elpro

Expert
in Video Signal
Management

ELPRO Video Labs is a company that operates in the field of Video Signal Management since 1972. Its name wishes to be the guarantee of the engagement of a group that knew how to create, over the years, its own space at european level.

Our range of products, counting more than 250, represents a composition of solutions in the area of video broadcast, professional, institutional, and for the presentation systems.

We offer on the market, by now consolidated in Italy and in the whole Europe and tending to expand to the emergent markets, excellent logistic services that allow us to guarantee the 24 hours dispatch.

We hope that this catalogue, updated in graphics and containing a lot of applications, could be the main instrument for your work process.

PRODUCT CATALOGUE 2010

GENERAL INDEX

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PRODUCT CATALOGUE 2010
ELPRO

A

A. PRODUCT CATALOGUE 2010 ELPRO

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A. PRODUCT CATALOGUE 2010 ELPRO

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A. PRODUCT CATALOGUE 2010 ELPRO

ALPHABETICAL INDEX

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A.1

BROADCAST LINE

EVL100RACK
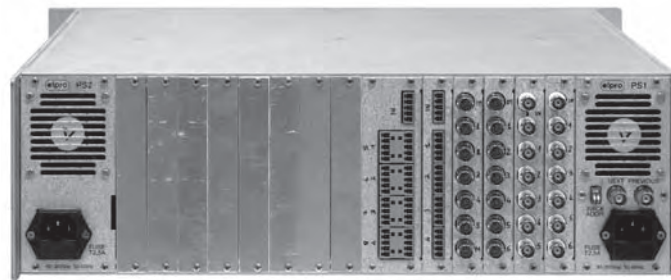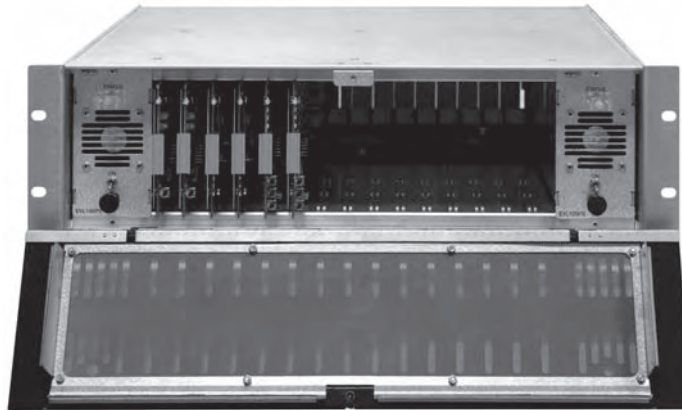
EVL100RACK is the frame designed to house cards of the EVL100 Series family. All the cards can be extracted after opening the front panel and fit into their matching extension fastened to the rear. In some cases, the same card may be connected to different types of extensions in order to promote maximum flexibility of use. Two side slots, reserved for power supply units, are also provided of which one standard and one optional and 15 slots to house the cards each of which, according to its characteristics and/or those of the connected extension, can occupy one slot or in some cases two.

The rack can be equipped with a control card able to dialogue with a remote station for complete control of system parameters according to the SNMP protocol. A single card of this type is able to control up to four racks which, in this case, must be connected together by a suitable rear cable (EVL link). A set of speed-controlled fans guarantees cooling of the rack only to the extent necessary, reducing noise in the case of non-critical heating situations.

The rack is shielded against electromagnetic disturbances.

- 3 x 19 inch RU
- Possibility of installing up to 15 cards
- Possibility of double power supply
- Pre-engineered for SNMP protocol
- EVL link system for concurrent management of up to 4 racks
- Temperature monitoring
- Control of fan speed
- EMI shielding

Technical specifications

Main input:	90÷250Vac/120÷250Vdc
Size (WxDxH):	483x450x133mm
Weight:	3 Kg
CE Mark:	Yes

EVL100PS

The EVL100PS is the power supply unit of the EVL100RACK frame. Constructed with switching technology, it furnishes in output a ±15V voltage that is distributed inside the rack via a backplane in order to power the cards of the EVL family. A control circuit constantly verifies the main system parameters, i.e. the level of the main voltages, the temperature of the power supply unit and temperatures inside the rack. Three separate circuits power the internal fan of the power supply unit and the 2 internal fans of the rack according to local temperatures detected. The control circuit is active also in the case of drop-out of the main voltages as it is powered by a separate standby voltage. A single EVL100PS can provide sufficient power to power all the cards of the rack even though a second redundant unit can also be used. In this case, this unit operates as slave and all the above control functions are carried out by the main power supply unit.

- High efficiency switching technology
- Universal power supply
- Protection against short-circuits, over-voltages, overload.
- Temperature control
- Control of output voltage
- Control of the fans with speed regulation
- Led to indicate ON/OFF and malfunction
- Easy to extract

Technical specifications

Main input:	90÷250Vac/120÷250Vdc
Inrush current:	<40A @25°C/264Vac (cold start)
Output voltage:	±15V
Voltage accuracy:	±1%
Standby supply:	+5V
Output power:	175W (200W peak)
Size (WxDxH):	60x338x115mm
Weight:	0,73Kg
CE Mark:	Yes

EVL106VD

ANALOGUE VIDEO DISTRIBUTOR/EQUALIZER
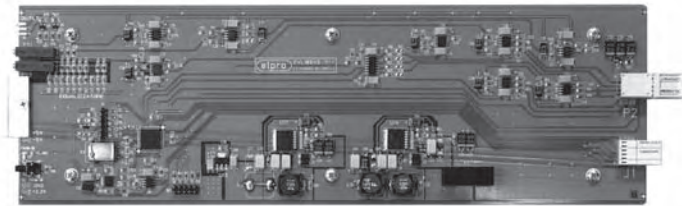
EVL106VD

R106VD

R115VD

The EVL106VD is a broadband analogue video signal distributor that can be configured as a 1x6 or 1x5 + input loop distributor according to the extension used. It is fitted with a level control circuit and high-performance monotrimmer equalizer to offset even significant losses due to long sections of input cable. The card features a control circuit of the output drivers with alarm output at local (via LEDs) and remote level, via SNMP protocol.

- Equalization: 300 m of Belden 1694A
- Band 100 MHz
- Signal level adjustment
- Switch for termination at 75Ω
- 1IN, 6 OUT version with R106VD extension
- 1IN + loop, 5 OUT version with R105VD extension
- Possibility of remote control of the 75Ω termination and card malfunction status

Technical specifications

Input type:	AC coupled, 75Ω or High Z
Input level:	2Vpp
Bandwidth:	± 0.1 dB up to 45 MHz
	± 3 dB up to 100 MHz
Equalization:	300 m Belden 1694A
Output level regulation:	± 3 dB
Input CMRR:	40 dB @ 50 Hz
Input Return Loss:	Input internal terminated:
	-41 dB @ 5 MHz
	-18 dB @ 100 MHz
	Input external terminated:
	-27dB @ 5 MHz
	-5 dB @ 100 MHz
Output Return Loss:	-56 dB @ 5MHz
	-30 dB @ 100MHz
Input to Output Delay:	10 ns
Differential gain:	0.1%
Differential phase:	0.1°
Tilt:	0.1% on 50 Hz squarewave
Hum & noise unweighted:	-70 dBm
Main input:	+15V DC
Power consumption:	2.2 W
Size (WxDxH):	420x130x20 mm
Weight:	370 g
CE Mark:	Yes

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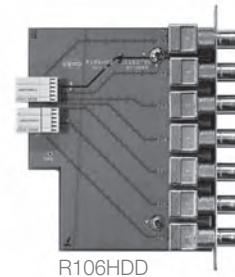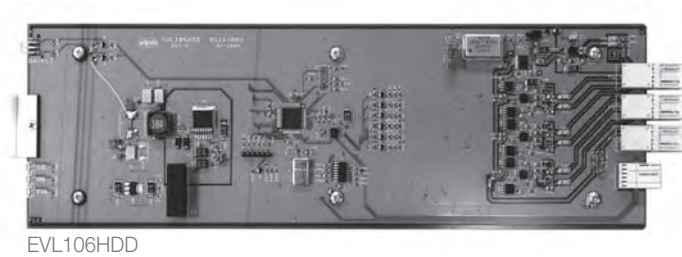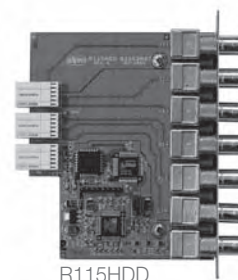
EVL106HDD

R106HDD

R115HDD

The EVL106HDD is a SD/HD-SDI digital signal distributor featuring automatic compensation of cable losses and reclocking of the signal. According to the type of extension connected to the motherboard, it can be configured as a 1x6 distributor or 1x5 + monitoring output distributor. This is active only in the case of SD-SDI input at 270Mbps and provides a reclocked PAL (or NTSC) signal. The EVL106HDD is equipped with a control circuit that monitors the most important nodes of the card, notifying any hardware malfunctions or of the input signal at local level (via LED) or remote via SNMP protocol.

- Automatic recognition of serial data rate from 143Mbps to 1485Mbps
- Automatic recognition of the type of signal (SD or HD)
- Reclocking functions for 143Mbps, 270Mbps, 1483Mbps, 1485Mbps signals
- Automatic reclocking bypass mode for 177Mbps, 360Mbps, 540Mbps signals
- 1IN, 6 OUT version with R106HDD extension
- 1IN, 5 OUT + PAL monitoring output version with R151HDD extension
- Possibility of remote control of alarms and of machine status
- Pre-engineered to manage 3G signals (with different chip set)

Technical specifications

Input type:	AC coupled, 75Ω
Standards:	Reclocking mode:
	SMPTE 259 M A, C
	(143Mbps, 270 Mbps)
	SMPTE 292 M
	(1483 Mbps, 1485 Mbps)
	DVB-ASI at 270 MHz
	Reclocking bypass:
	SMPTE259 M B, D
	(177 Mbps, 360 Mbps)
	SMPTE 344 M (540 Mbps)
Input return loss:	>16 dB @ 270 Mhz
	>12 dB @ 500 Mhz
Outputs return loss (digital):	>11 dB @ 270 Mhz
	>12 dB @ 500 Mhz
Outputs amplitude:	800mVpp/75Ω
Outputs rise/fall time:	<640 ps @270 Mbps
(20% - 80%)	<270 ps @ 1485 Mhz
Jitter:	<0.15UI @ 270 Mbps
	(1K Hz aligment jitter)
	<0.20UI @ 1485 Mbps
	(1 KHz aligment jitter)
Automatic equalization (with SDI check field):	450m Belden 1694A @ 270 Mbps
	170m Belden 1694A @ 1485 Mbps
Output return loss (analog PAL):	24 db @ 5M Hz
Main input:	+15V DC
Power consumption:	2.5W max (with R106HDD)
	3.5W max (with R151HDD)
Size (WxDxH):	420x130x20 mm
Weight:	0,48 Kg
CE Mark:	Yes

EVL108AD

BALANCED STEREO AUDIO (DUAL) DISTRIBUTOR/AMPLIFIER

R104AD
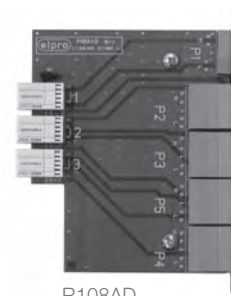
R108AD

EVL108AD

The EVL108AD is a balanced stereo audio distributor/amplifier with differential inputs that can be configured as a 1x4 or 1x8 distributor according to the type of extension used.

Its main characteristic is that it has an adjustable level for each channel (left/right) that can be set at local level and remote with the SNMP protocol. It can manage high level signals up to +25dBm (13.7 Vrms).

- Independently programmable amplification on two branches (left/right)
- Silence detection function in input with user-selectable level
- Overload detection function on the input signal
- Overload detection function on the output signal
- Zipper noise reduction circuit
- Version 1IN stereo, 4 OUT stereo with R104AD extension
- Version 1IN stereo, 4 OUT stereo with R108 extension
- Possibility of remote control of card parameters with SNMP protocol

Technical specifications

Input type:	Differential, AC-coupled
Input level:	+25 dBm
Input impedance:	40 kΩ
Output type:	Differential, AC-coupled
Output level:	+25 dBm
Output impedance:	600 Ω
Gain:	+30 dB to -30 dB in 0.5 dB steps
Input silence detection threshold:	-15 dBm to -30 dBm in 2.5 dBm steps and -35 dBm
Frequency response:	± 0.1 dBm from 20 Hz to 20 kHz
Harmonic distorsion:	< 0.05 (20Hz to 20kHz) @+24 dBm input and 0 dB gain
Hum & noise unweighted:	-60 dBm
CMRR:	43 dB @ 1 kHz 33 dB @ 10kHz 29.2 dB @ 16 kHz
Crosstalk (left vs right):	-55 dB @ 20 kHz, +24 dBm
Main input:	±15V DC
Power consumption:	7 W
Size (WxDxH):	420x130x20 mm (R104AD) 420x130x40 mm (R108AD)
Weight:	370 g (R104AD) 390 g (R108AD)
CE Mark:	Yes

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A.2
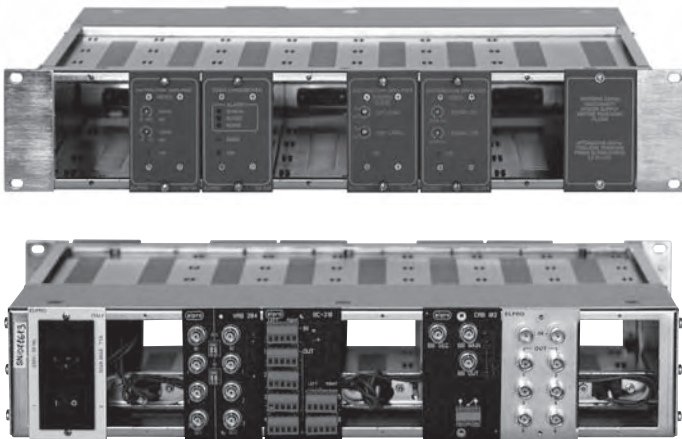
PLUG-IN

DVR-MV/RK

The DVR-MV/RK unit is a 19", 2RU 320mm-deep rack designed to house all Elpro plug-in.

The DVR-MV/RK must be installed on standard 19" cabinets.

As all Elpro plug-in are equipped with power supply, there is no need to fit power supply units in the DVR-MV/RK rack.

Power is distributed to the plug-in by the wiring inside the rack using three-pin connectors.

On the back, the DVR-MV/RK is equipped with a panel type mains plug in which the power cord provided must be inserted. The mains plug group includes the ON/OFF switch and a 5x20 fuse whose characteristics are screen-printed on the panel.

The DVR-MV/RK has been constructed according to EN60065 safety standards.

It can house up to a maximum of 7 plug-in.

The plug-in consist of two parts, i.e. a fixed part that houses the connectors for connection of the input/output signals, to be fastened on the back of the rack, and a mobile extractable part to be inserted in the front part of the rack.

Coupling of the two parts is assured by edge connectors. Any free slots can be covered with the BLK10TE panels.

Technical specifications

Main input:	230 Vac 50Hz
Size (WxDxH):	483x320x88
Weight:	3.8 Kg
Operating temp. range:	0÷45°C
Safety:	according to EN60065
EMC:	according to EN55103-1 and-2

DA104

- Differential input
- Up to 200 mt RG59 B/U equalization
- One trimmer fine equalizer
- Level adjust ± 3 dB
- One input / six outputs
- Broadcast quality
- To be fitted in DVR-MV/RK rack

CV
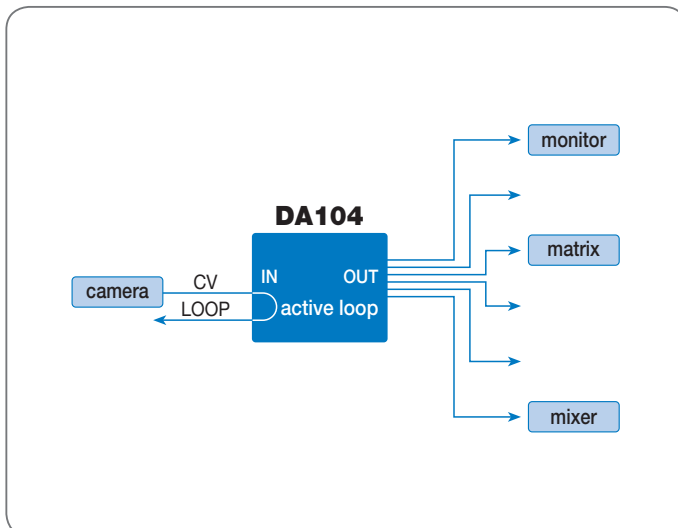
Technical specifications

Input type:	Differential, high Z, looping
Input coupling:	AC
Input level:	max 2 Vpp
Input CMRR:	>50 dB at 50 Hz
Input ret. loss:	>47 dB at 5 MHz
Output level:	±3 dB adjustable
Output ret. loss:	>33 dB at 5 MHz
Output isolation:	>42 dB at 5 MHz
DC on output:	±10 mV
Frequency response:	-0.1 dB 10 Hz to 5 MHz
	-3 dB at 28 Mhz (no equal.)
Delay:	21 nS ±1 nS
Differential gain:	max 0.1%
Differential phase:	max 0.1°
LF response:	<0.1% on 50 Hz squarewave
Hum & Noise:	-70 dB unweighted
Equalization:	up to 200 mt. RG59 B/U
	coax cable
Main input:	230 Vac 50 Hz
Power consumption:	5.5 VA
Operating temp. range:	0÷45°C
Safety:	according to EN 60065
EMC:	according to EN 55103-1
	and EN 55103-2

DA104

camera — CV — IN OUT — active loop — LOOP

→ monitor
→ matrix
→ mixer

DA204

- Dual 1x3 video distr. amplifier
- Differential input
- Up to 150 mt RG59 B/U equalization
- One trimmer fine equalizer
- Low power requirement
- Broadcast quality
- To be fitted in DVR-MV/RK rack

CV
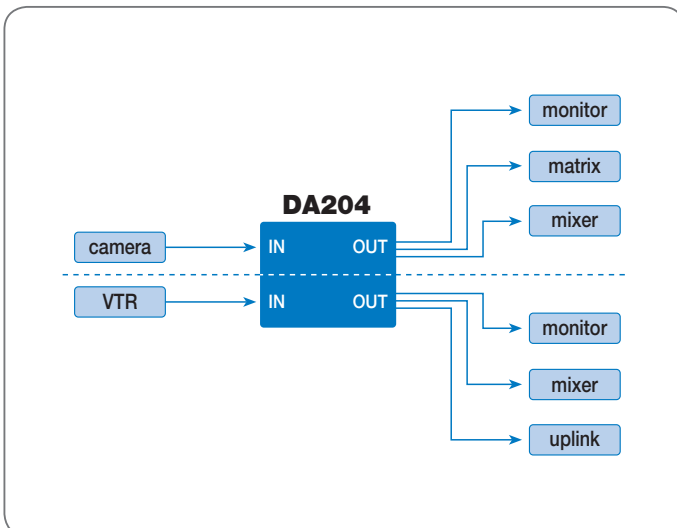
Technical specifications

Input type:	Differential
Input coupling:	AC
Input termination:	Manual, by jumper
Input Linking capability:	Manual by jumper to perform 1x6
Input level:	Max 2 Vpp
Input CMRR:	>55 dB at 50 Hz
Input Ret. Loss:	36 dB at 5 MHz
Output Ret. Loss:	48 dB at 5 MHz
Output isolation:	43 dB at 5 MHz
DC on output:	±15 mV
Frequency response:	0,1 dB from 10 Hz to 12 MHz
	-3 dB at 50 MHz (no equal.)
Delay:	35 ns
Diff. phase:	max 0,3°
Diff. gain:	max 0,3%
LF response:	<0,6% on 50 Hz squarewave
Hum & noise:	-80 dB unweighted
Equalization:	up to 150 mt coax RG59 B/U cable
Crosstalk (IN1 vs. IN2):	35 dB at 5 MHz
Main input:	230 Vac 50 Hz
Power consumption:	3 VA
Operating temp. range:	0÷45°C
Safety:	According to EN60065
EMC:	According to EN55103-1
	and EN55103-2

PLUG-IN 2

SD104

1x6 SD-SDI DIGITAL DISTRIBUTOR AMPLIFIER
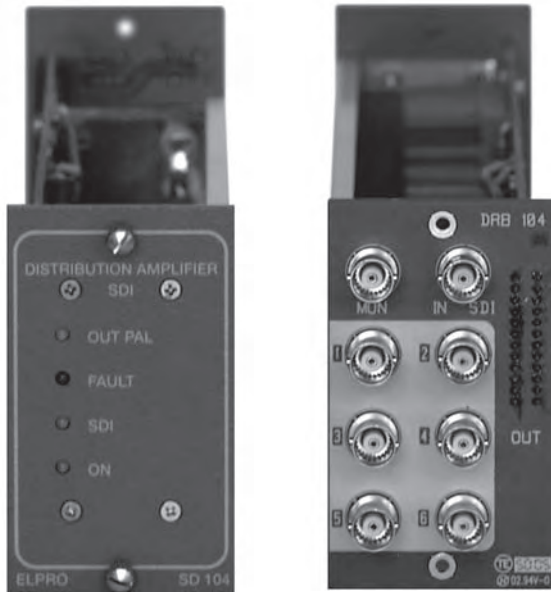
- SD-SDI presence indication
- High accuracy in the input and outputs ret. loss
- Autosensing circuit for fault monitoring
- Able to compensate 220m of RG59 DS cable
- Regenerated and reclocked outputs
- On board SD-SDI to Pal converter (DOP107, optional)
- To be fitted in DVR-MV/RK rack

OPTION

SD-SDI   CV
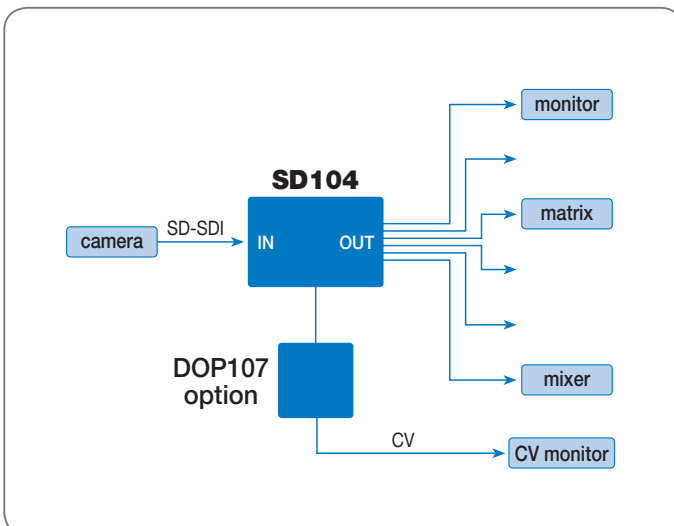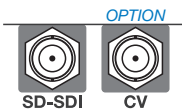
Technical specifications

Input type:	AC coupled
Input ret. loss:	44 dB at 10 MHz
	41dB at 100 MHz
	34 dB at 200 MHz
	29,5 dB at 270 MHz
Outputs ret loss:	33 dB at 10 MHz
	24 dB at 100 MHz
	22 dB at 200 MHz
	21 dB at 270 MHz
Jitter:	<0,2 UI
Outputs amplitude:	800 mVpp
Outputs rise/fall time:	780 ps at 270 Mb/s
	(measured from 20% to 80%)
Automatic compensation:	220 mt RG59 DS cable with SDI
	check field (Test with SPG422
	and VFM 601i Tektronix)
DOP107 Pal out ret. loss:	21 dB at 5 MHz

PLL locking:

bps	center freq.	f. min.	f. max
143 Mb/s	71,5 MHz	64,6 MHz	76,5 MH
177 Mb/s	88,5 MHz	79,8 MHz	93,1 MHz
270 Mb/s	135,0 MHz	124,0 MHz	144,6 MHz
360 Mb/s	180,0 MHz	166,9 MHz	194,6 MHz

Main input:	230 Vac 50 Hz
Power consumption:	5 VA
Weight:	0.3 Kg
Operating temp. range:	0÷45°C
Safety:	according to EN 60065
EMC:	according to EN 55013
	and EN 55020

camera → SD-SDI → **SD104** IN → OUT → monitor, matrix, mixer

DOP107 option → CV → CV monitor

DA110

1x6 AUDIO DISTRIBUTION AMPLIFIER

- ■ Input with transformer
- ■ Outputs electronically balanced
- ■ Front level adjustment ±6 dB
- ■ Internal four range gain selection: 20, 10, 0, -10 dB
- ■ One input / six separated outputs
- ■ Screw terminals connections
- ■ Broadcast quality
- ■ To be fitted in DVR-MV/RK rack

BAL AUD
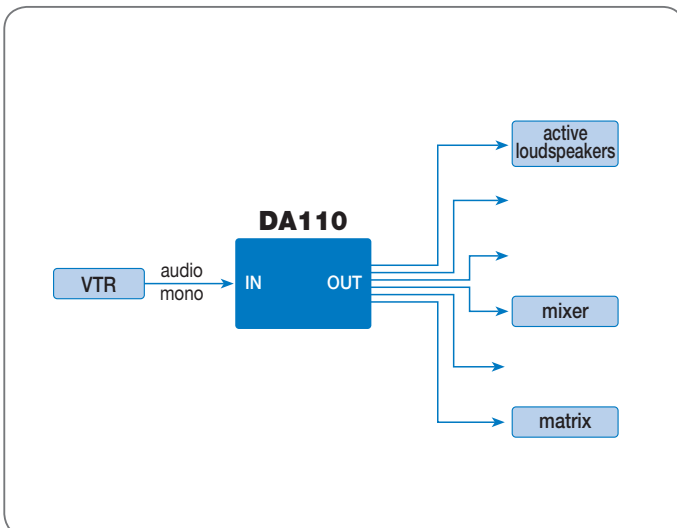
Technical specifications

Input impedance:	> 10 KΩ
Nominal input level:	+6 dBm
Max input/output level:	+21 dBm
CMRR at 5 Khz:	74 dB
CMRR at 16 Khz:	55 dB
Output impedance:	40 Ω
Frequency response:	-0.2 dB from 20 Hz to 20 KHz -3 dB at 600 KHz
Harmonic distortion at +20 dBm:	20 Hz to 20 Khz <0.1 %
Adj. gain:	±6 dB front panel
Fixed gain:	-10; 0; +10; +20 internal jumper selectable
Transient response (1 KHz squarewave):	1.25% ovsh
Hum (at 0 dB gain, input terminated with 600 Ω):	-90 dBm
Main input:	230 Vac 50 Hz
Power consumption:	9 VA
Operating temp. range:	0÷45°C
Safety:	according to EN 60065
EMC:	according to EN 55013 and EN 55020

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DA210
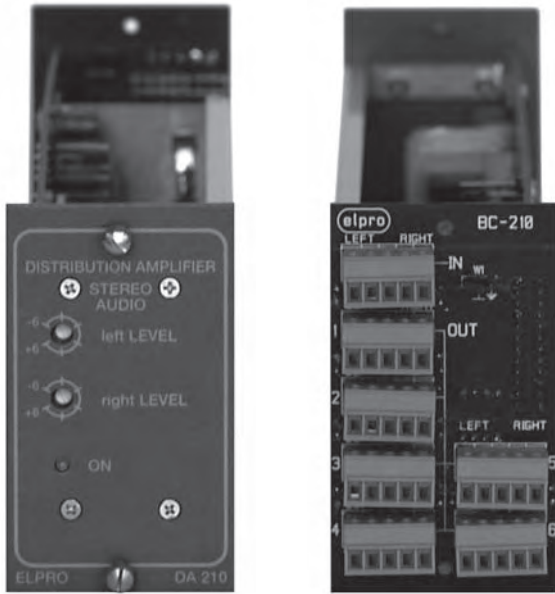
- 1x6 balanced stereo distribution ampl.
- Front level adj. ±6 dB each channel
- Internal gain selection +20, +10, 0, -10 dB
- Floating or earth connected ground
- Connections by Phoenix screwtype
- Broadcast quality
- To be fitted in DVR-MV/RK rack
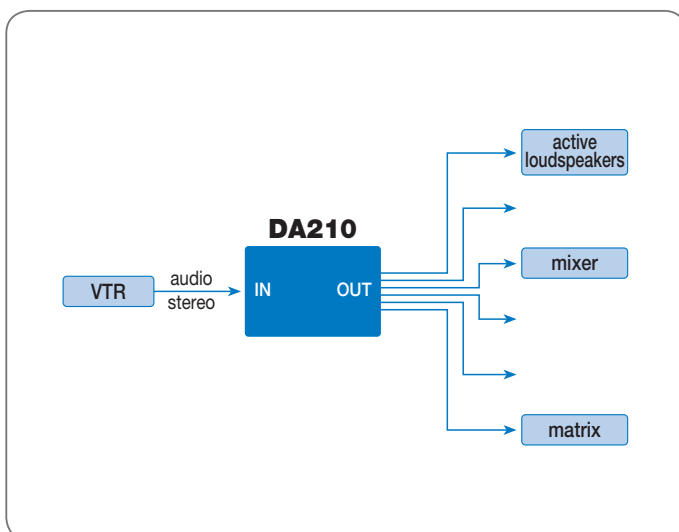
2 PLUG-IN

BAL AUD

Technical specifications

Input type:	Differential
Input coupling:	AC
Input impedance:	44 KΩ differential
	22 KΩ single ended
Max input/output level:	+16 dBm
CMRR:	55 dB at 16 KHz
Output impedance:	600 Ω
Output gain:	±6 dB front panel
Fixed gain:	-10, 0, +10, +20 dB
	internal jumper selectable
Frequency response:	-0,2 dB at 60 KHz;
	-3 dB at 600 KHz
Crosstalk (left vs. right):	75 dB at 16 KHz
Harmonic distortion:	< 0.05% from
	20 Hz to 20 KHz at +12 dBm
Hum (at 0 dB gain, input terminated 600Ω):	-90 dBm
Main input:	230 Vac 50 Hz
Power consumption:	7 VA
Operating temp. range:	0÷45°C
Safety:	According to EN60065
EMC:	According to EN55103-1
	and EN55103-2

DA210

VTR → audio stereo → IN — OUT → active loudspeakers
→ mixer
→ matrix

CONVI103RR
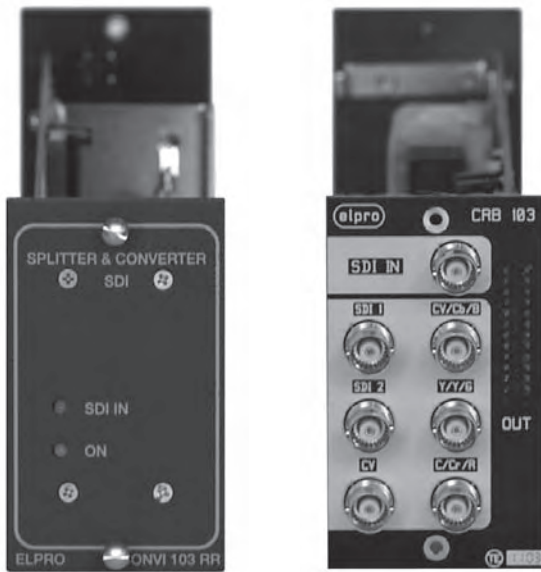
- 1 SD-SDI ITU-R 601 digital input
- 2 regenerated and reclocked SD-SDI outputs
- 1 fixed CV analog output
- 3 programmable analog outputs
- Internal TEST generator on all the outputs
- Possibility of disabling color
- 2 selectable internal digital filters

SD-SDI	CV	Y/C	Y Pb Pr

Technical specifications

Input type:	AC, 75 Ω ITU-R 601
SDI format:	ITU-R 601
Input ret. Loss:	25 dB at 270 MHz
SDI outputs:	2, regenerated & reclocked
Analog outputs:	n. 1 fixed CV on BNC
	n. 3 programmable on BNC:
	CV, Y, C or
	Cb, Y, Cr or
	B, G, R
Output level nominal (analog):	700 mVpp (plus sync)
Output level regulation:	500 mVpp ÷ 1 Vpp
Output ret. loss (all outputs):	20 dB at 5 MHz
Differential Phase:	0.8°
Differential Gain:	0.8 %
Main input:	230 Vac 50Hz
Power consumption:	5 VA
Weight:	0.3 Kg
Operating temp.range:	0÷45°C
Safety:	according to EN60065
EMC:	according to EN55103-1
	and EN55103-2

CONVI103RR

camera → SD-SDI → IN — OUT active loop

CV → 1 → local monitor

CV + Y/C or Y Pb Pr → 3 → VTR

SD-SDI distribution

PLUG-IN 2

CONVI104R

CV TO SDI CONVERTER

- PAL/NTSC compatible
- 10 bit ADC sampling
- Crystal PLL Jitter filter
- Ref. loop-through input
- Five-line adaptive chroma comb filter
- EDH generation and insertion
- Twin SD-SDI output
- To be fitted in DVR-MV/RK rack

CV   SD-SDI

CONVI104R

camera → CV → IN   OUT → SD-SDI → SD-SDI matrix

SD-SDI local monitor
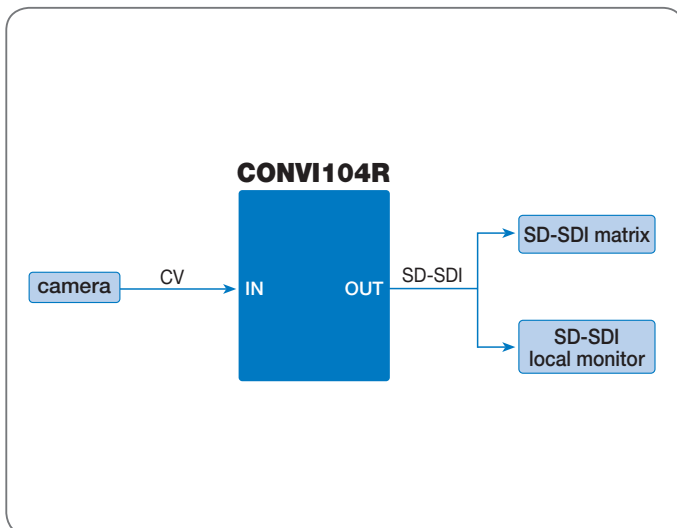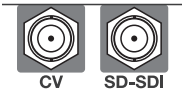
Technical specifications

Input type:	Single ended
Input coupling:	AC
Standard:	PAL, NTSC
Ref. loop:	Black burst or CV
Outputs:	SD-SDI, ITU-R601, twin
Comb filter:	5 line adaptive
Jitter filter:	Crystal with VCXO PLL
Jitter:	<0,2 UI
Outputs ret loss:	34 dB at 10 MHz,
	19 dB at 100 MHz,
	15 dB at 200 MHz,
	15 dB at 270 MHz
Main input:	230 Vac 50Hz
Power consumption:	5 VA
Weight:	0.3 Kg
Operating temp. range:	0÷45°C
Safety:	According to EN60065
EMC:	According to EN55103-1
	and EN55103-2

GMB101R

- 4 fixed Black Burst outputs
- Test output in CV and Y/C
- Choice among 8 test signals
- H/subcarrier genlocked
- PAL / NTSC formats
- 1 KHz balanced audio output
- High stability TCXO (2,5 ppm)
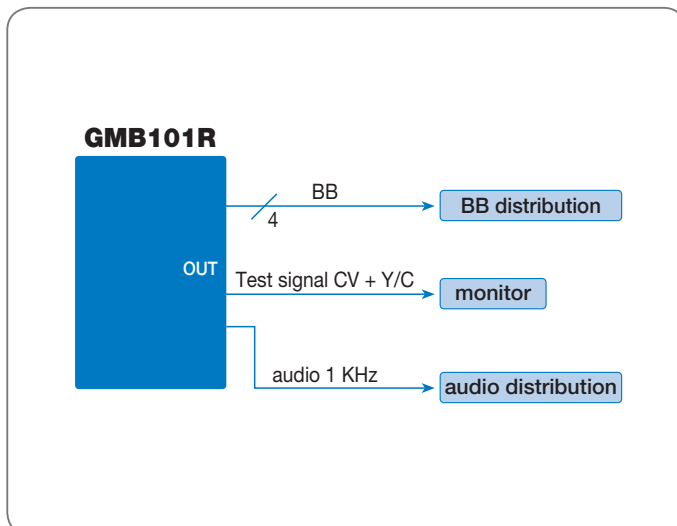
CV **Y/C** **BAL AUD**

Technical specifications

VIDEO

Output type:	std., with black level at 0 VDC
Black Burst out. ret.loss:	40 dB at 5 MHz
Black Burst out. isolation:	25 dB at 5 MHz
Stability:	better than 2,5 ppm with TCX0
Test output type:	CV+Y/C
Standards:	PAL, NTSC
Pattern available:	75% BARS, 100% BARS, 75% Y BARS, GRID, DOTS, RAMP, Y RAMP WHITE WINDOW

AUDIO

Output type:	Electronically balanced, with Phoenix screwtype detachable
Level:	0 dBm ±0.5 dB on 600 Ω
Output impedance:	600 Ω
Frequency:	1 KHz ±30 Hz
Main input:	230 Vac 50Hz
Power consumption:	5 VA
Weight:	0.3 Kg
Operating temp.range:	0÷45°C
Safety:	according to EN60065
EMC:	according to EN55103-1 and EN55103-2

CA102

- MAIN and SEC Black Burst inputs
- Synch., Burst and Noise control
- Switching in the frame interval
- Output alarm contact
- Automatic restore after return to normal conditions

CV   ALARM
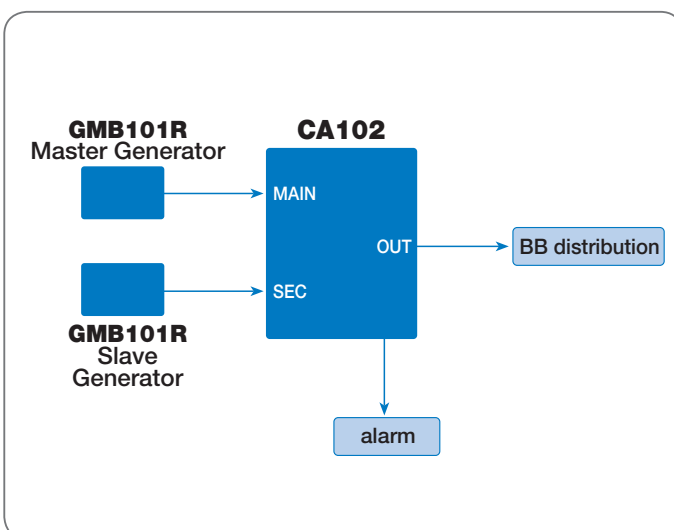
Technical specifications

Inputs type:	DC coupled, 75 Ω (Incoming signal must be clamped at 0V)
Input ret. Loss:	-32 dB at 5 MHz
Output:	75 Ω, source terminated
Output ret. Loss:	-37 dB at 5 MHz
Presence control:	both synchronisms and subcarrier
Threshold:	Burst 300 mV ±25 mV
	Black level 0 V ± 10 mV
Type of switching:	static, on vertical interval
Alarm:	dry contact, C, NO, NC
	200 mA at 24 VDC
Main input:	230 Vac 50 Hz
Power consumption:	5 VA
Weight:	0.3 Kg
Operating temp.range:	0÷45°C
Safety:	according to EN60065
EMC:	according to EN55103-1 and EN55103-2

GMB101R
Master Generator

CA102

MAIN

OUT → BB distribution

SEC

GMB101R
Slave Generator

alarm

elpro

A.3

DISTRIBUTORS

ABL100

The ABL100 unit is an appliance that transforms an unbalanced audio signal into a balanced audio signal.

Its configuration with 8 incoming and outgoing stereo signals means it is suitable for use in cascade of 8x8 or greater Matrix Switchers.

The possibility of regulating the level of each output means that the ABL100 can also be used as impedance adapter between non-standard sources and destinations.

- Eight inputs on RCA outlets
- Eight electronically balanced outputs
- Termination in output at 600 Ω
- High overload in input: +24 dBm
- Adjustable gain: ±6 dB or ±12 dB

UNBAL   BAL AUD
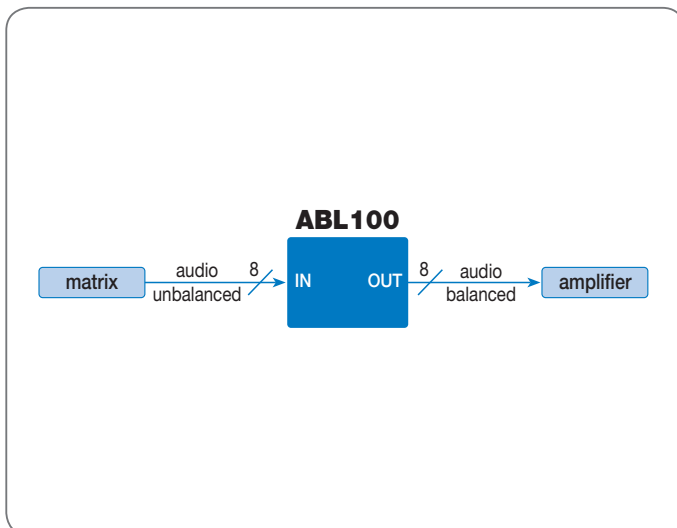
Technical specifications

Input signals:	8, single ended with RCA connector
Coupling:	AC
Input impedance:	>44 KΩ
Input level:	Max +24 dBm (34 Vpp)
Bandwidth:	-0.5 dB from 5 to 100 KHz at +6 dBm
Outputs:	8, electronically balanced
Output Impedance:	600 Ω
Gain:	±6 dB or ±12 dB int. jumper selectable and trimmers
Connectors:	Phoenix screwtype, removable
Main input:	230 Vac 50 Hz
Power consumption:	6 VA
Size (WxDxH):	483x220x44
Weight:	3.1 Kg
Operating temp. range:	0÷45°C
Safety:	according to EN60065
EMC:	according to EN55103-1 and EN55103-2

ABL100

matrix → audio unbalanced / 8 → IN   OUT → 8 / audio balanced → amplifier

DA124+

DA124+ is a distributor for video signals with 2 separated inputs and 4 outputs each.

May be employed as a normal distributor or as equalizer to compensate the long cable losses.

May operate as 1x8 video distributor and is compatible with Y/C signals.

- CV or Y/C distributor
- One trimmer equalizer up to 100 mt of RG59 B/U cable
- Inputs linkable to obtain 1x8
- AC or DC input coupling
- Switch for 75 Ω termination
- 19" 1 RU compatible by ADR1UM1 adapter

CV

3
DISTRIBUTORS
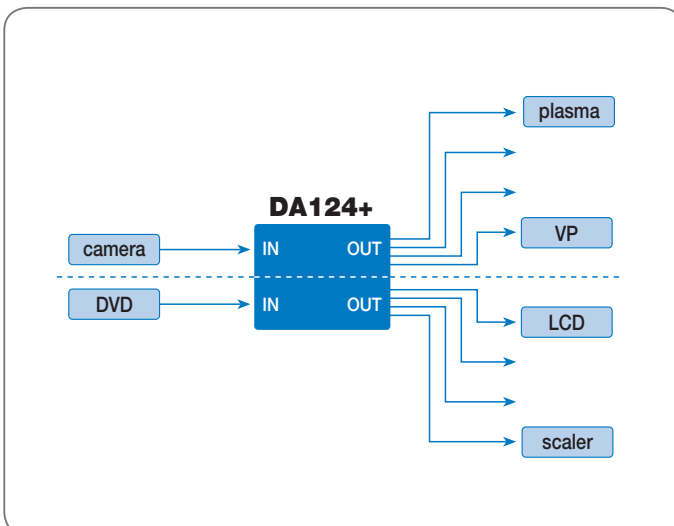
Technical specifications

Input type:	AC or DC switch select.
Video formats:	CV or Y/C
Input level:	Max 1.5 Vpp on 75 Ω
Input ret. loss:	35 dB at 5 MHz
Output gain:	0 dB
Output ret.loss:	36 dB at 5 MHz
Frequency response:	-0.1 dB at 10 MHz
	-3 dB at 60 MHz
Delay:	15 ns
Differential phase:	0.8°
Differential gain:	0.2%
Hum & noise:	-90 dB unweighted
Equalization:	up to 100 mt RG59 B/U coax cable
Crosstalk (two sections):	60 dB at 5 MHz
Main input:	230 Vac 50 Hz
	(with AC adapter ADM001)
Power consumption:	5 VA
Size (WxDxH):	200x100x44 mm
Weight:	0.5 Kg
Operating temp. range:	0÷45°C
Safety:	according to EN 60065
EMC:	according to EN 55103-1
	and EN 55103-2

DA124+

camera → IN   OUT → plasma
               → VP
DVD → IN   OUT → LCD
               → scaler

SP105

1x6 VIDEO & AUDIO DISTRIBUTION AMPLIFIER
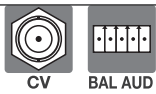
SP105 is a distribution amplifier for video and balanced audio signals capable to distribute the incoming signals towards 6 destinations.

- Composite video 1x6 distribution amplifier
- Input video loop
- Switch for 75 Ω termination
- Balanced audio stereo 1x6 distribution amplifier
- 600 Ω output audio impedance
- 19" 1 RU compatible by ADR1UM1 adapter

Technical specifications

VIDEO	
Input:	AC coupled
Input return loss;	> 32 dB @ 5 MHz
Input level:	Max 2 Vpp on 75 Ω
Ouput gain:	0 dB
Output return loss:	> 44 dB @ 5 MHz
Frequency response:	±0.10 dB up to 18 MHz
	±3 dB up to 130 MHz
Delay:	16 ns
Differential gain:	0.3 %
Differential phase:	0.2 %
Hum & noise:	-90 dB unweighted

AUDIO	
Input:	Differential, AC coupled
Input impedance:	44 KΩ
Input level:	+21 dBm Max
CMRR:	50 dB at 50 Hz
	36 dB at 16 KHz
Output impedance:	600 Ω
Output gain (fine adjust):	0 dB
Frequency response:	±0.10 dB from 7 Hz to 30 KHz
	±0.50 dB up to 60 KHz
	±3 dB up to 165 KHz
Harmonic distorsion:	< 0.01 %@ 21 dBm
Hum & noise:	-68 dB unweighted, worst case
Crosstalk:	60 dB @16 KHz (left/right)

Main input (with AC adapter ADM001):	230 Vac 50 Hz
Power consumption:	3.5 VA
Size (WxDxH):	206x90x44 mm
Weight:	0.6 Kg
Operating temp. range	:0÷45°C
Safety:	According to EN 60065
EMC:	According to EN 55103-1
	and EN 55103-2

SP205

SP205 is a dual 1x5 video and stereo audio distribution amplifier.

10x1 Distribution is possible by coupling of the 2 sections.

- Two separated 1x5 Video and stereo Audio sections
- CV or Y/C video signal
- Unbalanced stereo or balanced mono audio signals
- Inputs may be connected to perform 1x10 function
- Ideal for duplication center and professional distribution
- Low cost

CV   **UNBAL**

SP205

set top box

CV
audio   IN   OUT   CV → plasma
                audio → active loudspeakers

CV
audio   IN   OUT   CV → plasma
                audio → active loudspeakers

DVD
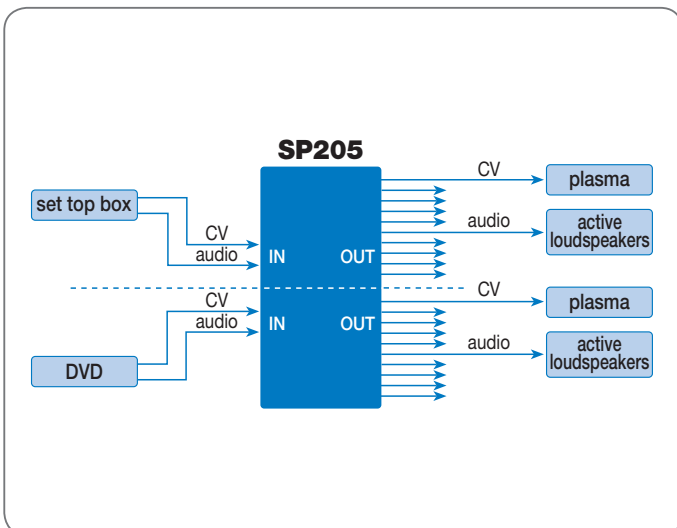
Technical specifications

VIDEO	
Input type:	AC
Input level:	1 Vpp nom.
Input ret. loss:	32 dB at 5 MHz
Output ret. loss:	43 dB at 5 MHz
Frequency response:	-0.4 dB at 5 MHz; -3 dB at 30 MHz
Differential gain:	1%
Differential phase:	1°
Hum & Noise:	-90 dBm unweigh
Crosstalk (two section):	40 dB at 5 MHz

AUDIO	
Input impedance:	22 KΩ
Input/output level:	+8 dBm max
Output load:	600 Ω max
Frequency response:	-0.5 dB from 40 Hz to 40 KHz
Harmonic distortion:	<0.1% from 20 Hz to 20 Khz, 0 dBm
Hum & Noise:	-86 dBm unweigh.
Crosstalk (two section):	70 dB at 20 KHz

Main input:	230 Vac 50 Hz
Power consumption:	15 VA
Size (WxDxH):	483x125x44 mm
Weight:	2.8 Kg

Operating temp. range:	0÷45°C
Safety:	according to EN 60065
EMC:	according to EN 55013 and EN 55020

3
DISTRIBUTORS

SP205+

DUAL 1x5 VIDEO & AUDIO DISTRIBUTION AMPLIFIER

SP205+ is a dual 1x5 video and audio stereo distribution amplifier.

1x10 distribution is possible by coupling of the 2 sections.

- Two separated 1x5 video and audio stereo sections
- Switch for 1x10 distribution mode
- Switch for 75 Ω termination
- CV or Y/C video signal
- Input video loop
- 150 Ω Output audio impedance

CV   **UNBAL**

SP205+

set top box → CV / audio → IN   OUT → CV → plasma

audio → active loudspeakers

DVD → CV / audio → IN   OUT → CV → plasma

audio → active loudspeakers

Technical specifications

VIDEO	
Input:	AC coupled
Input return loss:	32 dB @ 5 MHz worst case
Input level:	Max 2 Vpp on 75 Ω
Ouput gain:	0 dB
Output return loss:	>44 dB @ 5 MHz worst case
Frequency response:	±0.10 dB up to 9 MHz
	±0.15 dB up to 10 MHz
	±3 dB up to 120 MHz
Delay:	18 ns
Differential gain:	0.3 %
Differential phase:	0.2 %
Hum & noise:	-84 dB unweighted

AUDIO	
Input:	AC coupled
Input impedance:	56 KΩ
Input level:	+10 dBm Max
CMRR:	36 dB at 16 KHz
Output impedance:	150 Ω
Output gain (fine adjust):	0 dB
Frequency response:	±0.10 dB from 7Hz to 330 KHz
	±3 dB up to 6 MHz
Harmonic distorsion:	<0.05 % @ 10 dBm
Hum & noise:	-74 dB unweighted, worst case
Crosstalk:	54 dB @16 KHz
	(two sections) worst case
	51 dB @1 6 KHz
	(left/right) worst case
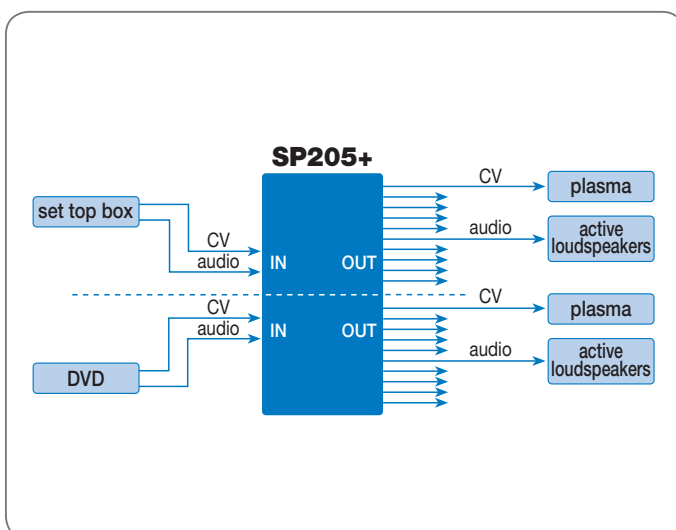
Main input:	90 ÷ 230 Vac
Power consumption:	5 VA
Size (WxDxH):	483x149x44mm
Weight:	2 Kg
Operating temp. range:	0÷45°C
Safety:	According to EN 60065
EMC:	According to EN 55103-1
	and EN 55103-2

SP205EQ

DUAL 1x5 VIDEO & AUDIO DISTRIBUTION AMPLIFIER
WITH EQUALIZATION & LEVEL CONTROL
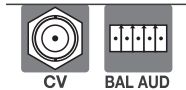
SP205EQ is a dual 1x5 video and balanced audio stereo distribution amplifier.

1x10 distribution is possible by coupling of the 2 sections. It is equipped with an equalizer to compensate the long cable losses and with a level control of video and audio signals.

- Two separated 1x5 video and audio stereo sections
- Composite video signals
- Switch for 1x10 distribution mode
- Switch for 75 Ω termination
- CV or Y/C video signal
- Input video loop
- Equalization up to 300 m of RG59B/U cable
- Video and audio level control
- 600 Ω output audio impedence

CV   BAL AUD

SP205EQ

set top box → CV / audio → IN   OUT → CV → plasma
→ audio → active loudspeakers

DVD → CV / audio → IN   OUT → CV → plasma
→ audio → active loudspeakers

Technical specifications

VIDEO	
Input:	AC coupled
Input return loss:	33 dB @ 5 MHz worst case
Input level:	Max 2 Vpp on 75 Ω
Ouput gain:	±3 dB
Output return loss:	44 dB @ 5 MHz worst case
Frequency response:	±0.10 dB up to 7.5 MHz
	±0.35 dB up to 10 MHz
	±3 dB up to 85 MHz
Equalization:	Up to 300 mt of RG59B/U coax cable
Delay:	20 ns
Differential gain:	0.3%
Differential phase:	0.2%
Crosstalk:	41 dB (two sections) @ 5 MHz worst case
Hum & noise:	-72 dB unweighted

AUDIO	
Input:	Differential, AC coupled
Input impedance:	43 KΩ
Input level:	+24 dBm Max
CMRR:	36 dB at 16 KHz
Output impedance:	600 Ω
Output gain (fine adjust):	±6 dB
Frequency response:	±0.10 dB from 7 Hz to 20 KHz
	±0.5 dB up to 40 KHz
	±3 dB up to 100 KHz
Harmonic distorsion:	<0.01 % @ 24 dBm
Hum & noise:	-60 dB unweighted, worst case
Crosstalk:	60 dB @ 16 KHz (two sections) worst case
	60 dB @ 16 KHz (left/right) worst case

Main input:	90 ÷ 230 Vac
Power consumption:	5 VA
Size (WxDxH):	483x149x44mm
Weight:	2 Kg
Operating temp. range:	0÷45°C
Safety:	According to EN 60065
EMC:	According to EN 55103-1 and EN 55103-2

DUBOX101

Dubox101 is an integrated distribution amplifier for video and stereo audio signals with 1 input and 10 outputs.

- ■ Video differential looping input
- ■ Audio differential unbalanced inputs
- ■ Video and audio level adjustment
- ■ Audio full power bandwidth at 150 KHz
- ■ Suited for integrated studio distribution

CV **UNBAL**

Technical specifications

VIDEO	
Input coupling:	AC
Input level:	1 Vpp, 2 Vpp max
Input ret. loss:	40 dB to 5 MHz
Outputs:	10 with 75 Ω source termination
Output level:	1 Vpp nom.
Output gain:	± 3 dB adjustable
DC on output:	± 20 mV max.
Frequency response:	-0.1 dB 10 Hz to 7 MHz; -3 dB at 9 MHz
Differential gain:	0.5% max at 4.43 MHz
Differential phase:	0.5° max at 4.43 MHz
LF response:	<2% on 50 Hz squarewave
Delay:	17 nS
Crosstalk at 150 KHz	
Audio left+right/video:	85 dB
Hum and noise:	<-82 dBm

AUDIO	
Input impedance:	20 KΩ
Max input level:	+14 dBm
CMRR at 16 KHz:	62 dB
Outputs:	10 with 600 Ω source termination
Max out level:	+14 dBm with 600 Ω load
Gain:	± 6 dB adjustable
Frequency response:	-0.5 dB from 20 Hz to 65 KHz
Harmonic distortion:	<0.015% from 20 Hz to 20 KHz, +6 dBm
Hum (unity gain):	<-88 dBm
Crosstalk:	80 dB at 16 KHz
Main input:	230 Vac 50 Hz
Power consumption:	10 VA
Size (WxDxH):	483x125x44 mm
Weight:	2.8 Kg
Operating temp. range:	0 ÷ 45°C
Safety:	according to EN 60065
EMC:	according to EN 55103-1 and EN 55103-2

DUBOX101

DVD — video / audio → IN   OUT → video / audio → VCR (duplication center)
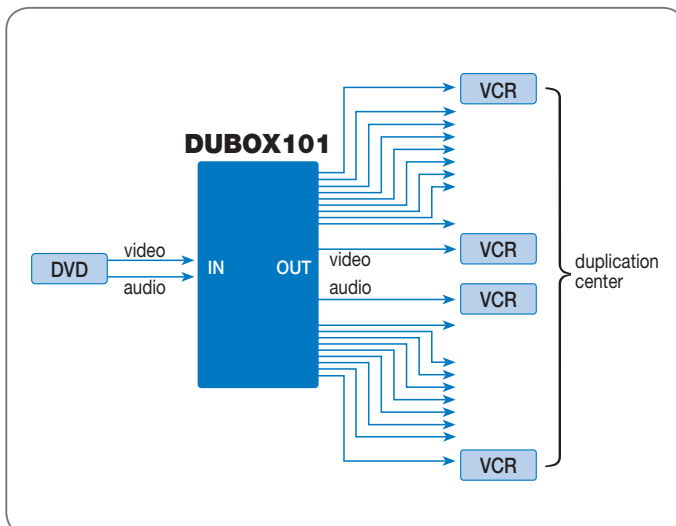
S-VHSBOX

S-VHSBOX is an integrated distributor for Y/C and stereo audio signals with 1 input and 8 outputs.
Audio level is front panel adjustable.

- Mini-Din 4 poles for Y/C
- Ideal for Y/C distribution
- Show rooms and CCTV
- Audio level adjustable ±6 dB
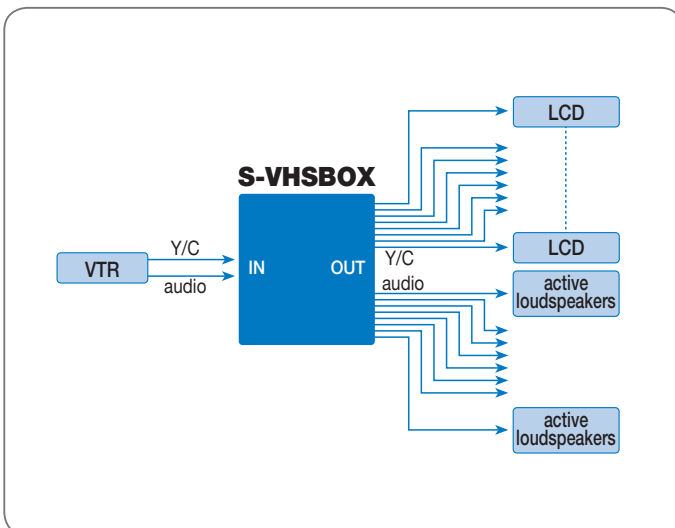
Y/C   UNBAL

Technical specifications

VIDEO	
Input type:	AC
Input ret. loss:	35 dB at 5 MHz
Output ret. loss:	27 dB at 5 MHz
Frequency response:	-0.5 dB at 6 MHz; -3 dB at 30 MHz
Hum & Noise:	-80 dB unweighted
Crosstalk (Y/C):	40 dB at 5 MHz

AUDIO	
Input type:	AC, unbalanced
Input impedance:	10 KΩ
Input/output level:	+11 dBm
Level adjustment:	±6 dB
Frequency response:	-0.5 dB at 300 KHz
Harmonic distortion:	0.06 % at 1 KHz
Hum & Noise:	-80 dBm
Crosstalk (L & R):	60 dB at 16 KHz

Main input:	230 Vac 50 Hz
Power consumption:	15 VA
Size (WxDxH):	483x125x44 mm
Weight:	2.5 Kg

Operating temp. range:	0 ÷ 45°C
Safety:	according to EN 60065
EMC:	according to EN 55103-1 and EN 55103-2

WS300/2

WS300/2 is a multistandard high resolution RGBHsVs distrirbution amplifier with one input and two outputs.

- Two buffered BNC outputs
- Compensation up to 100 mt. of RG59 B/U cable
- H sync tv compatible (0.3÷2 vpp neg 75 Ω)
- Suitable for CV and Y Pb Pr (0.1° phase diff.)
- Bandwidth 400 MHz

RGBHV   **Y Pb Pr**

Technical specifications

RGB signals:	analog, on 75 Ω nom.
Coupling:	DC
Crosstalk (worst case):	>30 dB at 40 mhz
Diff. amplitude:	0.1%
Diff. phase:	0.1°
H Syncronism (Comp.):	Horizontal TTL pos/neg, Composite TTL, TV neg. level -0,3 to -2 Vpp onto 75 Ω
Input H impedance:	automatic, high Z for TTL, 75 Ω for TV neg. level
Output H impedance:	fixed 75 Ω
V Syncronism:	TTL pos./neg.
Input/output connectors:	BNC
Bandwidth:	400 Mhz
Driving capability:	>100 mt. RG59 B/U cable (BOOST ON)
Main input:	230 Vac 50 Hz (with AC adapter ADM001)
Power consumption:	5 VA
Size (WxDxH):	220x100x55mm
Weight:	0.6 Kg
Operating temp. range:	0÷45°C
Safety:	according to EN 60065
EMC:	according to EN 55013 and EN 55020

DVD — Y Pb Pr / RGBHV → **WS300/2** IN — OUT → **Plasma HD**, **VP**
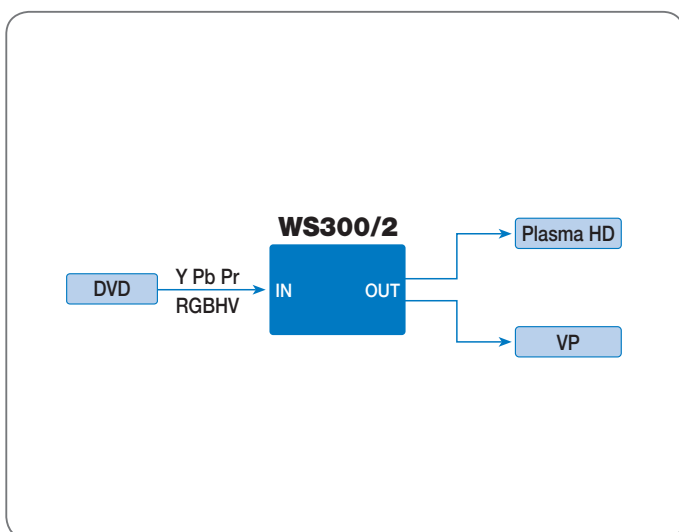
DISTRIBUTORS 3

SD124

SD124 is a high performance SD-SDI signal distributor. It presents 2 separated inputs each of them generates 4 outputs 75 Ω source terminated. The distributor contains the necessary circuitry to compensate and reclocking an incoming SD-SDI signal up to 200 mt of coax cable.

- SD-SDI presence indication
- Autosensing circuit for fault monitoring
- Able to compensate 200 mt of RG59 B/U cable
- Regenerated and reclocked outputs
- 19" 1 RU compatible by ADR1UM1 adapter

SD-SDI

3

DISTRIBUTORS
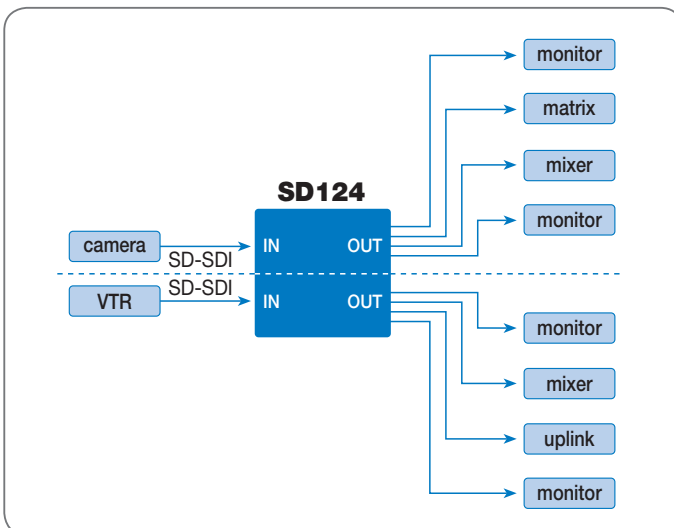
Technical specifications

Inputs:	2, separated, SD-SDI, ITU-R 601
Input type:	AC coupled
Automatic compensation:	up to 200 mt RG59 B/U cable
Outputs:	4, each input, reclocked
Jitter:	<0,2 UI
Out rise/fall time:	780 psec at 270Mbit/sec (measured from 20% to 80%)
Main input:	5 VDC (with AC adapter ADM030)
Power consumption:	max 5 VA
Operating temp. range:	0÷45°
Safety:	according to EN60065
EMC:	according to EN55103-1 and 55103-2

DA224+

DUAL 1x4 BALANCED AUDIO DISTRIBUTION AMPLIFIER

DA224+ is a distribution amplifier for audio signals capable to distribute the incoming stereo signal towards 4 destinations. May be employed as amplifier for small audio signals.

- Differential inputs
- Outputs electronically balanced
- Front panel fine level adj. (±6 dB)
- Gain of 0, +10, +24 dB rear dip-switches selectable
- 600 Ω output impedance
- 19" 1 RU compatible by ADR1UM1 adapter
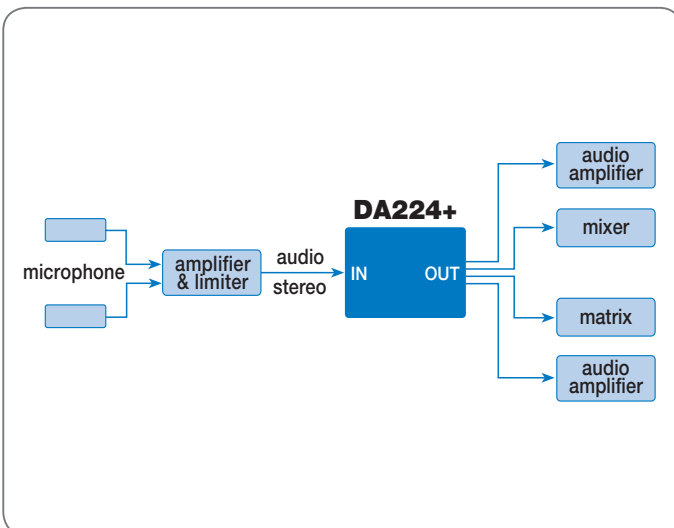
Technical specifications

Input:	Differential, AC coupled
Input impedance:	44 KΩ
Input level:	+21dBm Max
CMRR:	36 dB at 16 KHz
Output impedance:	600 Ω
Output gain:	Ω 6 dB (fine adjust)
	0,+10,+24 dB (jumper selectable)
Frequency response:	±0.10 dB from 7 Hz to 70 KHz
	±0.50 dB up to 160 KHz
	±3 dB up to 350 KHz
Harmonic distorsion:	<0.01% @ 21 dBm
Hum & noise:	-78 dB unweighted
Main input (with AC adapter ADM001):	230 Vac 50 Hz
Power consumption:	3.5 VA
Size (WxDxH):	206x90x44 mm
Weight:	0.6 Kg
Operating temp. range:	0÷45°C
Safety:	According to EN 60065
EMC:	According to EN 55103-1 and EN 55103-2

INBOX/2 PLUS

GRAPHIC SPLITTER

VGA

INBOX/2 PLUS is a high quality graphic splitter that receives the graphic signals from a computer and provides two powered outpus towards two visualization devices.
Output 1 is suited to connect the local monitor and permits data exchange between graphic card and monitor.
INBOX/2 PLUS provides a pre-emphasis circuitry that permits the driving of remote devices through 30 mt VGA cable.
ID bit presetting on HDD input connector is provided as well to activate the graphic card of some notebook.

- Two buffered outputs
- Useable for Y Pb Pr
- ID BIT
- Bandwidth 300 MHz
- 19" 1 RU compatible by ADR1UM1 adapter
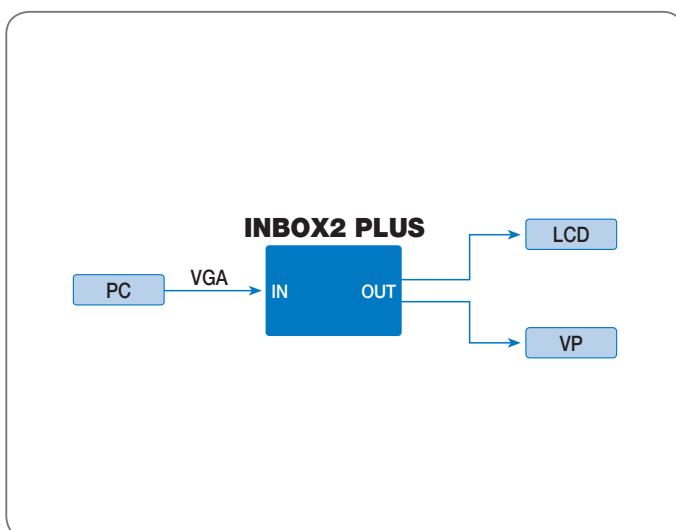
Technical specifications

RGB Signal:	positive, analog, 700 mVpp on 75 Ω nom.
Coupling:	DC
Syhchronism:	Hs and Vs TTL pos/neg
Input:	n°1 HDD 15 p.f.
Output:	n°2 HDD 15 p.f.
Bandwidth:	300 MHz
Driving capability:	30 mt VGA cable
Main input:	230 Vac 50 Hz (with AC adapter ADM001)
Power consumption:	5 VA
Size (WxDxH):	200x100x44
Weight:	0,5 Kg
Operating temp.range:	0÷45°
Safety:	according to EN60065
EMC:	according to EN55103-1 and EN55103-2

INBOX/4 PLUS

HIGH RESOLUTION GRAPHIC DISTRIBUTOR

INBOX/4 PLUS is a high resolution graphic distributor that receives the graphic signals from a computer and provides four powered outpus towards four visualization devices.
Output 1 is suited to connect the local monitor and permits data exchange between graphic card and monitor.
INBOX/4 PLUS provides a booster circuitry that, if enabled, permits the driving of remote devices up to 50mt VGA cable.
ID bit presetting on HDD input connector is provided as well to activate the graphic card of some notebook.

- Four buffered outputs
- Compensation up to 50 mt of VGA cable with boost on
- Useable for Y Pb Pr
- ID BIT
- Bandwidth 400 MHz
- 19" 1 RU compatible by ADR1UM1 adapter

VGA
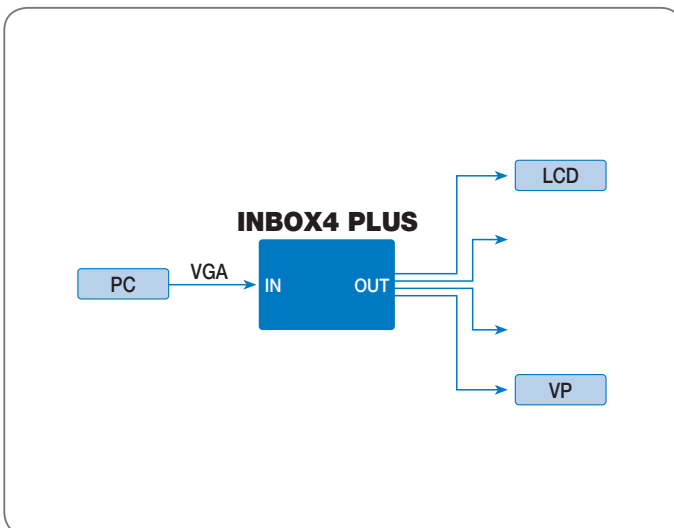
Technical specifications

RGB Signal:	analog, 700 mVpp on 75 Ω nom.
Coupling:	DC
Syhchronism:	Hs and Vs TTL pos/neg
Input:	n. 1 HDD 15 p.f.
Output:	n. 4 HDD 15 p.f.
Bandwidth:	400 MHz
Driving capability:	up to 50 mt VGA cable (Boost ON)
Main input:	230 Vac 50 Hz (with AC adapter ADM001)
Power consumption:	5 VA
Size (WxDxH):	200x100x44
Weight:	0,5 Kg
Operating temp.range:	0÷45°
Safety:	according to EN60065
EMC:	according to EN55103-1 and EN55103-2

INBOX4 PLUS

PC — VGA — IN [OUT] → LCD
→
→
→ VP

ELPRO Video Labs s.r.l. - Tel. +39 0117701583 - Product catalogue 2010 - www.elprovideolabs.com

INBOX/8 PLUS

HIGH RESOLUTION GRAPHIC DISTRIBUTOR

INBOX/8 PLUS is a computer and workstation graphic signals distributor with one input and eight outputs.

Its excellent features with a careful design make this unit very useful for heavy and continuous use.

Show rooms, airports, museum, stores and hotels are the main fields of application.

INBOX/8 PLUS provides a booster circuitry that, if enabled, permits the driving of remote devices up to 50 mt of VGA cable.

ID bit presetting on HDD input connector is provided as well to activate the graphic card of some notebook.

VGA

- Eight buffered outputs
- Compensation up to 50 mt VGA cable with BOOST ON
- Usable for Y Pb Pr
- ID BIT
- Linkable in cascade
- Bandwidth 400 MHz
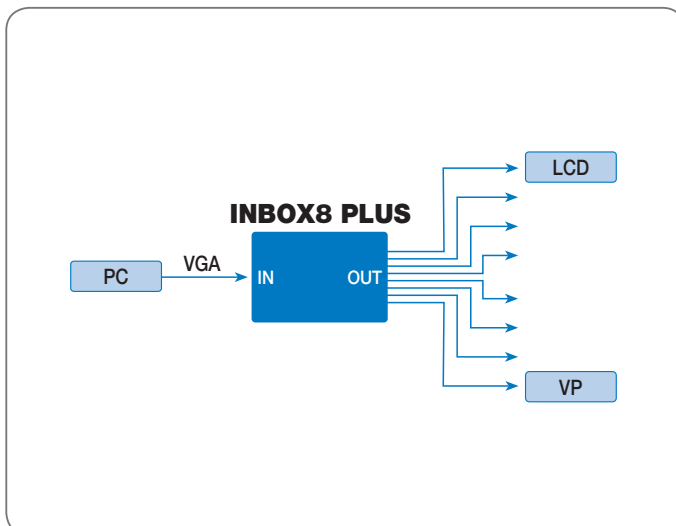
Technical specifications

RGB Signals:	analog, 700 mVpp on 75 Ω nom.
Coupling:	DC
Synchronism:	Hs and Vs TTL pos/neg
Input connector:	n. 1 HDD 15 p.f.
Out connectors:	n. 8 HDD 15 p.f.
Bandwidth:	400 MHz
Driving capability:	up to 50 mt. VGA cable (Boost 1÷4 and 5÷8 ON)
Main input:	230 Vac 50 Hz (115 Vac 60 Hz on request)
Power consumption:	6 VA
Size (WxDxH):	483x140x44 mm
Weight:	2 Kg
Operating temp. range:	0÷45°C
Safety:	according to EN 60065
EMC:	according to EN 55103-1 and EN 55103-2

INBOX8 PLUS

PC → VGA → IN   OUT → LCD

→ VP

elpro

A.4

SWITCHERS AND MATRIX SWITCHERS

TZVA05+

TZVA05 is a mechanical video and audio switcher with 5 inputs.

Reliable and versatile it is suited for professional and multimedial use. It can be fitted in a 19" structure.

- 300 MHz bandwidth
- Integrated keyboard
- Remote selection by dry contacts
- Remote selection by RS232
- Autosequencing and mute functions
- IR Remote Control (option)
- 19" 1 RU compatible by ADR1UM1 adapter

CV	UNBAL	BAL AUD	RS232	CONTACT	*OPTION* IR
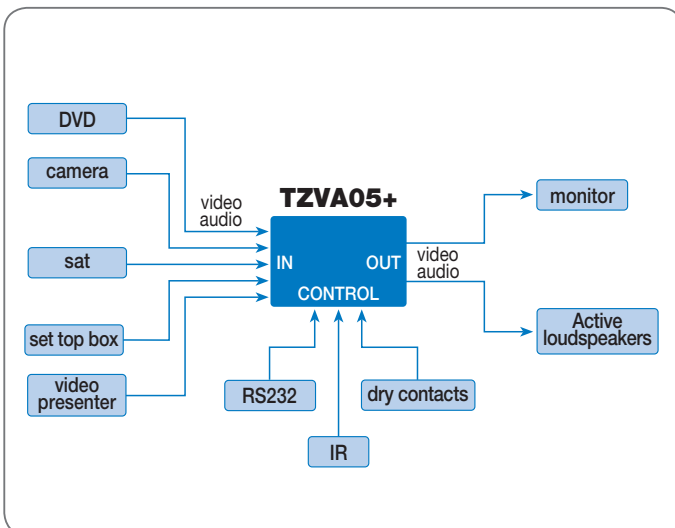
Technical specifications

Video inputs:	5 with BNC 75 Ω term.
Video output:	1 with BNC.
Bandwidht:	300 MHz
Switching mode:	dry contact, break-before-make
Audio inputs:	unbalanced stereo with RCA socket
Audio output:	balanced stereo, +6dB gain, with Phoenix scewtype removable
Remote control:	dry contacts, IR (option) RS232 on Remote connector
Auxiliary function:	autoseq., mute
Main input:	230 Vac 50 Hz (with AC adapter ADM001)
Power consumption:	5 VA
Size (WxDxH):	200x100x44 mm
Weight:	0,5 Kg
Operating temp. range:	0÷45°C
Safety:	according to EN 60065
EMC:	according to EN 55013 and EN 55020

SWITCHERS AND MATRIX SWITCHERS 4

TZVA10

TZVA10 is a mechanical video and audio switchers with 10 inputs.

Reliable and versatile it is suited for professional and multimedial use.

- ■ 300 MHz bandwidth
- ■ Integrated keyboard
- ■ Remote selection by dry contacts
- ■ Remote selection by RS232
- ■ Autosequencing and mute functions

CV	UNBAL	BAL AUD	RS232	CONTACT	OPTION IR
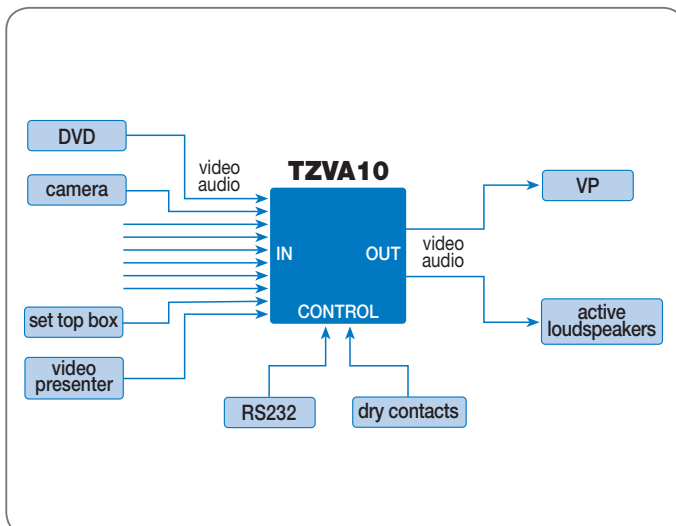
Technical specifications

Video inputs:	10 with BNC 75 Ω term
Video output:	1 with BNC.
Bandwidht:	300 MHz
Switching mode:	dry contact, break-before-make
Audio inputs/out:	stereo with RCA socket
Remote control:	dry contacts,
	RS232 on Remote connector
Auxiliary function:	autoseq., mute
Main input:	230 Vac 50 Hz
	(with AC adapter ADM001)
Power consumption:	5 VA
Size (WxDxH):	220x105x120 mm
Weight:	1 Kg
Operating temp. range:	0÷45°C
Safety:	according to EN 60065
EMC:	according to EN 55013
	and EN 55020

4

SWITCHERS AND MATRIX SWITCHERS
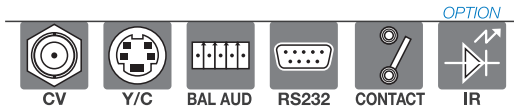
TZY61

The TZY61 unit is a switcher for Y/C and CV signals plus balanced stereo audio. It is intended for professional video environments, for presentation and also for high-level domestic applications.

The main characteristic of the TZY61 is its versatility. It can be controlled using its keypad, dry contacts, via RS232 and using an IR remote control. Up to 3 units can be connected in series to set up a 16x1 switcher.

CV	Y/C	BAL AUD	RS232	CONTACT	*OPTION* IR

- Suitable as 6x1 CV
- Frame interval switching (Y1 ref.)
- Balanced stereo audio
- Connectable in cascade
- Autosequencing and mute functions
- Remote control with dry contacts
- Tally
- RS232
- Twin Y/C output
- IR remote control (option)

Technical specifications

VIDEO	
Inputs:	Y/C or CV (Y), with BNC
Input coupling:	AC coupled
Input level:	1 Vpp, 75 ½ terminated
Inputs Ret. Loss:	28 dB at 5 MHz
Output:	twin Y/C and S-video
Switching time:	Vertical interval (Ref. Input Y1)
Bandwidth:	-0,1 dB at 5 MHz; -3 dB at 27 MHz
Crosstalk Y/C:	> than 75 dB at 5 MHz
Hum & noise:	-80 dB unweighted
Remote control:	IR, dry contacts, RS232
Cascade capablity:	up to 3 units (16x1 switcher)
Auxiliary function:	autoseq. mute

AUDIO	
Inputs/output type:	balanced with Phoenix screwtype
Type of switching:	AFV (Audio follows Video)
Input Coupling:	AC, differential
Input Impedance:	44 KΩ diff.; 22 KΩ single ended
Input level:	+11 dBm Max.
Output impedance:	600 Ω
Frequency response:	-0,1 dB from 10 Hz to 500 KHz
Crosstalk:	62 dB at 5 KHz
Distortion:	<0.1% at 0 dBm with 10 K load
Hum & noise:	-72 dBm
Main input:	230 Vac 50 Hz (115 Vac 60Hz on request)
Power consumption:	4.5 VA
Size (WxDxH):	483x210x44 mm
Weight:	2.3 Kg
Operating temp. range:	0÷45°C
Safety:	according to EN 60065
EMC:	according to EN 55103-1 and EN 55103-2

TZY61

DVD
camera
set top box
video presenter

IN OUT
CONTROL

video audio

VP

active loudspeakers

RS232 IR
dry contacts
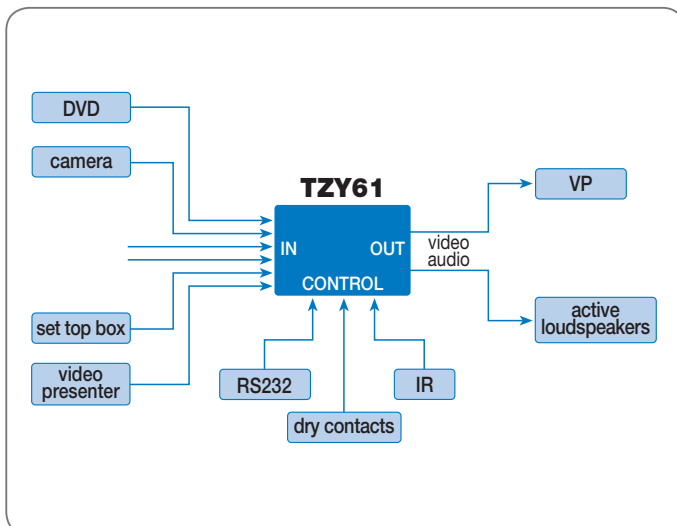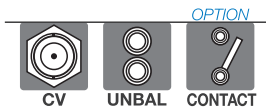
TZ04

TZ04 is a 4x4 video and stereo audio AFV matrix switcher. It's easy to use and very versatile, useful in professional and institutional video environment.

- 4x4 Video and stereo audio matrix
- Composite Video and unbalanced Audio signals
- Inputs and Outputs selectable by dedicated pushbuttons
- Status indication by 4x4 leds matrix
- Default configuration setting
- Dry contacts remote control (optional)

OPTION

CV   **UNBAL**   **CONTACT**

Technical specifications

VIDEO	
Input type:	composite AC coupled
Input ret. loss:	48 dB at 5 MHz
Output ret. loss:	27 dB at 5 MHz
Frequency response:	0.3 dB at 5 MHz
	-3 dB at 27 MHz
Differential gain:	1%
Differential phase:	1°
Crosstalk (two section):	40 dB at 5 MHz

AUDIO	
Input/output type:	unbalanced with RCA socket
Input impedance:	10 KΩ
Input/output level:	11 dBm max
Frequency response:	-0.5 dB from
	20Hz to 500KHz
Harmonic distortion:	0.1% from
	20Hz to 20khz, 0 dBm
Crosstalk (two adj. ch.):	60 dB at 16 KHz
Hum & Noise:	-84 dBm

Main input:	230 Vac 50 Hz
Power consumption:	13 VA
Size (WxDxH):	483x140x44 mm
Weight:	2.5 Kg

Operating temp. range:	0÷45°C
Safety:	according to EN 60065
EMC:	according to EN 55013
	and EN 55020

camera

DVD

set top box

VTR

video audio

TZ04

IN   OUT

CONTROL

video audio

VP

mixer

plasma

dry contacts
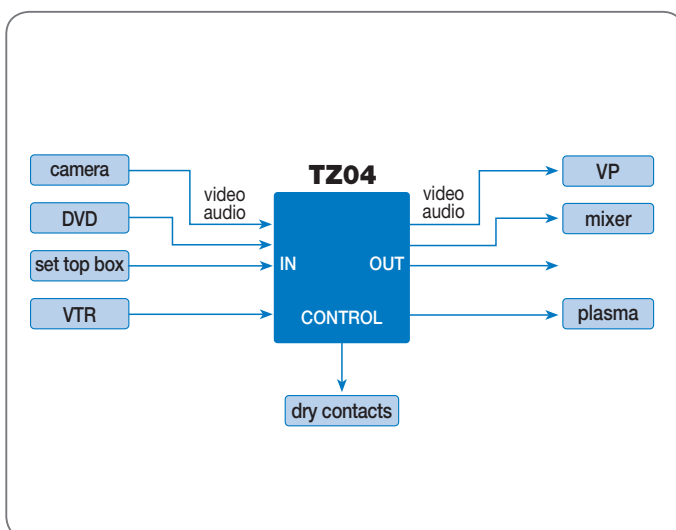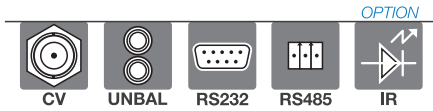
TZ05

The TZ05 unit is a two-level video and stereo audio matrix with fixed preview outputs.

It can be controlled by a computer with RS232 serial interface, by keypad and IR control.

The TZ05 is a low cost, easy to use, compact matrix switcher, widely used in professional and institutional environments

- Switching on the vertical interval
- Fixed preview output
- Only VIDEO, only AUDIO, AFV
- Customizable default configuration
- 4 presets that can be recalled via keypad,
- 8 presets from RS232
- IR remote control (optional)

| CV | UNBAL | RS232 | RS485 | IR (OPTION) |

Technical specifications

VIDEO

Input type:	composite AC coupled
Input ret.loss:	40 dB at 5MHz
Output ret.loss:	40 dB at 5MHz
Frequency response:	-0.1 dB at 10 MHz;
	-1 dB at 60 MHz;
	-3 dB at 170 MHz
Differential gain:	±0.3%
Differential phase:	+0.2°
Crosstalk (Worst case):	better than 50 dB at 5MHz
Hum & noise:	-70 dB unweighted

AUDIO

Input/output type:	unbalanced with RCA socket
Input coupling:	AC
Input impedance:	13 KΩ
Input/output level:	+12 dBm max
Output impedance:	170 Ω
Frequency response:	-1 dB from 3Hz to 600 KHz
Harmonic distortion:	<0.02% from 20 Hz to 20 KHz at
	+6 dBm 10KΩ
Crosstalk (Worst case):	60dB at 20 KHz
Hum & noise:	-80 dBm unweighted
Remote control:	IR, RS232, RS485
Mains input:	230 Vac 50 Hz
	(115Vac 60Hz on request)
Power consumption:	8 VA
Size (WxDxH):	483x150x44
Weight:	3.1 Kg
Operating temp.range:	0÷45°C
Safety:	according to EN60065
EMC:	according to EN55103-1 and-2

Diagram

camera → (video audio) → **TZ05** IN → OUT (video audio) → VP, mixer, plasma, monitor
DVD →
set top box →
VTR →
CONTROL → Preview → Active loudspeakers
RS232, IR

TZ08

CV   **BAL AUD**   **RS232**

The TZ08 unit is a two-level 8x8 video and stereo balanced audio matrix.
It can be controlled by a computer with RS232 serial interface.

- Vertical interval switching
- Only VIDEO, only AUDIO, AFV
- 8 presets that can be recalled from keyb and RS232
- Saves last configuration command
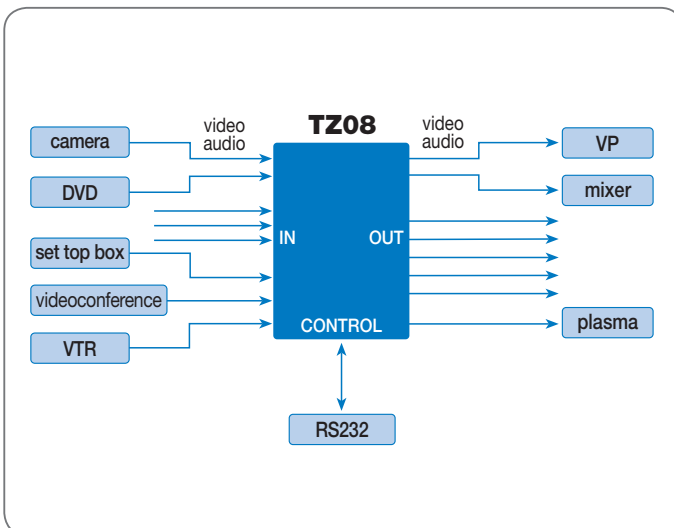
Technical specifications

VIDEO	
Input type:	AC coupled
Input ret.loss:	40 dB at 5MHz
Output ret.loss:	40 dB at 5MHz
Frequency response:	-0.1 dB at 5 MHz;
	-1 dB at 30MHz;
	-3 dB at 80MHz
Differential gain:	±0.3%
Differential phase:	±0.2°
Crosstalk (Worst case):	better than 50 dB at 5MHz
Hum & noise:	-70 dB unweighted

AUDIO	
Input type:	differential AC coupled with Phoenix screwtype removable
Input impedance:	22 KΩ single ended, 44 KΩ differential
Input level:	+16 dBm max (balanced)
Output impedance:	600 Ω
Frequency response:	-0.5 dB from 3 Hz to 600 KHz
Distortion:	<0.02% from 20 Hz to 20 KHz at +6 dBm 10 KΩ Load
Crosstalk (Worst case):	70 dB at 20 KHz
Hum & noise:	-80 dBm unweighted
Remote control:	RS232

Main input:	230Vac /115Vac (selectable)
Power consumption:	10 VA
Size (WxDxH):	483x130x88 mm
Weight:	3 Kg

Operating temp. range:	0÷45°C
Safety:	according to EN 60065
EMC:	according to EN 55103-1 and EN 55103-2

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SWITCHERS AND MATRIX SWITCHERS
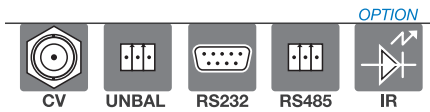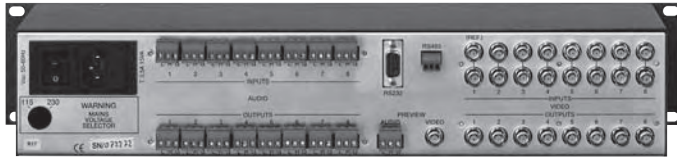
TZ09

The TZ09 unit is a two-level 8x8 video and stereo audio matrix with fixed preview outputs.
It is equipped with a built-in loudspeaker and a headphones output for audio monitoring.
It can be controlled by a computer via an RS232 serial interface.

- Video inputs with BNC in loop
- Vertical interval switching
- Fixed preview output
- Loudspeaker for audio monitoring
- Only VIDEO, only AUDIO, AFV
- 8 presets that can be recalled via RS232 and keyboard
- IR remote control (optional)

OPTION

| CV | UNBAL | RS232 | RS485 | IR |

Technical specifications

VIDEO

Input type:	AC coupled
Input ret.loss:	40 dB at 5 MHz
Output ret.loss:	40 dB at 5 MHz
Frequency response:	-0.1 dB at 10 MHz;
	-1 dB at 60 MHz;
	-3 dB at 170 MHz;
	-3 dB One to All, worst case,
	150 MHz
Differential gain:	±0.3%
Differential phase:	±0.2°
Crosstalk (Worst case):	better than 50 dB at 5 MHz
Hum & noise:	-70 dB unweighted

AUDIO

Input/output type:	unbalanced with
	Phoenix screwtype
Input coupling:	AC
Input impedance:	10 KΩ
Input/output level:	11 dBm max (600 1⁄2)
Output impedance:	150 Ω
Frequency response:	-0.5 dB from 3 Hz to 600 KHz
Harmonic distortion:	<0.3% from 20 Hz to 20 KHz
	at +6 dBm
Crosstalk (Worst case):	70 dB at 20 KHz
Hum & noise:	-75 dBm unweighted
Output phase:	180°
Remote control:	IR, RS232, RS485
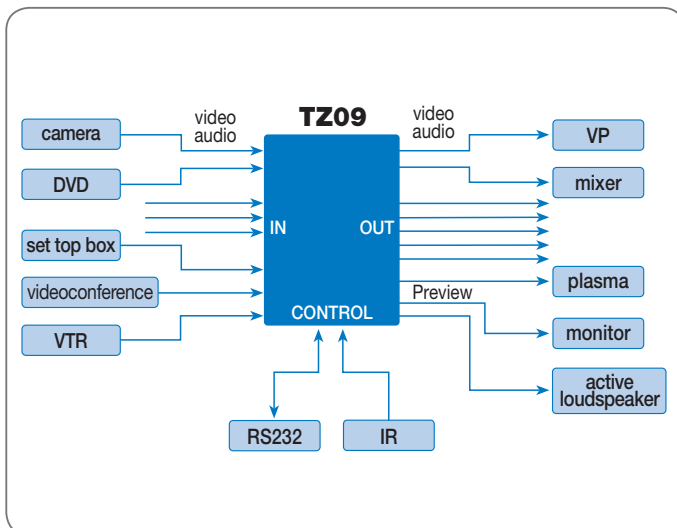
Main input:	230 Vac /115 Vac (selectable)
Power consumption:	10 VA
Size (WxDxH):	483x130x88 mm
Weight:	3.1 Kg

Operating temp. range:	0÷45°C
Safety:	according to EN 60065
EMC:	according to EN 55103-1
	and EN 55103-2

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SWITCHERS AND MATRIX SWITCHERS 4

TZX08

The TZX08 unit is a matrix designed to switch Y/C, AUDIO and IR (Infrared from remote control) signals. It features 8 inputs and 7 outputs (zone). The possibility of switching IR signals permits decentralized control of DVD player, satellite decoders and VCR systems located in the machine room. The TZX08 is also equipped with 6 common IR outputs useful for controlling up to 6 machines from all areas at the same time.

- Fixed preview output for source monitoring
- Built-in loudspeaker for audio monitoring
- Separate switching of VIDEO, AUDIO and IR.
- Audio level adjustment for each output (ZONES)
- 8 recallable presetting
- IR remote control

Y/C	CV	UNBAL	RS232	IR

Applications

Typical system using the TZX08.
3 types of switching are permitted, video, VCA audio and IR, and all 3 can be performed concurrently or only one or two leaving the others unchanged.
- Each audio output is equipped with VCA to permit adjustment of the sound level for each zone.
- The IR connection follows the opposite direction to normal video and audio switching; so the IR receivers that are the signal sources will be positioned where the video and audio destinations are positioned.
- The IR emitters, which are the so-called destinations, will be positioned where the video and audio sources are present.
- No conflit when from each zones, through the TZX08 IR control, the user wants to choice the source and adjust the volume. In this case each zone operates only on itself.

TZX08

IR Transmitter
TV
SAT
DVD
VHS
IR Receivers
IN (Y/C)   OUT (Y/C)
CONTROL
RS232   IR
8   7
ZONE 1
IR receiver   IR control
Active loudspeaker
Plasma
2
3
4
5
6
ZONE 7
preview
monitor
Active loudspeaker

Technical specifications

VIDEO Y/C

Input type:	AC coupled
Frequency response:	-0.3 dB at 5 MHz;
	-1 dB at 10 MHz;
	-3 dB at 20 MHz
Crosstalk (Worst case):	better than 50 dB at 5MHz
Hum & noise:	-70 dB unweighted

IR

Input type:	AC or TTL, internally selectable
Input impedance:	Low or high, internally selectable
Output type:	Low impedance, able to drive IR leds
Remote control:	IR, RS232

AUDIO

Input/output type:	unbalanced with RCA socket
Input coupling:	AC
Input impedance:	10KΩ
Input/output level:	+11 dBm max (600 Ω)
Output impedance:	150Ω
Frequency response:	-0.5 dB from 3Hz to 600 KHz
Distortion:	<0.3% from 20 Hz to 20 KHz at +6 dBm
VCA on outputs:	from MUTE to 99% (33 steps)
Crosstalk (Worst case):	50 dB at 20 KHz

Mains input:	230 Vca / 115 Vac (selectable)
Power consumption:	10 VA
Size (WxDxH):	440x220x132,5
Weight:	6 Kg

Hum & noise:	-75 dBm unweighted
Operating temp.range:	0÷45°C
Safety:	according to EN60065
EMC:	according to EN55103-1 and-2
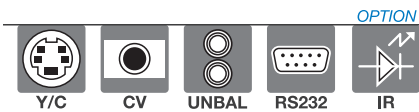
TZY08

The TZY08 unit is a two-level 8x7 Y/C signals and stereo audio matrix with fixed preview outputs.
It can be controlled by keyb, and a computer via an RS232 serial interface and by infrared control (optional).
It is equipped with a built-in loudspeaker and a headphones output for audio monitoring.

- Vertical interval switching
- Fixed preview output
- Loudspeaker for audio monitoring
- Only Y/C, only AUDIO, AFV
- 8 preset thet can be recalled from keyb and RS232
- IR remote control (optional)

Y/C **CV** **UNBAL** **RS232** *OPTION* **IR**

Technical specifications

VIDEO Y/C	
Input type:	AC coupled
Frequency response:	-0.3 dB at 5 MHz;
	-1 dB at 10 MHz;
	-3 dB at 20 MHz
Crosstalk (Worst case):	better than 50 dB at 5MHz
Hum & noise:	-70 dB unweighted

AUDIO	
Input/output type:	unbalanced with RCA socket
Input coupling:	AC
Input impedance:	10 KΩ
Input/output level:	+11 dBm max (600 Ω)
Output impedance:	150 Ω
Frequency response:	-0.5 dB from 3 Hz to 600 KHz
Distortion:	<0.05% from 20 Hz to 20 KHz
	at +6 dBm
Crosstalk (Worst case):	50 dB at 20 KHz
Hum & noise:	-75 dBm unweighted
Remote control:	IR, RS232
Main input:	230 Vac / 115 Vac (selectable)
Power consumption:	15 VA
Size (WxDxH):	440x220x88
Weight:	4.3 Kg
Operating temp.range:	0÷45°C
Safety:	according to EN60065
EMC:	according to EN55103-1 and-2

TZY08 diagram

camera → video audio → **TZY08** → video audio → VP
DVD → → mixer
set top box → IN OUT →
videoconference → → plasma
VTR → CONTROL → Preview → monitor
→ Active loudspeakers
RS232   IR
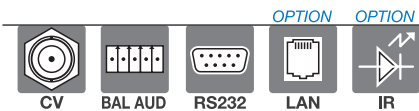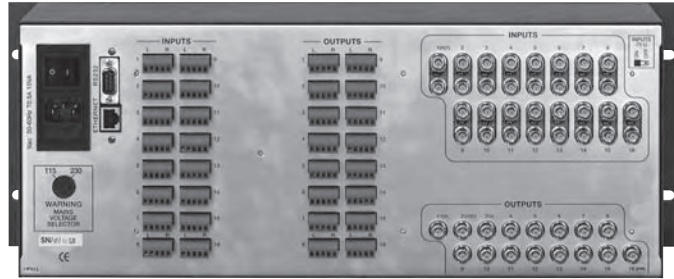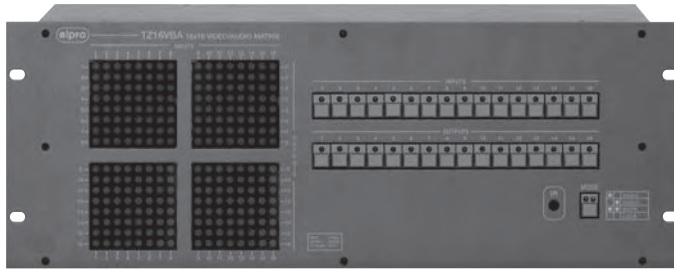
TZ16VBA

The TZ16VBA unit is a two-level 16x16 video and audio balanced stereo matrix.
It can be programmed to operate with Y/C (8x8), Y Cb Cr (5x5) and RGBS (4x4) signals.
Output 16 can operate as preview.
It can be controlled by a computer with RS232 serial interface and optional LAN.

- Video inputs with BNC in loop
- Switching in the frame interval
- Keypad-programmable preview output
- Only VIDEO, only AUDIO, AFV
- Save last configuration command
- 8 presets that can be recalled from keypad and RS232
- IR remote control (optional)
- LAN control (optional)

CV	BAL AUD	RS232	OPTION LAN	OPTION IR

Technical specifications

VIDEO	
Input type:	AC coupled
Input ret. loss:	40 dB at 5 MHz
Output ret. loss:	>40 dB at 5 MHz
Frequency response:	-0.1 dB at 10 MHz; -1dB at 60 MHz; -3 dB at 170 MHz -3 dB One to All, worst case, 150 MHz
Differential gain:	±0.3%
Differential phase:	±0.2°
Crosstalk (Worst case):	better than 80 dB at 5 MHz
Hum & noise:	-90 dB unweighted

AUDIO	
Input type:	differential with Phoenix screwtype removable
Input coupling:	AC
Input impedance:	22 KΩ single ended, 44 KΩ differential
Input/output level:	+16 dBm max (balanced)
Output impedance:	600 Ω
Frequency response:	-1 dB from 3 Hz to 600 KHz
Distortion:	<0.02% from 20 Hz to 20 KHz at +6 dBm 10 KW Load
Crosstalk (Worst case):	60 dB at 20 KHz
Hum & noise:	-80 dBm unweighted
Remote control:	IR, RS232, LAN
Main input:	230 Vac / 115 Vac (selectable)
Power consumption:	10 VA
Size (WxDxH):	483x130x176
Weight:	6 Kg
Operating temp. range:	0÷45°C
Safety:	according to EN 60065
EMC:	according to EN 55103-1 and EN 55103-2

TZ32V

The TZ32V unit is an extremely flexible 32x32 video matrix. Programmable directly from the customer.

it is programmable as a matrix in the configurations: CVBS (32x32), Y/C (16x16), YCbCr (10x10), RGBS (8x8).

The TZ32V could be uniform in two lists separate matrices: 2xCVBS (16x16) or 1xCVBS (16x16) + 1xY/C (8x8) or 1xYCbCr (5x5) + 1xY/C (8x8) etc.

It can work in single mode or as a master when connected to the TZ32A audio matrix.

The TZ32V can be commanded through the integrated keyboard, from computer with RS232 or RS485 interface and IR control.

- Video inputs wth BNC in loop
- Video only, Audio only, AFV (if connected to TZ32A)
- Switching in the frame interval
- Keypad programmable preview output
- CV or Y/C or Y Cb Cr or RGBS
- 12 presets can be recalled
- Mapping capability
- IR remote control (optional)

OPTION

| CV | RS232 | RS485 | IR |

Technical specifications

Input type:	AC coupled
Input ret.loss:	>40 dB at 5MHz
Output ret.loss:	>40 dB at 5MHz
Frequency response:	-0.1 dB at 10 MHz;
	-1 dB at 60 MHz;
	-3 dB at 170 MHz
	-3 dB One All,
	worst case, 150 MHz
Differential gain:	±0.3%
Differential phase:	±0.2°
Crosstalk (Worst case):	better than 40 dB at 5MHz
Hum & noise:	-80 dB unweighted
Remote control:	IR, RS232, RS485
	linkable with TZ32A
Main input:	230 Vac / 115 Vac (selectable)
Power consumption:	10VA
Size (WxDxH):	483x130x176
Weight:	6 Kg
Operating temp.range:	0÷45°
Safety:	according to EN60065
EMC:	according to EN55103-1 and-2

camera
DVD
VTR
set top box
videoconference

TZ32V

video 32 → IN   OUT → video 32

VP
mixer
plasma

CONTROL

RS232   IR

elpro

SWITCHERS AND MATRIX SWITCHERS **4**

TZ32A

The TZ32A unit is a 32x32 audio stereo matrix with balanced inputs and outputs.

It can work in single mode or combined with the TZ32V video.

The TZ32A can be controlled through the integrated keyboard, from computer with RS232 or RS485 interface and IR control.

Moreover it can be driven via link when connected to the TZ32V video matrix .

- Balanced audio
- Inputs / outputs with Phoenix screwtype, removable
- Keypad programmable preview output
- 12 presets can be recalled
- Mapping capability
- IR remote control (optional)
- Linkable to TZ32V

| BAL AUD | RS232 | RS485 | *OPTION* IR |

4

SWITCHERS AND MATRIX SWITCHERS
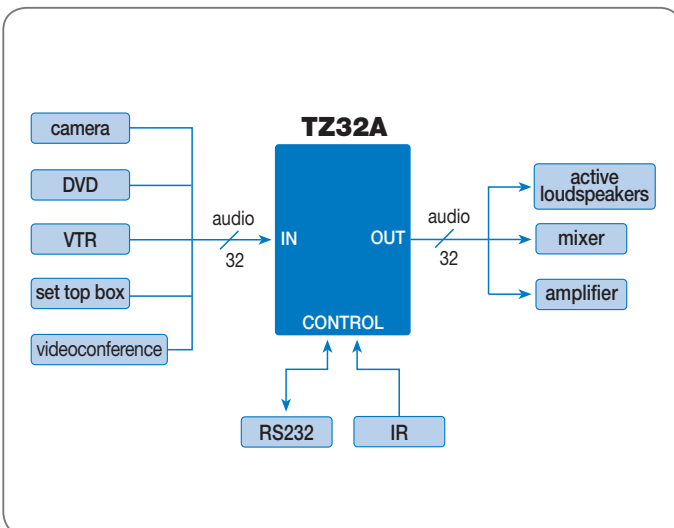
Technical specifications

Input/output type:	Differential, with Phoenix Screwtype, removable
Input coupling:	AC
Input impedance:	13 KΩ
Input level:	+18 dBm max (balanced)
Output impedance:	600 Ω
Frequency response:	-1 dB from 3 Hz to 600 KHz
Distortion:	<0.02% from 20 Hz to 20 KHz at +6 dBm 10 KΩ
Crosstalk (Worst case):	60 dB at 20 KHz
Hum & noise:	-80 dBm unweighted
Remote control:	IR, RS232, RS485 linkable with TZ32V
Main input:	230 Vac / 115 Vac (selectable)
Power consumption:	10 VA
Size (WxDxH):	483x130x176
Weight:	6 Kg
Operating temp.range:	0÷45°
Safety:	according to EN60065
EMC:	according to EN55103-1 and-2

SDZ16

SDZ16 is a 16x16 SD digital matrix switcher with associated analog audio. It's ideal for switching SD-SDI signals in video studios, production center and non linear editing suites. Each SD input is provided with an automatic compensation and each output is reclocked. Audio is inputs / outputs balanced type. The matrix switcher can be controlled by integrated keyboard and by computer through RS232, LAN and panel remote CNS1000. SDZ16 performs a synchronous switching with an analog external reference with the possibility to select the switching line (2÷15).

- Automatic rate selection from 143 to 360 Mb/s
- External switching reference
- Switching line selectable
- Control by keyboard, RS232 or LAN
- 16 recallable presets
- Balanced audio combined
- Dual Power Supply (SDZ16 Dual PS)

SD-SDI   REF   BAL AUD   LAN   RS232

Technical specifications

VIDEO SD-SDI

Standard:	From 143 to 360 Mb/s, SMPTE259M, 8 or 10 bits
Input coupling:	AC, 75 Ω
Inputs:	16, with equalizer up to 200 mt RG59 B/U
Input ret. Loss:	>18 dB at 270MHz
Switching:	on ext. ref. line 6 default, selectable from 2 to 15
Outputs:	16, with reclocker
Ext. synch. Reference:	Analog, black burst with Loop

AUDIO

Input/output type:	Differential with Phoenix screwtype removable
Input type:	AC
Input impedance:	44 KΩ differential 22 KΩ single ended
Input level:	21 dBm max (balanced)
Output impedance:	600 Ω
Frequency response:	-0.1 dB from 20Hz to 20 KHz
Distortion:	<0.2% from 20Hz to 20 KHz at +6 dBm
Crosstalk:	55 dB at 16 KHz (Worst case)
Hum & Noise:	-63 dBm unweighted (Worst case)
Remote control:	RS232, LAN

Main Input:	230 Vac / 115 Vac (selectable)
Power consumption:	20 VA
Dimensioni (WxDxH):	483x220x144
Weight:	4.9 Kg

Operating temp.range:	0÷45°
Safety:	according to EN60065
EMC:	according to EN55103-1 and 55103-2
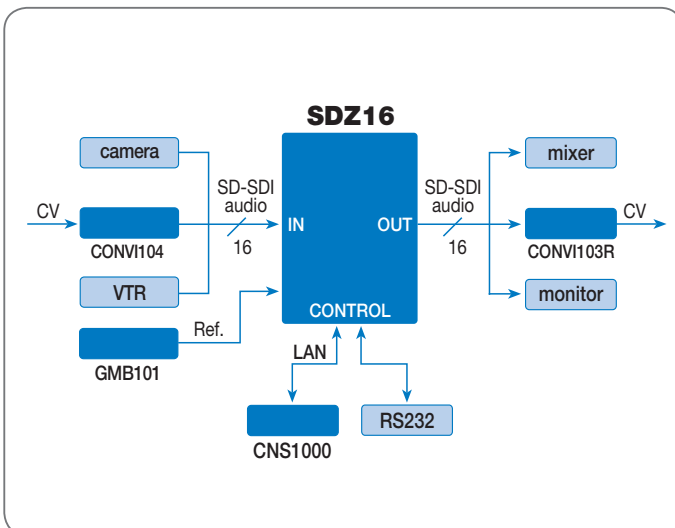
SDZHD08

SDZHD08 is a 8x8 HD-SDI and SD-SDI digital matrix switcher with associated analog audio. It's ideal for switching HD/SD-SDI signals in video studios, production center, and non linear editing suites. Each input is provided with an automatic compensation and each output is reclocked. Audio is inputs/outputs balanced type. The matrix switcher can be controlled by integrated keyboard and by computer through RS232 or LAN. SDZHD08 performs a synchronous switching with an analog external reference (bi-level or tri-level sync) with the possibility to select the switching line.

■ Automatic selection HD-SDI/SD-SDI
■ External switching reference
■ Switching line selectable
■ Control by keyboard, RS232 or LAN
■ 8 recallable presets
■ Balanced audio combined
■ Equalization disable selectable on each input
■ Reclocking disable selectable on each output
■ Optional redundant power supply

HD/SD-SDI	CV	BAL AUD	LAN	RS232

Technical specifications

VIDEO HD/SD-SDI

Standard:	SMPTE 259 M (143 Mbps, 177 Mbps, 270 Mbps, 360 Mbps) SMPTE 344 M (540 Mbps) SMPTE 292 M (1483 Mbps, 1485 Mbps)
Input coupling:	AC,75 Ω
Inputs:	8, with equalizer up to 200 mt RG59DS (SD-SDI) or 100 m RG59DS (HD-SDI)
Input retun loss:	>15 dB
Outputs:	8 with reclocker
Output amplitude:	800 mVpp/75 Ω
Jitter:	<0.2UI
External reference:	Analog bi-level or tri-level sync, with Loop

AUDIO

Input:	Differential with Phoenix screwtype removable
Input coupling:	AC
Input impedance:	44 KΩ differential, 22 KΩ single ended
Input level:	+21 dBm Max (balanced)
Output impedance:	600 Ω
Output gain:	0dB
Frequency response:	±0.10 dB from 20 Hz to 20 KHz
Harmonic distorsion:	0.2% from 20 Hz to 20 KHz at +6 dBm
Hum & noise:	-63 dBm unweighted (worst case)
Crosstalk:	55 dB at 16 KHz (worst case)

Remote control:	RS232, LAN
Main input:	90 ÷ 240Vac
Power consumption:	25 VA
Size (WxDxH):	438x340x88 mm
Weight:	5 Kg
Operating temp.range:	0÷45°C
Safety:	According to EN 60065
EMC:	According to EN 55103-1 and EN 55103-2
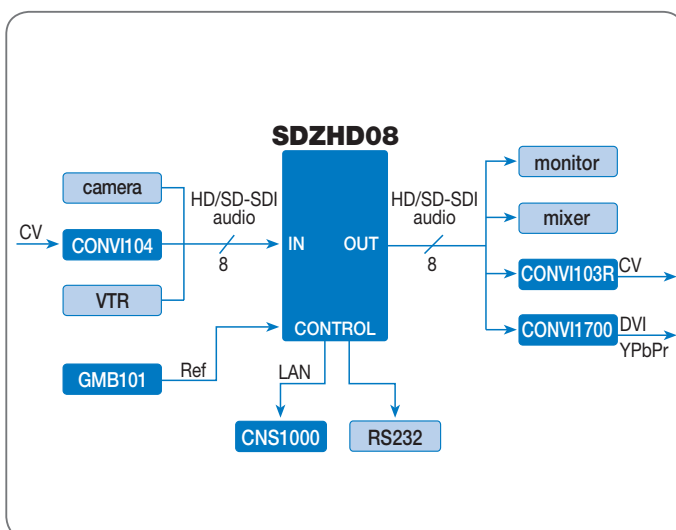
4 SWITCHERS AND MATRIX SWITCHERS

SDZHD16 Series

SDZHD16 is a 16x16 HD-SDI and SD-SDI digital matrix switcher with associated analog audio. It's also available in the 16x8 or 8x16 size. It's ideal for switching HD/SD-SDI signals in video studios, production center, and non linear editing suites. Each input is provided with an automatic compensation and each output is reclocked. Audio is inputs/outputs balanced type. The matrix switcher can be controlled by integrated keyboard, by computer through RS232 or LAN and by remote panel CNS1000. SDZHD16 performs a synchronous switching with an analog external reference (bi-level or tri-level sync) with the possibility to select the switching line.

- Automatic selection HD-SDI/SD-SDI.
- External switching reference
- Switching line selectable
- Control by keyboard, RS232, LAN or remote panel CNS1000
- 16 recallable presets
- Balanced audio combined
- Equalization disable selectable on each input
- Reclocking disable selectable on each output
- Optional redundant power supply
- Available also in 16x8 and 8x16 sizes

Technical specifications

VIDEO HD/SD-SDI

Standard:	SMPTE 259 M (143 Mbps, 177 Mbps, 270 Mbps, 360 Mbps) SMPTE 344 M (540 Mbps) SMPTE 292 M (1483 Mbps, 1485Mbps)
Input coupling:	AC,75 Ω
Inputs:	8 or 16, with equalizer up to 200 mt RG59DS (SD-SDI) or 100 m RG59DS (HD-SDI)
Input retun loss:	>15 dB
Outputs:	8 or 16 with reclocker
Output amplitude:	800 mVpp/75 Ω
Jitter:	<0.2 UI
Ext. Synch. Reference:	Analog bi-level or tri-level sync, with Loop

AUDIO

Input:	Differential with Phoenix screwtype removable
Input coupling:	AC
Input impedance:	44 KΩ differential, 22 KΩ single ended
Input level:	+21 dBm Max (balanced)
Output impedance:	600 Ω
Output gain (fine adjust):	0 dB
Frequency response:	±0.10 dB from 20 Hz to 20 KHz
Harmonic distorsion:	0.2 % from 20 Hz to 20 KHz at +6dBm
Hum & noise:	-63 dBm unweighted (worst case)
Crosstalk:	55 dB at 16 KHz (worst case)

Remote control:	RS232, LAN
Main input:	90 ÷ 240 Vac
Power consumption:	25 VA
Size (WxDxH):	438x340x88mm
Weight:	5Kg
Operating temp. range:	0÷45°C
Safety:	According to EN 60065
EMC:	According to EN 55103-1 and EN 55103-2

HD/SD-SDI   CV   BAL AUD   LAN   RS232

TZR403

TZR403 is a 4x1 switcher suited for routing RGBHV signals with combined audio. It's possible to connect CV, Y/C and Y Pb Pr signal on RGB BNCS.

- 400 mhz bandwidth
- Integrated keyboard
- Remote selection by dry contacts
- Remote selection by RS232
- Autoswitching, autosequencing and mute functions
- Cascade capability up to 4 units

RGBHV | Y Pb Pr | UNBAL | RS232 | CONTACT
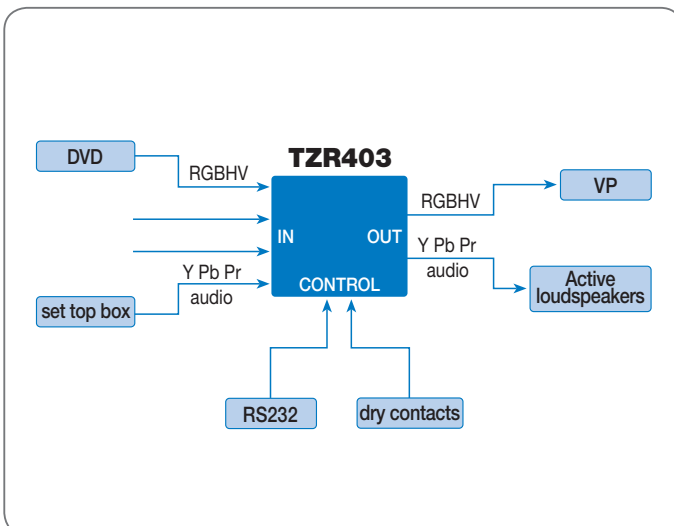
Technical specifications

Video inputs:	4 RGBHV with BNC
Video outputs:	1 RGBHV with BNC
Bandwidth:	400 Mhz
Audio inputs/output:	stereo jack sockets 3.5 mm
Auxiliary functions:	autoswitching, autosequencing, mute
Cascade capability:	up to 4 units (13x1)
Remote control:	dry contacts, RS232
Main input:	230 Vac 50 Hz (with AC adapter ADM001)
Power consumption:	5 VA
Size (WxDxH):	220x105x120 mm
Weight:	1 Kg
Operating temp. range:	0÷45°C
Safety:	according to EN 60065
EMC:	according to EN 550103-1 and EN 55103-2

TZW203+

TZW203+ is a 2x1 switcher suited for routing graphic signals with combined audio.
Can be fitted in a 19" structure by ADR1UM1 option or desk top mounted.

- 400 MHz bandwidth
- Integrated keyboard
- Remote controlled by dry contacts
- Remote controlled by RS232
- Autoswitching and mute functions
- Audio balanced output +6 dB

| VGA | UNBAL | BAL AUD | RS232 | CONTACT |
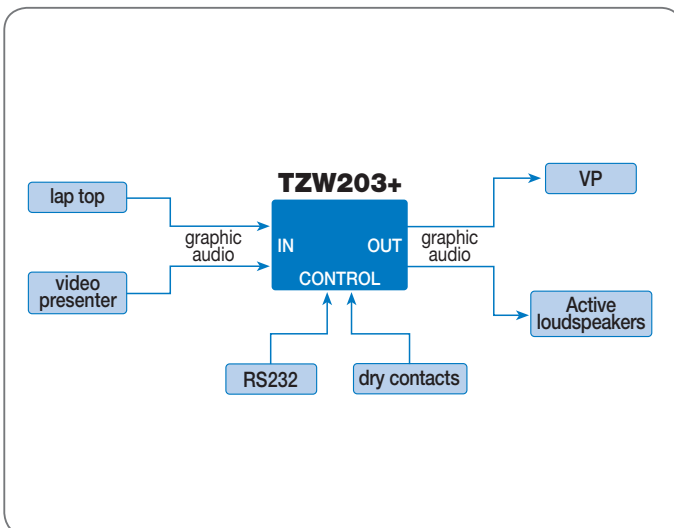
Technical specifications

Video inputs:	2 GRAPHIC with HDD 15 p.m.
Video outputs:	1 GRAPHIC with HDD 15 p.f.
Bandwidth:	400 Mhz
Audio level:	+11 dBm max
Audio inputs:	2 with RCA outlet
Audio outputs:	+6 dB Balanced with Phoenix screwtype removable
Auxiliary functions:	autoswitching, mute
Remote control:	dry contacts, RS232
Main input:	230 Vac 50 Hz (with AC adapter ADM001)
Power consumption:	5 VA
Size (WxDxH):	200x100x44 mm
Weight:	0.5 Kg
Operating temp. range:	0÷45°C
Safety:	according to EN 60065
EMC:	according to EN 55103-1 and EN 55103-2

TZW403+

TZW403+ is a 4x1 switcher suited for routing graphic signals with combined stereo audio.

It presents a twin audio output, balanced (+6 dB) and unbalanced. Can be cascaded to perform a 13x1 selection. Can be fitted in a 19" structure by provided brackets or desk top mounted.

- 400 MHz bandwidth
- Integrated keyboard
- Remote controlled by dry contacts
- Tally out
- Remote controlled by RS232
- Autoswitching, autosequencing and mute functions
- Cascade capability up to 4 units
- Twin audio output

| VGA | UNBAL | BAL AUD | RS232 | CONTACT |

4

SWITCHERS AND MATRIX SWITCHERS
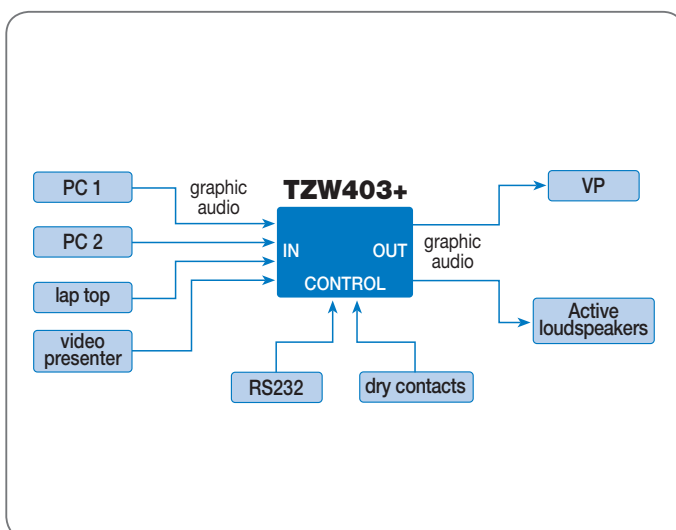
Technical specifications

Video inputs:	4 GRAPHIC with HDD 15 p.f.
Video outputs:	1 GRAPHIC with HDD 15 p.f.
Bandwidth:	400 Mhz
Audio inputs:	4 with RCA outlet
Audio outputs:	1, unbalanced, 0 dB gain, with RCA outlet
	1, balanced, +6dB gain, with Phoenix screwtype removable
Auxiliary functions:	autoswitching, autosequencing, mute
Cascade capability:	up to 4 units (13x1)
Remote control:	dry contacts, RS232
Main input:	230 Vac 50 Hz (with AC adapter ADM001)
Power consumption:	5 VA
Size (WxDxH):	440x100x44 mm
Weight:	0.5 Kg
Operating temp. range:	0÷45°C
Safety:	according to EN 60065
EMC:	according to EN 55103-1 and EN 55103-2

Diagram:
- PC 1 — graphic audio → TZW403+ IN / OUT CONTROL
- PC 2
- lap top
- video presenter
- RS232, dry contacts (control inputs)
- OUT graphic audio → VP
- → Active loudspeakers

TZW803+

TZW803+ is a 8x1 switcher suited for routing graphic signals with combined stereo audio.

It presents a twin audio output, balanced and unbalanced. Can be cascaded to perform a 29x1 selection.

The main areas of application include showrooms, airports, museums, large department stores and hotels.

- 400 MHz bandwidth
- Output buffered for 20 mt VGA cable
- Remote controlled by dry contacts
- Tally out
- Remote controlled by RS232
- Autoswitching, autosequencing and mute functions
- Cascade capability up to 4 units
- Twin audio output
- IR remote control provided

VGA	UNBAL	BAL AUD	RS232	CONTACT	IR
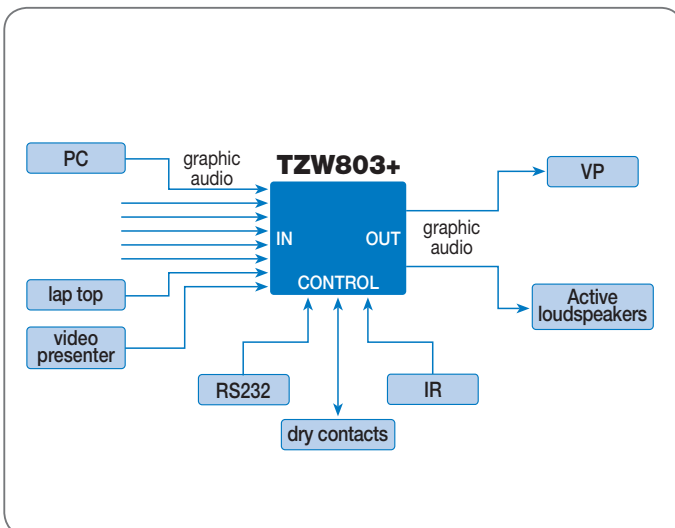
Technical specifications

Video inputs:	8 GRAPHIC with HDD 15 p.f.
Video outputs:	1 GRAPHIC with HDD 15 p.f.
Bandwidth:	400 MHz
Audio inputs:	8 with RCA outlet
Audio outputs:	1, unbalanced, 0 dB gain, with RCA outlet
	1, balanced, with Phoenix screwtype removable
Audio level:	+11 dBm max
Auxiliary functions:	autoswitching, autosequencing, mute
Cascade capability:	up to 4 units (29x1)
Remote control:	dry contacts, IR, RS232
Main input:	230 Vac 50 Hz (115 Vac 60 Hz on request)
Power consumption:	6 VA
Size (WXDXH):	483x210x88
Weight:	2.5 Kg
Operating temp. range:	0÷45°C
Safety:	according to EN 60065
EMC:	according to EN 55103-1 and EN 55103-2

elpro

SWITCHERS AND MATRIX SWITCHERS 4
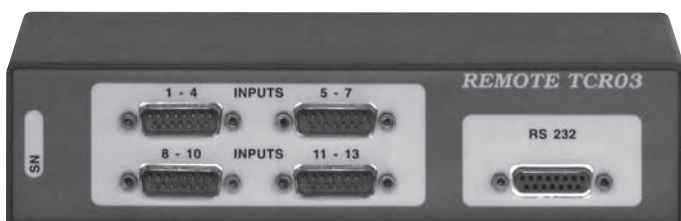
TCR03

TCR03 is the remote panel for the TZR, TZW and TZVA series.

■ Suited to drive TZW and TZVA series
■ Host RS232 loop-through
■ Don't need mains supply

RS232   CONTACT

4

SWITCHERS AND MATRIX SWITCHERS
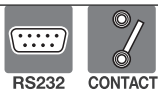
Technical specifications

Size (WxDxH):	220x100x55
Weight:	0,6 Kg
Operating temp.range:	0÷45°C
Safety:	according to EN60065
EMC:	according to EN55103-1 and-2

TZM423

TZM423 is a 4 inputs and 2 indipendent outputs matrix switcher suited for routing GRAPHIC signals with combined audio.

TZM423 can manage Y Pb Pr, RGBS or RGBHsVs signals as well.

May be very useful when, driving a main output, it's necessary to keep a second source under monitoring control or when it's needed to drive 2 destinations by 2 different signals.

- Two indipendent buses
- 400 MHz Video bandwidth
- Integrated keyboard
- Remote selection by dry contacts
- Controlled by RS232
- Mute function for each bus
- Suitable for Y Pb Pr/RGBS/RGBHV

Technical specifications

VIDEO	
Inputs:	VGA/XGA or RGB/YUV analog 700 mVpp with HDD 15 p.m.
Input coupling:	DC
Input impedance:	75 Ω
Crosstalk (worst case):	50 dB at 40 MHz
Bandwidth:	400 MHz
Outputs:	2, indipendent with HDD 15 p.f.
Syncronisms:	H+V separated, TTL level, high Z
Other signals:	ST, SDA, SCL TTL level, high Z

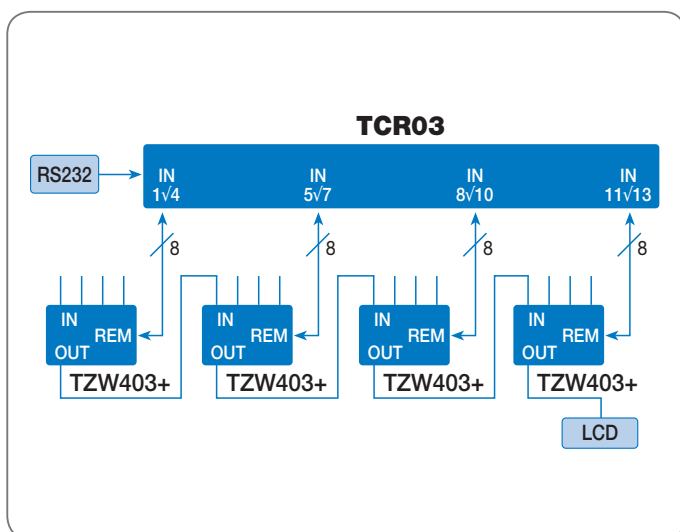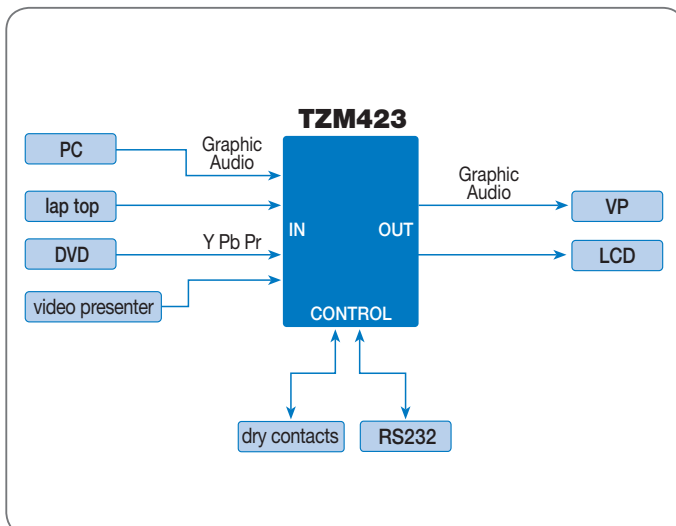| AUDIO	
Input/output type:	unbalanced with jack sockets 3,5 mm
Input coupling:	AC
Input impedance:	47 KΩ
Input level:	+11 dBm Max
Gain:	-0.5 dB
Output load:	10 KΩ nominal, 600 Ω minimum
Output impedance:	100 Ω
Frequency response:	-1 dB from 20 Hz to 60 KHz
Crosstalk:	60 dB at 5 KHz
Distortion:	<0.03% at 0 dBm with 10 KΩ load
Remote control:	Dry contacts, RS232
Main input:	230 Vac 50 Hz (with AC adapter ADM 001)
Power consumption:	5 VA
Size (WxDxH):	220x105x120 mm
Weight:	0.9 Kg
Operating temp. range:	0÷45°C
Safety:	according to EN 60065
EMC:	according to EN 55103-1 and EN 55103-2

SWITCHERS AND MATRIX SWITCHERS 4
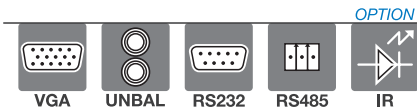
TZM443

The TZM443 unit is a 4x4 matrix for graphic signals with combined audio.

The TZM443 can be accessed by integrated keyboard, by computer through RS232 or RS485 and by IR control.

TZM443 features the "through blank" switching mode.

The switching time is user adjustable to permit the perfect matching with the destination devices.

- Swithing "through blank" with user adj. time
- Keypad-programmable preview output
- Customizable default configuration
- 4 presets that can be recalled via keypad, and IR 8 from RS232
- Only RGBHV, only AUDIO, AFV
- Control using RS232, RS485, IR
- IR remote control (optional)

OPTION

| VGA | UNBAL | RS232 | RS485 | IR |

Technical specifications

VIDEO

Inputs:	4, VGA/XGA or RGB or YUV analog, 700 mVpp with HDD 15 p.f.
Input coupling:	DC
Input impedance:	75 Ω
Crosstalk (worst case):	65 dB at 10 MHz
Bandwidth:	400 MHz
Outputs:	4, indipendent with HDD 15 p.f.
Synchronism:	H+V separated, TTL level, High Z

AUDIO

Input/output type:	unbalanced with RCA socket
Input coupling:	AC
Input impedance:	10 K Ω
Input level:	+11 dBm max
Output impedance:	150 Ω
Frequency response:	0.1 dB from 3Hz to 600 KHz
Distortion:	<0.2% at 10 dBm with10 KΩ load
Crosstalk (Worst case):	70 dB at 15 KHz
Hum & noise:	-70 dBm unweighted
Remote control:	IR, RS232, RS485

Mains input:	230Vac 50Hz (115Vac 60Hz on request)
Power consumption:	8 VA
Size (WxDxH):	483x150x44
Weight:	3.1 Kg

Operating temp. range:	0÷45°C
Safety:	according to EN 60065
EMC:	according to EN 55103-1 and EN 55103-2

TZM443

PC, lap top, DVD, video presenter → Graphic Audio → IN — OUT → Graphic Audio → VP, LCD, plasma

CONTROL ← IR, RS232

TZM883V

The TZM883V unit is a 8x8 matrix for graphic signals. It can manage Y, Pb, Pr signals as well. The TZM883V can be accessed by integrated keyboard, by computer through RS232 or LAN and by IR control. TZM883V features the "through blank" switching mode. The switching time is user adjustable to permit the perfect matching with the destination device.

OPTION

| VGA | RS232 | LAN | IR |

- Switching "through blank" with user adj. time
- Programmable preview on output 8
- Controlled by RS232 and LAN
- 8 recallable presets
- Saves last configuration
- IR remote control (optional)
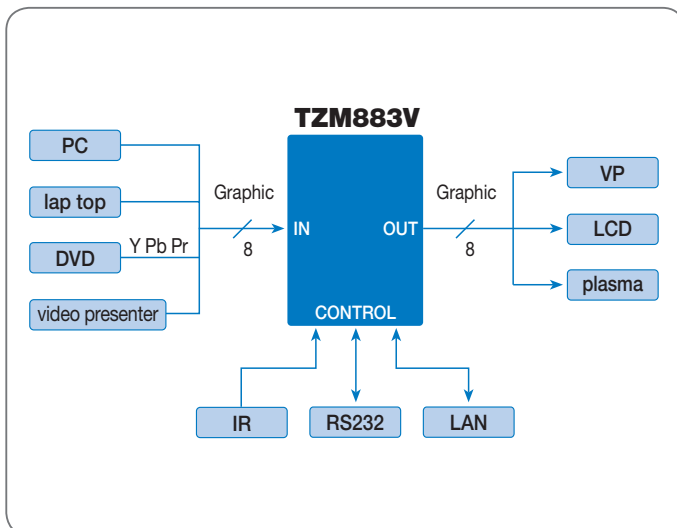
Technical specifications

VIDEO	
Inputs:	8, Graphic or Y Pb Pr with HDD 15 p. F.
Input coupling:	DC
Input impedance:	75 Ω
Crosstalk (worst case):	50 dB at 50 MHz
Bandwidth:	500 MHz at -3 dB
Outputs:	8, indipendent with HDD 15 p. F.
Synchronism:	H+V separated, TTL level, High Z
Remote control:	IR, RS232, LAN
Main input:	90÷230 Vac
Power consumption:	15 VA
Size (WxDxH):	483x204x44 mm
Weight:	3 Kg
Operating temp. range:	0÷45°C
Safety:	according to EN 60065
EMC:	according to EN 55103-1 and EN 55103-2

TZM883V

PC
lap top — Graphic → IN OUT → Graphic
DVD — Y Pb Pr — 8 → → 8
video presenter

VP
LCD
plasma

CONTROL

IR   RS232   LAN
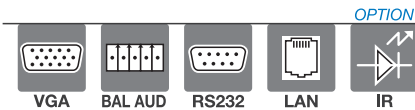
TZM883VA

The TZM883VA unit is a 8x8 matrix for graphic signals with combined audio. Audio is balanced type for both inputs and outputs. It can manage Y, Pb, Pr signals as well. The TZM883VA can be accessed by integrated keyboard, by computer through RS232 or LAN and by IR control. TZM883VA features the "through blank" switching mode. The switching time is user adjustable to permit the perfect matching with the destination device.

- ■ Switching "through blank" with user adj. time
- ■ Programmable preview on output 8
- ■ Graphic only, AUDIO only, AFV
- ■ Controlled by RS232 and LAN
- ■ 8 recallable presets
- ■ Saves last configuration
- ■ IR remote control (optional)

VGA **BAL AUD** **RS232** **LAN** **OPTION / IR**

Technical specifications

VIDEO	
Inputs:	8, Graphic or Y Pb Pr with HDD 15 p. F.
Input coupling:	DC
Input impedance:	75 Ω
Crosstalk (worst case):	50 dB at 50 MHz
Bandwidth:	500 MHz at -3 dB
Outputs:	8, indipendent with HDD 15 p. F.
Synchronism:	H+V separated, TTL level, High Z

AUDIO	
Input/output type:	balanced with Phoenix screwtype, removable
Input coupling:	differential AC
Input Impedance:	44 KΩ, differential; 22 KΩ single ended
Input level:	+16 dBm Max (balanced)
Output impedance:	600 Ω
Frequency response:	-0.1 dB from 20 Hz to 600 KHz
Distortion:	<0.2% from 20 Hz to 20K Hz at +6 dBm
Crosstalk (Worst case):	55 dB at 16 KHz
Hum & noise:	-70 dBm unweighted (Worst case)
Remote control:	IR, RS232, LAN

Main input:	90÷230 Vac
Power consumption:	15 VA
Size (WxDxH):	483x204x88 mm
Weight:	4 Kg

Operating temp. range:	0÷45°C
Safety:	according to EN 60065
EMC:	according to EN 55103-1 and EN 55103-2

TZM883VA

PC — lap top — DVD — video presenter → Graphic audio 8 / Y Pb Pr → IN — OUT — CONTROL → Graphic 8 / Audio 8 → VP, LCD, plasma, Active Loudspeakers

IR — RS232 — LAN
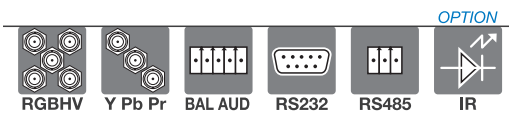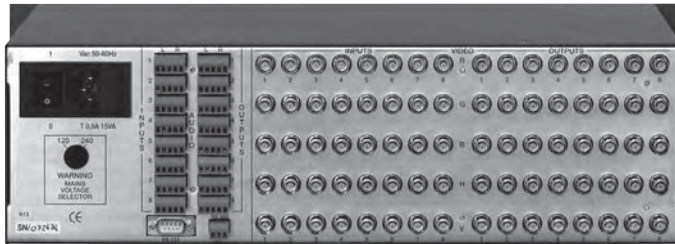
TZM883R

The TZM883R unit is a 8x8 matrix for RGBHV signals with combined audio. Audio is balanced type for both inputs and outputs. It can manage Y, Cb, Cr signals as well. The TZM883R can be accessed by integrated keyboard, by computer through RS232 or RS485 and by IR control. TZM883R features the "through blank" switching mode. The switching time is user adjustable to permit the perfect matching with the destination device.

- Switching "through blank" with user adj. time
- Programmable preview on output 8
- RGBHV only, AUDIO only, AFV
- Controlled by RS232
- 8 recallable presets
- IR remote control (optional)

OPTION

| RGBHV | Y Pb Pr | BAL AUD | RS232 | RS485 | IR |

Technical specifications

VIDEO	
Inputs:	8, RGBHV or Y Pb Pr with BNC
Input coupling:	DC
Input impedance:	75 Ω
Crosstalk (worst case):	50 dB at 40 MHz
Bandwidth:	400 MHz
Outputs:	8, indipendent with BNC
Synchronism:	H+V separated, TTL level, High Z

AUDIO	
Input/output type:	balanced with Phoenix screwtype, removable
Input coupling:	differential AC
Input Impedance:	44 KΩ, differential; 22 KΩ single ended
Input level:	+17 dBm Max (balanced)
Output impedance:	600 Ω
Frequency response:	-0.1 dB from 20 Hz to 600 KHz
Distortion:	<0.2% from 20 Hz to 20K Hz at +6 dBm
Crosstalk (Worst case):	55 dB at 16 KHz
Hum & noise:	-60 dBm unweighted (Worst case)
Remote control:	IR, RS232, RS485

Main input:	230 Vac /115 Vac (selectable)
Power consumption:	15 VA
Size (WxDxH):	483x220x132 mm
Weight:	4.9 Kg

Operating temp. range:	0÷45°C
Safety:	according to EN 60065
EMC:	according to EN 55103-1 and EN 55103-2
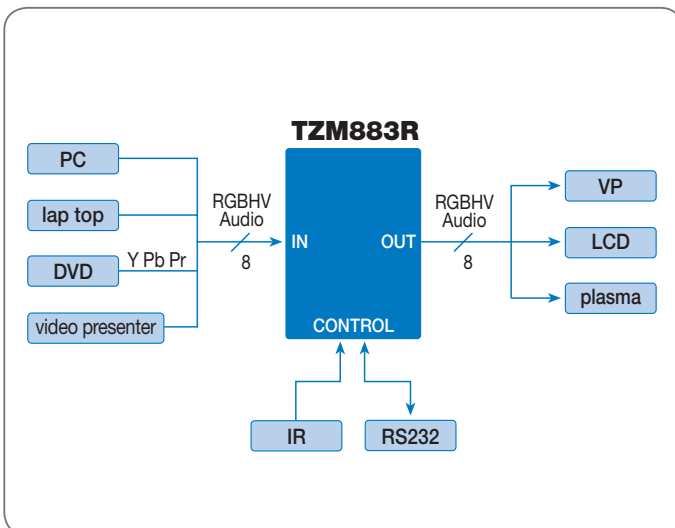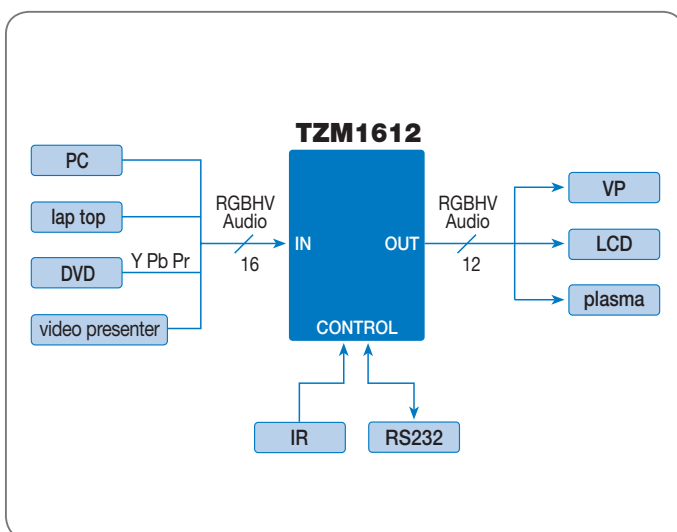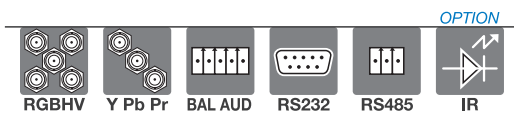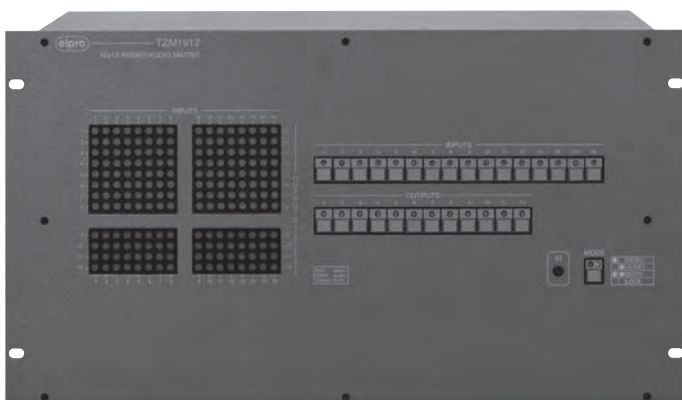
TZM1612

The TZM1612 unit is a 16x12 matrix for RGBHV signals with combined audio. Audio is balanced type for both inputs and outputs. It can manage Y Pb Pr signals as well. The TZM1612 can be accessed by integrated keyboard, by computer through RS232 or RS485 and by IR control. TZM1612 features the "through blank" switching mode. The switching time is user adjustable to permit the perfect matching with the destination device.

- Switching "through blank" with user adj. time
- Programmable preview on output 12
- RGBHV only, AUDIO only, AFV
- Controlled by RS232
- 8 recallable presets
- IR remote control (optional)

RGBHV **Y Pb Pr** **BAL AUD** **RS232** **RS485** OPTION **IR**

Technical specifications

| VIDEO	
Inputs:	16, RGBHV or Y Pb Pr with BNC
Input coupling:	DC
Input impedance:	75 Ω
Crosstalk (Worst case):	43 dB at 40 MHz
Bandwidth:	400 MHz
Outputs:	12, indipendent with BNC
Synchronism:	H+V separated TTL level High Z

AUDIO	
Input/output type:	balanced with Phoenix screwtype, removable
Input coupling:	differential AC
Input impedance:	44 KΩ differential; 22 KΩ single ended
Input level:	+15 dBm max (balanced)
Output impedance:	600 Ω
Frequency response:	-0.1 dB from 20 Hz to 600 KHz
Crosstalk (Worst case):	55 dB at 16 KHz
Distortion:	<0.2% from 20 Hz to 20 KHz at +6 dBm
Hum & noise:	-63 dBm unweighted (Worst case)
Remote control:	IR, RS232, RS485
Main input:	230 Vac / 115 Vac (selectable)
Power consumption:	14,5 VA
Size (WxDxH):	483x220x264
Weight:	8.6 Kg
Operating temp. range:	0÷45°C
Safety:	according to EN 60065
EMC:	according to EN 55103-1 and EN 55103-2

4

SWITCHERS AND MATRIX SWITCHERS

TZM1612

PC
lap top
DVD
video presenter

RGBHV Audio
16

IN   OUT

CONTROL

RGBHV Audio
12

VP
LCD
plasma

IR   RS232

elpro

A.**5**

SCAN CONVERTERS AND SCALERS

OVR101

PC TO VIDEO OVERLAY, MIXER AND SCAN CONVERTER

CV **Y/C** **VGA** **IR**
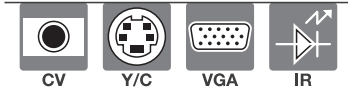
The OVR101 unit is a device that permits electronic overlay of an image coming from a computer in a main video image.
Simple scan converter to convert PC signal in CV and Y/C signal and mixer functions are also available.
The main fields of application include conferences, presentations, education, museums, department stores and hotels.

- 1RU with 230Vac internal power supply unit
- 4 functions: overlay, mixer, scan converter and video pass through
- Pal/NTSC compatibility
- Key on Black or Blue
- Bar generator
- Linear zoom and panning
- All functions controlled by IR remote control device

OVR101

PC —graphic→ IN

camera —CV or Y/C→ IN

OUT —CV and Y/C with overlay→ mixer

CONTROL

IR
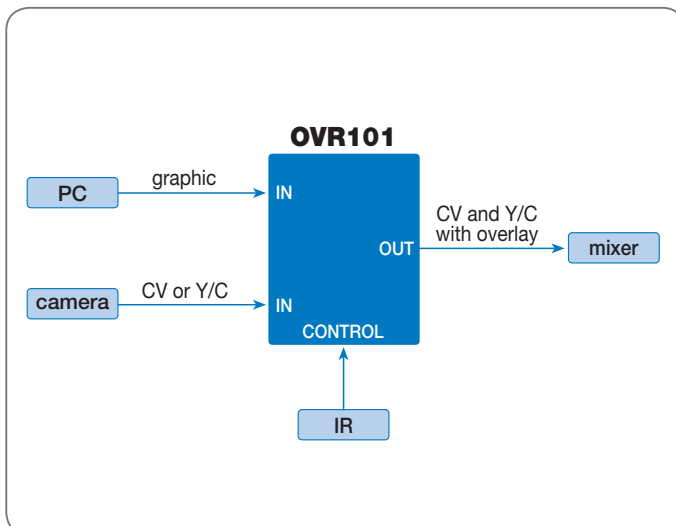
Technical specifications

Inputs:	N°1 Graphic in loop-through with HDD 15 p.f. (PC formats compatibility: up to 1024x768 75Hz N.I.) N°1 CV with RCA socket N°1 Y/C with Mini-Din 4 p
Output:	N°1 CV with RCA socket N°1 Y/C with Mini-Din 4 p
Functions:	Scan converter, overlay, mixer, video pass through
Remote control:	IR
Mains input:	230 Vac 50 Hz
Power consumption:	7 VA
Size (WxDxH):	483x210x44
Weight:	2.9 Kg
Operating temp. range:	0÷45°
Safety:	according to EN60065
EMC:	according to EN55103-1 and EN55103-2

MDL200
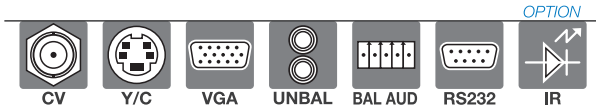
The MDL200 unit converts a video signal into a high resolution RGBHV signal. It can be used for videoprojection or onto TFT visualizer to improve picture quality. The choice among five input signals, each with the combined audio, makes the MDL200 very useful in the presentation domain, where many sources, either video or graphics, must be displayed onto a single destination.

- 5 inputs with combined audio
- Output format selectable
- Maintenance of settings
- Optional IR control
- Controlled by RS232

CV **Y/C** **VGA** **UNBAL** **BAL AUD** **RS232** **IR** *OPTION*

Technical specifications

VIDEO

Inputs:	N°2 CV
	N°1 Y/C
	N°2 Graphic (active bypass)
	with HDD 15 p.f.
Output:	High resolution with HDD 15 p.f.
Output Format:	Graphic SVGA, XGA, SXGA and
	YPbPr 480p, 576p, 720p, 1080i
Standard:	PAL, SECAM, NTSC
Synch. level:	TTL
Vertical synch.:	60 Hz

AUDIO

Inputs type:	N°5 unbalanced with RCA outlet
Input coupling:	AC
Input impedance:	56 KΩ
Input level:	+9 dBm Max
Frequency response:	-1 dB from 20 Hz to 60 KHz
Crosstalk:	60 dB at 5 KHz
Distortion:	<0,03% at 0 dBm with 10 KΩ load
Hum & noise:	-75 dBm unweighted
Outputs type:	N°1 Unbalanced, 150 Ω
	with RCAoutlet
	N°1 Balanced, 600 Ω
	with Phoenix screwtype
Remote control:	IR, RS232
Main input:	90÷240 Vac 50-60 Hz
Power consumption:	15 VA
Size (WxDxH):	483x210x44 mm
Weight:	3 Kg
Operating temp. range:	0÷45°C
Safety:	according to EN 60065
EMC:	according to EN 55103-1
	and EN 55103-2
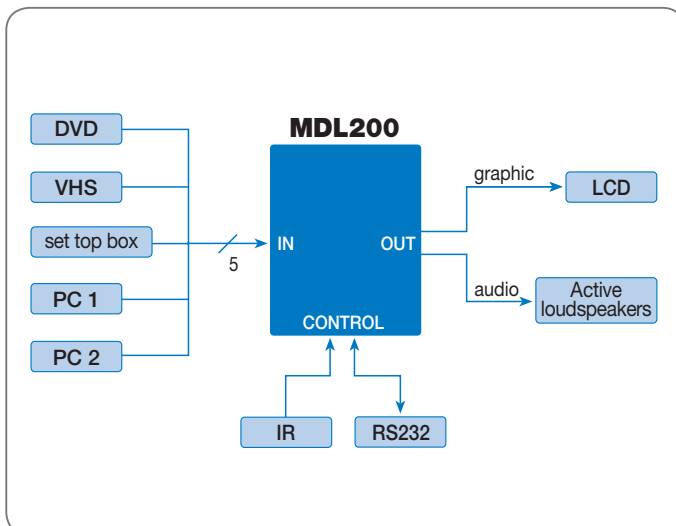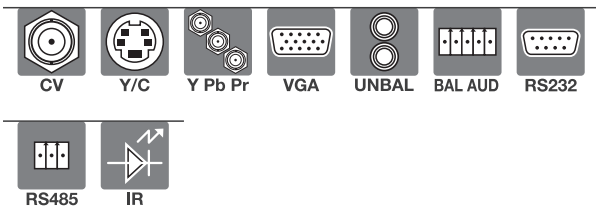
TZL300

TZL300 units converts a video signal into a high resolution RGBHV signal. It can be used for videoprojection or onto TFT visualizer to improve picture quality. The wide choice among 11 input signals, each with the combined audio, makes the TZL300 very useful in the presentation domain, where many sources, either video or graphics, must be be displayed onto a single destination. TZL300 features the "through blank" switching where the switching time is user adjustable to permit the perfect matching with the destination device.

- ■ 11 inputs with combined audio
- ■ Switching through blank with user adj. time
- ■ Twin high resolution outputs
- ■ Buffer on high resolution outputs
- ■ Output format selectable
- ■ VCA on audio balanced output
- ■ Maintenance of settings
- ■ IR control provided
- ■ Controlled by RS232 and RS485

CV	Y/C	Y Pb Pr	VGA	UNBAL	BAL AUD	RS232

RS485	IR

Technical specifications

VIDEO	
Inputs:	N°3 CV
	N°3 Y/C
	N°1 Y, Cb, Cr
	N°4 Graphic (active bypass)
	with HDD 15 p.f.
Output:	Twin, High resolution
	with HDD 15 p.f.
Output Format:	Graphic SVGA, XGA, SXGA and
	YPbPr 480p, 576p, 720p, 1080i
Standard:	PAL, SECAM, NTSC
Synch. level:	TTL
Vertical synch.:	60 Hz
Switching:	Through blank, with switching
	time user adj.

AUDIO	
Inputs:	N°11 unbalanced with RCA outlet
Input coupling:	AC
Input impedance:	56 KΩ
Input level:	+9 dBm Max
Frequency response:	-1 dB from 20 Hz to 60 KHz
Crosstalk:	60 dB at 5 KHz
Distortion:	<0,03% at 0 dBm with 10 KΩ load
Hum & noise:	-75 dBm unweighted
Outputs:	N°1 Unbalanced, 150 Ω
	with RCA outlet
	N°1 Balanced, 600 Ω with
	Phoenix screwtype
Output level:	Adjustable in 8 steps
	on the balanced output
	by IR control RS232/485
Remote control:	IR, RS232, RS485

Main input:	90÷240 Vac 50-60 Hz
Power consumption:	15 VA
Size (WxDxH):	483x210x88 mm
Weight:	4 Kg

Operating temp. range:	0÷45°C
Safety:	according to EN 60065
EMC:	according to EN 55103-1
	and EN 55103-2

Block diagram

Sources		
DVD 1		
DVD 2		
video presenter		
VHS 1		
VHS 2		
video conference		
set top box		
PC 1		
PC 2		
PC 3		
PC 4		

TZL300

IN — OUT

11

CONTROL

graphic → LCD
graphic → VP
audio → Active loudspeakers

IR   RS232

elpro

DVIPRO100   *SWITCHER/HIGH RESOLUTION SCALER & PIP CONTROL*
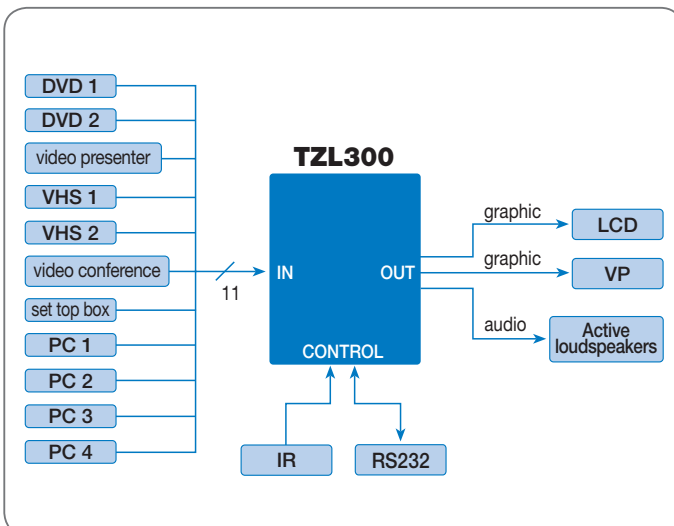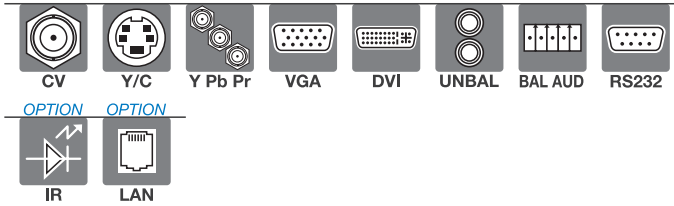
DVIPRO100 is a unit that transforms the incoming video and PC inputs in a RGBHV and DVI signals. The two outputs are simultaneous and both present the same resolution. By IR control or by RS232 it's possible to change several parameters to adjust the image. Besides the Scaler function, the DVIPRO100 provides the PIP (Picture in Picture) between a video overlayed into a PC source. Both can be scaled separately pixel by pixel and moved in X and Y position on the screen (PAN). The Scaler and PIP features and the presence of the combined audio to each input, makes the DVIPRO100 very useful in the presentation systems where several sources must be displayed onto RGBHV and DVI destinations.

CV	**Y/C**	**Y Pb Pr**	**VGA**	**DVI**	**UNBAL**	**BAL AUD**	**RS232**

OPTION	*OPTION*
IR	**LAN**

- Outputs resolution up to 1280x1024 and 1080i
- "Seamless" switching with fading
- 5 separate inputs with combined audio
- Setup saving and recalling
- PIP: Video on PC
- Pixel x Pixel Upscale and Downscale of images
- Pan of images in PIP
- Optional IR control
- Controlled by RS232
- Audio output level control
- Optional LAN control

Technical specifications

VIDEO

Inputs:	N°1 CV; N°1 Y/C
	N°1 CV or YCbCr
	N°2 Graphic
Input formats:	PAL, SECAM, NTSC
Output:	N°1 DVI-D output
Output:	N°1 High resolution with HDD 15 p.f.
Output Format:	Selectable SVGA, XGA, SXGA
	and HDTV 480p, 576p, 720p, 1080i
Standards:	PAL, SECAM; NTSC
Synch. Level:	TTL
Vertical synch.:	60 Hz
PIP:	Video on PC
	UpScale & DownScale pixel x pixel
	Pan of both images in X and Y

AUDIO

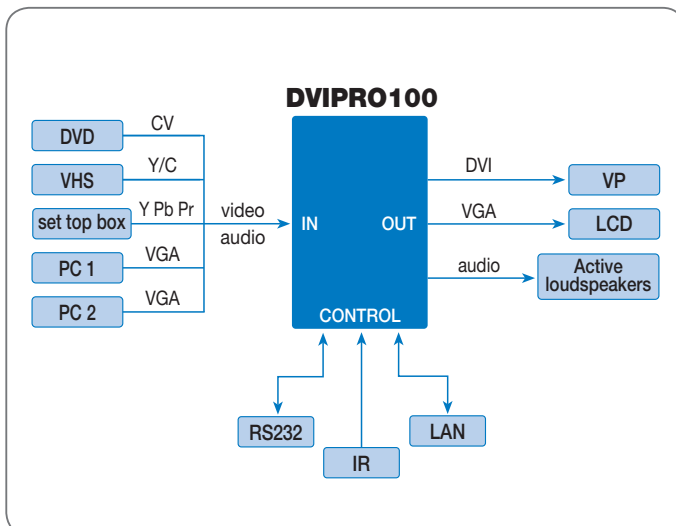|	
Inputs:	N°5 unbalanced with RCA outlet
Input coupling:	AC
Input impedance:	56 KΩ
Input level:	+9 dBm Max
VCA on outputs:	from MUTE to 100% (33 steps)
Frequency response:	-1 dB from 40 Hz to 20 KHz
Crosstalk:	60 dB at 5 KHz
Distortion:	<0,03% at 0 dBm with 10 KΩ load
Hum & noise:	-75 dBm unweighted
Outputs:	N°1 Unbalanced, 150 Ω with RCA outlet
	N°1 Balanced, 600 Ω with
	Phoenix screwtype
Remote control:	IR, RS232, LAN
Main input:	90÷240 Vac 50-60 Hz
Power consumption:	15 VA
Size (WxDxH):	483x210x44 mm
Weight:	3 Kg
Operating temp. range:	0÷45°C
Safety:	according to EN 60065
EMC:	according to EN 55103-1
	and EN 55103-2

5 SCAN CONVERTERS AND SCALERS

DVIPRO100

DVD	CV	DVI	VP
VHS	Y/C	VGA	LCD
set top box	Y Pb Pr → video audio	audio	Active loudspeakers
PC 1	VGA		
PC 2	VGA		

IN — OUT

CONTROL

RS232 — IR — LAN

DVIPRO1000

8x2 UNIVERSAL SCALER MATRIX SWITCHER

CV	Y/C	Y Pb Pr	VGA	DVI	HDMI	BAL AUD	RS232	
LAN	IR							
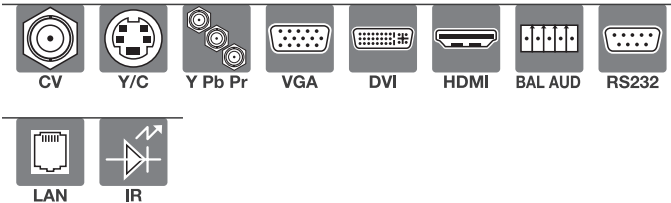
DVIPRO1000-2 is a scaler/matrix switcher 8x2 that transforms the incoming video and PC inputs in 2 indipendent outputs both with RGBHV and DVI simultaneous signals. DVIPRO1000-2 has 8 universal video inputs HDTV compatible. Through the best Faroudja and DCDi technology, it's possible to set several parameters to change the image quality and the video effects. Besides the Scaler function, the DVIPRO1000-2 provides the PIP (Picture in Picture) between 2 different sources. Both the output images can be scaled separately pixel by pixel and moved in X and Y position on the screen (PAN). The text and image overlay permit a complete and useful titling function. The large number of features and the presence of the combined audio to each input, makes the DVIPRO1000-2 very useful in the presentation systems where several sources must be displayed onto 2 different destiations, such a local monitor for preview and a videoprojector for displaying program.

- Outputs resolution up to 1600x1200 and 1080p
- 10 bit ADC sampling resolution
- Faroudja and DCDi technology
- "Seamless" switching with fading, mixer or cut
- 8 separate universal inputs with combined audio
- 2 indipendent outputs (Preview program possible)
- Setup saving and recalling
- Full PIP function
- Pixel x Pixel Upscale and Downscale of images
- Pan of images in PIP
- Text or image overlay
- IR control provided
- Controlled by IR, RS232 and LAN
- Audio output level control
- Upgrading FW by RS232

Technical specifications

VIDEO

Inputs:	N°2 universal CV, Y/C, YPbPr, RGBHV on HDD 15 p.f.
	N°4 universal CV, Y/C, YPbPr, RGBHV on 3 BNC and 1 HDD 15 p.f.
	N°1 universal CV, Y/C, YPbPr, RGBHV, DVI on 3 BNC and 1 DVI-I 29p.f.
	N°1 universal CV, Y/C, YPbPr, HDMI on 3 BNC and 1 HDMI connector
Graphic:	SVGA, XGA, WXGA, SXGA, SXGA+, WSXGA, WSXGA+, UXGA
RGBHV:	720p, 1080i, 1080p
Input formats:	PAL, SECAM, NTSC
Outputs:	N° 2 separated, PW Function on OUT1
Output type:	twin, DVI-D on DVI-I 29 p.f. and graphic + YPbPr on HDD 15 p.f.
Synch. Level:	TTL
Vertical synch.:	60 Hz
PIP:	between 2 inputs UpScale & DownScale pixel x pixel Pan of both images in X and Y
Function:	image adj., overlay, DNR, motion control

AUDIO

Inputs/Outputs type:	N°8 bal. with Phoenix Screwtype, remov.
Input coupling:	AC
Input impedance:	56 KΩ
Input level:	+9 dBm Max
SPDIF out:	for HDMI input only
VCA on outputs:	from MUTE to 100% (33 steps)
Frequency response:	-1 dB from 40 Hz to 20 KHz
Crosstalk:	60 dB at 5 KHz
Distortion:	<0,03% at 0 dBm with 10 KΩ load
Hum & noise:	-75 dBm unweighted
Outputs:	N°1 Unbalanced, 150 Ω with RCA outlet N°1 Bal. 600 Ω with Phoenix screwtype
Remote command:	IR, RS232, LAN
Main input:	90÷240 Vac 50-60 Hz
Power consumption:	25 VA
Size (WxDxH):	483x210x132 mm
Weight:	4,5 Kg
Operating temp. range:	0÷45°C
Safety:	according to EN 60065
EMC:	according to EN 55103-1 and -2
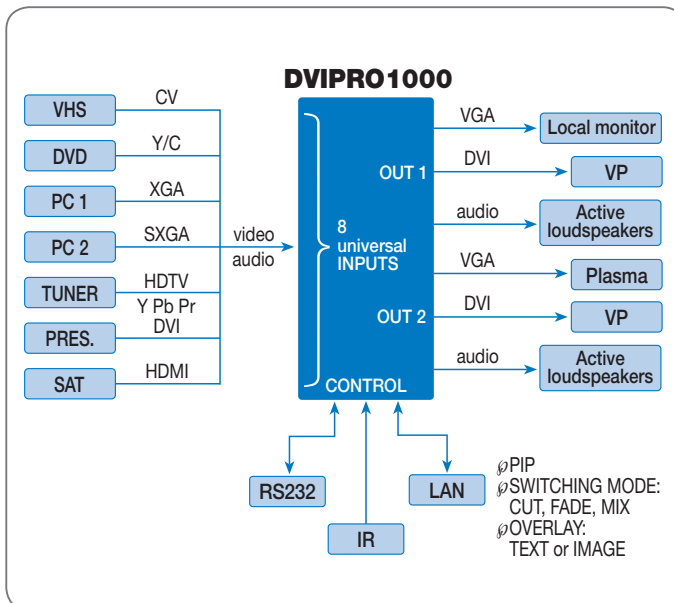
elpro

A.6

CONVERTERS AND GENERATORS
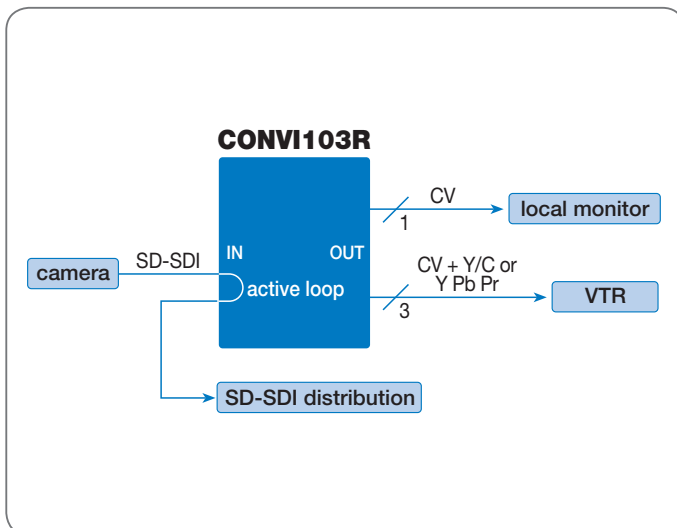
CONVI103R

The CONVI103R is a standard converter that accepts in input a serial digital signal ITU-R 601 (SD-SDI) and converts this into various analog formats available on the 4 output BNC. To optimize use, it provides 2 regenerated SD-SDI outputs. At conversion level, it features a fixed PAL standard output and 3 outputs that can be programmed using dip-switches which alternate RGB, or YUV, or YC plus a second PAL output.

- 1 digital input ITU-R 601 (SD-SDI) terminated at 75Ω
- 2 regenerated and reclocked digital outputs
- 1 fixed PAL analogue output +3 programmable
- Internal TEST generator on all the outputs
- Possibility of disabling the color
- Possibility of synch. insertion in RGB
- 2 selectable internal digital filters
- Output level adjustment using trimmer on front panel
- 19"assembling with provided kit

SD-SDI **CV** **Y/C** **Y Pb Pr**

CONVI103R

camera — SD-SDI — IN   OUT
active loop

1 — CV — local monitor
3 — CV + Y/C or Y Pb Pr — VTR

SD-SDI distribution

Technical specifications

Input type:	AC, 75 Ω ITU-R 601
SDI format:	ITU-R 601
Input ret. Loss:	25 dB at 270 MHz
SDI outputs:	2, regenerated & reclocked
Analog outputs:	n. 1 fixed CV on BNC
	n. 3 programmable on BNC:
	CV, Y, C or
	Cb, Y, Cr or
	B, G, R
Output level nominal (analog):	700 mVpp (plus sync)
Output level regulation:	500 mVpp ÷ 1 Vpp
Output ret. loss (all outputs):	20 dB at 5 MHz
Differential Phase:	0.8°
Differential Gain:	0.8 %
Main input:	230 Vac 50 Hz
Power consumption:	11 VA
Size (WxDxH):	200x170x44 mm
Weight:	0.9 Kg
Operating temp. range:	0 ÷ 45°C
Safety:	according to EN 60065
EMC:	according to EN 55103-1
	and EN 55103-2

CONVERTERS AND GENERATORS 6
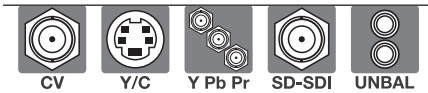
CONVI104

CONVI104 is a unit that converts an analog TV signal into an SD-SDI signal following the ITU-R601 standard.

The signal to be converted is selected among 3 incoming signals in CV, Y/C, Y, Cb, Cr format. Each input presents a combined audio. CONVI104 works as generator as well presenting a set of 3 patterns. CONVI104 is PAL/NTSC compatible. The product is mounted in a 1U mechanical housing able to be mounted in a 19" structure by the ADR1U adapter.

- PAL/NTSC compatible
- 10 bit ADC sampling
- Crystal PLL Ditter filter
- Five-line adaptive chroma comb filter
- EDH generation and insertion
- Twin SDI output
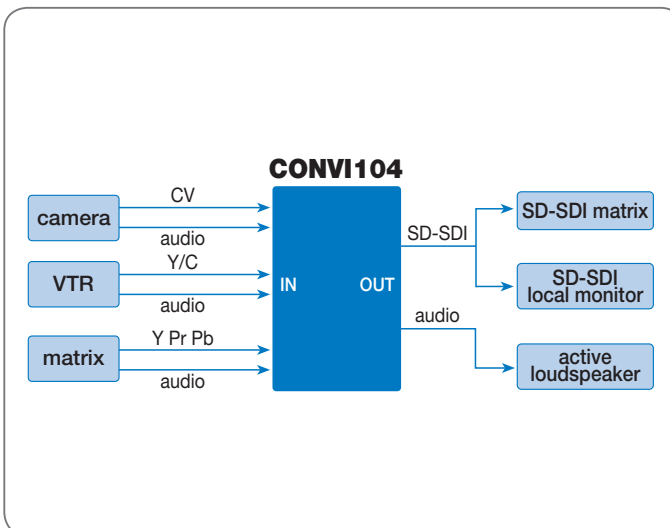
Technical specifications

VIDEO

Inputs:	3, CV, Y/C, Y Cb Cr
Input type:	Single ended
Input coupling:	AC
Standard:	PAL, NTSC
Reference:	Black burst or CV, 75 Ω terminated
Outputs:	SD-SDI, ITU-R601, twin
Comb filter:	5 line adaptive
Jitter filter:	Crystal with VCXO PLL
Jitter:	<0,2 UI
Outputs ret. loss:	34 dB at 10 MHz, 19 dB at 100 MHz, 15 dB at 200 MHz, 14 dB at 270 MHz

AUDIO

Audio inputs:	AC coupled, unbalanced
Input impedance:	47 KΩ
Input level:	+10 dBm max
Frequency response:	-1 dB from 20 Hz to 20 KHz
Crosstalk:	60 dB at 5 KHz
Distortion:	0.05% at 0 dBm with 10 KΩ load
Output impedance:	100 Ω

Main input:	230 Vac 50 Hz
Power consumption:	7 VA
Size (WxDxH):	200x170x44
Weight:	0.9 Kg

|	
Operating temp. range:	0÷45°C
Safety:	According to EN60065
EMC:	According to EN55103-1 and -2

CONVI1001
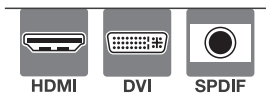
The CONVI1001 is a converter that accepts in input a digital signal HDMI, HDCP compliant, and converts this in DVI digital video signal and SPDIF digital audio signal.

The unit runs input and output resolutions up to UXGA and 1080p. The unit regenerates the incoming HDMI signal by decoding and re-encoding it to a new standard DVI signal so it can extend the transmission range without degradation.

The conversion properties let to watch HDMI source signal on DVI digital display and enjoy high quality digital audio at the same time on SPDIF receiver.

The HDMI input is HDCP 1.1 compliant so CONVI1001 can be used in all HD systems.

- HDCP 1.1 compliant
- DVI converted output without quality degradation
- Input/output resolution up to 1600x1200 (UXGA) or 1080p (HDTV)
- Digital signal rebuilding
- SPDIF digital audio output
- HD formats compliant
- Up to 15 mt with DVI output cable @ 1080p

HDMI   DVI   SPDIF
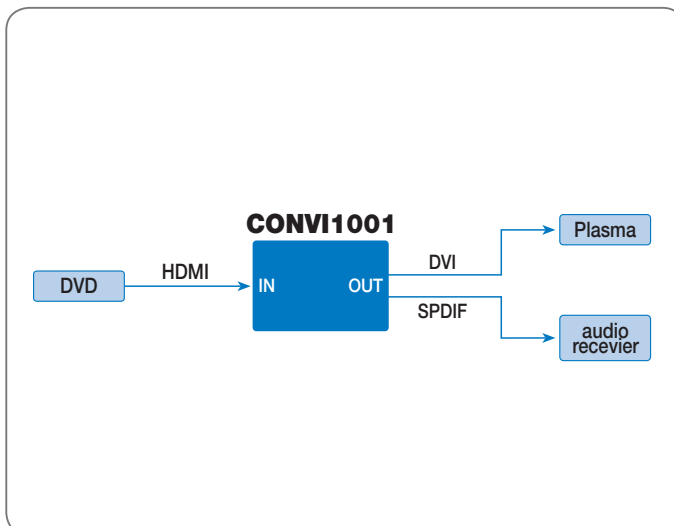
Technical specifications

HDMI / DVI format:	single link
Bandwidth:	1,6 Gbs
Resolution:	up to 1600x1200 or 1920x1080
HDCP 1.1:	compliant
Extend capability:	up to 15 mt @ 1080p on output
Input connector:	HDMI 19 p.f.
Output connector:	DVI-I 29 p.f. for DVI output
	RCA for SPDIF audio output
Main input:	5 Vdc (with AC adapter ADM050)
Power consumption:	max 10 VA
Size (WxDxH):	76x96x30 mm
Weight:	0,25 Kg
Operating temp.range:	0÷45°
Safety:	according to EN60065
EMC:	according to EN55103-1
	and EN55103-2

CONVI1001

DVD — HDMI → IN | OUT → DVI → Plasma

OUT → SPDIF → audio recevier

CONVERTERS AND GENERATORS 6
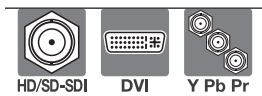
CONVI1700

CONVI1700 is a device that permits the conversion of an SDI signal. The incoming signal can be SD-SDI or HD-SDI compliant to the standards SMPTE 259M and 292M. The unit provides two outputs of the same rate of the incoming signal, one in digital DVI-D format and the other in analog YPbPr / YCbCr format.
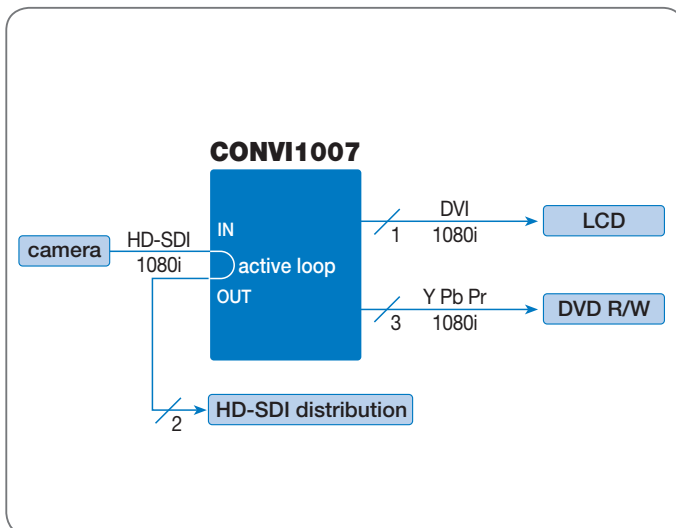
Two regenerated and reclocked digital outputs that match the input signal are provided as well.

CONVI1700 is useful to monitor an HD/SD-SDI signal onto not expensive DVI monitors.

- Input SDI compatible HD at 1,485 Gbps and SD at 270 Mbps
- 12 Bits conversion resolution
- DVI-D output available with the same input rate
- Analog component output with the same input rate
- Two SDI reclocked outputs
- 2 separated leds to indicate SD and HD standard

Technical specifications

Input type:	AC coupled
Standards:	SMPTE 259M A, C (270 Mbps, 340 Mbps) SMPTE 292M (1483 Mbps, 1485 Mbps)
Input ret. loss:	>20 dB at 270 Mhz, >25 dB at 500 MHz, >15 dB at 1.5 GHz
SDI Outputs:	twin regenerated and reclocked on BNC
SDI Outputs ret loss:	>11 dB at 270 Mhz, >13 dB at 500 MHz, >15 dB at 1.5 GHz
SDI Outputs amplitude:	800mVpp
SDI Jitter:	< 0.18UI at 270 Mbps (1KHz Alignment jitter) < 0.25UI at 1485 Mbps (100KHz Alignment jitter)
SDI Automatic eq.:	100 m RG59DS with SD-SDI signal at 270 Mbps 100 m RG11DS or 50 m RG59DS with HD-SDI at 1,485 Gbps
Converted Outputs:	N. 1 DVI-D digital output on DVI-1 29p.f. connector N. 1 Component analog output (YPbPr/YCbCr) on 3 BNC
Conversion resolution:	12 bits
Resolution Format:	SD 480i (NTSC), SD 576i (PAL), HD 720p @ 60Hz (**Not compatible HD 720p @ 50 Hz**) HD 1080i @ 50 Hz, HD 1080i @ 60 Hz HD 1080p @ 25 Hz, HD 1080p @ 30 Hz
Main input:	90÷240 Vac 50-60 Hz with adapter ADM050
Power consumption:	5VA
Size (WxDxH):	200x100x44 mm
Operating temp.range:	0÷45°
Safety:	according to EN60065
EMC:	according to EN55103-1 and-2

6 CONVERTERS AND GENERATORS

CONVI1007

camera — HD-SDI 1080i — IN — active loop — OUT

1 — DVI 1080i → LCD
3 — Y Pb Pr 1080i → DVD R/W
2 — HD-SDI distribution

GMB101

The GMB101 Black Burst and test signal generator features 4 BB outputs and the test signal that is present with the CV and Y/C formats.

The implemented TCXO oscillator ensures a subcarrier high stability (2,5 ppm).

The unit can be used as master generator in studio, OB-Van environments and in non-linear editing stations.

Its test outputs can be used to tune monitors and video-projectors. It can generate signals in PAL or NTSC.

The GMB101 also features a balanced auto output at 1 KHz, 0 dBm on 600 Ω.

- 4 fixed Black Burst outputs
- CV and Y/C test outputs
- Choice of 8 test patterns
- Output with related phase
- PAL / NTSC
- 1 KHz balanced audio output

CV   **Y/C**   **XLR**

Technical specifications

VIDEO	
Output type:	std., with black level at 0 VDC
Black Burst out. ret.loss:	40 dB at 5 MHz
Black Burst out. isolation:	25 dB at 5 MHz
Stability:	2,5 ppm
Test output type:	CV +Y/C
Standards:	PAL, NTSC
Pattern available:	75% BARS, 100% BARS, 75%Y BARS, GRID, DOTS, RAMP, Y RAMP WHITE WINDOW

AUDIO	
Output type:	Electronically balanced on XLR
Level:	0 dBm ±0.5 dB on 600 Ω
Output impedance:	600 Ω
Frequency:	1 KHz ±30 Hz

Main input:	230 Vac 50 Hz
Power consumption:	5 VA
Size (WxDxH):	483x220x44 mm
Weight:	1.8 Kg

Operating temp. range:	0÷45°C
Safety:	according to EN 60065
EMC:	according to EN 55103-1 and EN 55103-2

GMB101

OUT

BB → **BB distribution**
/4

Test signal CV + Y/C → **monitor**

audio 1 KHz → **audio distribution**

elpro

CONVERTERS AND GENERATORS 6

elpro

A.7
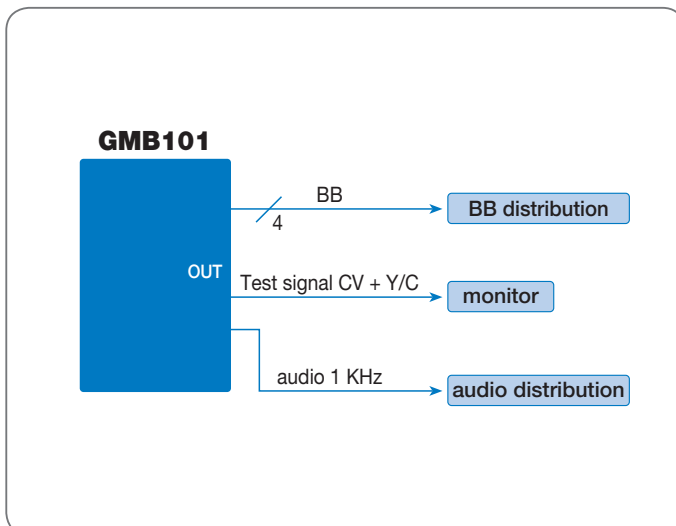
TWISTED PAIRS
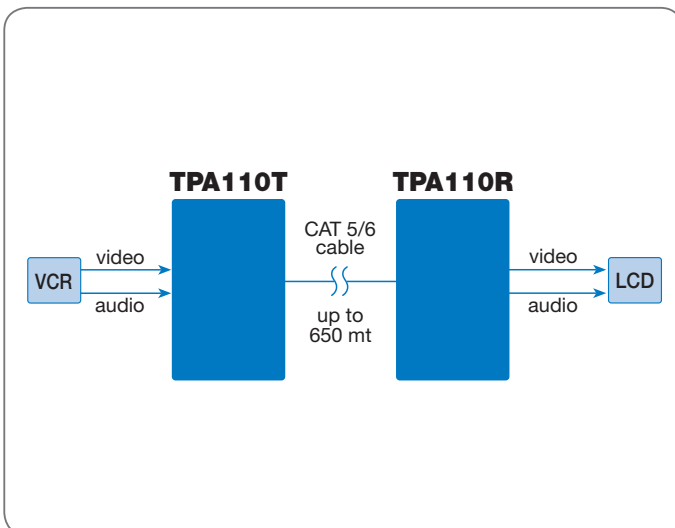
TPA110

The TPA110 series consists of two pairs, transmitter and receiver, designed for remote transmission, via CAT5/6 UTP cable, of a video signal and of a stereo audio signal.
For simple monitoring applications, a distance of up to 650 meters can be covered using a UTP AWG22 cable.

- Video and audio stereo Transmitter / Receiver
- Compensation adjustment
- 19" compatible by ADR1U adapter

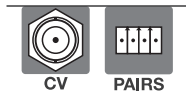## *Technical specifications*

TPA110T

Video Input type:	BNC, AC coupled
Input ret.loss:	35 dB at 5 MHz
Audio input type:	RCA socket, AC coupled
Input impedance:	20 KΩ
Input level:	+10 dBm max
Line OUT:	8 Phoenix screwtype detachable (4 pairs bal.)

TPA110R

Line IN:	8 Phoenix screwtype detachable (4 pairs bal.)
Video OUT:	BNC, not clamped
Equalization / Frequency response from 30KHz to 5 MHz:	±1,5 dB up to 375 mt CAT5 AWG26 cable; ±1,5 dB up to 500 mt CAT5 AWG24 cable; ±1,5 dB up to 650 mt CAT5 AWG22 cable;
Delay:	2.0 µs at 375 mt CAT5 AWG26 cable
Differential gain:	0.6 % worst case
Differential phase:	1.2° worst case
LF Response:	1.2 % on 50Hz squarewave
Hum & noise:	-70 dB unweighted with 375 mt CAT5 AWG26 cable
Audio OUT:	RCA socket
Output level:	Adjustable for up to 375 mt CAT5 AWG26 cable
Max. output level:	+10 dBm
Output impedance:	150 Ω
Audio response:	-0.5 dB from 10Hz to 20KHz; -3 dB at 95 KHz
Distortion:	0.04% from 20Hz to 20KHz at +6 dBm
Crosstalk L/R (Worst case):	55 dB at 16KHz worst case
Hum & Noise:	-64 dBm unweighted through 350 mt CAT5 AWG26 cable
Video/Audio crosstalk:	68 dB worst case through 350 mt CAT5 AWG26 cable
Audio/Video crosstalk:	80 dB at 16 KHz through 350 mt CAT5 AWG26 cable
Mains input:	230 Vac 50 Hz (with AC adapter ADM001)
Power consumption:	5 VA
Size (WxDxH):	200x100x44
Weight:	0.5 Kg / Each unit
Operating temp.range:	0÷45°C
Safety:	according to EN60065
EMC:	according to EN55103-1 and-2

TPA110T   **TPA110R**

VCR → video / audio → CAT 5/6 cable up to 650 mt → video / audio → LCD

TPA110IR

The TPA110IR consists of two pairs, transmitter and receiver, designed for remote transmission, via CAT5/6 UTP cable, of a video signal, a stereo audio signal and IR signal.
For simple monitoring applications, a distance of up to 650 meters can be covered using a UTP AWG22 cable.
Besides, TPA110IR also permits passing of an IR signal.
It also provides visual indication of the correct input video signal and, through contact in exchange of a relay, permits remote alarm or remote signaling

- Video and audio stereo Transmitter / Receiver
- Compensation adjustment
- Video signal in arrival indication
- Exchange contact for video presence
- Bi-directional IR transmission
- Carrier frequency up to 1.2MHz
- 19" compatible by ADR1U adapter

Technical specifications

TPA110 IRT

Video Input type:	BNC, AC coupled
Input ret.loss:	35 dB at 5 MHz
Audio input type:	RCA socket, AC coupled
Input impedance:	20 KΩ
Input level:	+10 dBm max
Line OUT:	8 Phoenix screwtype detachable (4 pairs bal.)
IR IN:	3 Phoenix screwtype detachable
IR OUT:	jack mono 3.5 mm
IR Signal type:	Carrier frequency up to 1.2 MHz

TPA110 IRR

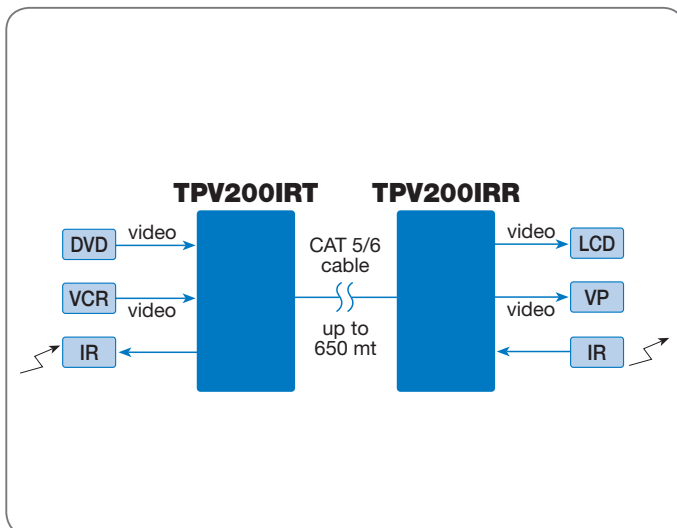|	
Line IN:	8 Phoenix screwtype detachable (4 pairs bal.)
Video OUT:	BNC, not clamped
Equalization / Frequency response from 30KHz to 5 MHz:	±1,5 dB up to 375 mt CAT5 AWG26 cable; ±1,5 dB up to 500 mt CAT5 AWG24 cable; ±1,5 dB up to 650 mt CAT5 AWG22 cable;
Delay:	2.0 µs at 375mt CAT5 cable
Differential gain:	0.6 % worst case
Differential phase:	1.2° worst case
LF Response:	1.2 % on 50Hz squarewave
Hum & noise:	-70 dB unweighted with 375mt CAT5 AWG26 cable
VIDEO (Video presence):	3 Phoenix screwtype detachable dry contact
Audio OUT:	RCA socket
Output level:	Adjustable for up to 375 mt CAT5 AWG26 cable
Max. output level:	+10 dBm
Output impedance:	150 Ω
Audio response:	-0.5 dB from 10Hz to 20KHz; -3 dB at 95 KHz
Distortion:	0.04% from 20Hz to 20KHz at +6 dBm
Crosstalk L/R (Worst case):	55 dB at 16KHz worst case
Hum & Noise:	-64 dBm unweighted through 350 mt CAT5 cable
Video/Audio crosstalk:	68 dB worst case through 350 mt CAT5 cable
Audio/Video crosstalk:	80 dB at 16 KHz through 350 mt CAT5 cable
IR IN:	3 Phoenix screwtype detachable 3p
IR OUT:	jack mono 3.5 mm
IR Signal type:	Carrier frequency up to 1.2 MHz
Mains input:	230 Vac 50 Hz (with AC adapter ADM001)
Power consumption:	5VA
Size (WxDxH):	200x100x44
Weight:	0.5Kg / Each unit
Operating temp. range:	0÷45°C
Safety:	according to EN60065
EMC:	according to EN55103-1 and-2

CV   UNBAL   IR   PAIRS   ALARM

TPA110IRT — TPA110IRR

VCR → video / audio → TPA110IRT → CAT 5/6 cable up to 650 mt → TPA110IRR → video / audio → LCD

IR ← → TPA110IRT | TPA110IRR ← → IR

TWISTED PAIRS

TPV200

The TPV200 series consists of two pairs, transmitter and receiver, designed for remote transmission, via CAT5/6 UTP cable, of two video signals. For simple monitoring applications, a distance of up to 650 meters can be covered using a UTP AWG22 cable.

- Suitable for Y/C signal
- Dual video Transmitter / Receiver
- Compensation adjustment
- 19" compatible by ADR1U adapter

CV **PAIRS**

Technical specifications

TPV200T	
Video Input type:	2 BNC, AC coupled
Input ret.loss:	35 dB at 5 MHz
Crosstalk (two sections):	50 dB at 5 MHz
Line OUT:	8 Phoenix screwtype detachable (4 pairs bal.)

TPV200R	
Line IN:	8 Phoenix screwtype detachable (4 pairs bal.)
Video OUT:	2 BNC, not clamped
Equalization/ Frequency response from 30KHz to 5 MHz:	±1,5 dB up to 375 mt CAT5 AWG26 cable; ±1,5 dB up to 500 mt CAT5 AWG24 cable; ±1,5 dB up to 650 mt CAT5 AWG22 cable;
Delay:	2.0 µs at 375mt CAT5 cable
Differential gain:	0.6 % worst case
Differential phase:	1.2° worst case
LF Response:	1.2 % on 50 Hz squarewave
Hum & noise:	-70 dBm unweightedwith 375 mt. CAT5 AWG26 cable
Video1/video2 crosstalk:	37 dB at 5 MHz, worst case
Mains input:	230 Vac 50 Hz (with AC adapter ADM001)
Power consumption:	5 VA
Size (WxDxH):	200x100x44
Weight:	0.5 Kg / Each unit
Operating temp.range:	0÷45°C
Safety:	according to EN60065
EMC:	according to EN55103-1 and-2

TPV200T   **TPV200R**

DVD → video → TPV200T → CAT 5/6 cable up to 650 mt → TPV200R → video → LCD

VCR → video → → video → VP
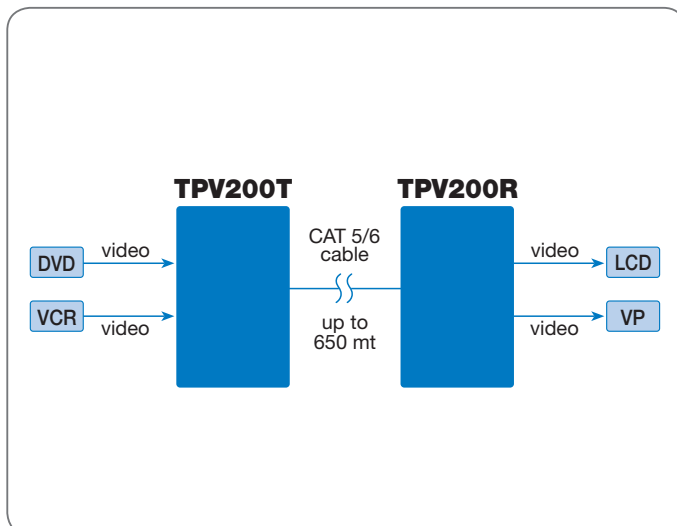
The TPV200IR consists of two pairs, transmitter and receiver, designed for remote transmission, via CAT5/6 UTP cable, of two video signals and IR. For simple monitoring applications, a distance of up to 650 meters can be covered using a UTP AWG22 cable.

Besides, TPV200IR also permits passing of an IR signal and also provides visual indication of the correct input video signal.

- Suitable for Y/C signal
- Dual video Transmitter / Receiver
- Compensation adjustment
- Video signal in arrival indication
- Bi-directional IR transmission
- Carrier frequency up to 1.2 MHz
- Double IR power output
- 19" compatible by ADR1U adapter

Technical specifications

TPV200 IRT	
Video Input type:	2 BNC, AC coupled
Input ret.loss:	35 dB at 5 MHz
Crosstalk (two sections):	50 dB at 5 MHz
Line OUT:	8 Phoenix screwtype detachable (4 pairs bal.)
IR IN:	3 Phoenix screwtype detachable
IR OUT:	2 jacks mono 3.5 mm
IR Signal type:	Carrier frequency up to 1.2 MHz

TPV200 IRR	
Line IN:	8 Phoenix screwtype detachable (4 pairs bal.)
Video OUT:	2 BNC, not clamped
Equalization/ Frequency response from 30KHz to 5 MHz:	±1,5 dB up to 375 mt CAT5 AWG26 cable; ±1,5 dB up to 500 mt CAT5 AWG24 cable; ±1,5 dB up to 650 mt CAT5 AWG22 cable;
Delay:	2.0 µs at 375mt CAT5 cable
Differential gain:	0.6 % worst case
Differential phase:	1.2° worst case
LF Response:	1.2 % on 50 Hz squarewave
Hum & noise:	-70 dBm unweighted with 375 mt CAT5 AWG26 cable
Video1/video2 crosstalk:	37 dB at 5 MHz, worst case
IR IN:	3 Phoenix screwtype detachable 3 p
IR OUT:	2 jacks mono 3.5 mm
IR Signal type:	Carrier frequency up to 1.2 MHz
Mains input:	230 Vac 50 Hz (with AC adapter ADM001)
Power consumption:	5 VA
Size (WxDxH):	200x100x44
Weight:	0.5 Kg / Each unit
Operating temp. range:	0÷45°C
Safety:	according to EN60065
EMC:	according to EN55103-1 and-2

CV   IR   PAIRS

7
TWISTED PAIRS

elpro

A.8

DVI

DVIBOX/1
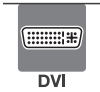
DVIBOX/1 is a signal repeater suited for the standard DVI graphic interface. The input signal can be applied through a cable with a length up to 15 mt. At its internal, DVIBOX/1 rebuilds completely the RGB digital data, and then recodes them in the DVI format, so the output signal is always perfectly DVI compliant. This feature makes possible to connect the remote destination with a cable of 15 mt, reaching an overall length of 30 mt. Besides, it is possible to use more then one device, in order to obtain an overall distance even longer. Also the DDC signals are driven to the destination.

- Input/output resolution up to 1600x1200 (UXGA) or 1080p (HDTV)
- Digital signal rebuilding
- Cascade capability
- HDMI compliant through adapter
- Up to 30 mt with one repeater
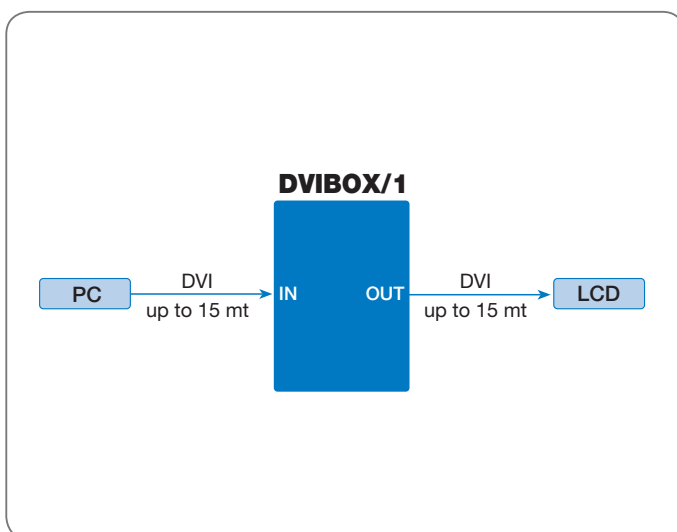
DVI

Technical specifications

DVI format:	single link (2 pixels x clock)
Bandwidth:	1,6 Gbs
Resolution:	up to 1600x1200 or 1920x1080
DDC Input:	TTL +5Vdc
Extend capability:	up to 30 mt with 1 unit
Cascade capability:	2 units (up to 45 mt)
Input/output connectors:	DVI-I 29 p.f.
Main input:	5Vdc (with AC adapter ADM030)
Power consumption:	max 10 VA
Size (WxDxH):	94,5x110x25 mm
Weight:	0,25 Kg
Operating temp.range:	0÷45°
Safety:	according to EN 60065
EMC:	according to EN 55103-1 and EN55103-2

DVIBOX/1

PC — DVI up to 15 mt → IN OUT — DVI up to 15 mt → LCD

DVI 8

90

DVIBOX/2

DVIBOX/2 is a signal distributor/repeater suited for the standard DVI graphic interface. The input signal can be applied through a cable with a length up to 15 mt. At its internal, DVIBOX/2 rebuilds completely the RGB digital data, and then recodes them in the DVI format on two separate outputs, so the output signals are always perfectly DVI compliants. This feature makes possible to connect each destination with a cable up to 15 mt, reaching an overall length of 30 mt. Besides, it is possible to use more then one device, in order to obtain an overall distance even longer. The DDC signals are driven to the OUT1.

- Input/output resolution up to 1600x1200 (UXGA) or 1080p (HDTV)
- Digital signal rebuilding
- Two separate DVI outputs
- Cascade capability
- HDMI compliant through adapter
- Up to 15 mt of output driving
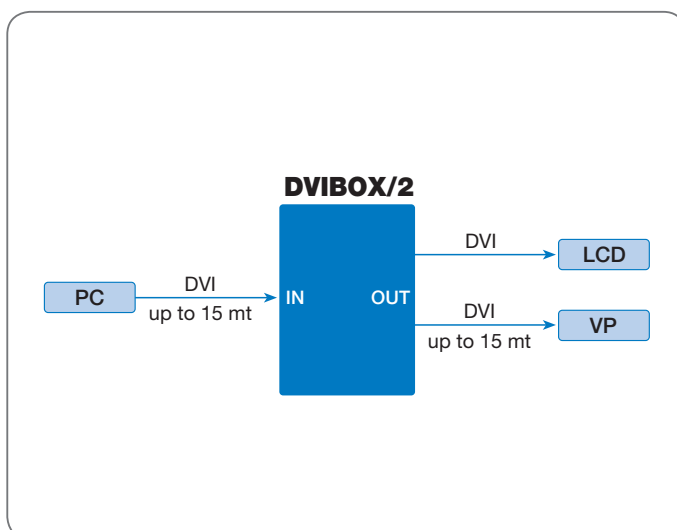
Technical specifications

DVI format:	single link (2 pixels x clock)
Bandwidth:	1,6 Gbs
Resoloution:	up to 1600x1200 or 1920x1080
HDCP:	not compatible
DDC Input:	TTL +5 Vdc
Driving capability:	up to 30 mt each output unit
Cascade capability:	2 units (up to 45 mt)
Input/output connectors:	DVI-I 29p.f.
Main input:	5Vdc (with AC adapter ADM030)
Power consumption:	max 10 VA
Size (WxDxH):	200x100x44 mm
Weight:	0,5 Kg
Operating temp.range:	0÷45°
Safety:	according to EN 60065
EMC:	according to EN 55103-1 and EN55103-2

DVISEL403

The DVISEL403 is a 4x1 DVI switcher suited for routing one of 4 different DVI-D input to a DVI-D output up to 1600x1200 or 1080p resolution. For each DVI input, a stereo associated audio input is provided. AutoSequencing, AutoSwitch and Mute functions are implemented. It is possible to connect up to 4 unit in cascade to set up a 13x1 switcher. A special circuitry emulates the EDID connection towards monitor, even when the source is not selected.

- DVI resolution up to 1600x1200 (UXGA) or 1080p (HDTV)
- 4 separate DVI inputs with combined audio
- Setup saving and recalling
- Cascade capability up to 13 inputs for the switcher
- HDMI compliant through adapter
- Up to 15 mt of output driving
- Optional IR control
- Controlled by RS232

OPTION

| DVI | UNBAL | BAL AUD | RS232 | IR |

Technical specifications

VIDEO	
Inputs:	N°4 DVI-D inputs
Output:	N°1 DVI-D output
DVI format:	single link (2 pixels x clock)
Bandwidth:	1,6 Gbs
Resolution:	up to 1600x1200 or 1920x1080
DDC Input:	TTL +5 Vdc
Driving capability:	up to 15 mt
Input/output connectors:	DVI-I 29 p.f.

AUDIO	
Inputs:	N°4 unbalanced with RCA outlet
Input coupling:	AC
Input impedance:	56 KΩ
Input level:	+9 dBm Max
Frequency response:	-1 dB from 40 Hz to 20 KHz
Crosstalk:	60 dB at 5 KHz
Distortion:	<0,03% at 0 dBm with 10 KΩ load
Hum & noise:	-75 dBm unweighted
Outputs:	N°1 Unbalanced, 150 Ω with RCA outlet N°1 Balanced, 600 Ω with Phoenix screwtype

Cascade capability:	up to 4 units (13x1)
Auxiliary function:	autoswitching, autosequencing, mute
Remote control:	IR, RS232

Main input:	90÷240 Vac 50-60 Hz
Power consumption:	12 VA
Size (WxDxH):	483x210x44 mm
Weight:	3 Kg

Operating temp. range:	0÷45°C
Safety:	according to EN 60065
EMC:	according to EN 55103-1 and EN 55103-2

DVISEL403

PC1 — DVI — audio

lap top

PC2

video presenter

IN — OUT — CONTROL

DVI — LCD

audio — active loudspeakers

IR — RS232

DVI 8

DVIDEC100

4x1 DVI SWITCHER & HIGH RESOLUTION SCALER
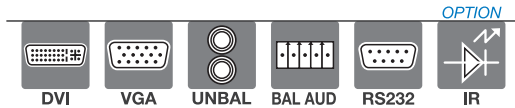
DVIDEC100 is a unit that matches a 4x1 DVI switcher and a DVI to RGBHV scaler. It's possible to set the resolution on the RGBHV out and, by IR and RS232 control, some picture corrections as well. A special circuitry emulates the EDID connection towards monitor, even when the source is not selected. The conversion DVI to RGBHV permits to work with the DVI quality on VGA format, avoiding the limit of the length of the DVI cables.

The choice among four input signals, each with the combined audio, makes the DVIDEC100 very useful in the presentation domain, where many sources , either video or graphics, must be displayed onto a single DVI and/or RGBHV destinations.

- DVI resolution up to 1600x1200 (UXGA) or 1080p (HDTV)
- RGB output resolutions selectable
- "Seamless" switching on RGBHV output
- 4 separate DVI inputs with combined audio
- Setup saving and recalling
- Cascade capability
- HDMI compliant through adapter
- Up to 15 mt of DVI output driving
- Optional IR control
- Controlled by RS232

| DVI | VGA | UNBAL | BAL AUD | RS232 | *OPTION* IR |

Applications

It is possibile to install after the DVIDEC100 a VGA Switcher, type TZW403/803: In this way we features a mixed switcher DVI+VGA with the final out in VGA format outgoing from the last TZW403/803.
Typical application to create a 13x1 DVI Switcher with a VGA out for remote displaying.
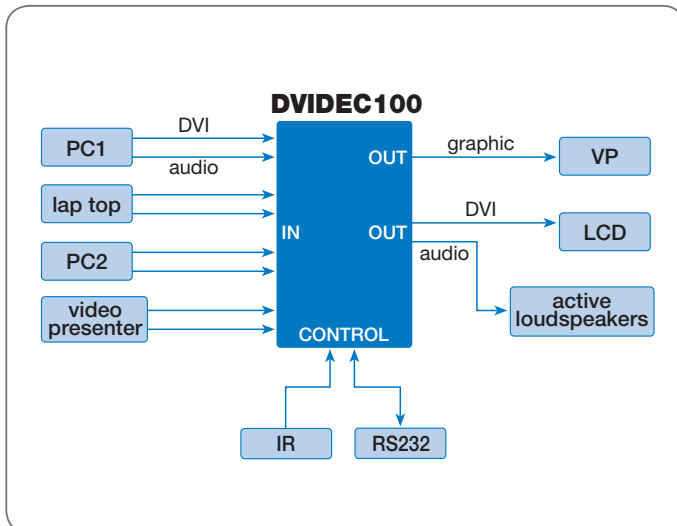
DVIDEC100 block diagram

PC1	DVI / audio →		
lap top	→	IN	OUT → graphic → VP
PC2	→		OUT → DVI → LCD
video presenter	→		audio → active loudspeakers
		CONTROL	
	IR	RS232	

Technical specifications

VIDEO

Inputs:	N°4 DVI-D inputs
Output:	N°1 DVI-D output
Output:	N°1 High resolution with HDD 15 p.f.
Output Format:	Graphic SVGA, XGA, SXGA and YPpPr 480p, 576p, 720p, 1080i
Synch. level:	TTL
Vertical synch.:	60 Hz

AUDIO

Inputs:	N°4 unbalanced with RCA outlet
Input coupling:	AC
Input impedance:	56 KΩ
Input level:	+9 dBm Max
Frequency response:	-1 dB from 40 Hz to 20 KHz
Crosstalk:	60 dB at 5 KHz
Distortion:	<0,03% at 0 dBm with 10 KΩ load
Hum & noise:	-75 dBm unweighted
Outputs:	N°1 Unbalanced, 150 Ω with RCA outlet N°1 Balanced, 600 Ω with Phoenix screwtype

Cascade capability:	up to 4 units (13x1)
Auxiliary function:	autoswitching, autosequencing, mute
Remote control:	IR, RS232

Main input:	90÷240 Vac 50-60 Hz
Power consumption:	12 VA
Size (WxDxH):	483x210x44 mm
Weight:	3 Kg

Operating temp. range:	0÷45°C
Safety:	according to EN 60065
EMC:	according to EN 55103-1 and EN 55103-2

8
DVI

elpro

A.**9**

RS232 /
LAN INTERFACE

CONS100

LIN10x / INTELLIGENT CONSOLE
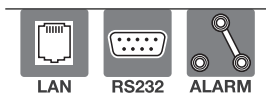
CONS100 is a console suited for the management of the units of the family LIN10x or for the management of a generic unit handled through serial line RS232 or LAN.

The unit LIN10x interface is realized through keys, for driving relays, and through LED to display the state of the inputs and outputs. The management of a generic units is realized by the Intelligent Console mode, that allows to match, for each key of the CONS100 that's pressed, a command string that will be sent to the peripheral unit.

The firmware is upgradable, via RS232, in order to follow the evolution of LIN10x family or to allow further operation modes.

- LAN or RS232 interface
- LAN and interface status through LED and keys
- LIN10x family handling
- Repetition by relays of the LIN105 inputs status
- Intelligent Console mode for generic units handling
- Console fully configuration via RS232
- Firmware upgradable
- Easy insertion in existing LAN

Applications

CONS100 console permits to drive the LIN10x units without computer. In the Intelligent Console mode, CONS100 can drive any serial device simply sending a string of characters any time a button is pressed.

In the following figure is described the mode of operation of CONS100 through Internet and RS232. Both CONS100 and the LIN10x under control are connected on Internet directly through modem ADSL or by LAN that must have a HUB with a fixed IP address. Remind that one CONS100 can control one LIN10x or generic unit only.
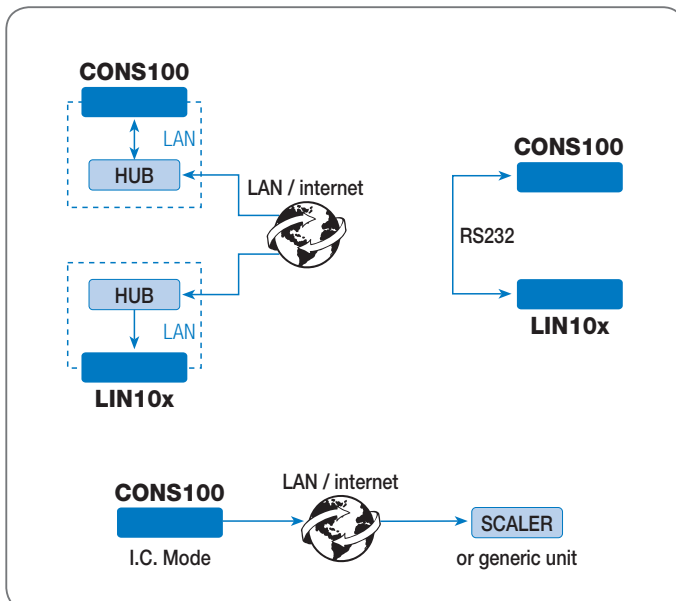
Technical specifications

Relays contact for LIN105 remote inputs repetition:	4 N.O.
Switching current:	max 500 mA at 48 VDC
Ethernet interface:	10 Base T
Network cable:	CAT5
Network Protocols:	UDP, TCP, ICMP, ARP
Data buffer size:	2 independent of 255 bytes
Serial interface:	RS232
Signals:	RxD, TxD, GND
Serial rate:	fixed 9600 b/s (LIN10x console)
Intelligent Mode:	RS232 rate 2400 to 38400 character format configurable
Command string:	up to 20 bytes for each key
Main input:	9 Vac (with AC Adapter ADM001)
Power consumption:	2 VA
Size (WxDxH):	200x100x44 mm
Weight:	0,5 Kg
Operating temp. range:	0÷45°C
Safety:	according to EN 60065
EMC:	according to EN 55103-1 and EN 55103-2 EN 50081 part1 and 50082 part 1

RS232 / LAN INTERFACES

9

ELPRO Video Labs s.r.l. - Tel. +39 0117701583 - Product catalogue 2010 - www.elprovideolabs.com

CNS1000 is a console that can be used for remote control of ELPRO matrix switchers which can be interfaced via RS232 serial line or on Ethernet network. The operator interface consists of an alphanumeric display and a set of function keys used to send commands to the matrix switchers. On an Ethernet network, it is possible to connect several CNS1000 consoles to manage a single matrix; management of various matrix switchers is also possible from the same console. It is possible to create packets commands, by serial programming, that can be associated to the alphanumeric keys, to be sent to one or more machines.

The firmware can be updated, via RS232, so as to follow the evolution of ELPRO products or to implement new functions.

- RS232 or Ethernet interface
- Operator interface via alphanumeric display and function keys
- Management of ELPRO matrix switchers
- Firmware updatable via RS232
- Easy insertion in an existing LAN
- Possibility of insertion in 2RU rack
- Packets commands programming

LAN   **RS232**

Applications

CNS1000 can drive more than one ELPRO Matrix Switchers through LAN / Internet see below.

MACRO COMMANDS

It's possible to create some packets commands, by serial programming, that can be associated to the alphanumeric keys, to be sent to more than one machine. In this way, pressing one button only, it's possible to activate an event sequence in the units connected to the CNS1000: this feature is very useful in video studios or room control.
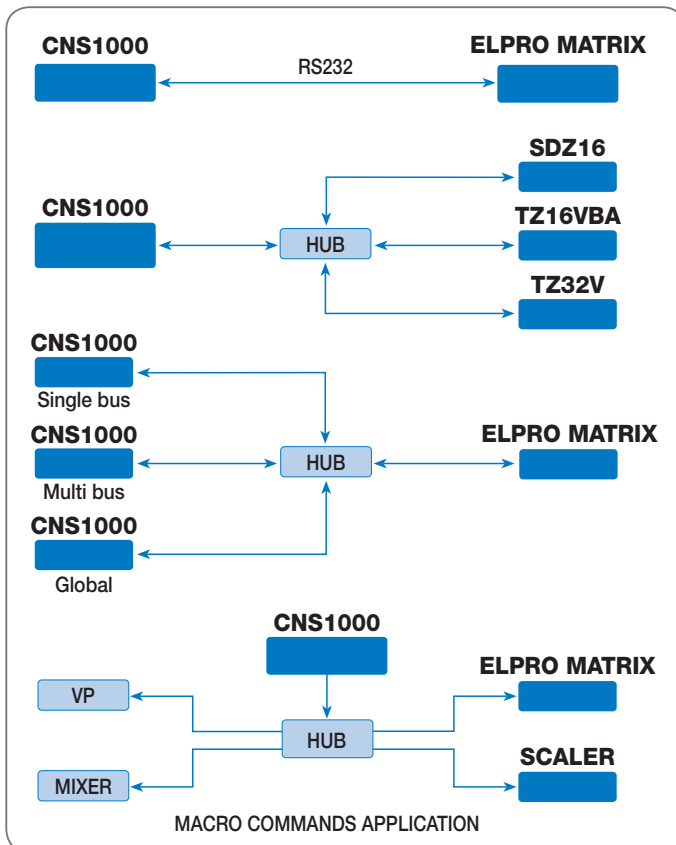
Technical specifications

Ethernet interface:	10/100 Base T
Network cable:	CAT5
Network Protocols:	UDP, TCP, DHCP, ICMP, ARP
Data buffer size:	2 independent of 255 bytes
Serial interface:	RS232
Signals:	RxD, TxD, GND
Serial rate:	programmable 2400 to 38400 bit/sec (9600 for ELPRO matrices)
Main input:	5 Vcc with AC (adapter ADM030)
Power consumption:	2,5 VA
Size (WxDxH):	320x45x88 mm
Weight:	1,0 Kg
Operating temp. range:	0÷45°C
Safety:	according to EN 60065
EMC:	according to EN 55103-1 and EN 55103-2 EN 50081 part1 and 50082 part 1

CNS1000 — **RS232** — **ELPRO MATRIX**

SDZ16
TZ16VBA
TZ32V

CNS1000 — **HUB**

CNS1000
Single bus

CNS1000 — **HUB** — **ELPRO MATRIX**
Multi bus

CNS1000
Global

CNS1000

VP
MIXER — **HUB** — **ELPRO MATRIX** / **SCALER**

MACRO COMMANDS APPLICATION

9

RS232 / LAN INTERFACES
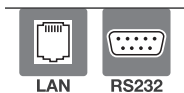
LIN101

LIN101 is a birectional RS232/Ethernet 10 baseT converter. It lets to interface, via TCP/IP LAN protocols, all devices equipped with RS232 interface.

LIN101 can be used with an existing PC LAN network using the provided VSP software (VIRTUAL SERIAL PORT DRIVER), to create many virtual RS232 interfaces.

It is also possible to interface serial devices directly via Ethernet protocols.

- Connection with RS232 devices via LAN
- Easily integrates into an existing LAN
- Network and serial programming mode
- Connection using Virtual Serial Port Driver on PC LAN
- Direct connection using TCP/IPand UPD/IP protocols
- LEDs indication of interface status

LAN **RS232**

Applications

LIN101 is the simplest interface between an existing LAN and a serial device. There are 3 basic ways to work with the LIN101:

- In Windows OS through virtual serial port. In this case it's possible to run by the same application software already installed that was using a standard COM.
- Virtual serial port can be created by VSP software included in the installation tools provided.
- In both Windows and other OS, running with a software able to manage directly UDP/IP and TCP/IP protocols
- Creating a virtual serial link over the network by using two LIN101 (see 2nd figure).
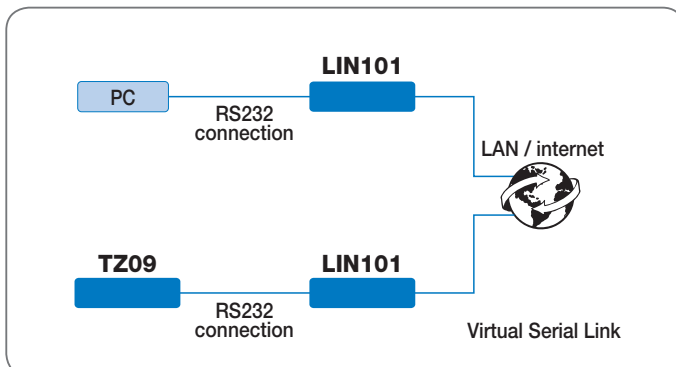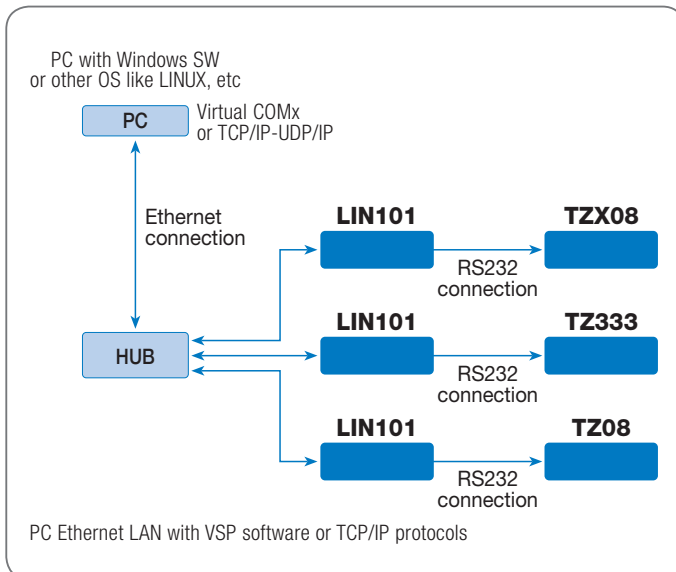
PC with Windows SW
or other OS like LINUX, etc

PC Virtual COMx
or TCP/IP-UDP/IP

Ethernet
connection

LIN101 **TZX08**
RS232
connection

HUB **LIN101** **TZ333**
RS232
connection

LIN101 **TZ08**
RS232
connection

PC Ethernet LAN with VSP software or TCP/IP protocols

PC **LIN101**
RS232
connection

LAN / internet

TZ09 **LIN101**
RS232
connection

Virtual Serial Link

Technical specifications

Ethernet interface:	10 Base T
Network cable:	CAT5
Network Protocols:	UDP, TCP, ICMP, ARP
Data buffer size:	2 independent of 255 bytes
Serial interface:	RS232
Signals:	RxD TxD, RTS, CTS
Serial speed:	from 150 b/s to 115200 b/s
Main input:	9 Vac (with AC adapter ADM001)
Power consumption:	3 VA
Size (WxDxH):	94.5x71.5x25
Weight:	0,2 Kg
Operating temp. range:	0÷45°C
Safety:	according to EN 60065
EMC:	according to EN 55103-1 and EN 55103-2 EN 50081 part1 and 50082 part 1

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LIN102

LIN102 permits the command, by LAN or by RS232 serial line, of 4 low power relays. In addition it can acts the bidirectional conversion RS232 / Ethernet 10base T in order to permit the interfacing towards all the units that present the RS232 capability.

LIN102 may work directly on an existing LAN or by the software VSP (Virtual Serial Port) Manager that permits to create a virtual serial port on the computer.

- Command of 4 relays by LAN or RS232
- Transparent mode for the the Elpro units control through LAN
- Easy insertion in existing LAN
- Programmable through LAN or by RS232
- Connection using Virtual Serial Port Manager on PC LAN
- Direct connecting using TCP/IP and UPD/IP protocols
- Led indication of interface status

Applications

LIN102 is an interface able to energize 4 dry contacts through LAN or by RS232.

There are 4 basic ways to work with the LIN102:

- Commanding the 4 dry contacts in Windows OS through virtual serial port. Virtual serial port can be created by VSP software included in the installation tools provided.
- Commanding the 4 dry contacts in both Windows and other OS, running with a software able to manage directly UDP/IP and TCP/IP protocols
- Commanding the 4 dry contacts directly by RS232

To command the 4 dry contacts, the software running must comply the Elpro protocol. The Elpro protocol is available in the installation tools provided.

- LIN102 works as RS232 / LAN interface to command remote devices
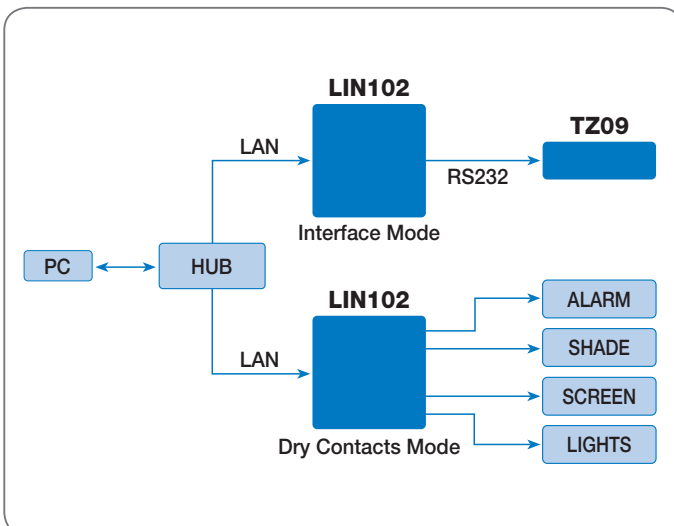
Technical specifications

Relays contact:	N. O.
Switching current:	max 200 mAat 24 VDC
Contacts connector:	Screwtype detachable
Ethernet interface:	10 Base T
Network cable:	CAT5
Network Protocols:	UDP, TCP, ICMP, ARP
Data buffer size:	2 independent of 255 bytes
Serial interface:	RS232
Signals:	RxD TxD
Serial speed:	fixed 9600 b/s
Transparent mode signals:	RxD TxD, RTS, CTS
Transparent mode speed:	from 150 b/s to 115200 b/s
Main input:	9 Vac (with AC Adapter ADM001)
Power consumption:	3 VA
Size (WxDxH):	94,5x110x25 mm
Weight:	0,25 Kg
Operating temp. range:	0÷45°C
Safety:	according to EN 60065
EMC:	according to EN 55103-1 and EN 55103-2 EN 50081 part1 and 50082 part 1

LIN103

LIN103 allows the command by LAN or by RS232 serial line of 8 SCHUKO SOCKETS.
LIN103 may work directly on an existing LAN or by the software VSP (Virtual Serial Port) Manager that allows to create a virtual serial port on the computer.

- Command of 8 SCHUKO sockets by LAN or RS232
- Easy insertion in an existing LAN
- Programmable through LAN or by RS232
- Connection using VSP or PC LAN
- Direct connection using TPC/IP and UPD/IP protocols
- LED indications of interface status

LAN   RS232   ACTION

Applications

LIN103 is an interface able to energize 8 Schuko sockets through LAN or by RS232.
There are 3 basic ways to work with the LIN103:
- Commanding the Shuko sockets in Windows OS through virtual serial port. Virtual serial port can be created by VSPD software included in the installation tools provided.
- Commanding the Shuko sockets in both Windows and other OS, running with a software able to manage directly UDP/IP and TCP/IP protocols
- Commanding the Shuko sockets directly by RS232
To command the Shuko sockets, the software running must comply the Elpro protocol.
The Elpro protocol is available in the installation tools provided.

PC with Windows SW
or other OS like LINUX, etc

PC   Virtual COMx
or TCP/IP-UDP/IP

Ethernet
connection

HUB   Ethernet
connection

LIN103

Towards eight apparatus to be powered
by SHUKO sockets

Technical specifications

SCHUKO load (single):	230 Vac at 5 A
SCHUKO fuse link:	T 6 A
Maximum SCHUKO load (total):	230 Vac at 16 A
Ethernet interface:	10 Base T
Network cable:	CAT5
Network Protocols:	UDP, TCP, ICMP, ARP
Data buffer size:	2 independent of 255 bytes
Serial interface:	RS232
Signals:	RxD TxD
Serial speed:	fixed 9600 b/s
Transparent mode signals:	RxD TxD, RTS, CTS
Transparent mode speed:	from 150 b/s to 115200 b/s
Main input:	230 Vac 50 Hz (115 Vac 60 Hz on request)
Power consumption:	9 VA
Size (WxDxH):	483x190x135 mm
Weight:	3 Kg
Operating temp. range:	0÷45°C
Safety:	according to EN 60065
EMC:	according to EN 55103-1, EN-55103-2, EN-50081 part1 and 50082 part1
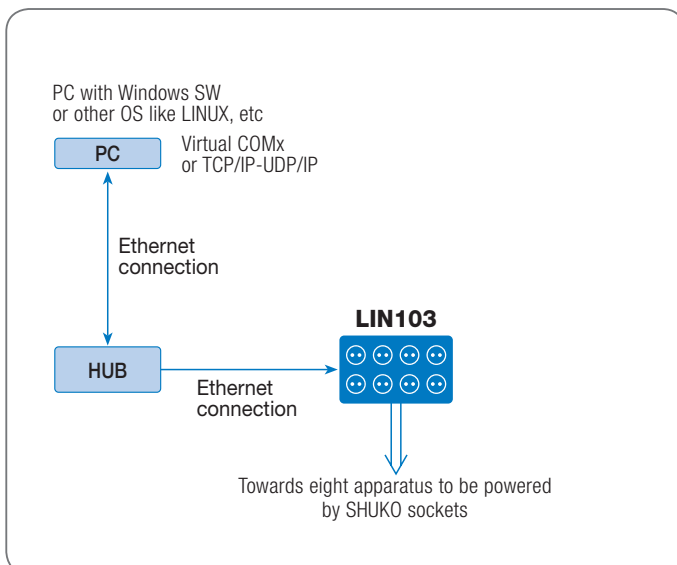
LIN104
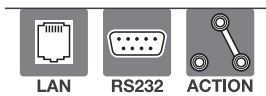
LIN104 permits the command, by LAN or by RS232 serial line, of 12 low power relays. LIN104 may be handled by CONS100 console or directly via RS232 or LAN.
In PC environment it is possible to use the software VSP (Virtual Serial Port) Manager that permits to create a virtual serial port on the computer.

- Command of 12 relays by LAN or RS232
- Handled by CONS100 console
- Easy insertion in existing LAN
- Programmable through LAN or by RS232
- Running on LAN in O.S. Win with Virtual Serial Port created by Software VSP Manager
- Running on LAN by direct linking with protocols TCP/IP and UDP/IP
- Led indication of interface status

Applications

The apparatus LIN104 can be controlled by the CONS100 console either through RS232 and through LAN.

To use the LIN104 onto LAN or Internet it's necessary to set its internal IP address. This IP address must be the same setted onto CONS100 as "Destination IP". In this case CONS100 is programmed as "master" unit, whereas LIN104 must be programmed as "slave" unit.

The software to program and set the IP address onto CONS100 and LIN104, called DSE Manager, is available on the Elpro web site.

In the following example is described the management of LIN104 by CONS100.
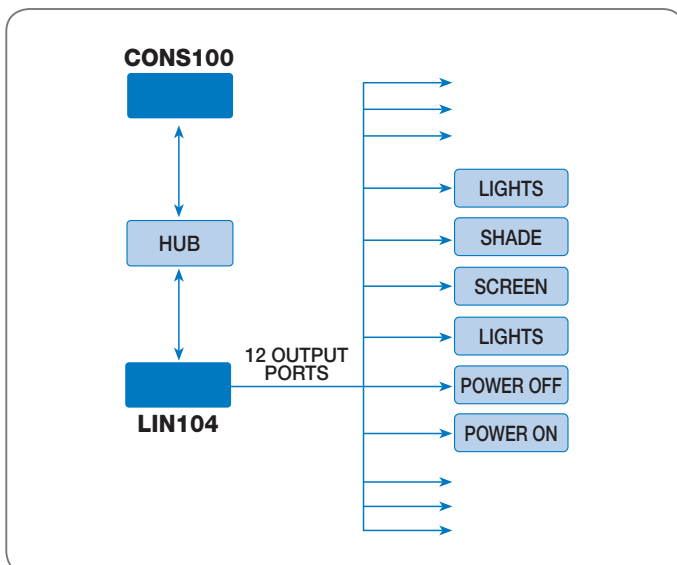
Technical specifications

Relays contact:	8 N. O.
	4 Exchange
Switching current:	max 500 mA at 48VDC
Ethernet interface:	10 Base T
Network cable:	CAT5
Network Protocols:	UDP, TCP, ICMP, ARP
Data buffer size:	2 independent of 255 bytes
Serial interface:	RS232
Signals:	RxD, TxD, GND
Serial rate:	fixed 9600 b/s
Main input:	9 Vac (with AC Adapter ADM001)
Power consumption:	5 VA
Size (WxDxH):	200x100x44 mm
Weight:	0,5 Kg
Operating temp. range:	0÷45°C
Safety:	according to EN 60065
EMC:	according to EN 55103-1
	and EN 55103-2 EN 50081
	part1 and 50082 part 1

LIN105

LIN105 permits the command, by LAN or by RS232 serial line, of 8 low power relays and the acquisition of 4 digital inputs. LIN105 may be handled by CONS100 console or directly via RS232 or LAN.

In PC environment it is possible to use the software VSP (Virtual Serial Port) Manager that permits to create a virtual serial port on the computer.

- Command of 8 relays by LAN or RS232
- Acquisition of 4 digital inputs OPEN or GND
- Handled by CONS100 console
- Easy insertion in existing LAN
- Programmable through LAN or by RS232
- TCP/IP standard protocol
- Running on LAN in O.S. Win with Virtual Serial Port created by Software VSP Manager
- Running on LAN by direct linking with protocols TCP/IP and UDP/IP
- Led indication of interface status

Applications

The apparatus LIN105 can be controlled by the CONS100 console either through RS232 and through LAN.

To use the LIN105 onto LAN or Internet it's necessary to set its internal IP address. This IP address must be the same setted onto CONS100 as "Destination IP". In this case CONS100 is programmed as "master" unit, whereas LIN105 must be programmed as "slave" unit.

The software to program and set the IP address onto CONS100 and LIN105, called DSE Manager, is available on the Elpro web site.

In the following example is described the management of LIN105 by CONS100.

LIN105, inserted onto a LAN / internet network system, permits to control and automate an integrated system. If alarms, status and positions are recognized by LIN105 inputs, then through LIN105 OUT relais it's possible to command lighting, shades, screens and by LAN / internet. The command are under software control that runs on a PC.
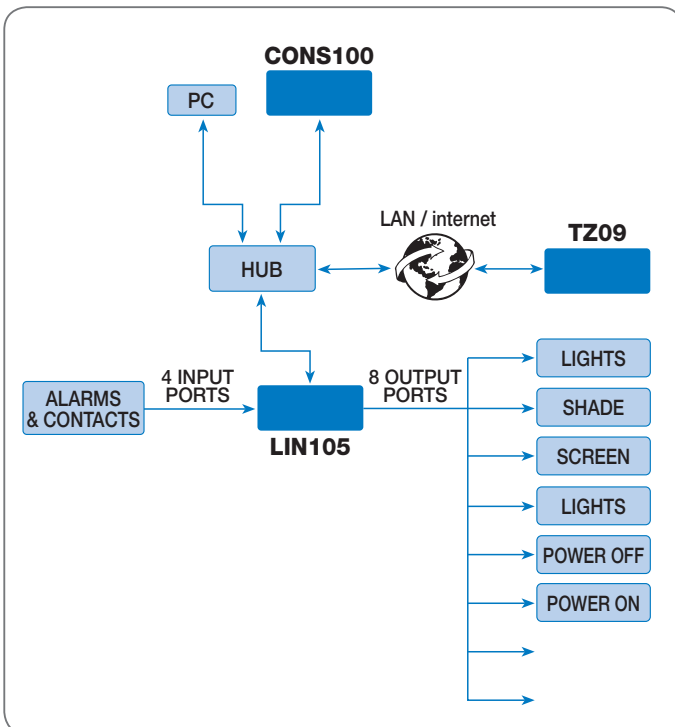
Technical specifications

Relays contact:	4 N. O.
	4 Exchange
Input:	4 digital: open or GND level
Switching current:	max 500 mA at 48VDC
Ethernet interface:	10 Base T
Network cable:	CAT5
Network Protocols:	UDP, TCP, ICMP, ARP
Data buffer size:	2 independent of 255 bytes
Serial interface:	RS232
Signals:	RxD, TxD, GND
Serial rate:	fixed 9600 b/s
Main input:	9 Vac (with AC Adapter ADM001)
Power consumption:	2 VA
Size (WxDxH):	200x100x44 mm
Weight:	0,5 Kg
Operating temp. range:	0÷45°C
Safety:	according to EN 60065
EMC:	according to EN 55103-1
	and EN 55103-2 EN 50081
	part1 and 50082 part 1

RS232 / LAN INTERFACES

9

elpro

A.10

WALL PLATES

■ **WP210** - Dual RCA vs. 4 poles terminal block

■ **WP220** - Dual 3.5 mm jack vs. 3+3 poles terminal block

■ **WP310** - Dual BNC vs. 6 poles terminal block

■ **WP410** - BNC and 3.5 mm jack vs. 3+3 poles terminal block

■ **WP420** - Mini-Din and 3.5 mm jack vs. 6 poles terminal block

■ **WP230** - XLR 3 p.f. or 6,3 mm mono jack, solder cups (2 modules wide)

WALL PLATES **10**
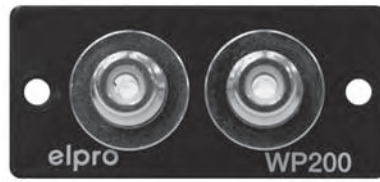
■ **WP200** - Dual RCA pass-through
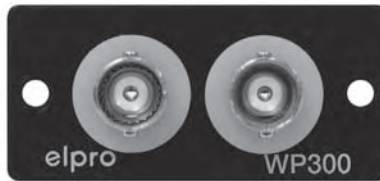
■ **WP300** - Dual BNC pass- through
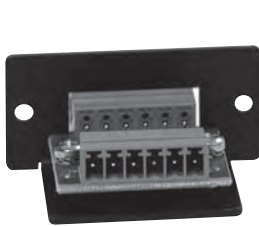
■ **WP240** - 3+3 poles terminal block pass through

■ **WP400** - BNC and RCA pass-through
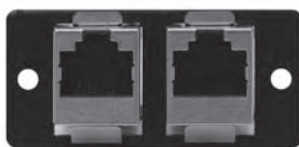
■ **WP100** - Dual RJ-45 pass-through

■ **WP110** - RJ-45 and BNC pass- through

■ **WP500** - HDD 15 poles f. pass through

■ **WP510** - HDD 15 poles f. vs 6+2 poles terminal block
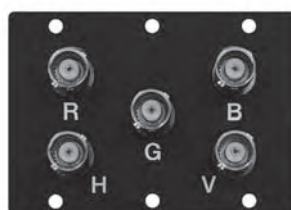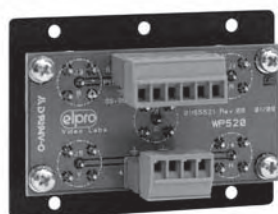
■ **WP520** - 5 BNC vs. 10 poles terminal block
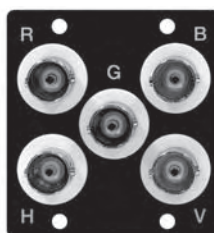
■ **WP530** - 5 BNC pass through
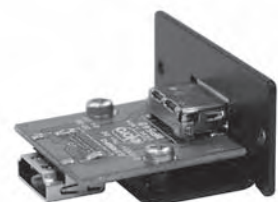
■ **WP540** - HDMI pass through

■ **WP550** - DVI-I 29 poles f. pass through
(2 modules wide)

LAN & GRAPHICS *PASS-THROUGH & CONNECTION MODULES*
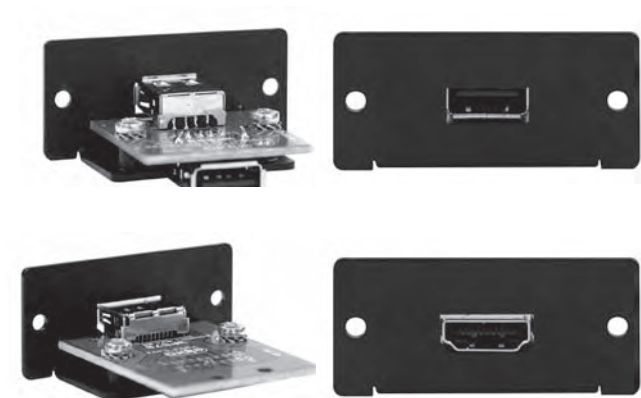
■ **WP560** - USB type A pass through

■ **WP570** - HDMI vs. soldering pads

MISCELLANEOUS *CONNECTION MODULES*

■ **WP600** - Button and Led vs 4 poles terminal block

■ **WP610** - Jack, Led and Mini-button vs 3+4 poles terminal block

■ **WP620** - 3 poles Italian mains socket (2 modules wide)

■ **WP630** - General purpose D series chassis (2 modules wide)

10 WALL PLATES

FRAMES & BLANK PANELS
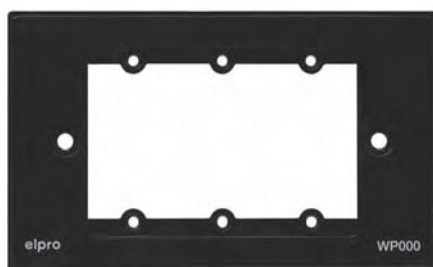
■ **WP000** - 3 modules frame for EU standard box
- Provided with 2 blank modules WP060
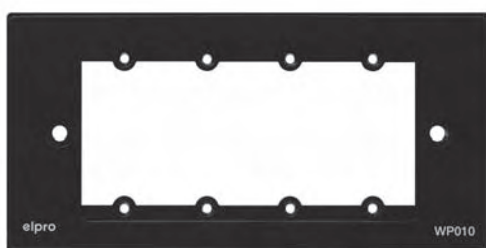
■ **WP010** - 4 modules frame for EU standard box
- Provided with 2 blank modules WP060
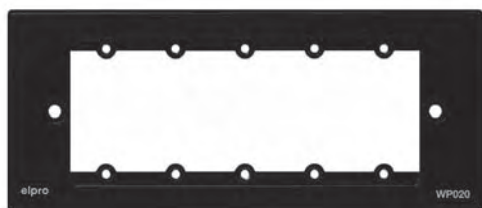
■ **WP020** - 5 modules frame for EU standard box
- Provided with 2 blank modules WP060

■ **WP060**, **WP065** - One and Two blank module

Dimensions				
Item	W (mm)	D (mm)	H (mm)	Wheelbase (mm)
WP000	115	2.5	70	83.5
WP010	139	2.5	70	108
WP020	163	2.5	70	130
WP060	23.5	1.5	50.5	
WP060	47.2	1.5	50.5	

■ **WP070** - 19" 1RU 6 modules frame
- Provided with 2 blank modules WP060

■ **WP075** - 19" 2RU 16 modules frame
- Provided with 2 blank modules WP060

WALL PLATES **10**

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ACCESSORIES

■ **WP040** - Optional external wall box
  - Can fit 1 WP010
  - WxDxH (mm) = 160 x 100 x 50

■ **WP045** - Optional external floor box
  - Can fit 1+1 WP010
  - WxDxH (mm) = 170 x 150 x 130

■ **WP050** - Optional hidden floor box
  - Can fit 1+1 WP010
  - WxDxH (mm) = 322 x 217 x 105
  - Surface cutout (mm) = 305 x 195

■ **WP055** - Optional table box
  - Can fit 1 WP010
  - WxDxH (mm) = 160 x 100 x 100
  - Surface cutout (mm) = 140 x 80

WP080

The WP080 belongs to the family of the Cables and Modules Shelter. It's ideal for classrooms and large training facilities where several tabletop cable connections are needed. It has a universal AC power outlet compatible with Shuko, Italian tripolar and US sockets. It can house too up to three data, audio and video cables that can be pulled-up through the openings in the cable pass-through adapter. Three different cable diameters and connector types are available. After the use, the cables can be pushed back in the shelter and remain invisible until the cap is closed.

- Professional Black color
- Universal AC power outlet compatible with all the type of plugs
- Cable pass-through kit, grommets and screws provided
- Cap to give a nice aspect at the end of use
- Simple cable installing and using
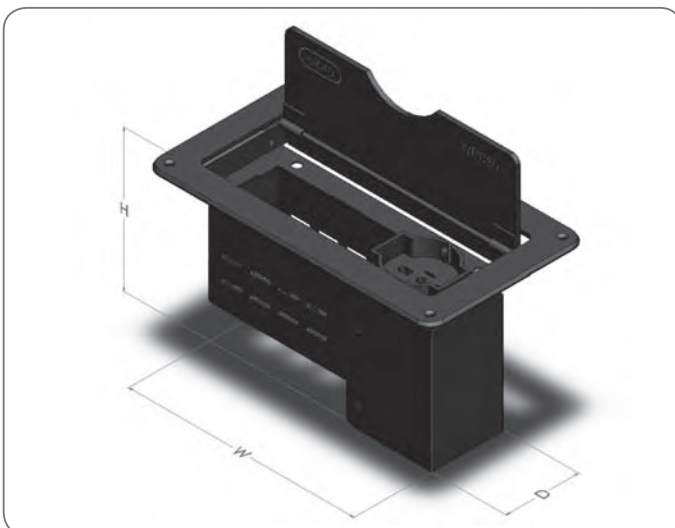
Technical specifications

Dimensions	W (mm)	D (mm)	H (mm)
Top Plate	203	112	N.A.
Surface Cutout	183	84	N.A.
Box (under surface)	181	76	105

WP080 configuration:	N°1 Universal AC power outlet N°1 Cable pass-through kit - 3 cable holes (Large, Medium, Small)
Main Input:	90-240Vac 5A Max
Weight:	1.1 Kg

WP090
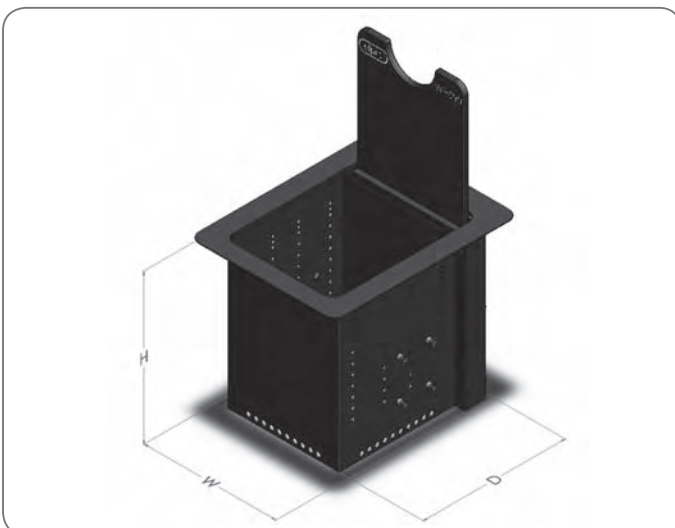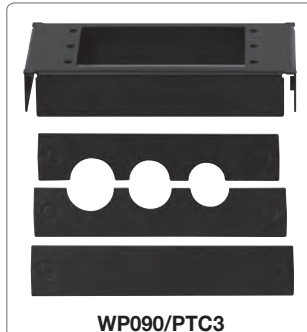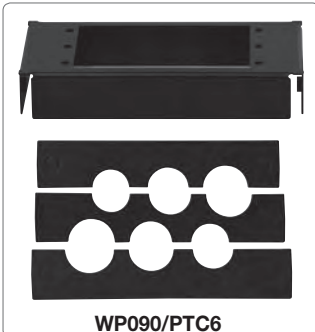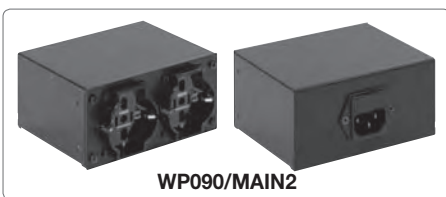
The WP090 belongs to the family of the Cables and Modules Shelter. It's ideal for classrooms and large training facilities where several tabletop cable connections are needed. WP090 can be used in several applications having the possibility of choosing among several configurations. It can house as well up to twelve data, audio and video cables that can be pulled-up through the openings in the cable pass-through adapter. Three different cable diameters and connector types are available. Up to four universal AC power outlets and the whole range of Elpro wall plates modules can be mounted onto WP090 permitting a full universal configuration.

The feature to house 2 or 4 universal AC power outlet is useful in cases where is necessary to saving space and 2 or 4 devices can be energized through one WP090.

- Professional black color
- Can fit Universal AC power outlets, Wall Plate modules and Cable pass-through kits
- Universal AC power outlet compatible with all the type of plugs
- Up to 8 Wall Plate Modules
- Cable pass-through kits for 3 or 6 cables
- Optional blank panel WP090/BLK3
- Cup to give a nice aspect at the end of use
- Simple installing and using

WP090/MAIN2

WP090/WP4

WP090/BLK3

WP090/PTC6

WP090/PTC3

Configuration accessories

- **WP090/MAIN2** Mains group with N°2 universal Shuko sockets + screws + mains cable.

- **WP090/WP4** Frame for N°4 Modules + 4 screws

- **WP090/PTC3** Passing-through kit for 3 cables that includes: frame + N°2 complementary pass-through flaskes + N°1 WP090/BLK1 + accessories + 4 screws.

- **WP090/PTC6** Passing-through kit for 6 cables that includes: frame + N°2 complementary pass-through flaskes + 1 central pass-through flask + accessories + 6 screws

- **WP090/BLK3** Blank Panel

Technical specifications

Dimensions	W (mm)	D (mm)	H (mm)
Top Plate	150	190	N.A.
Surface Cutout	144	180	N.A.
Box (under surface)	140	178	154

Main Input: 90-240Vac 5A Max
Weight: 2.5 Kg

WP090 Configuration

The following pictures describe all the 22 possible installation configurations of WP090 with its accessories to fit mains sockets, pass-through cables an Wall Plates modules.

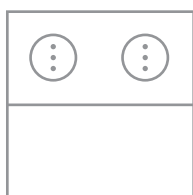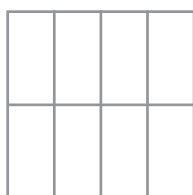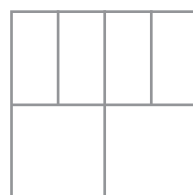Each configuration has an ordering code: see Ordering Information table for accessory types and quality to order.
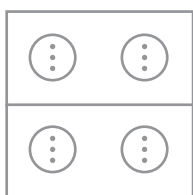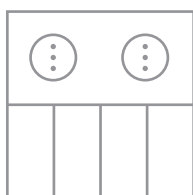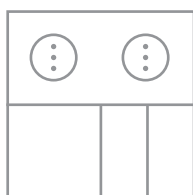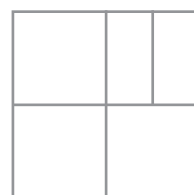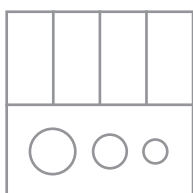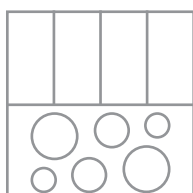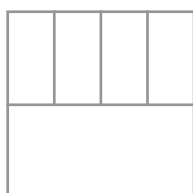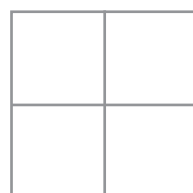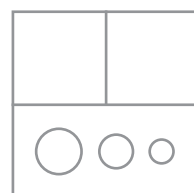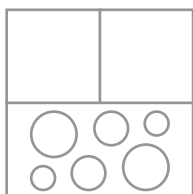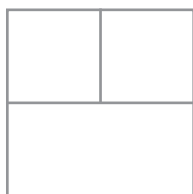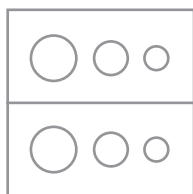
WP090-A WP090-B WP090-C WP090-D WP090-E
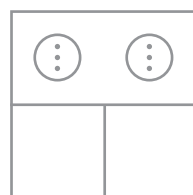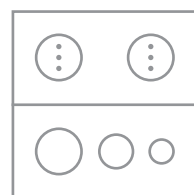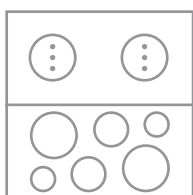
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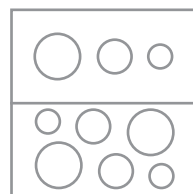
WP090-L WP090-M WP090-N WP090-O WP090-P

WP090-Q WP090-R WP090-S WP090-T WP090-U
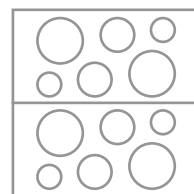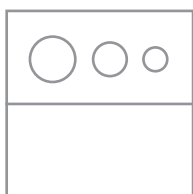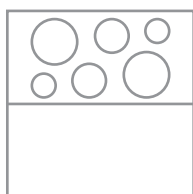
WP090-V WP090-Z

Ordering Information Table

	WP090 Configuration codes												
Accessories	A	B-C-D	E	F	G	H-I-K-O	L-P	M-Q	N-R	S	T	U	V	Z
WP090/MAIN2	2	1	1	1	1									
WP090/WP4		1				2	1	1	1					
WP090/PTC3			1				1			2	1		1	
WP090/PTC6				1				1			1	2		1
WP090BLK3					1				1				1	1
WP090	1	1	1	1	1	1	1	1	1	1	1	1	1	1

WALL PLATES 10

elpro

A. 11

PATCH PANELS

EASYPATCH

CONTACT	CV	Y/C	VGA	LAN	UNBAL
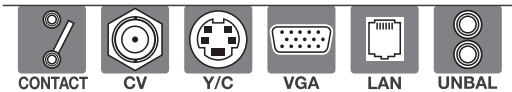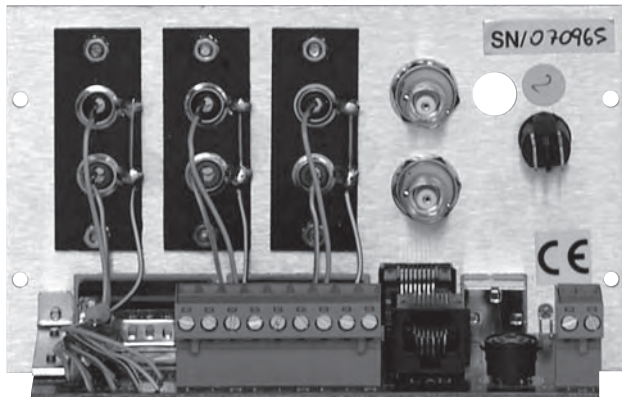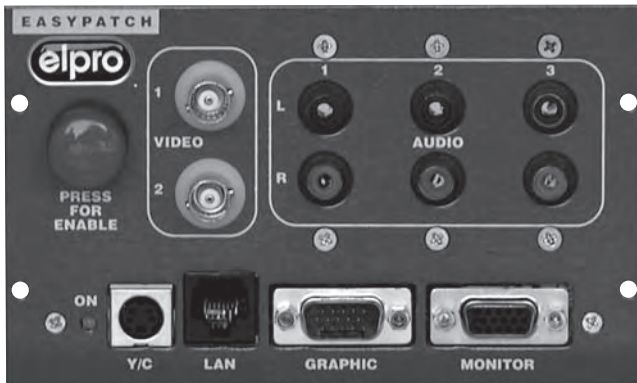
EASYPATCH is an useful tool suited for the wiring of the presentation systems.

The unit is passive and does not need of power supply.

EASYPATCH is the ideal interface between a computer and the external video/sound systems.

It provides the pass through connectors for graphic, audio and LAN signals.

In addition two CVBS video, one Y/C and other two stereo audio are available.

A pushbutton and one led are mounted to permit the command selection towards an ELPRO switcher type TZR or TZW series.

EASYPATCH can be fitted in a table, podium, wall or 19" rack.

The mounting on a wall is made possible by an additional box kit available as accessory. (Cod. EP BOX1)

The mounting on 19" is possible by an additional AL support. (Cod. EP RACK1)

Technical specifications

CONNECTORS	
Graphic:	1, HDD 15 p.m./f. in loop
Monitor:	1, HDD 15 p.f./m. in loop
Audio:	3, stereo RCA sockets and captive screw terminals
CVBS Video:	2,BNC/BNC in loop
Y/C Video:	1, mini-Din 4 p.f. in loop
LAN:	1, RJ-45 in loop
Size (WxDxH):	143x60x86 mm
Weight:	0.25 Kg

OPTIONAL ACCESSORY	
Kit for wall mounting:	cod. EP BOX1
Size (WxDxH):	200x80x150 mm
Weight:	0.45 Kg
Mounting on 19":	cod.EP RACK1
Size (WxH):	483x88 mm

PATCH PANELS

11

ELA24S
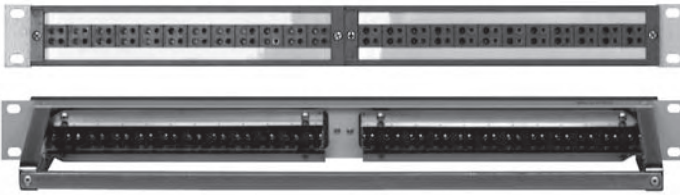
The ELA audio patch panels series was developped to guarantee the maximum of reliability on the contact especially for the customers who are using microphonic signals.

Patch panel ELA is made by 24 pads each of them has four contacts (two pairs) where the customer can solder one source and one destination both balanced.

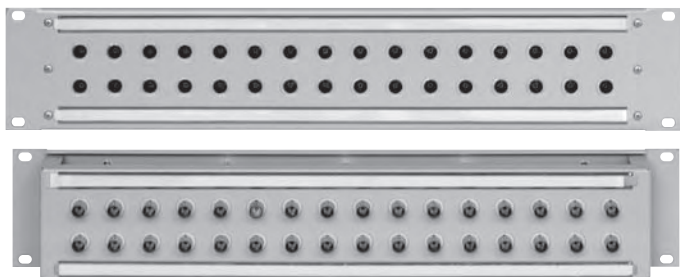The pair is made by two contacts of different diameter so that phase inversions are not possible.

The patch is equipped with tag-carrier and can be funished with a large series of accessories.

ELV16BP/32BP

mod. ELV16BP

mod. ELV32BP

The ELV video patch panels series was developped to meet the demands of professional and broadcast operators.
All models are equipped with tag-carrier and can be furnished with a large series of accessories.

Model ELV 16BP presents 16 insulated BNC/JACK connectors.
It's useful as patch panel for incoming cables in wiring studios.

Model ELV 32BP consists in a 2U panel on which are mounted two rows of 16 BNC/JACK connectors.

The mobile connections are accomplished on the front panel and are simplified by the use of quick connection connectors.

ELD12

ELD12 is a patch panel for multiple cable suited for the interconnection among machines which operate with RS422.

ELD12 consists of a 1RU panel which presents:

12 modular RJ45 connectors on front panel to make quick connections.

12 connectors Sub-D 9 p.f. on rear panel to receive the RS422 cables.

Through the 6 cable provided with the unit one or two control edit can drive several different units.

PATCH PANELS

11

elpro

A. 12 ACCESSORIES

VGA CABLES

COD. ELPRO	DESCRIPTION	
ADC101	Cable HDD 15 p. m./f.	1,5 mt.
ADC101MM	Cable HDD 15 p. m./m.	1,5 mt.
ADC105	Cable HDD 15 p. m./f.	5 mt.
ADC105MM	Cable HDD 15 p. m./m.	5 mt.
ADC110	Cable HDD 15 p. m./f.	10 mt.
ADC110MM	Cable HDD 15 p. m./m.	10 mt.
ADC115MM	Cable HDD 15 p. m./m.	15 mt.
ADC120	Cable HDD 15 p. m./f.	20 mt.
ADC120MM	Cable HDD 15 p. m./m.	20 mt.
ADC130	Cable HDD 15 p. m./f.	30 mt.
ADC130MM	Cable HDD 15 p. m./m.	30 mt.
ADC140MM	Cable HDD 15 p. m./m.	40 mt.

ADP101	VGA Adapter m./m.
ADP102	VGA Adapter f./f.

ADC201	Adapter cable HDD 15 p. m./5 BNC

DVI CABLES

COD. ELPRO	DESCRIPTION
ADC001M	Male DVI-D connector Single link

DVI101MM	Cable DVI-D Single link m./m.	1,5 mt.
DVI105MM	Cable DVI-D Single link m./m.	5 mt.
DVI105MF	Cable DVI-D Single link m./f.	5 mt.
DVI110MM	Cable DVI-D Single link m./m.	10 mt.
DVI115MM	Cable DVI-D Single link m./m.	15 mt.

HDMI CABLES

COD. ELPRO	DESCRIPTION	
HDMI101MM	Cable HDMI m./m.	1,5 mt.
HDMI105MM	Cable HDMI m./m.	5 mt.
HDMI110MM	Cable HDMI m./m.	10 mt.
HDMI115MM	Cable HDMI m./m.	15 mt.

ACCESSORIES

12

POWER ADAPTERS

COD. ELPRO	DESCRIPTION
■ ADM001	AC Adapter 230 Vac 50 Hz 9V 500mA
■ ADM030	DC Adapter 100-230 Vac 5V 3A

19" ADAPTERS
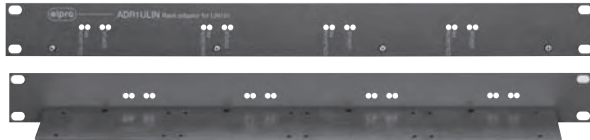
COD. ELPRO	DESCRIPTION
■ ADR1U LIN1	Rack adapter for LIN 101
■ ADR1U LIN2	Rack adapter for LIN 102
■ ADR1U M1	Rack adapter for using type INBOX series, DA124+, TZW203+, SP105, DA224+, SD124
■ ADR1U	Rack adapter for TP SERIES 1RU 19"
■ ADR2U	Rack adapter 2RU 19"
■ ADR2U BLK	Blank panel 2U
■ ADR3U	Rack adapter 3RU 19"
■ ADR3U BLK	Blank panel 3U
■ EPBOX1	Kit for wall mounting for EASYPATCH
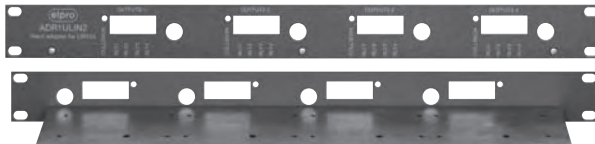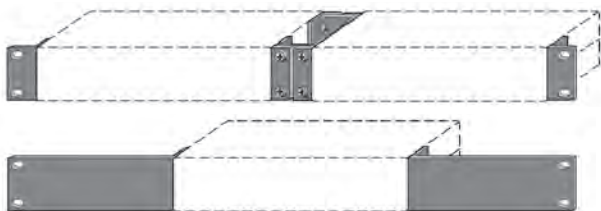
19" ADAPTERS

COD. ELPRO	DESCRIPTION
■ **EPRACK1**	Mounting on 19" for EASYPATCH

■ **10TE**	BLANK PANEL for DVR-MV/RK

IR CONTROLS

PROVIDED WITH UNITS

COD. ELPRO	DESCRIPTION
■ **IRSCALER**	Infrared control for TZL300, TZL400
■ **IRTZW803**	Infrared control for TZW803+
■ **IRTZX08**	Infrared control for TZX08
■ **IRDVIPRO1000**	Infrared control for DVIPRO1000

OPTIONAL

COD. ELPRO	DESCRIPTION
■ **IRTZ05**	Infrared control for TZ05
■ **IRTZ09**	Infrared control for TZ09
■ **IRTZ16**	Infrared control for TZ16VBA
■ **IRTZY08**	Infrared control for TZY08
■ **IRTZM883**	Infrared control for TZM883 Series
■ **IRTZM1612**	Infrared control for TZM1612
■ **IRTZ333**	Infrared control for TZ333
■ **IRTZY61**	Infrared control for TZY61
■ **IRDVI**	Infrared control for DVIDEC100, DVISEL403
■ **IRTZ32**	Infrared control for TZ32
■ **IRTZM443**	Infrared control for TZM443
■ **IRSCALER**	Infrared control for MDL200
■ **IR DVIPRO**	Infrared control for DVIPRO100

ACCESSORIES

12

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PRODUCT CATALOGUE 2010

CYP

Cypress Technology Co., Ltd.

B.

CYP

Cypress Technology Co., Ltd.∗

∗ (ISO 9001/14001 Certified Company)   **www.cypress.com.tw**

VGA

YPbPr

DVI

HDMI

DP

FIBER OPTICS

L/R

COAX

**DISTRIBUTION
SWITCHING
CONVERSION
SCALING**

TOSLINK

CAT 5/6

CV PAL SECAM NTSC

Y/C

YCbCr

RGsB

B. PRODUCT CATALOGUE 2010 CYP

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2

HDMI SWITCHERS 134÷136

3

HDMI MATRIX SWITCHERS 138÷140

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B. PRODUCT CATALOGUE 2010 CYP

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CYP

Cypress Technology Co., Ltd.

B. 1

HDTV - AUDIO DISTRIBUTORS & SWITCHERS

CYP

Cypress Technology Co., Ltd.

CHDD-3C

1x3 HD DISTRIBUTOR W/DIGITAL & ANALOG AUDIO

COAX **Y Pb Pr** **UNBAL AUD**
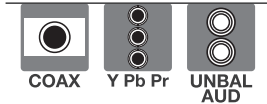
Applications:
CHDD-3C is capable of distributing Video in 3 different formats and is ideal for use in any analog video entertainment distribution system.

Features:
- Support Std. (Composite, YCbCr) and HDTV (YPbPr, RGsB) Input signal.
- Audio can be analog stereo (L/R) or digital coaxial (S/PDIF)
- High bandwidth performance 480MHZ at -3dB.

CHDD-8C

1x8 HDTV DISTRIBUTOR UP TO 1080P/UXGA

COAX **Y Pb Pr** **UNBAL AUD**
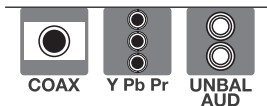
Applications:
CHDD-8C is a high performance and versatile distribution amplifier for delivering both HD and Std. video signal with digital/analog audio to your multiple display units.

Features:
- Support Std. (Composite, YCbCr) and HDTV (YPbPr) input signal.
- Audio can be analog stereo (L/R) or digital coxial (S/PDIF).
- High bandwidth performance 650MHz at -3dB.

CHDD-41AR

4-IN 1-OUT HD SWITCHER

COAX **Y Pb Pr** **UNBAL AUD** **RS232** **IR**

Applications:
CHDD-41AR HD/CV switcher is designed for switching between various HD and Std. sources for sharing TV display.

Simply pressing a button on remote control you can select your desired HD/Std. source for display on the TV monitor.

Features:
- Component / composite switcher.
- Support audio formats: S/PDIF (Digital) and L/R (analog).
- High bandwidth performance 650MHz at -3dB.
- IR remote control.
- RS-232 interface allows control from a distant device.

CCMX-44

COMPONENT 4x4 MATRIX

Y Pb Pr **UNBAL AUD** **RS232** **IR**
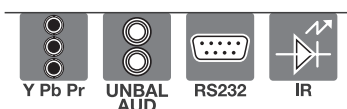
Applications:
CCMX-44 is a high performance Component + L/R Audio Matrix with remote control. It offers you maximum convenience in HDTV audio/video signal distribution when you have multiple sources and displays to connect together.

Features:
- Provides 4 by 4 matrix input/output of Component (YPbPr/YCbCr) video and L/R audio signal.
- Input source LED indicators on each output select.
- Supports high resolution input/output: HDTV: 480i, 576i, 480p, 576p, 1080i, and 1080p.
- IR remote control.
- RS-232 control.

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B.2

HDMI - DISTRIBUTORS

Cypress Technology Co., Ltd.

Applications:

The HDMI v1.3 Distribution Amplifier Series is the most advanced solution to HDMI signal distribution. Each product in this series is compatible to HDMI v1.3 specifications, a cutting-age technology which defines the support to transfer Deep Color (10-bit and 12-bit) video and new lossless compressed (Dolby TrueHD, Dolby Digital Plus and DTS-HD Master Audio) digital audio, with a high bandwidth up to 225MHz (6.75Gbps). Besides splitting and distributing, the HDMI v1.3 DA series also does signal amplification and equalization, so as to provide high performance I/O of audio and video. Each of the buffered output can run up to 20 meters and can be cascaded.

Features:

- HDMI 1.3, HDCP1.1 and DVI1.0 compliant Receiver
- Deep color video up to 12bit, 1080p@60Hz
- One HDMI source to connect to some HDMI displays simultaneously
- HDCP keysets allows each output to work independently when connecting to a HDMI display
- Split a HDMI source to some outputs without signal loss
- Supports DVI source and DVI display by using HDMI to/from DVI adaptor cable
- Dolby Digital, DTS digital audio transmission (32-192 kHz Fs sample rate)
- Supports a wide range of PC and HDTV resolutions from VGA to UXGA and 480i to 1080p
- HDMI cable distance test with 1080p resolution: Input/Output source can run up to 20M/5.1CH
- Full HDCP Compliant.
- **Indipendent EDID on each output**

CLUX-11S
1x1 HDMI 1.3 REPEATER

HDMI

CLUX-12S
1x2 HDMI 1.3 SPLITTER

HDMI

CLUX-14S
1x4 HDMI 1.3 SPLITTER

HDMI

CLUX-4M `new`

Applications:

The HDMI 1.3 Distribution Amplifier M Series is the most advanced solution to HDMI signal distribution. Each product in this series is compatible to HDMI v1.3 specifications, a cutting-edge technology which defines the support to transfer Deep (10-bit and 12-bit) video and new lossless compressed (Dolby TrueHD, Dolby Digital Plus and DTS-HD Master Audio) digital audio, with a high bandwidth up to 225MHz (6.75Gbps). Besides splitting and distributing, the HDMI v1.3 DA series also does signal amplification and equalization, so as to provide high performance I/O of audio and video.

Features:

- HDMI 1.3, HDCP1.1 and DVI1.0 compliant
- Deep colour video up to 12bit, 1080p@(24/60)Hz.
- One HDMI source that can connect up to four HDMI displays simultaneously
- HDCP keysets allows each output to work independently when connecting to a HDMI display
- Supports DVI source and DVI display by using HDMI to/from DVI adaptor cable
- Dolby Digital Plus, DTS digital audio transmission (32-192 kHz Fs sample rate)
- Supports a wide range of PC and HDTV resolutions up to UXGA and 1080p
- HDMI cable distance test with 1080p/8bits resolution the, Input/Output can run up to 15/15 m.
  If 1080p/12bits the Input/Output can run up to 10/15 m.
- Selects EDID from TV mode or STD mode
- Supports CEC bypass
- System Reset function
- Support xvYCC (Extended-gamut YCC)

CLUX-18S

Applications:

The HDMI v1.3 Distribution Amplifier Series is the most advanced solution to HDMI signal distribution. Each product in this series is compatible to HDMI v1.3 specifications, a cutting-age technology which defines the support to transfer Deep Color (10-bit and 12-bit) video and new lossless compressed (Dolby TrueHD, Dolby Digital Plus and DTS-HD Master Audio) digital audio, with a high bandwidth up to 225MHz (6.75Gbps). Besides splitting and distributing, the HDMI v1.3 DA series also does signal amplification and equalization, so as to provide high performance I/O of audio and video. Each of the buffered output can run up to 20 meters and can be cascaded.

Features:

- HDMI 1.3, HDCP1.1 and DVI1.0 compliant Receiver
- Deep color video up to 12bit, 1080p@60Hz
- One HDMI source to connect to some HDMI displays simultaneously
- HDCP keysets allows each output to work independently when connecting to a HDMI display
- Split a HDMI source to some outputs without signal loss
- Supports DVI source and DVI display by using HDMI to/from DVI adaptor cable
- Dolby Digital, DTS digital audio transmission (32-192 kHz Fs sample rate)
- Supports a wide range of PC and HDTV resolutions from VGA to UXGA and 480i to 1080p
- HDMI cable distance test with 1080p resolution: Input/Output source can run up to 20M/5.1CH
- Full HDCP Compliant.
- **Indipendent EDID on each output**

2 HDMI - DISTRIBUTORS

CYP
Cypress Technology Co., Ltd.

B.**3**

HDMI - SWITCHERS

CYP
Cypress Technology Co., Ltd.

Features:

- HDMI 1.3, HDCP 1.1 and DVI 1.0 compliant
- Supports 30/36/48 bit color depth display
- Support High Definition audio-Dolby Digital TrueHD and DTS-HD
- Auto Signal Enhancement feature can improve signal quality after long distance transmission
- LED indicators

- Ideal for home theater integration
- Supports high resolution input:
  PC: VGA, SVGA, XGA, SXGA and UXGA (1600x1200) and 1920x1200&
  HDTV: 480i, 576i, 480p, 576p, 720p, 1080i, and 1080p

CLUX-21SY

HDMI 1.3 2x1 SWITCHER

HDMI

Applications:

CLUX-21SY is a high performance HDMI switcher. It allows two HDMI sources to share one HDTV display.

Simply pressing input button to select your desired HDMI source for display on the HDTV.

CLUX-41SY

HDMI 1.3 4x1 SWITCHER

HDMI   **IR**

Applications:

CLUX-41SY is a high performance HDMI switcher with remote control. It allows four HDMI sources to share one HDTV display.

Simply pressing one button to select your desired HDMI source for display on the HDTV.

CPRO-3D41GAME   new

HDMI 1.4 4x1 SWITCHER

AVAILABLE OCTOBER 2010

HDMI

Applications:

This is a high performance HDMI 1.4 Switcher with four inputs and one outputs. It supports HDCP repeater functions and fast switching between any inputs in less than 1 second. Moreover it has an integrated OSD feature that allows user to enjoy using one display to control both source and display at once.

Features:

- HDMI 1.4, HDCP 1.4 and CEC 1.4 compliant
- HDMI 1.4 supports:
  - Audio Return Channel (ARC)
  - 3D TV
  - CEC 1.4
- Fast switching on all HDMI inputs in less than 1 sec.
- Deep Colour support 36/30/24 bit, 1080p 60 Hz
- Audio support:
  - HDMI 1.4 Audio compatible interface
  - Dolby TrueHD
  - DTS-HD Master Audio

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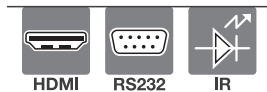
CLUX-C41C new

Applications:

CLUX-C41C is a high performance HDMI switcher that allows for up to four HDMI sources to share one HDTV display. This device features CEC control functions and supports deep colour, xvYCC and RS-232 control. Simply press one button select your desired HDMI source to display on the HDTV or use remote control to control your sources from a distance.

Features:

- HDMI 1.3 and HDCP 1.1 compliant
- Supports deep colour display RGB/YCbCr 4:4:4 24/30/36 bits
- Supports colour space YCbCr 4:2:2 16/20/24 bits
- Supports high definition audio - Dolby Digital True HD® and DTS-HD®
- Signal Enhancement feature allows signal quality improvement after long distance transmission
- HDMI cable distance test with 1080p/8-bit resolution, the input/output can reach up to 15/15 m. If running at 1080p/12-bit, the input/ output can reach at up to 15/6 m
- PC resolution up to UXGA (1600 x 1200), HD up to 1080p 24
- Memory retention (last configuration)
- Remote control function
- Supports RS232 operation
- Supports CEC control function (ON/OFF)
- Supports xvYCC (Extended-gamut YCC)

CLUX-C81C new

Applications:

CLUX-C81C is a high performance HDMI switcher that allows for up to eight HDMI sources to share one HDTV display. This device features CEC control functions and supports deep colour, xvYCC and RS-232 control. Simply press one button select your desired HDMI source to display on the HDTV or use remote control to control your sources from a distance.

Features:

- HDMI 1.3 and HDCP 1.1 compliant
- Supports deep colour display RGB/YCbCr 4:4:4 24/30/36 bits
- Supports colour space YCbCr 4:2:2 16/20/24 bits
- Supports high definition audio - Dolby Digital True HD® and DTS-HD®
- Signal Enhancement feature allows signal quality improvement after long distance transmission
- HDMI cable distance test with 1080p/8-bit resolution, the input/output can reach up to 15/15 m. If running at 1080p/12-bit, the input/ output can reach at up to 15/6 m
- PC resolution up to UXGA (1600 x 1200), HD up to 1080p 24
- Memory retention (last configuration)
- Remote control function
- Supports RS232 operation
- Supports CEC control function (ON/OFF)
- Supports xvYCC (Extended-gamut YCC)

3 HDMI - SWITCHERS

CLUX-41W `new`

HDMI

Applications:

This is a high performance HDMI 1.3 Switcher with remote control .

It's suited for Showroom display control, Educational demo, Installation usage and Advertising display.

It allows various HDMI sources to share a HDTV display. Simply press the button to select your desire HDMI source for display on the HDTV. The device is compatible to HDMI v1.3 specifications, and can define to support Deep Colour transfer (10-bit and 12-bit) video and new lossless compressed (Dolby TrueHD, Dolby Digital Plus and DTS-HD Master Audio) digital audio, with a high bandwidth up to 225MHz.

Features:

- HDMI 1.3, HDCP1.1 and DVI1.0 compliant
- Deep colour video up to 12bit, 1080p@60Hz
- Four HDMI sources to connect up to a HDMI display simultaneously
- Supports DVI source and DVI display by using HDMI to/from DVI adaptor cable
- Supports LPCM 7.1CH, Dolby TrueHD, Dolby Digital Plus and DTS-HD Master Audio transmission (32 192kHz Fs sample rate)
- Supports a wide range of PC and HDTV resolutions up to UXGA and 1080p
- Full HDCP Compliant
- HDMI cable distance test with 1080p/8bit resolution, the input/output source can run up to 15/15 m
  If 1080p/12bit, the input/output source can run up to 10/15 m
- Support xvYCC (Extended-gamut YCC)
- Support CEC bypass
- Support Sys. Reset function with hot key switch to reset the system within 8~10 minutes into factory mode

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3 HDMI - SWITCHERS

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B.4

HDMI - MATRIX SWITCHERS

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CHMX-22

HDMI 2x2 MATRIX
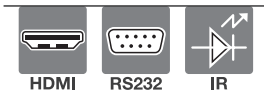
Applications:

CHMX-22 is a high performance HDMI Matrix with remote control. It offers you maximum convenience in HDMI signal distribution when you have two HDMI sources and displays to connect together. Each of the two HDMI sources can be directed to any one of the two HDMI displays so each can show different sources.

Features:

- HDMI 1.2, HDCP 1.1 and DVI 1.0 compliant
- HDMI input is compensated, clock / phase adjusted, and jitter eliminated so the output is a brand new standard HDMI signal
- Input source LED indicators on each output select
- Ideal for home theater integration, conference room and retail stores
- Compatible with all HDMI sources and displays
- Supports high resolution input/output:
  PC: VGA, SVGA, XGA, SXGA and UXGA (1600x1200) & HDTV: 480i, 576i, 480p, 576p, 1080i and 1080p
- RS-232 control
- IR remote control
- Regenerated outputs can drive up to 15 mt cable

HDMI   RS232   IR

CHMX-42

HDMI 4x2 MATRIX
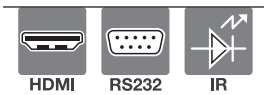
Applications:

CHMX-42 is a high performance HDMI Matrix with remote control. It offers you maximum convenience in HDMI signal distribution when you have four HDMI sources and two displays to connect together. Each of the four HDMI sources can be directed to any one of the two outputs, so two displays can show 2 identical or 2 different sources at the same time.

Features:

- HDMI 1.2, HDCP 1.1 and DVI 1.0 compliant
- HDMI input is compensated, clock / phase adjusted, and jitter eliminated so the output is a brand new standard HDMI signal
- Input source LED indicators on each output select
- Ideal for home theater integration, conference room and retail stores
- Compatible with all HDMI sources and displays
- Supports high resolution input/output:
  PC: VGA, SVGA, XGA, SXGA and UXGA (1600x1200) & HDTV: 480i, 576i, 480p, 576p, 1080i and 1080p
- RS-232 control
- IR remote control
- Regenerated outputs can drive up to 15 mt cable

HDMI   RS232   IR

CMLUX-42S `new`
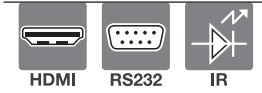
Applications:

High performance HDMI 1.3 Matrix of 4 input and 2 output with remote control for you to link with your favor HDMI devices to enjoying movies, music, or games at once. Each of the four HDMI sources can be routed to any of the two or both outputs.

When HDMI signal progresses through the system, it is re-timed, and level-compensated.

Define HDCP, HDMI and DVI source. The LED light will light up to define the input sources' format.

Switchable EDID function for choosing the native resolution to display.

Features:

- HDMI 1.3, HDCP 1.1 and DVI 1.0 compliant
- Supports digital video formats in Deep Colour 12bit and new lossless compressed (Dolby TrueHD, Dolby Digital Plus and DTS-HD Master Audio) digital audio
- The HDMI input is compensated, clock / phase adjusted, and jitter eliminated so the output is a brand new standard HDMI signal
- Presents input source LED indicators on each output select
- Compatible with all HDMI sources and displays
- Supports a wide range of PC and HDTV resolutions up to UXGA and 1080p
- Supports RS-232 control
- Supports IR remote control and IR extender.
- Dolby Digital, DTS digital audio transmission (32-192 kHz Fs sample rate)
- Supports LPCM7.1 channels output from each independent HDMI ports
- HDMI cable distance test with 1080p/8bit resolution, the Input/Output source can run up to 10/10 m.
  If 1080p/12bit the Input/Output source can run up to 6/6 m.)

HDMI RS232 IR

CMLUX-44S
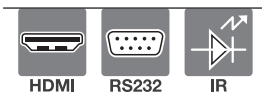
Applications:

High performance HDMI 1.3 Matrix of 4 (four) input and 4 (four) output with remote control for you to link with your favor HDMI devices to enjoying movies, music, or games at once. Each of the four HDMI sources can be directed to any four of HDMI displays and or to all of the HDMI display.

When HDMI signal progresses through the system, it is re-timed, and level-compensated.

Define HDCP, HDMI and DVI source. The LED light will light up to define the input sources' format. Switchable EDID function for choosing the native resolution to display.

Features:

- HDMI 1.3, HDCP 1.1 and DVI 1.0 compliant.
- Supports digital video formats in Deep Color up to 30 bits and new lossless compressed (Dolby TrueHD, Dolby Digital Plus and DTS-HD Master Audio) digital audio.
- The HDMI input is compensated, clock / phase adjusted, and jitter eliminated so the output is a brand new standard HDMI signal.
- Supports input source LED indicators on each output select.
- Compatible with all HDMI sources and displays.
- Supports a wide range of PC and HDTV resolutions from VGA to UXGA and 480i to 1080p.
- Supports RS-232 control.
- Supports IR remote control and IR extender.
- Dolby Digital, DTS digital audio transmission (32-192 kHz Fs sample rate).
- Supports LPCM7.1 channels output from each independent HDMI ports.
- HDMI cable distance test with 1080p/8bit resolution, the Input/Output source can run up to 15/15 meters. If 1080p/12bit the Input/Output source can run up to 15/6 meters.
- HDCP and HDMI/DVI led indication.

HDMI RS232 IR

CMLUX-88S new
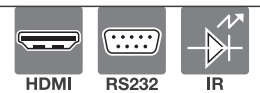
Applications:

The popularity of HDMI products over the years is now widely seen in today's commercial and residential environments. People usually have several HDMI displays and sources in a single place. As multiple HDMI inputs and outputs increase, the need for a HDMI matrix that will inter-connect these HDMI devices is becoming more eminent. HDMI V1.3 Matrix provides this excellent and convenient solution. It also features a variety of choices on where to play the images with an existing remote controller. Further, the HDMI V1.3 Matrix supports HDMI 1.3, HDCP 1.1 and DVI 1.0, and can transfer Deep Colour video and bit stream digital audio with maximum performance.

Features:

- 4RU rack design for easy installation
- HDMI 1.3, HDCP 1.1 and DVI 1.0 compliant
- Supports digital video formats in Deep Colour 10 bits and new lossless compressed (Dolby TrueHD, Dolby Digital Plus and DTS HD Master Audio) digital audio
- The HDMI input is compensated, clock / phase adjusted and jitter eliminated so the output is brand new standard HDMI signal
- Supports recall, memory and key lock function
- Compatible with all HDMI sources and displays
- Supports a wide range of PC and HDTV resolutions up to UXGA and 1080p
- Supports RS-232 control and firmware upgrading through USB port
- Supports IR remote control and IR extender
- Dolby Digital, DTS digital audio transmission (32-192kHz Fs sample rate)
- Supports LPCM 7.1 channels output from each independent HDMI ports
- HDMI cable distance test with 1080p/8 bits can run up to 10/15 m while10 bits resolution can run up to 10/10 m
- Independent switchable EDID function for choosing the native resolution to display
- High performance HDMI 1.3 Matrix with 8 (eight) inputs and 8 (eight) outputs with remote control for link up -HDMI devices to enjoying movies, music or games at once.
- Supports 38KHz IR extender
- Useful hot keys for quick set up
- Slide track with handles for easy store
- Firm housing structure with intensify placement allowing heat dispensing profoundly

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B.5

DVI - DISTRIBUTORS & SWITCHERS

Cypress Technology Co., Ltd.

CDVI-4

1x4 DVI SPLITTER

DVI

Applications:
CDVI-4 is a high performance HDCP compliant DVI distribution amplifier.
It allows same DVI or HDMI signal source to split up to four identical and buffered displays for multi-viewing purpose.

Features:
- Built-in EDID and HDCP bypass ensures each output can be displayed independently.
- HDMI source and displays are compatible by using the HDMI to DVI adaptor cable.
- Supports a wide range of PC and HDTV resolutions from VGA to UXGA and 480p to 1080p.
- Can be cascaded up to 3 layers.
- Each of the buffered output can run up to 15 meters.

CDVI-8

*1x8 DVI SPLITTER*

DVI

Applications:
CDVI-8 is a high performance DVI distribution amplifier. It allows one DVI or HDMI signal source to split up to eight identical and buffered outputs for connecting to 8 DVI displays simutaneously.

Features:
- Built-in EDID bypass ensures each output to work independently.
- When connecting to DVI display, HDMI source and displays are compatible by using the HDMI to DVI adaptor cable.
- Supports a wide range of PC and HDTV resolutions from VGA to UXGA and 480p to 1080p.
- Can be cascaded up to 3 layers.
- Each of the buffered output can run up to 15 Meters.

CDVI-31

3-IN 1-OUT DVI SWITCHER

DVI   **IR**
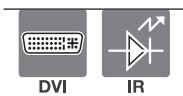
Applications:
CDVI-31 DVI Switcher is a high performance switching box with remote. It is to be placed between your various DVI input sources and DVI display monitor.
Simply pressing a button on the remote you can select your desired DVI source for display on the DVI monitor.

Features:
- HDCP 1.1 and DVI1.0 compliant.
- The unit has the function of signal enhancer to improve signal quality after long distance transmission.
- LED indicators.
- Ideal for home theater integration.
- Supports high resolution input:
  PC: VGA, SVGA, XGA, SXGA, and UXGA (1600x1200) &
  HDTV: 480i, 576i, 480p, 576p, 720p, 1080i & 1080p @60Hz.
- Remote control.

CDVI-81

8-IN 1-OUT DVI SWITCHER

DVI   **RS232**   **IR**
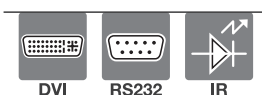
Applications:
CDVI-81 is a high performance DVI switcher with remote control. It allows your various DVI sources to share one DVI display.
Simply pressing one button to select your desired DVI source for display on the HDTV.

Features:
- HDMI 1.2, HDCP 1.1 and DVI 1.0 compliant.
- Signal Enhancement feature allows you to improve signal quality after long distance transmission.
- LED indicators.
- Ideal for home theater integration.
- Supports high resolution input:
  PC: VGA, SVGA, XGA, SXGA and UXGA (1600x1200) &
  HDTV: 480i, 576i, 480p, 576p, 720p, 1080i and 1080p.
- Remote control.

5

DVI - DISTRIBUTORS & SWITCHERS

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B.6

DP (DISPLAYPORT) - DISTRIBUTORS

CYP
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CDP-13DPI

1x3 DISPLAYPORT SPLITTER

DP

Applications:

This DP Splitter can distribute the image into 3 destinations. It can work with any desktop or Notebook which has a single digital output port. Each output is able to display HD resolution up to 1920x1200 with uncompressed audio pass through.

Features:

- Standards compliance DisplayPort 1.1a, VESA DDM Standard, HDCP 1.3 and EDID 1.4
- Supports main link rates of 2.7 Gbps (HBR) and 1.62 Gbps (RBR) from the source
- Supports up to 1920x1200
- Provides Secured Content Protection with HDCP 1.3 for digital content including video and audio

CMDP-13MDPI

1x3 MINI-DISPLAYPORT SPLITTER

DP

Applications:

This mini DP Splitter can distribute the image into 3 destinations. It can work with any desktop or Notebook which has a single digital output port. Each output is able to display HD resolution up to 1920x1200 with uncompressed audio pass through.

Features:

- Standards compliance DisplayPort 1.1a, VESA DDM Standard, HDCP 1.3 and EDID 1.4
- Supports main link rates of 2.7 Gbps (HBR) and 1.62 Gbps (RBR) from the source
- Supports up to 1920x1200
- Provides Secured Content Protection with HDCP 1.3 for digital content including video and audio

CDPH-1S

DP TO HDMI CONVERTER / ADAPTER

DP   **HDMI**

Applications:

More and more devices are deploying the DisplayPort (DP) interface instead of HDMI onto their graphics solution these days. When users wish to display on a large screen like HDTV or with an even more advanced monitor, he would need a device that can connect his DP source to his HDMI output display. Our latest "DP to HDMI mini converter adaptor" provides a quick and handy solution for this need. This adaptor is not only compliant with HDMI 1.3 specifications but it also has a remarkable frequency rate that can reach up to 2.7Gbps per lane. Inter-connecting your DP source with a HDMI display has never become as easy and convenient with our "DP to HDMI mini converter adaptor".

Features:

- Converts low-swing alternative current (AC) in to HDMI
- HDMI V1.3 and DVI 1.0 compliant
- HDMI level shifting operating up to 2.7 Gbps per lane
- Plugs and runs without any software application

DP (DISPLAY PORT) - DISTRIBUTORS 6

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B.**7**

SCAN
CONVERTERS

CYP
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CPT-385A

PC TO VIDEO CONVERTER

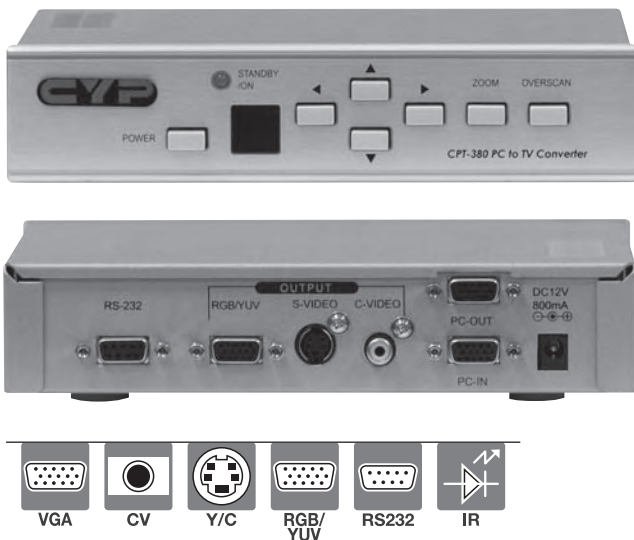| VGA	CV	Y/C

Applications:

The CPT-385A PC to Video scan converter box is designed to convert a variety of computer images, from 640x480 up to 1600x1200, to interlaced NTSC or PAL video. It support output formats including composite and SVideo. It is ideal for use in applications like video conference, home theater, business presentation, lecturing room or viewing PC image on TV.

Features:

- Automatically detects and down converts the incoming PC images to NTSC or PAL.
- Support high resolution PC input up to UXGA (1600x1200@60Hz).
- Scale down PC video to Composite/S-Video.
- Switch between NTSC/PAL.
- Image Overscan/Underscan selection.

CPT-380RGB

PC TO VIDEO SCAN CONVERTER

VGA	CV	Y/C	RGB/YUV	RS232	IR

Applications:

The CPT-380RGB PC to Video scan converter is designed to convert a variety of computer images,from 640x480 up to 1600x1200@60Hz, to interlaced NTSC / PAL / RGB or YUV. It is ideal for use in applications like video conference, home theater,business presentation, lecturing room or viewing PC image on TV.

Features:

- Automatically detects and down converts the incoming PC images to NTSC, PAL, RGB or YUV.
- Support high resolution PC input up to UXGA (1600x1200@60Hz).
- Output video format is selectable between composite/S-Video, YUV or RGB through a control button on the remote.
- Support high input refresh rate up to 140Hz (VGA).
- Adjustable images scaling.
- Pan, Position and Zoom.
- Advance 2-D flicker filter ensures flicker-free picture.
- Last memory.
- Adjustment and control through RS-232 interface.
- Useful functions, overscan, freeze, test pattern, magnifier.
- Remote control.
- OSD operation display.

SCAN CONVERTERS 7

CHD-380A

Applications:

CHD-380A is a high performance and multi- format Video Scan Converter. It is designed to convert not only PC but also HDTV images to interlaced NTSC/PAL and component output. It is ideal for use in applications like video conference, home theater, business presentation, lecturing room or viewing PC/HDTV images on TV.
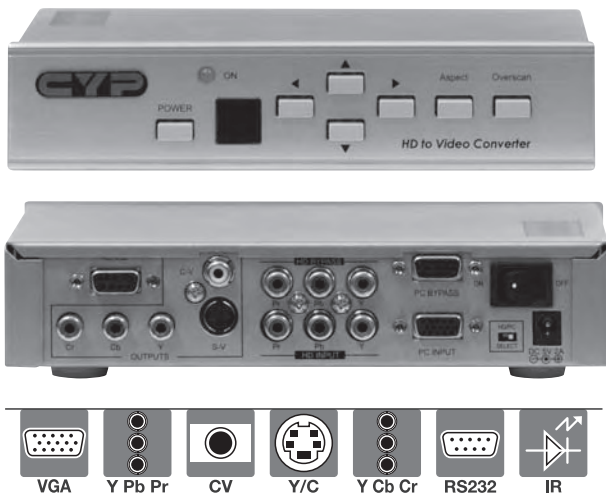
Features:

- Switch on the back to select PC or HDTV input and down converts to NTSC or PAL, CV, S-Video and Component outputs.
- Supports high resolution PC input up to UXGA (1600x1200@60Hz) and HDTV input up to 1080i@60Hz.
- Supports high input refresh rate up to 140Hz (VGA).
- Additional HD-15 and 3RCA connectors for looping through PC and HDTV input signal.
- Adjustable image scaling; Pan, Position and Zoom.
- Advanced 2-D flicker filter ensures flicker-free picture.
- Aspect adjustment for wide-screen HDTV Source.
- Adjustable contracst, brightness, color, sharpness.
- Last memory.
- Useful function-overscan, freeze, test pattern, magnifier.
- Adjustment and control through RS-232 interface.
- Remote control, OSD operation display.

VGA   Y Pb Pr   CV   Y/C   Y Cb Cr   RS232   IR

CM-388

Applications:

The HDMI to CV/SV Converter is designed to convert digital signal from HDMI (or DVI + Coaxial) source to analog signal of NTSC or PAL system, with L/R stereo audio. Besides S-Video and Composite Video outputs, it also provides one bypass HDMI output to deliver original signal, and a Coaxial output to send S/PDIF digital audio to audio amplifier. The product provides a convenient application that user can watch high definition movie meanwhile record it (in standard resolutions 480i or 576i) to DVR or VCR machine.

Features:

- HDMI 1.2, HDCP1.1 and DVI1.0 compliant.
- Converts video signal from HDMI source to NTSC or PAL signal selectable.
- Converts digital audio from HDMI or Coaxial source to analog stereo audio.
- Accepts HDTV input of wide resolutions, from 480p to 1080p@60Hz (except 1080p@24Hz) and PC from VGA@60Hz to UXGA@60Hz.

Note: Sources signal also need to disable 1080p@24Hz resolution in order to avoid image corruption.
When the signal from HDMI or DVI source is protected by HDCP (Highbandwidth Digital Content Protection), the HDMI or DVI display needs to support HDCP to be able to show picture.
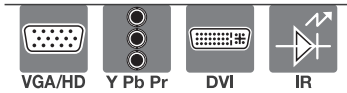
HDMI   COAX   CV   Y/C   UNBAL AUD

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B.8

SCALERS

CYP
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CP-255D

Applications:

An ideal company to your HDMI TVs, CP-255D/H is a professional universal scaler with ultra high bandwidth (205MHz). It accepts both analog and digital input and outputs a variety of scaled resolutions onto both simultaneously DVI and VGA outputs.

Features:

- Both digital and analog inputs are format converted and pixel re-scaled through the CP-255D. It outputs a big range of formats and resolutions that will easily match the native resolution/ format of your display to ensure highest picture quality
- Analog RGB Compliant input:
  - Supports PC RGB input up to WUXGA @60Hz
  - Supports HDTV RGB/YPbPr/YCbCr up to 1080p @60Hz
- DVI/HDCP/HDMI compliant input:
  - Operates up to 165Mhz (Up to UXGA @60Hz)
- Supports digital PC RGB output up to WUXGA @60Hz
- Supports digital HD output up to 1080p
- Dual 3-D motion video adaptive de-interlacers with adaptive edge-oriented adaptive algorithm for smooth low-angle edge
- The Proprietary Advanced Color Engine technology gives:
  - Brilliant and fresh color
  - Intensified contrast and details
  - Vivid skin tone
  - Sharp edge
  - Accurate and independent color control
- 3D noise reduction
- On-screen OSD menu control and remote control

VGA/HD · Y Pb Pr · DVI · IR

CSO-T2 `new`
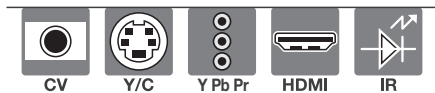
Applications:

The Instant HQV HD Scaler box allows the user to maximize the full benefits of the today's High Definition DTV. Instant HQV uses the Industry leading HQV Realta Video Processor to convert standard definition content (PAL/NTSC) into crisp, detailed and artifact resolution of your DTV. This allows you to enjoy the full benefits of the high resolution by recreating the cinema like viewing experience as the original DVD content was intended. In addition, the HD inputs up to 1080i are vastly improved by the same industry leading HQV video processing to deliver crisp and noise free full HD video.

Features:

- 3 Analog (CV, Y/C and Y,Cb/Pb, Cr/Pr) with combined Audio and 2 digital (HDMI) inputs
- Twin Output, HDMI and Y,Pb, Pr
- 3D video decoder for optimal NTSC/PAL/SECAM video quality
- HDMI1.3 with Deep Colour and xvYCC (Extended-gamut YCC)
- True 10-bit HQV video processing
- AnyNoise-Automatically detects the different type of noise and applies the appropriate per pixel based noise reduction algorithm
- Lips sync audio delay
- HQV Detail Enhancement-Processes the input image quality to approach HD output image quality

CV · Y/C · Y Pb Pr · HDMI · IR

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SCALERS 8

CP-255I

| CV | Y/C | Y Pb Pr | COAX | UNBAL AUD | VGA/HD | 3,5 mm UNBAL AUD |

| HDMI | RS232 | IR |
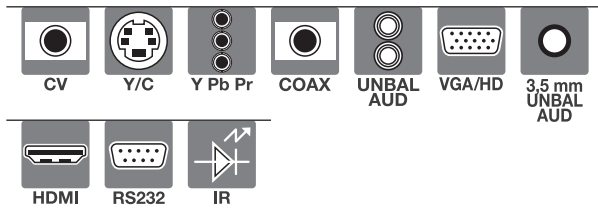
Applications:

CP-255I Scaler Box is designed to upscale digital/analog video signal from Composite, S-Video, PC, Component (HD) and HDMI input sources, to digital HDMI output of wide-range HDTV and PC resolutions, up to 1080p and WUXGA (1920x1200).

Besides video upscaling, the scaler box also converts digital/analog audio signal to digital format, then output either through HDMI combining with the video, or Coaxial S/PDIF separately. CP-255I has a comprehensive OSD menu that allows user to select a variety of output resolutions and adjust for best picture quality.

Features:

- HDMI 1.2, HDCP 1.1 and DVI 1.0 compliant
- Scales any PC (VGA~WUXGA) / HD (480i~1080p) resolutions to/from another PC/HD resolutions
- Automatically detect the factory setting of the connected display and output the corresponding resolution and refresh rate, when the NATIVE output is selected
- Supports 50/60Hz frame rate conversion
- Provides output picture adjustment on contrast, brightness, hue, saturation, sharpness, RGB (color tone) level, and aspect ratio size
- Supports high resolution input/output:
  PC: VGA, SVGA, XGA, SXGA, UXGA, WXGA, WSXGA, WUXGA
  HDTV: 480i, 576i, 480p, 576p, 720p, 1080i, and 1080p
- Adjustment and control through RS-232 interface
- IR remote control, OSD operation display

CP-290

| VGA/HD | DVI | HDMI |
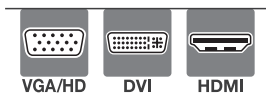
Applications:

This Scaler Box is design to display your PC/HD images on the HDTV with better viewing image. It can upscale PC/DVI input sources to HDMI output for wide-range PC/HD resolutions; the resolutions support XGA/UXGA/720p/1080p. This unit allows user to select a variety of output resolutions and adjust for the best picture quality. Further, it also transfer sounds through HDMI for user to enjoy both HD images and sounds consistently.

Features:

- HDMI 1.2, HDCP 1.1 and DVI 1.0 compliant
- Support PC/HD resolution input:
  - DVI: VGA~WUXGA
  - PC: VGA~WUXGA
  - HD: 480i~1080p50/60 Hz
- Scale any PC/HD resolutions to XGA/UXGA/720p/1080p resolutions
- Support PC&DVI to HDMI output
- Transfer L/R and coaxial sounds to HDMI
- Input and output selection bottoms for easy and quick function chose
- **Doesn't support frame rate conversion**

8

SCALERS
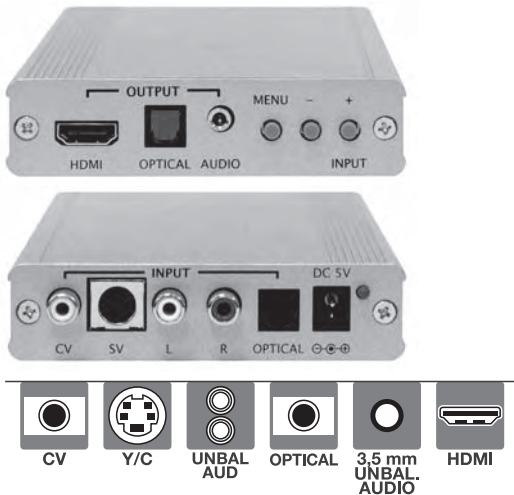
CP-295N

Applications:

CP-295N is designed to upscale analog video signal from CV/SV input Source to digital HDMI output of wide range HDTV and PC resolutions Up to 1080p. Besides video upscaling, CP-295N also converts digital/analog audio signal to digital/analog format, then output to HDMI combining with the video, TOSLink and Jack simultaneously. OSD menu allows user to select a variety of out resolutions and adjust for best picture quality.

Features:
- HDMI 1.2, HDCP 1.1 and DVI 1.0 compliant.
- Automatically detects the factory setting of the connected display and output the corresponding resolution and refresh rate, when the native output is selected.
- Supports 50/60 frame rate conversion.
- Supports 3-D motion video adaptive, 3-D de-interlacing and 3:2/2:2 pull down detection and recovery.
- Provides picture adjustment and aspect ratio size.
- Supports high resolution output: VGA, SVGA, XGA, SXGA, UXGA, WXGA, WSXGA, WUXGA and 480i, 576i, 480p, 576p, 720p, 1080i, 1080p.
- Audio input selectable by OSD menu.
- Audio output to HDMI, TOSLink and jack simultaneously.

| CV | Y/C | UNBAL AUD | OPTICAL | 3.5 mm UNBAL. AUDIO | HDMI |

CP-293

Applications:

This Scaler Box is designed to upscale analog video signal from PC input source to digital HDMI output of wide-range HDTV and PC resolutions, up to 1080p/WUXGA. Besides video upscaling, the scaler box also converts digital/analog audio signal to digital/analog format, then output to HDMI combining with the video, TOSLink (optical fiber), and phone jack (L/R audio) simultaneously. This unit has a comprehensive OSD menu that allows user to select a variety of output resolutions and adjust for best picture quality.

Features:
- HDMI 1.2, HDCP 1.1 and DVI 1.0 compliant.
- Scales any PC resolutions to PC (VGA ~ WUXGA)/ HD (480i ~ 1080p) resolutions.
- Automatically detect the factory setting of the connected display and output the corresponding resolution and refresh rate, when the NATIVE output is selected.
- Provides output picture adjustment on contrast, brightness, hue, saturation, sharpness, RGB (color tone) level and aspect ratio size.
- Supports high resolution output (See section 6.2 "Support Resolution" for reference):
  - PC: VGA, SVGA, XGA, SXGA, UXGA, WXGA, WSXGA, WUXGA.
  - SD/HD: 480i, 576i, 480p, 576p, 720p, 1080i and 1080p
- Supports stereo LPCM analog/digital audio input and stereo LPCM analog/digital output. Simply select among the audio input sources in the OSD menu, then output the audio to HDMI, TOSLink and phone jack simultaneously.

| VGA | 3.5 mm UNBAL. AUDIO | OPTICAL | HDMI |

CM-348

Applications:

CM-348 is designed to convert Composite Video, S-Video, YCbCr, and RGsB, signals to a variety of computer and HDTV resolutions. It accepts video input of all video systems-NTSC, PAL and SECAM. CM-348 has many great features to upgrade video source to high resolution PC or HDTV quality and is ideal for use in professional large screen presentation.

Features:
- Supports out formats up to SXGA and 1080i.
- Video inputs are 3D de-interlaced and scaled up to PC or HDTV output resolution.
- Automatically accommodates worldwide input video systems of NTSC, PAL and SECAM.
- High performance adaptive digital 4H Comb filter Y/C separator with adjustable vertical peaking.
- Motion compensated deinterlancing algorithms to produce artifact-free progressive scan video signal.
- Built in adaptive film mode 3:2/2:2 pull-down provides clear and crisp de-interlacing of video originating from 24 fps film, such as DVD movies.
- Frame rate up conversion from 50 up to 85Hz.
- Vertical temporal filter (VT) removes jaggy and other de-interlacing artifacts from normal video.
- OSD menu with adjustable control on Color, Sharpness, Brightness, Contrast and Tint (NTSC).
- Last memory for all adjustments.

| CV | Y/C | Y Cb Cr | DVI |

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CM-1391

Applications:

CM-1391 is designed to convert Composite and S-Video to DVI-I/ HDTV output format. Compatible with NTSC and Pal.
It's ideal for use in professional large screen presentation.

Features:

- Motion adaptive 3D Y/C separation comb filter (for composite video input).
- 3D (frame Based) motion adaptive YNR/CNR noise reduction (for Y/C video input).
- Advanced 3D motion adaptive deinterlace.
- Automatic 2:2/3:2 film mode detection.
- Supports 50Hz to 60Hz frame rate conversion.
- Video quality improvement:
  DCT1 (Digital chroma transient improve),
  DLT1 (Digital luminance transient improve),
  Black level extension.
- Average picture level (APL), Automatic contrast limiter (ACL) function supported.
- OSD menu for picture quality adjustment.
- Built in 8-bit DAC for RGB or YPbPr output.
- Front Panel and IR remote control.
- Automatic NTSC/PAL video format detection and switching.
- Up to WUXGA (1920x1200) 60 Hz.
- Up to 1080p 50 or 60 Hz (follows input source).

CV   **Y/C**   **DVI**

Warning: The unit doesn't accept CV or Y/C input fast signal switching. Interval of 1 second is recommended.

CP-252

Applications:

CP-252 is a high performance PC/HDTV two-way scaler that accepts analog RGB input (VGA) and converts to DVI-I (digital+analog RGB) output. It also outputs Apple iMAC 1680x1050 at 60Hz resolution.

Features:

- Supports out formats up to SXGA and 1080i.
- The input is analog PC or HDTV signal in the format of either RGBHV, YPbPr or YCbCr.
- The output is digital+analog PC or HDTV signal in the format of digital RGBHV bitstream plus analog RGBHV, known as DVI-I (Integrated digital and analog)
- The input resolution is automatically detected while the output resolution and refresh rate can be selected through OSD menu and front panel push buttons.
- 48MB frame memory for frame rate conversion.
- Output picture adjustment on brightness, contrast, color, RGB level and H-V position.
- DVI output enables an all digital rendering of video without the losses associated with an analog interface and is an ideal for use with digital display such as LCD, Plasma and DLP projectors.
- A DVI-I to VGA adaptor is included to transfer the analog RGB output contained in the DVI-I connector into HD-15 VGA connector so that the output can also connect to any display units that has VGA input.

VGA/HD   **DVI**
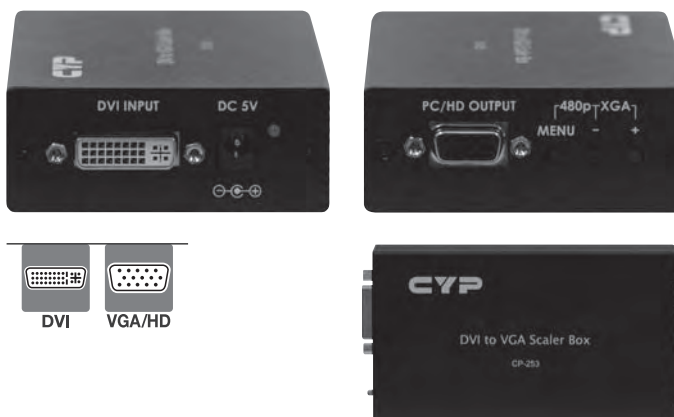
CP-253

Applications:

CP-253 is a high performance PC/HDTV two-way scaler which accepts Digital DVI-D input and converts to Analog RGB output.

Features:

- Supports out formats up to SXGA and 1080i.
- The input to the CP-253 is digital PC or HDTV signal in the format of either RGBHV or YPbPr / YCbCr data bitstream via 24-pin DVI connector.
- The output of the CP-253 is Analog PC or HDTV signal in the format Analog RGBHV or YPbPr via a HD-15 VGA connector.
- The input resolution is automatically detected while the output resolution and refresh rate can be selected through OSD menu and front panel push buttons.
- 48MB frame memory for frame rate conversion.
- Output picture adjustment on Brightness, Contrast, Color and H-V position.

DVI   **VGA/HD**

8
SCALERS

CP-291
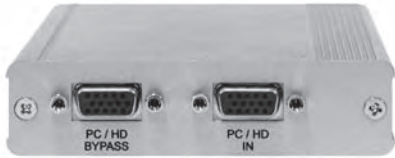
Applications:

This Scaler Box is designed to upscale PC/HD input sources to PC/HD output of wide-range PC/HD resolutions; the resolution is up to WUXGA/1080p. This unit has a comprehensive OSD menu that allows user to select a variety of output resolutions and adjust for best picture quality.
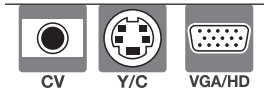
Features:

- Scales any PC/HD resolutions to PC (VGA ~ WUXGA)/HD (480i ~ 1080p) resolutions.
- Provides output picture adjustment on contrast, brightness, hue, saturation, sharpness, RGB (color tone) level and aspect ratio size. Supports high resolution output:
  PC: VGA, SVGA, XGA, SXGA, UXGA, WXGA, WSXGA, WUXGA.
  SD/HD: 480i, 576i, 480p, 576p, 720p, 1080i and 1080p.
- Supports YPbPr/RGBHV input/output.
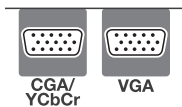
VGA/HD

CM-1390

Applications:

This is designed to convert Composite and S-Video to a variety of computer and HDTV resolutions. It handles video input from TV systems of NTSC, PAL TV standards.

Features:

- Motion adaptive 3D Y/C separation comb filter (for composite video input).
- 3D (frame Based) motion adaptive YNR/CNR noise reduction (for Y/C video input).
- Advanced 3D motion adaptive deinterlace.
- Automatic 2:2/3:2 film mode detection.
- Supports 50Hz to 60Hz frame rate conversion.
- Video quality improvement:
  DCT1 (Digital chroma transient improve),
  DLT1 (Digital luminance transient improve),
  Black level extension.
- Average picture level (APL), Automatic contrast limiter (ACL) function supported.
- OSD menu for picture quality adjustment.
- Built in 8-bit DAC for RGB or YPbPr output.
- Front Panel and IR remote control.
- Automatic NTSC/PAL video format detection and switching.
- Up to WUXGA (1920x1200) 60 Hz.
- Up to 1080p 50 or 60 Hz (follows input source).

CV   Y/C   VGA/HD

Warning: The unit may not accept CV or Y/C input fast signal switching. Interval of 1 second is recommended.

CM-397

Applications:

The CM-397 converts CGA (RGB or YCbCr format) to 3 PC resolutions- VGA/XGA and WXGA. It enables you to connect your RGB or YCbCr signal source such as game boards to a PC display.

Features:

- Accepts RGB or YCbCr format and converts to PC format.
- Scales CGA/480i/576i up to VGA/XGA/WXGA PC resolution.
- 50/60Hz frame rate conversion ensures glitch-free display.
- RGB input formats are auto detected and can be RGBHV, RGB H+V or RGsB (Sync. on G).
- Play video games on your PC monitor.
- Automatic 3:2/2:2 film mode detection.
- High-resolution output picture.
- Plug & Play- No driver software required, easy ot install.
- Palm size.

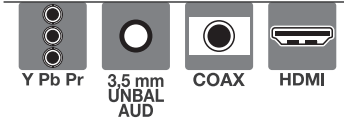**CGA/YCbCr   VGA**

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B.9

SIGNAL FORMAT CONVERTERS

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CP-281H
*YPbPr/YCbCr+AUDIO TO HDMI CONVERTER*

Applications:

CP-281H is a YPbPr/YCbCr+Audio to HDMI Converter, which allows you to convert the YPbPr/YCbCr and digital/analog audio output from a DVD Player or Set-top-box equipment to feed the digital HDMI input of a HDTV display. It supports high definition input/output up to 1080p. The output rate is the same of the incoming input.

Features:

- Compliant with HDMI 1.2, HDCP 1.1 and DVI 1.0 specifications.
- Supports a wide range of resolution: 480i/480p/576i/576p/720p/1080i/1080p@60 Hz.
- Supports digital audio input through coax cable, or analog audio input through L/R audio cable.

Y Pb Pr   **3,5 mm UNBAL AUD**   **COAX**   **HDMI**

CP-261HS
PC/HD WITH AUDIO TO HDMI FORMAT CONVERTER
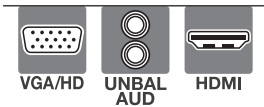
Applications:

The CP-261H converts analog PC/RGB or HD YPbPr and their associated audio source to digital HDMI format.
It enables you to connect your PC VGA out or DVD YPbPr out to the HDMI input of the new HD ready HDTV. The output rate is the same of the incoming input.

Features:

- Improves video display quality by utilizing the new high definition HDMI interface.
- Add HDMI output to your PC or YPbPr video sources.
- Input YPbPr/RGB switchable.

VGA/HD   **UNBAL AUD**   **HDMI**

CP-268S   new
DVI-I + COAXIAL TO HDMI CONVERTER

Applications:

This converter box is designed to convert DVI/Coaxial to HDMI output. It allows users to connect the DVI source and digital audio to a HDMI digital display. This converter box also amplifies signal for incoming TMDS data before re-transmitting them with optimal quality regardless of the incoming signal quality.

Features:

- HDMI 1.2, HDCP 1.1 and DVI 1.0 compliant
- Supports DVI/Coaxial input and HDMI output
- Input format auto detection: Digital RGB or YPbPr
- Optical input supports LPCM 2CH, Dolby Digital 5.1CH and DTS 5.1CH digital audio
- Operation Frequency: 165MHz
- Frequency Bandwidth: 1.65Gbps (single link)
- Supports audio sampling frequencies: 32, 44.1 and 48kHz
- Supports high resolution input/output: PC: up to UXGA 60Hz; HD: up to 1080p 60Hz
- Easy to install and to operate

DVI   **COAX**   **HDMI**

SIGNAL FORMAT CONVERTERS   9

CDPH-1S new

DP TO HDMI CONVERTER / ADAPTER

DP   HDMI

Applications:

More and more devices are deploying the DisplayPort (DP) interface instead of HDMI onto their graphics solution these days. When users wish to display on a large screen like HDTV or with an even more advanced monitor, he would need a device that can connect his DP source to his HDMI output display. Our latest "DP to HDMI mini converter adaptor" provides a quick and handy solution for this need. This adaptor is not only compliant with HDMI 1.3 specifications but it also has a remarkable frequency rate that can reach up to 2.7Gbps per lane. Inter-connecting your DP source with a HDMI display has never become as easy and convenient with our "DP to HDMI mini converter adaptor".

Features:

- Converts low-swing alternative current (AC) in to HDMI
- HDMI V1.3 and DVI 1.0 compliant
- HDMI level shifting operating up to 2.7 Gbps per lane
- Plugs and runs without any software application

CP-1261D new

PC/YPbPr TO DVI-D CONVERTER

VGA/HD   DVI
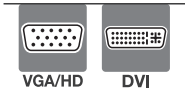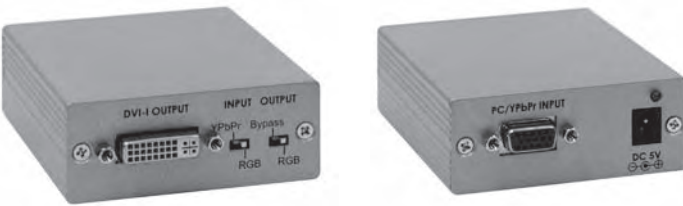
Applications:

This is a PC/HD to DVI-D format converter box. This box can convert and upgrade your display image from analog into digital leaving the rate unchanged. Whether your sources comes in from PC or traditional RGB signal through the PC/HD to DVI Format Converter, the image will be transformed into DVI signal.

Features:

- Connect computers with analog PC output or DVDs with HD output (YPbPr) to digital DVI-D monitors or projectors
- Select input between analog RGB and YPbPr manually.
- Select output between Bypass or digital RGB manually.
- Supports up to UXGA 60 Hz for PC input and 1080p 60 Hz for HD input
- Built-in EDID

CP-1262DE new

DVI-D TO PC/YPbPr CONVERTER

DVI   VGA/HD
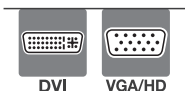
Applications:

This box is designed to convert digital DVI-D to Analog PC/RGB or HD YPbPr output. It enables the DVI sources display through analog PC monitor, Projector or TV.

Features:

- Supports DVI-D input and Analog PC/RGB or HD YPbPr output
- Output selection between YPbPr and RGB
- Supports input/output resolution as below:
  PC: up to SXGA and WXGA 60Hz
  HD: up to 720p 60Hz
- Note:
  1) Due to the limitation of Tri-level synchronies output the image will shift to the left side of the screen when component output is at 720p
  2) If DVI source includes HDCP protection, destination would not show the image properly

9 SIGNAL FORMAT CONVERTERS

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CP-1262HE `new` *HDMI TO PC/YPbPr CONVERTER WITH ANALOG AUDIO OUT*

Applications:

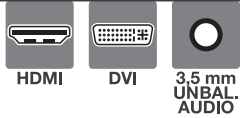This box is designed to convert digital HDMI to Analog PC/RGB or HD YPbPr output. It enables the HDMI sources display through analog PC monitor, Projector or TV. Its high bandwidth capability supports a wide range of PC and HDTV resolutions. **The device cannot manage HDMI with HDCP content protection.**

Features:

- HDMI 1.3 Compliant
- Supports HDMI input and Analog PC or SD/HD output
- Output selection between YPbPr and RGB
- Supports input/output resolution as below:
  PC: up to UXGA 60Hz and WUXGA (1920x1200) 60Hz
  HD: up to 1080p 60Hz
  Note: Due to the limitation of Tri-level synchronies output the image will shift to the left side of the screen when component output is at 720p/1080i/1080

CP-283HD *DUAL HDMI TO HD COMPONENT CONVERTER*
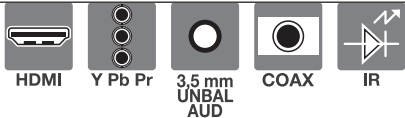
Applications:

CP-283HD is an HDMI to component (YCbCr/YPbPr) Converter with audio output. It allows you to switch between 2 HDMI sources and convert it to component and analog audio (L/R) or digital audio (Co-axial) output at the same time.

It supports high definition up to 1080p, and output resolution follows input. The output rate is the same of the incoming input.

Features:

- Compliant with HDMI 1.2, HDCP 1.1 and DVI 1.0 specifications.
- Supports a wide range of resolutions: 480i/480p/576i/576p/720p/1080i/1080p@60Hz.
- Supports digital audio input through coax cable, or analog audio input through L/R audio cable.
- IR remote control.
- HDCP not managed. When input is HDCP encrypted (protected) the component out will be turned off.

CDM-150 *VIDEO SYSTEM CONVERTER*

Applications:

CDM-150 Video system converter is designed to convert SC/PAL/SECAM input source to NTSC/PAL display. It support output formats switch for NTSC or PAL. The user can easily to install and use in NTSC/PAL display.

Features:

- Supports digital conversion from NTSC/PAL/SCAM to NTSC/PAL.
- To convert between 525 lines and 625 lines.
- To convert refresh frequency between 60Hz and 50Hz.
- Built in Color bar.
- Output with Macovision signal when input Macrovision signal is detected.
- System with 8 Mb field memory.

CSY-2100 *SCART TO Y-U-V CONVERTER*
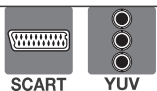
Applications:

SCART to Y-U-V Converter.

Features:

- Converts scart RGB to YUV with RCA output jacks.
- Operates in PAL, PAL M, PAL N, NTSC, NTSC 4.43, SECAM.
- Enhances picture quality by utilizing Y,U,V input your TV.
- Ideal for use with TVs that have YUV input.

SIGNAL FORMAT CONVERTERS 9

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B. 10

AUDIO
PROCESSOR

DCT-3 🔴 new   COAXIAL/OPTICAL TO L/R AUDIO CONVERTER

COAX · OPTICAL · UNBAL AUD

Applications:

DCT-3 is a Coaxial/Optical to L/R audio converter box. It accepts digital audio signal input through either Coaxial or Optical input via a switch, and converts it to analog audio signal (L/R) output.

Features:

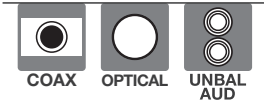- Supports digital audio signal (Coaxial/Optical) input and convert it to analog audio signal (L/R) output
- Integrated digital interpolator filter and Digital to Analog Converter (DAC)
- Supports non-compressed digital stereo audio input.
- Compact size and easy to install

DCT-6S 🔴 new   ANALOG I/O SRS VOLUME LEVELER

UNBAL AUD

Applications:

The SRS TruVolume(TM) accessory Box regulates TV-channel volume to the most comfortable listening level. Preventing disturbing fluctuations while you channel surf, as well as keep under control those obnoxious commercials. When the volume is set to a lower level, you could still hear every detailed sound.

Features:

- Simple Operation "ON/OFF"
- Simple connection for easy installation (Stereo analog in/out, Power)
- Supports Line Level inputs up to 2Vrms and Line Level Outputs up to 1Vrms, via stereo RCA jacks
- Regulates TV/Satellite/Radio broadcast volume levels, so you don't have to adjust it constantly when you change channels
- Helps the hearing impaired by keeping channels at a consistent volume level so the audiences can hear everything clearly while not disturb the others in the room
- Boosts low and high-frequency content dynamically (20-bands/ch), using an advanced psychoacoustic modeling engine

AUDIO PROCESSOR **10**

DCT-8S `new`

DIGITAL SRS TRU/VOLUME HDMI 1.3 VOLUME LEVELER

HDMI

Applications:

This most advanced HDMI to HDMI audio repeater and decoder incorporating SRS TruVolume™ technology will free you from volume fluctuations when switching TV channels. This device is HDMI v1.3 compliant and can transfer deep colour video with high bandwidth up to 225MHz . It also does signal amplification with equalization for repeater function. The device will prevent annoying fluctuations from obnoxious commercials or bursting sounds from action scenes. Although it maintains a satisfactory volume level, it will not make you miss any sounds during low tone conversations or light orchestra. The HDMI SRS TruVolume processor is definitely the best choice for your sounding and viewing pleasure.

Features:

- HDMI v1.3, HDCP v1.1 and DVI v1.0 compliant
- Supports high definition input up to 1080p@(24/60) Hz, output resolution follows input
- Support HDMI signal amplification and equalization output for repeater function
- Supports 2 channels audio from HDMI input to HDMI output ports
- Integrated HDCP encryption for transmitting protected audio and video content
- Support CEC (Consumer Electronic Control) bypass
- Regulates TV / Satellite / Radio broadcast volume level
- Auto adjust volume to your best hearing acceptance
- Boosts low and high-frequency content dynamically, using an advanced psychoacoustic-modeling engine making the entire listening experience come alive, regardless of the audio level
- HDMI cable distance test with 1080p/8 bits resolution, the input/output source can run up to 15/10 meters and 1080p/12 bits can run up to 10/15 meters
- Simple connection and easy installation, no software require

---

DCT-9 `new`

A/D AND D/A AUDIO CONVERTER

COAX **OPTICAL** **UNBAL AUD**

Applications:

DCT-9 is an audio converter that provides a big variety of audio formats/interfaces.

With three different types of bidirectional connectors namely optical, coaxial and L/R, the DCT-9 can convert all three signals into any preferred format.

Analog audio signal input can be converted into digital output, and digital audio signal input into analog output. The 3 outputs as Optical, coaxial and L/R are simultaneously present independantly from the selected input. DCT-9 is the best choice of audio enthusiasts and professionals looking for a compact, flexible, elegant, and user friendly audio converter.

Features:

- Integrated digital interpolator filter and Digital-to-Analog Converter (DAC)
- Integrated Analog to Digital Converter (ADC)
- Supports sampling frequencies from 16 - 100 kHz
- Provides electromagnetic noise-free transmission
- Easy to install and operate
- Compact size with elegant design

10 AUDIO PROCESSOR

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B. 11

GENERATORS

CYP
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CPA-1

VGA/HD

Applications:
CPA-1 is high performance PC/HDTV test pattern generator that provides over 20 most-often-used test patterns that can be used as an industrial-standard signal source for testing, broadcasting and troubleshooting.
It is ideal for use with LCD, PDP, CRT monitors or projectors that equipped with PC or DVI input.

Features:
- The output format is analog RGBHV/YPbPr via HD-15 VGA connector.
- Provides a wide range of PC/HDTV output resolutions.
- Generates 27 test patterns including most useful test patterns in Video/PC industry, such as Color bar, Multiburst, Circle, Crosshatch...
- OSD indicates output resolution and refresh rate.
- Output can be reset to one of the two factory default modes: 1024x768 or 720p.
- Selectable output refresh rate up to 85 Hz.
- Output resolutions up to SXGA and 1080i.

CPA-2
DVI PATTERN GENERATOR

DVI

Applications:
CPA-2 is high performance PC/HDTV test pattern generator that provides over 20 most-often-used test patterns that can be used as an industrial-standard signal source for testing, broadcasting and troubleshooting.
It is ideal for use with LCD, PDP, CRT monitors or projectors that equipped with PC or DVI input.

Features:
- The output format is digital RGB data bitstream via 24-pin DVI connector.
- Provides a wide range of PC/HDTV output resolutions.
- Generates 27 test patterns including most useful test patterns in Video/PC industry, such as Color bar, Multiburst, Circle, Crosshatch...
- OSD indicates output resolution and refresh rate.
- Output can be reset to one of the two factory default modes: 1024x768 or 720p.
- Selectable output refresh rate up to 85 Hz.
- Output resolutions up to SXGA and 1080i.

CPHD-1
HDMI PATTERN GENERATOR

HDMI   **OPTICAL**   **UNBAL AUD**   **RS232**   **IR**
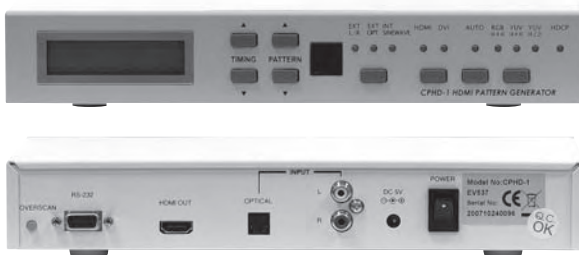
Applications:
CPHD-1 HDMI Pattern Generator is a handy tool for evaluation and testing of displays/panels. With the combination of its various timings, patterns and color spaces, CPHD-1 can provide up to 4095 types of video testing signals. Besides video patterns, the generator also supports 3 types of audio testing signal, one built-in shine wave, one external analog audio, and one external digital audio input through S/PDIF. The control over CPHD-1 is simple yet comprehensive, as you can use the on-panel buttons or remote controller to select from the timings, patterns, color spaces, DVI/HDMI output, and audio signal type, while you can also choose to use the bundled Windows software application to perform advanced control, such like timing/pattern programming, EDID reading and writing.

Features:
- Provides total 35 Timings and 39 Patterns.
- Supports HDCP signal verification pattern (P39).
- On-panel LED display and LED indicators.
- Remote control.
- Supports RS-232 control, specific PC application included.
- Output resolutions up to 1080p.

CYP
Cypress Technology Co., Ltd.

B. 12

MISCELLANEOUS

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CID-4 `new`
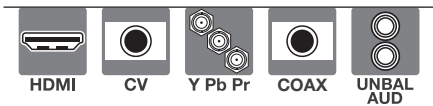
AVAILABLE OCTOBER 2010

Applications:

Enjoying your iPod/iTouch/iPhone video and audio contents with large screen TV is no longer impossible with this multi-functional docking station converter. This device allows HDMI, CV, component, coaxial and iPod/iTouch/iPhone inputs sources to output HDMI, VGA and L/R. The converter can scale digital or analog signal into HDMI output with resolution up to 1080p and VGA output with resolution up to 1920 x1200.

Features:

- HDMI v1.2, HDCP 1.1 and DVI 1.0 compliance
- Support iPod/iPhone standard 30 pin connector with audio, video and USB charging function
- Scale iPod/iPhone or external SD/HD video source to HDMI or VGA output
- Auto input source selection
- Support PCM, Dolby Digital and DTS
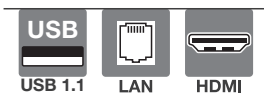- Support audio sampling rate up to 192 KHz

| HDMI | CV | Y Pb Pr | COAX | UNBAL AUD |

CDL-160ETH `new`

ETHERNET AND USB TO HDMI CONVERTER

Applications:

The Ethernet and USB to HDMI Converter allow users to use TV as the PC primary display with keyboard and mouse at hand for Internet browsing, using Microsoft Office, listening music and watching movies from a PC on the network. Simply connect the TV to the device and then plugging the device into an Ethernet network, this TV instantly become the PC monitor with keyboard and mouse for any computer on that network. The device will enable this TV to be used as if it was directly connected to the computer. The distance between TV and computer can be 100 meters apart within the same LAN. The device removes the limitations of running expensive audio and video wiring in long distance digital signage extending. All that is needed is an Ethernet network. Multiple users will have the ability to access the same TV without physically connect with computers. This will eliminate the distance limitations of conventional audio and video cabling for easy AV sharing between computers.

Features:

- Move the complete PC operation environment into TV with100 meters away from computer. Original PC monitor can show different content with TV
- Allow TV as the PC primary display with keyboard and mouse at hand for Internet browsing, using Microsoft Office, listening music and watching movies from a PC on the network
- Extend or mirror video through network or USB cable to HDMI display, including both video and audio output signals
- Share HDMI displays with multiple users through your existing office or home IP network
- Add a HDMI display to your computer through a USB 2.0 port
- Supports mirror and extended video modes
- Friendly interface for easy configuration and monitoring
- Software Control provided

| USB 1.1 | LAN | HDMI |

MISCELLANEOUS

12

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CPP-12H / CPP-16H

12 OR 16 HDMI FEMALE TO FEMALE PATCH PANEL

Applications:

CPP-12H and CPP-16H are 12 and 16 HDMI female to female couplers Patch Panels. These useful structured devices help you with organizing your complex HDMI circuit system. They permit to connect up to 12 or 16 sources to corrispondent devices in a neat and tidy state. Cables runs can be quick and easy identified by clear numbering on the front of the panel.

- HDMI systems connection.
- HDMI extender connection.
- HDMI multi-display connection.

Features:

- Used to connect HDMI cables in a 19" equipment rack.
- Heavy gauge steel and grit blast coating provides durability.
- Industry standard 2U panel height will fit most racks.
- With high quality HDMI connectors to ensure minimal signal loss.
- Includes a bracket for easy mounting.
- Great configurable solution for setting up a network.

CIR-12 / CIR-03

CAT5 INFRARED EXTENDER KIT
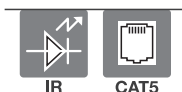
Applications:

CIR-12 and CIR-03 are a couple of devices that performs the IR Transmission through CAT5 cable. Only one device must be powered and it feeds the companion. This kit permits the user to control and display the desired sources instantly without limitation to distance up to 250 m.

CIR-12 is the transmitter that sends the signal of the incoming IR receiver through the CAT5 cable.

In the meanwhile, it provides to drive 2 local destinations by 2 IR outputs.

CIR-03 is the receiver that recognize the IR signal incoming by CAT5 cable and drives up to 3 destinations by 3 IR outputs. The receiver and the five IR transmitters are provided with the kit.

Features:

- Support five (5) output (3 from CIR-03, 2 from CIR-12).
- Control source equipments anywhere within 250 meters, even through walls and ceilings.
- Send No audio/video, but just infrared signals.
- Using existing remote controls.
- One IR Receiver only.
- IR Receiver's frequency must be at 38 KHz.

CAC-TXA/RXA *new*   *5 COAX HDMI TRANSCEIVER*

HDMI **RGBHV**

Applications:

CAC-TXA/RXA is an Active Connect Multimedia Transmitter and Receiver Box through 5 coax cables, that permits long distance displaying of your game/player devices to your HDMI displayer. For optimum performances the length of the 5 coax cables have to be **strictly** the same.

Features:

- Compliant with HDMI 1.3 and DVI 1.1
- Higher data rates enabling new features and applications
- New and improved colour gamut (i.e. deep colour xvYCC)
- HD audio (8 channel audio support)
- High Resolutions from PC up to WUXGA (1920 x 1200), HDTV up to 1080p/12 bit
- Supports CEC
- Receiver with power setting (external by PS or internal by coax)
- Supports seamless for VESA DDC, CEC and Hot Plug Detect (HPD)
- The RG6 type 75 Ω can run up to 100m at 720p or **50m at 1080p** (Note 1)
- The RG59 type 75 Ω can run up to 50 m at 480p or 30 m at 720p
- Supports xvYCC (Extended-gamut YCC)
- Easy to install and to operate

Note 1: RG6 (AWG18 solid) can replace the smaller RG59 (AWG23) in CATV and domestic applications for better performances. Cables smaller than AWG23 are not recommended for this application.

CH-1106TX/RX *new*   *HDMI 1.3 TO CAT6 TRANSCEIVER*

HDMI **IR** **CAT6**
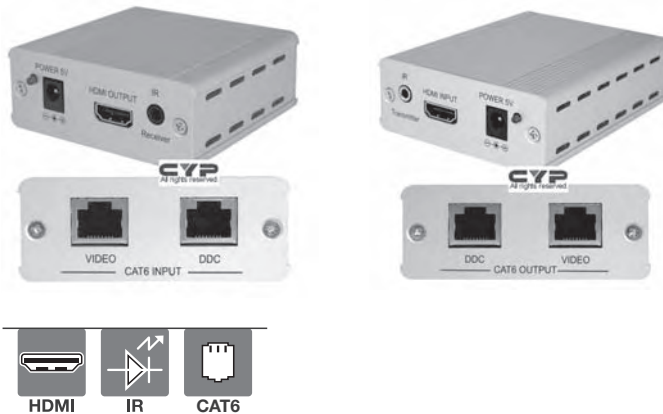
Applications:

The HDMI 1.3 transmitter and receiver over CAT6 is an extension tool for your long distance HDMI display needs. Instead of using expensive HDMI cables, your existing CAT6 cables/sockets can replace HDMI cables while performing the same functions like transfer Deep Colour (12 bits/colour) video and new lossless compressed (Dolby TrueHD, Dolby Digital Plus and DTS-HD Master Audio) Digital audio, at a bandwidth of up to 225MHz. Moreover, you can use your existing remote control to control your device over a 30/45 meters distance through the IR blaster. Our HDMI 1.3 Transmitter and receiver is your ideal choice when looking for a HDMI extender. For best performances, **CAT6 AWG23** solid is recommended (**Note 1**).
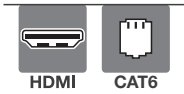
Features:

- Complies with HDMI 1.3, HDCP 1.1 and DVI1.1 standards
- Supports digital video formats in Deep Colour Mode at up to 36 bits (12bits/colour) and new lossless compressed (Dolby TrueHD, Dolby Digital Plus and DTS-HD Master Audio) Digital audio
- Supports CAT6 cables for data/DDC transmission
- Supports equalize and recover incoming TMDS data before re-transmitting them with optimal quality regardless of the incoming signal quality
- Supports high definition resolution, at 1080p/8bits distance can reach 45 m with CAT6 AWG23
- Supports CEC bypass
- Supports xvYCC (Extended-gamut YCC)
- Supports IR Receiver & IR Blaster
- Supports full range of IR frequencies from 20~60 KHz

Note 1: The receiver CH-1106RX can be ordered to be used as receiver box to interface the outputs of CLUX-1H4CAT, CLUX-1H8CAT and CMLUX-4H4CAT

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CH-107 TX/RX *new*

HDMI **CAT6**

Applications:
The HDMI 1.3 transmitter and receiver over **one only** CAT6 is an extension tool for your long distance HDMI display needs. Instead of using expensive HDMI cables, your existing CAT6 cables/sockets can performs the same functions like transfer Deep Colour (12 bits/colour) video and new lossless compressed (Dolby TrueHD, Dolby Digital Plus and DTS-HD Master Audio) Digital audio, at a bandwidth of up to 225MHz. For best performances, **CAT6 AWG23** solid is recommended.

Features:
- Complies with HDMI 1.3, HDCP 1.1 and DVI1.1 standards
- Supports digital video formats in Deep Colour Mode at up to 36 bits (12bits/colour) and new lossless compressed (Dolby TrueHD, Dolby Digital Plus and DTS-HD Master Audio) Digital audio
- Supports one only CAT6 cables for data/DDC transmission
- Supports equalize and recover incoming TMDS data before re-transmitting them with optimal quality regardless of the incoming signal quality
- Supports high definition resolution, at 1080p/8bits distance can reach 45 m with CAT6 AWG23
- Supports CEC bypass
- Supports xvYCC (Extended-gamut YCC)

CLUX-1H4CAT *new*
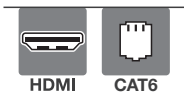
HDMI **CAT6**

Applications:
The HDMI 1.3 Splitter over CAT6 has many combinations of products that allows users to make use of according to their need. This solution provides a direct input of one HDMI to one direct output of HDMI (OUT 1), and 3 CAT6 outputs that allows users to link up a source to display in 4 different screens simultaneously. Alternatively, the HDMI output can be treated as an extender to connect to another HDMI splitter or cascade with other unit in multiple layers. Due to the mass usage of the CAT6 system and the information allowance through the CAT6, this design leaves users to display many types of information without compressed the signal and display through long distance. Not only so, it also has some extra functions like EDID, System reset, Deep colour and IR systems. For best performances, **CAT6 AWG23** solid is recommended.

Features:
- HDMI 1.3, HDCP1.1 and DVI1.0 compliant
- Supports Deep colour video up to 12bit, 1080p@60Hz
- One HDMI source to connect up to 1 HDMI and 3 CAT6 that allows users to link up to 4 displays simultaneously
- HDCP keysets allows each output to work independently when connecting to a HDMI display
- Supports DVI source and DVI display by using HDMI to/from DVI adaptor cable
- Supports LPCM 7.1CH, Dolby TrueHD, Dolby Digital Plus and DTS-HD Master
- Audio transmission (32-192kHz Fs sample rate)
- Supports a wide range of PC and HDTV resolutions up to UXGA and 1080p
- HDMI cable distance test with 1080p resolution: OUT1can run up to 10m
- Selects EDID from TV mode or STD mode
- Deep colour setting of 8 bit or 12 bit
- IR remote control
- System reset function
- Supports high definition resolution, at 1080p/8bits distance can reach 45 m with CAT6 AWG23

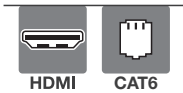The receiver CH-1106RX must be ordered to be used as CAT6 receiver box.

CLUX-1H8CAT ●new

HDMI **CAT6**

Applications:

The HDMI 1.3 Splitter over CAT6 has many combinations of products that allows users to make use of according to their need. This solution provides a direct input of one HDMI to one direct output of HDMI (OUT1) and 7 CAT6 outputs that allows users to link up a source to display in 8 different screens simultaneously. Alternatively, the HDMI output can be treated as an extender to connect to another HDMI splitter or cascade with other unit in multiple layers. Due to the mass usage of the CAT6 system and the information allowance through the CAT6, this design gives users the ability to display many types of information without compressed the signal and display through long distance. Not only so, it also has some added value functions like EDID, System reset, Deep colour and IR systems. For best performances, **CAT6 AWG23** solid is recommended.
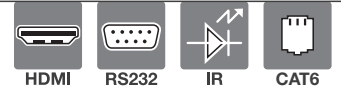
Features:

- HDMI 1.3, HDCP1.1 and DVI1.0 compliant
- Supports Deep colour video up to 12bit, 1080p@60Hz
- One HDMI source to connect up to 1 HDMI and 7 CAT6 that allows users to link up to 8 displays simultaneously
- HDCP keysets allows each output to work independently when connecting to a HDMI display
- Supports DVI source and DVI display by using HDMI to/from DVI adaptor cable
- Supports LPCM 7.1CH, Dolby TrueHD, Dolby Digital Plus and DTS-HD Master
- Audio transmission (32-192kHz Fs sample rate)
- Supports a wide range of PC and HDTV resolutions up to UXGA and 1080p
- HDMI cable distance test with 1080p resolution: OUT1can run up to 10m
- Selects EDID from TV mode or STD mode
- Deep colour setting of 8 bit or 12 bit
- IR remote control
- System reset function
- Supports high definition resolution, at 1080p/8bits distance can reach 45 m with CAT6 AWG23

The receiver CH-1106RX must be ordered as CAT6 receiver box.

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CMLUX-4H4CAT new

HDMI **RS232** **IR** **CAT6**

Applications:

CMLUX-4H4CAT is a high performance HDMI Matrix over CAT6 with a remote control. It is compatible with HDMI v1.3 specifications, a cutting-edge technology which defines the support to transfer Deep Colour (10 bits/colour) video and new lossless compressed (Dolby TrueHD, Dolby Digital Plus and DTS-HD Master Audio) digital audio. It offers you the maximum convenience in HDMI signal distribution, when you have multiple HDMI sources and displays to be connected together. Each of the four HDMI sources can be directed to any one of the four HDMI displays, so each display can show a different source. When HDMI signal progresses through the system, it is re-timed, and level-compensated. Furthermore, since signal is transferred over CAT6, the distance can be extended at a long range (over 50m at 1080p 8 bits) yet at a very low cost. CAT6 connection can also be built with cascade function with other devices with real time play and no signal loss. Moreover, with remote control and built-in IR in & out systems, makes it a very handy device. For best performances, **CAT6 AWG23** solid is recommended.

Features:

- HDMI 1.3, HDCP 1.1 and DVI 1.0 compliant
- Supports digital video formats in Deep Colour 12 bits and new lossless compressed (Dolby-TrueHD, Dolby Digital Plus and DTS-HD Master Audio) digital audio
- The HDMI input is compensated, clock / phase adjusted, and jitter eliminated so the output is a brand new standard HDMI signal
- Shows input source LED indicators on each output select
- Compatible with all HDMI sources and displays
- Supports a wide range of PC and HDTV resolutions up to UXGA and 1080p
- Supports RS-232 control
- Supports IR remote control and IR extender
- Supports high definition resolution, at 1080p/8bits distance can reach 45 m with CAT6 AWG23

The receiver CH-1106RX must be ordered as CAT6 receiver box.

COH-TX/RX new

HDMI 1.2 OPTICAL TRANSCEIVER
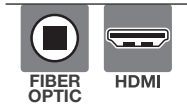
Applications:

When HDMI signal is broadly used in the entertainment world, the cost and distance availability of the HDMI cables has become a burden for users. HDMI over fiber provides the same quality presentation with distance up to 300 m. The HDMI signal is not compressed and is fully complained with HDCP.

Features:

- HDMI 1.2, HDCP and DVI compliance
- Transmission up to 300 m
- Support EDID reading and CEC function
- Supports up to 1080i 60 Hz and 1080p 30 Hz
- LC Fiber Type Plug

FIBER OPTIC   **HDMI**

CLUX-UCEC new

HDMI CEC CONTROL OVER RS232

Applications:

The HDMI CEC control over RS232 is a convenient devicefor controller to set the CEC command in the control room. Both source and display can be controlled through PC and/or through a remote control.

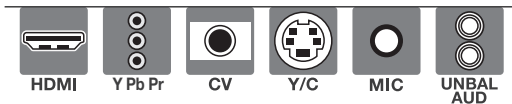Other than the RS232 control function the mini USB input can also provide power to the device.

Features:

- HDMI 1.3, HDCP 1.1, DVI1.0 compliance
- Supports full CEC functions
- RS232 over mini USB
- Supplied over mini USB
- Supports EDED bypass
- Software Control provided

HDMI

CMX-12 new

DIGITAL AV MIXER

Features:

- Selective size and position for digital effects area and PIP windows
- Automatic fade and wipe with speed preset control
- Digital effects: Still, Mosaic, Paint, Negative
- 96 wipe patterns
- Chroma key and Luminance Key
- 3x8 Bar colour
- Joystick control for digital effect position
- Fade control for Video and Audio
- Video and Audio mixing
- Two HDMI source inputs
- Two Component source inputs
- Two CV or Y/C source inputs
- One HDMI recording output
- Two Componrnt recording outputs
- One CV and Y/C outputs
- One CV and Y/C preview outputs
- Auxiliary Audio input
- Microphone input and headphone outputs
- PIP control (3 windows size)

HDMI   **Y Pb Pr**   **CV**   **Y/C**   **MIC**   **UNBAL AUD**

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PRODUCT CATALOGUE 2010

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VGA		CAT 5/6		KVM (PS2)
DVI		EXTENSION DISTRIBUTION SWITCHING		KVM (USB)
HDMI				RS 232
AUDIO		FIBER OPTICS		IR
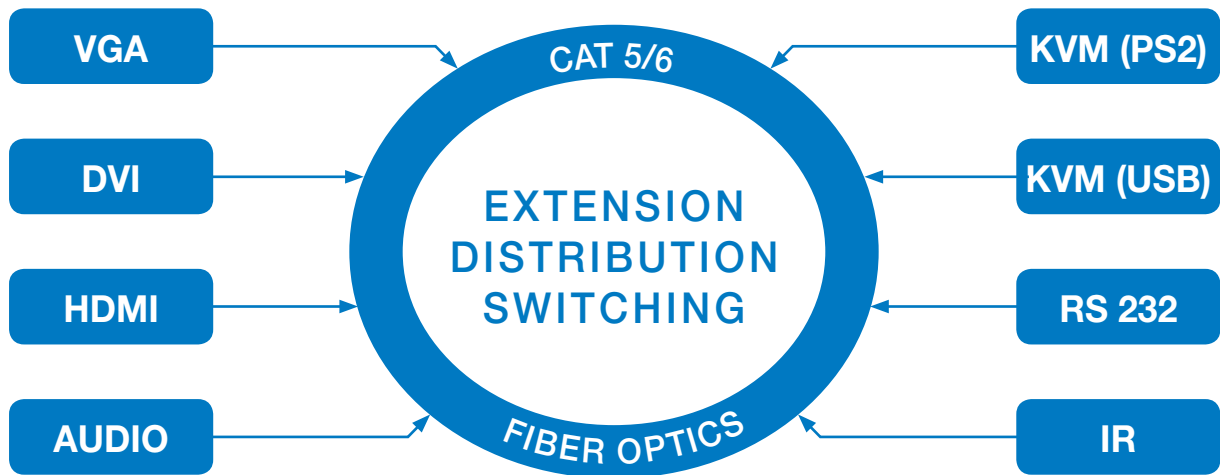
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B. PRODUCT CATALOGUE 2010 SMART - AVI

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Smart-AVI
SMART AUDIO VIDEO INNOVATION

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Smart-AVI
SMART AUDIO VIDEO INNOVATION

c.1

UXGA, AUDIO, RS232 AND IR EXTENDERS

AR-100S
RS232 BIDIRECTIONAL + AUDIO TRANSCEIVER
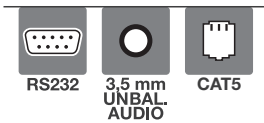
Applications:

The AR-100S kit is composed by the AR-TX100S transmitter and the AR-RX100S receiver. The kit may be ordered using code AR-100S.

The AR-TX100S transmitter is a device which conveys on a CAT5 cable one RS232 and a stereo audio signal.

The AR-RX100S receiver receives through a CAT5 cable the transmitter signals and regenerates them toward the output into an RS232 signal and an audio stereo one.

The AR-RX100S receiver should be placed at the end of the CAT5 cable. Maximum acceptable cable length is 900m.

Features:

- Extends RS232 and Audio up to 900 m
- Supports all protocol and baud rates
- Uses easy to install inexpensive CAT5 cable
- Output reaches up to 900 m
- Compatible with line level stereo audio signals
- High ground loop immunity
- Built-in lightning, power surge and transient protection
- Remote units come with buffered outputs
- Compact enclosure
- Fully transparent path for all protocols and data transfers

RS232 · **3,5 mm UNBAL. AUDIO** · **CAT5**

VDXS
UXGA + RS232 BIDIRECTIONAL TRANSCEIVER
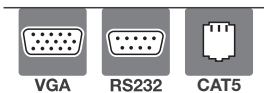
Applications:

The VDXS kit is composed by the VDX-TXS transmitter and the VDX-RXS receiver.

The VDX-TXS transmitter is a device designed to convey PC graphic signals and RS232 signals on a CAT5 cable. The RS232 signal may be bidirectional.

The VDX-TXS transmitter is designed to operate in pair with the VDX-RXS receiver.

The VDX-RXS receiver receives through a CAT5 cable the transmitter signals and regenerates them into UXGA and RS232 signals toward the destinations.

Three trimmers, working individually on the RGB signals, permit to regulate the cable loss compensation.

The VDX-RXS receiver should be placed at the end of the CAT5 cable.

Maximum acceptable length of cable is 300m.

VGA · **RS232** · **CAT5**

Features:

- Extends high-resolution UXGA and RS232 signals
- Uses easy to install, inexpensive CAT5/5e/6 cable
- Output reaches up to 300 m.
- Supports high resolution clear video up to 1900x1200
- HDTV compatible (720p, 1080i,1080p)
- 300 MHz Bandwidth
- Compatible with VGA, XGA, Sun, MAC and SGI
- Sync Format / Polarity Preservation
- Bidirectional serial RS232 (Tx/Rx) control
- High ground loop immunity
- Built-in lightning, power surge and transient protection
- Designated trimmer in the remote unit to compensate for cable length
- Compact metal case enclosure
- Remote units come with buffered outputs

UXGA, AUDIO, RS232 AND IR EXTENDERS

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XTAVS

VGA **3,5 mm UNBAL. AUDIO** **CAT5**

Applications:

The XTAVS kit is composed by the XTA-TXS transmitter and the XTA-RXS receiver.

The XTA-TXS transmitter is a device designed to convey PC graphic signals and its stereo audio signals on a CAT5 cable.

The XTA-TXS transmitter is designed to operate in pair with the XTA-RXS receiver.

The XTA-RXS receiver receives through a CAT5 cable the transmitter signals and regenerates them into UXGA and stereo audio signals toward the destinations.

Three trimmers, working individually on the RGB signals, permit to regulate the cable loss compensation.

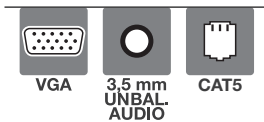The XTA-RXS receiver should be placed at the end of the CAT5 cable. Maximum acceptable length of cable is 300m.

Features:

- Extends high-resolution UXGA and Stereo Audio
- Uses easy to install, inexpensive CAT-5/5e/6
- Output reaches up to 300 m.
- Resolutions up to 1900x1200
- 300 MHz Bandwidth
- Compatible with VGA, XGA, Sun, MAC and SGI
- Sync Format / Polarity Preservation
- Compatible with Line Level Stereo Audio Signals
- High ground loop immunity
- Built-in lightning, power surge and transient protection
- Designated trimmer in the remote unit to compensate for cable length
- Compact Metal Case Enclosure

XTPROS

VGA **3,5 mm UNBAL. AUDIO** **RS232** **IR** **CAT5**
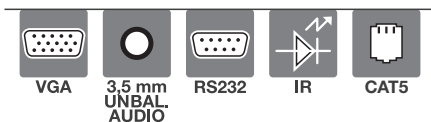
Applications:

The XTPROS kit is composed by the XTP-TXS transmitter and the XTP-RXS or XTP-RXLS receiver.

The XTP-TXS transmitter is a device designed to convey PC graphic signals, its stereo audio signals, RS232 and an IR signal as well on a CAT5 cable. The IR signal may be bidirectional, meaning that an SM-LED emitter or an SM-EYE receiver may be connected.

The XTP-TXS transmitter represents, with the XTP-RXS receiver, the most complete pair for CAT5 cable signal convey.

The XTP-RXS receiver receives through a CAT5 cable the transmitter signals and regenerates them into UXGA, stereo audio, RS232 and IR signals toward the destinations.

Three trimmers, working individually on the RGB signals, permit to regulate the cable loss compensation. RS232 and IR signals are bidirectional.

The XTP-RXS receiver should be placed at the end of the CAT5 cable. Maximum acceptable length of cable is 300m.

If longer cable is needed, the XTP-RXLS receiver may operate up to 500m. All other characteristics are unchanged.

Features:

- Extends high-resolution UXGA, Stereo Audio, RS232 and IR
- Supports Dual Screens
- Uses easy to install, inexpensive CAT-5/5e/6
- Output reaches up to 300 m.
- Resolutions up to 1900x1200
- 300 MHz Bandwidth
- Compatible with VGA, XGA, Sun, MAC and SGI
- Sync Format / Polarity Preservation
- Compatible with Line Level Stereo Audio Signals
- High ground loop immunity
- Built-in lightning, power surge and transient protection
- Designated trimmer in the remote unit to compensate for cable length
- Compact Metal Case Enclosure

Smart-AVI
SMART AUDIO VIDEO INNOVATION

c.**2**

UXGA
MULTIPOINT
TRANSMITTERS

Applications:

The XT-TX400S or 800S or 1600S send PC signals (graphic UXGA, stereo audio and RS232 standard) to 4 or 8 or 16 separate destinations.
The RS232 signal is monodirectional, from the center to the periphery.
UXGA and audio outputs are available on the transmitter to allow PC graphic & audio outputs local monitoring.

Features:

- Extends high-resolution UXGA, Audio, RS232 or IR from one source to multiple locations
- Uses easy to install, inexpensive CAT5/5e/6
- Each output reaches up to 300 m
- Supports high resolution video up to 1900x1200
- HDTV Compatible (720p, 1080i,1080p)
- 300 MHz Bandwidth
- Compatible with VGA, XGA, Sun, MAC and SGI
- Sync Format / Polarity Preservation
- Compatible with Line Level Stereo Audio Signals
- High ground loop immunity
- Built-in power surge and transient protection
- Designated trimmer in the remote unit to compensate for cable length
- Compact Metal Case Enclosure
- External power supply

XT-TX400S *UXGA + AUDIO + RS232 + IR 4 PORT TRANSMITTER*

| VGA | 3,5 mm UNBAL. AUDIO | RS232 | IR | CAT5 |
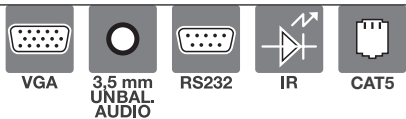
XT-TX800S *UXGA + AUDIO + RS232 + IR 8 PORT TRANSMITTER*

| VGA | 3,5 mm UNBAL. AUDIO | RS232 | IR | CAT5 |
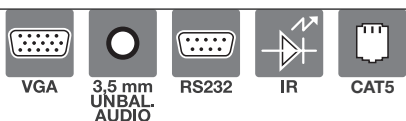
XT-TX1600S *UXGA + AUDIO + RS232 + IR 16 PORT TRANSMITTER*

| VGA | 3,5 mm UNBAL. AUDIO | RS232 | IR | CAT5 |

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MATRICES WITH CAT5 OUTPUTS

Applications:

Matrix with CAT5 output are designed to connect several outputs using a CAT5 cable.

Each of the destinations must be served by a receiver. The receivers should be chosen according to the signals to be treated and the CAT5 cable length (max. 500m).

Matrix accepts the input signals straight from the sources. Typical formats are 8X8, 16X16 and 32X16.

The SMX-AV series allows transit of UXGA and audio.

Features:

- Switches 8, 16 or 32 inputs to any outputs for unmatched design flexibility
- Signal distribution over CAT5/6 structured cabling
- Supermatrix is a full non-blocking switching matrix
- Integrated RS232 and Infrared matrix offers unparalleled control
- Switch signals from devices located up to 300 m apart
- HD compatible (720p, 1080i, 1080p)
- Supports high resolution video up to 1900x1200
- Sends high-resolution UXGA, stereo audio, RS232 or IR over a single twisted pair cable
- Compatible with Video Composite, S-Video, Component and UXGA interface

- Increases productivity by providing access to 16 computers from 16 workstations
- Can be controlled via software interface, remote control, Internet or RS232
- Full RS232 Matrix control
- Remotely power on and off all of the connected display devices
- Send commands such as video schedules or input source.
- Reporting
- Enable touch-screen displays to send and receive data.
- Interrupt displays with Alerts and urgent messages
- Controlling the Matrix
- Support multiple control interfaces
- Control via RS232 using SmartControl; our Windows based Software included with the system
- Supermatrix also allows multiple users to access the matrix from anywhere in the world using our http interface
- You can also use a remote control through an Infrared connection

SMX-AV0808S — *UXGA + AUDIO OVER CAT5 8x8 MATRIX*

VGA   **3,5 mm UNBAL. AUDIO**   **CAT5**

SMX-AV1616S — *UXGA + AUDIO OVER CAT5 16x16 MATRIX*

VGA   **3,5 mm UNBAL. AUDIO**   **CAT5**

SMX-AV3216S — *UXGA + AUDIO OVER CAT5 32x16 MATRIX*
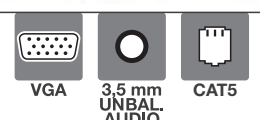
VGA   **3,5 mm UNBAL. AUDIO**   **CAT5**

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Applications:

Matrix with CAT5 output are designed to connect several outputs using a CAT5 cable.

Each of the destinations must be served by a receiver. The receivers should be chosen according to the signals to be treated and the CAT5 cable length (max. 500m).

Matrix accepts the input signals straight from the sources. Typical formats are 8x8, 16x16 and 32x16.

The SMX-AVD series allows transit of UXGA, audio, RS232 and IR.

Features:

- Switches 8, 16 or 32 inputs to any outputs for unmatched design flexibility
- Signal distribution over CAT5/6 structured cabling
- Supermatrix is a full non-blocking switching matrix
- Integrated RS232 and Infrared matrix offers unparalleled control
- Switch signals from devices located up to 300 m apart
- HD compatible (720p, 1080i, 1080p)
- Supports high resolution video up to 1900x1200
- Sends high-resolution UXGA, stereo audio, RS232 or IR over a single twisted pair cable
- Compatible with Video Composite, S-Video, Component and UXGA interface

- Increases productivity by providing access to 16 computers from 16 workstations
- Can be controlled via software interface, remote control, Internet or RS232
- Full RS232 Matrix control
- Remotely power on and off all of the connected display devices
- Send commands such as video schedules or input source
- Reporting
- Enable touch-screen displays to send and receive data
- Interrupt displays with Alerts and urgent messages
- Controlling the Matrix
- Support multiple control interfaces
- Control via RS232 using SmartControl; our Windows based Software included with the system
- Supermatrix also allows multiple users to access the matrix from anywhere in the world using our http interface
- You can also use a remote control through an Infrared connection

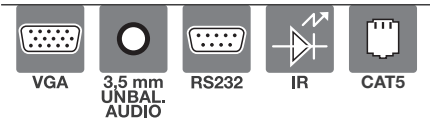# SMX-AVD0808S *UXGA + AUDIO + RS232 + IR OVER CAT5 8x8 MATRIX*

| VGA | 3,5 mm UNBAL. AUDIO | RS232 | IR | CAT5 |

SMX-AVD1616S *UXGA + AUDIO + RS232 + IR OVER CAT5 16x16 MATRIX*

| VGA | 3,5 mm UNBAL. AUDIO | RS232 | IR | CAT5 |
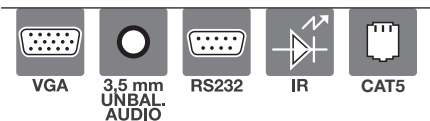
SMX-AVD3216S *UXGA + AUDIO + RS232 + IR OVER CAT5 32x16 MATRIX*
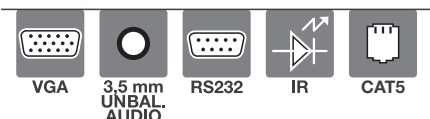
| VGA | 3,5 mm UNBAL. AUDIO | RS232 | IR | CAT5 |

Applications:

Matrix with CAT5 output are designed to connect several outputs using a CAT5 cable.

Each of the destinations must be served by a receiver. The receivers should be chosen according to the signals to be treated and the CAT5 cable length (max. 300m).

Matrix accepts the input signals straight from the sources. Typical formats are 16X8 and 16X16.

The SNV series is designed for transit of CV (composite), audio and IR signals.

Features:

- High quality video and stereo audio routing
- Signal distribution over CAT5/6 structured cabling
- Full interactivity via infrared control
- Fully compatible with all standards of modulated IR and IRDA
- Automatic cable compensation
- On-screen display
- Distributes signals over 300m
- Expandable on-site
- Remote powering of receiver

SNV16x08S — *CV + AUDIO + IR OVER CAT5   16x8 MATRIX*

| CV | UNBAL AUD | IR | CAT5 |

SNV16x16S — *CV + AUDIO + IR OVER CAT5   16x16 MATRIX*

| CV | UNBAL AUD | IR | CAT5 |

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CATSWITCH - MATRICES WITH INPUT/OUTPUTS ON CAT5

Applications:

Matrix with CAT5 input & output are designed to connect several sources and destinations by a CAT5 cable.

Sources are interfaced with a transmitter on CAT5 cable, while destinations are served by a receiver. Typical formats are 8x8, 16x16 and 32x16.

The CSW series Matrix is designed to commute UXGA and audio signals.

At a peripheral level, each transmitter on CAT is connected to a PC or other multimedia source, while the CAT5 receiver is connected to a destination (monitor or video projector).

Transmitter and receivers should be chosen according to the signals to be treated and the CAT5 cable length in the system.

Features:

- Supports high resolution video up to 1900x1200
- Signal distribution over CAT5/6 structured cabling
- High quality audio switching
- Infrared, RS232 and TCP/IP control
- PC Windows software control
- Integral UTP distribution
- 1U rackmounted chassis
- Maximum extension of 450m between the local and remote units
- HDTV compatible. (720p, 1080i,1080p)
- 300 MHz bandwidth
- Compatible with VGA, XGA, Sun, MAC and SGI.
- Sync Format / Polarity Preservation
- Compatible with Line Level Stereo Audio Signals
- High ground loop immunity
- Built-in power surge and transient protection

CSW08x08S

CAT5 UXGA + AUDIO   8x8 MATRIX

VGA   UNBAL AUD   CAT5

CSW16x08S

CAT5 UXGA + AUDIO 16x8 MATRIX

VGA   UNBAL AUD   CAT5

CSW16x16S

CAT5 UXGA + AUDIO 16x16 MATRIX

VGA   UNBAL AUD   CAT5

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Applications:

Matrix with CAT5 input & output are designed to connect several sources and destinations by a CAT5 cable.

Sources are interfaced with a transmitter on CAT5 cable, while destinations are served by a receiver. Typical formats are 8X8, 16x16 and 32x16.

The CSWP series Matrix is designed to commute UXGA, audio, RS232 and IR signals.

At a peripheral level, each transmitter on CAT is connected to a PC or other multimedia source, while the CAT5 receiver is connected to a destination (monitor or video projector).

Transmitter and receivers should be chosen according to the signals to be treated and CAT5 cable length in the system.

Features:

- Supports high resolution video up to 1900x1200
- Signal distribution over CAT5/6 structured cabling
- High quality audio switching
- Infrared, RS232 and TCP/IP control
- PC Windows software control
- Integral UTP distribution
- 1U rackmounted chassis
- Maximum extension of 450m between the local and remote units
- HDTV compatible. (720p, 1080i,1080p)
- 300 MHz bandwidth
- Compatible with VGA, XGA, Sun, MAC and SGI
- Sync Format / Polarity Preservation
- Compatible with Line Level Stereo Audio Signals
- High ground loop immunity
- Built-in power surge and transient protection

CSWP08x08S

CAT5 UXGA + AUDIO + RS232 + IR 8x8 MATRIX

VGA | UNBAL AUD | RS232 | IR | CAT5
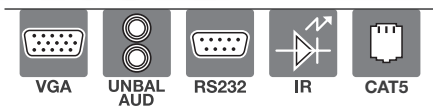
CSWP16x08S

CAT5 UXGA + AUDIO + RS232 + IR 16x8 MATRIX

VGA | UNBAL AUD | RS232 | IR | CAT5
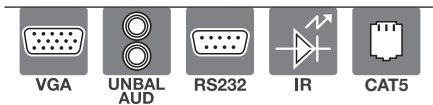
CSWP16x16S

CAT5 UXGA + AUDIO + RS232 + IR 16x16 MATRIX

VGA | UNBAL AUD | RS232 | IR | CAT5

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SMART AUDIO VIDEO INNOVATION
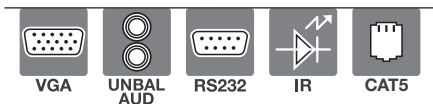
c.5

DVI-D, AUDIO, RS232 E KVM EXTENDERS

DVX-200PS
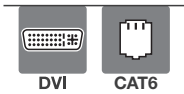
Applications:

The DVX-200PS kit is composed by the DVX-TX200PS transmitter and the DVX-RX200S receiver.

The DVX-TX200PS transmitter gets the DVI-D signal from a PC and sends it, via a CAT6 cable, toward the receiver which will regenerate the signal and send it to its final destination.

The use of a CAT6 cable (shielded and twisted pairs) is necessary to guarantee the best quality level.

The DVX-RX200S receiver receives the signal sent by the transmitter through the CAT6 cable and regenerates the DVI-D signal transforming it for final visualization.

The DVX-RX200S receiver is placed at the end of the CAT6 cable.

The kit may be ordered using code DVX-200PS.

Features:

- Extends DVI-D towards remotely located Monitor
- Top Image Quality at all Resolutions
- Video Resolutions up to 1920 x 1200 @ 60Hz (1280x1024 @ 75Hz) up to the maximum distance
- User selectable: DCC-Information used from the remotely located Monitor, from the locally located Monitor or from an internal DDC Table
- Distances: 65m with a STP CAT6 cable
- Compatible with all operating systems
- Compatible with all major KVM Switches
- Rack Mount options (19")

DVI   CAT6
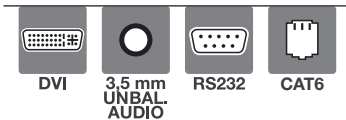
DVX-PROS

Applications:

The DVX-PROS kit is composed by the DVX-TXPROS transmitter and the DVX-RXPROS receiver.

The DVX-TXPROS transmitter gets the DVI-D signal from a PC and sends it, via two CAT6 cables, to the receiver which will regenerate the signal and send it to its final destination.

Together with the DVI-D signal the transmitter may also send a stereo audio signal and a bidirectional RS232 one. The use of a CAT6 STP cable (shielded and twisted pairs) is necessary to guarantee the best quality level.

The DVX-RXPROS receiver receives the signal sent by the transmitter via two CAT6 cables and regenerates the DVI-D signal transforming it for final visualization.

Together with the DVI-D signal the receiver also receives and regenerates a stereo audio signal and a bidirectional RS232 one. The DVX-RXPROS receiver is placed at the end of the CAT6 cables.

DVI   3,5 mm   RS232   CAT6
UNBAL.
AUDIO

Features:

- Extends DVI-D, Audio and RS-232 up to 75 m
- Uses easy to install, inexpensive STP CAT6 cable
- Video Resolutions up to 1920 x 1200 @ 60Hz (1280 x 1024 @ 75Hz) up to the maximum distance
- User selectable: DCC-Information used from the remotely located Monitor, from the locally located Monitor or from an internal DDC Table
- Full duplex RS232 up to 150kbps
- Compatible with all operating systems
- Compatible with all major Touch Screen and Tablet
- Rack Mount options (19")

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DVI-D, AUDIO, RS232 E KVM EXTENDERS

5
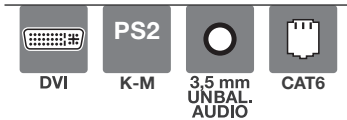
KDX-200S

Applications:

The KDX-200S kit is composed by the KDX-TX200S transmitter and the KDX-RX200S receiver.

The KDX-TX200S transmitter gets the DVI-D signal from a PC and sends it, through two CAT6 cables, to the receiver which will regenerate the signal and send it to its final destination.

Together with the DVI-D signal the transmitter may also send a stereo audio signal and keyboard & mouse signals through PS2 connectors. In this way all the PC tools may be remoted, leaving at a distance only the main CPU unit.

The use of a CAT6 STP cable (shielded and twisted pairs) is necessary to guarantee the best quality level.

The KDX-RX200S receiver operates together with the KDX-TX200S transmitter. It receives the signals through two CAT6 cables and regenerates them toward a DVI-D monitor, a keyboard and a mouse. It also provides, if originally available on the transmitter, a stereo audio towards two active loudspeakers. In this way all the PC tools may be remoted, leaving at a distance only the main CPU unit.

The use of a CAT6 STP cable (shielded and twisted pairs) is necessary to guarantee the best quality level.

Features:

- Extends DVI-D, Audio + KVM (PS2) up to 75 m
- Video Resolutions up to 1920 x 1200 @ 60Hz (1280x1024 @ 75Hz) up to the maximum distance
- Uses easy to install, inexpensive STP CAT6 cable
- Basic device to remotely located monitor, keyboard/mouse and sound
- Supports PS2-keyboard/mouse
- Maximum screen resolution up to 75m with STP CAT6
- Compatible with all operating systems
- Compatible with all major KVM switches
- Rack mount options (19")

DVI	PS2 K-M	3,5 mm UNBAL. AUDIO	CAT6

DVX-PLUS

Applications:

The DVX-PLUS kit is composed by the DVXU-TXS transmitter and the DVXU-RXS receiver.

The DVXU-TXS transmitter makes, with the DVXU-RXS receiver, a pair, called DVX-PLUS, which is used to remote all PC tools, leaving at a distance only the main CPU unit.

The transmitter will be connected to the PC CPU by a DVI-D cable and a standard USB (A-B) one. Two pairs of CAT6 cables carry all signals to the receiver.

The use of a CAT6 STP cable (shielded and twisted pairs) is necessary to guarantee the best quality level.

The DVXU-RXS receiver receives all signals via two CAT6 cables. It provides a graphic DVI-D output for the monitor, and 4 USB outputs, two of which are used to connect keyboard and mouse. The use of a CAT6 STP cable (shielded and twisted pairs) is necessary to guarantee the best quality level.

Features:

- Extends USB and DVI signals up to 75m
- Uses easy to install, inexpensive STP CAT6 cable
- Data recovery for digital video
- Supports 1920x1200 digital video resolution
- Fully compliant with USB 1.1 specifications
- Supports 1.5 and 12 Mbps data rates
- Compatible with all operating systems
- External power adapter for transmitter and receiver unit
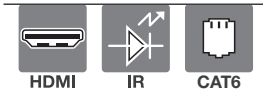- Fully transparent (does not use any emulation)
- Plug and play

DVI	USB 1.1	CAT6

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c.**6**

HDMI
EXTENDERS

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HDX-1000S

HDMI + IR (MONODIR.) CAT6 TRANSCEIVER UP TO 75 m

HDMI   **IR**   **CAT6**

Applications:

The HDX-1000S kit is composed by the HDX-TX1000S transmitter and the HDX-RX1000S receiver.

The HDX-TX1000S transmitter gets the HDMI signal from a PC and sends it, through two CAT6 cables, to the receiver which will regenerate the signal and send it to its final destination. The use of a CAT6 STP cable (shielded and twisted pairs) is necessary to guarantee the best quality level. The HDX-TX1000S transmitter may receive through the CAT6 cable an IR signal sent by the CAT6 receiver and generate an IR output on which an emitter as the SM-LED may be connected to control a source from a distance.

The HDX-RX1000S receiver receives from the HDX-TX1000S transmitter through two CAT6 cables and regenerates the HDMI signal to send at destination.

The HDX-RX1000S receiver may be connected to an IR receiver such as the SM-EYE with the purpose of controlling from a distance the HDMI source by its remote control.

Features:

- Extends HDMI display with IR control up to 75m
- Top Image Quality at all Resolutions
- Maintains multiple high definition resolutions up to 1080p or UXGA for computers
- For the best results a **STP CAT6 AWG24** solid cable must be used
- Compatible with all operating systems
- Supports digital video/audio
- Supports DDWG standards for HDMI compliant monitors
- HDCP and HDMI compliant
- Sends Infrared Remote over CAT6
- Fully compliant with standard modulated IR and the latest IRDA

HDMI EXTENDERS 6

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FIBER OPTICS
SOLUTIONS

FVX-2000

Applications:

Transceiver FVX-2000 permits the transmission by multimode fiber optics of a SXGA signal other than keyboard and mouse (PS2) as well (KVM feature).

The FVX-2000 consists of both transmitter and receiver units, which enable long-distance, superior signal extension quality of XVGA and KVM components.

Equipped with XVGA and PS/2 connectors for a single-link and optional keyboard and mouse, this product is the perfect fiber solution for professional XVGA/KVM extension needs.

The maximum extension range from the source component to the digital display is 420m using multimode fiber.

Features:

- Top Signal Quality at Maximum Extension Over Multimode Fiber (420m.)
- Superior Image Quality at all Resolutions
- Video Resolutions up to 1920 x 1200 at 60Hz (1280x1024 at 75Hz)
- Customizable/Programmable DDC Table
- Supports PS/2 Keyboard/Mouse
- Supports Stereo Audio
- Supports XVGA
- Supports RS-232 Control from 300bps to 19,200bps
- Supports all PC/AT and PS/2 Keyboards with Full Emulation
- Caps Lock, Num Lock and Scroll Lock are Automatically Saved and Restored
- Fiber Plug Type LC
- Compatible With all Operating Systems
- Compatible With all Major KVM Switches
- Compact Metal Casing

FIBER OPTIC	VGA	PS2 K-M

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Applications:

Transceiver FDX-2000 permits the remoting, by multimode fiber optics, of the all using tools of the PC leaving remote the PC only.

Optic transmitter must be connected to PC through a DVI-D cable, the two PS2 cables, the Audio jack 3.5mm cable and the RS232 cable. Maximum distance is 420m.

The FDX-2000 consists of both transmitter and receiver units, which enable long-distance, superior signal extension quality of KVM, DVI-D, audio and RS-232 components.

Equipped with DVI-D connectors for a single-link and optional keyboard and mouse, this product is the perfect fiber solution for professional KVM extension needs.

The maximum extension range from the source component to the digital display is 420m using multimode fiber.

Features:

- Top Signal Quality at Maximum Extension Over Multimode Fiber (420m.)
- Superior Image Quality at all Resolutions
- Video Resolutions up to 1920 x 1200 at 60Hz (1280x1024 at 75Hz)
- Customizable/Programmable DDC Table
- Supports PS/2 Keyboard/Mouse
- Supports Stereo Audio
- Supports DVI-D
- Supports RS-232 Control from 300bps to 19,200bps
- Supports all PC/AT and PS/2 Keyboards with Full Emulation
- Caps Lock, Num Lock and Scroll Lock are Automatically Saved and Restored
- Fiber Plug Type LC
- Compatible With all Operating Systems
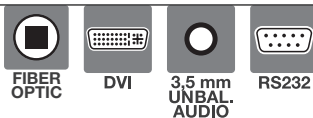- Compatible With all Major KVM Switches
- Compact Metal Casing

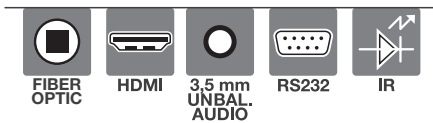# FDX-2000   *DVI-D + KVM (PS2) + AUDIO + RS232 UP TO 420 m*
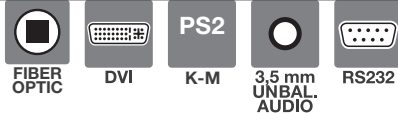
FDX-AV   *DVI-D + AUDIO + RS232 TRANSCEIVER UP TO 420 m*

FX-HDPROS

Applications:

Transceiver FX-HDPRO permits the remoting, by multimode fiber optics, of the all using tools of a DVD Player leaving remote the DVD Player only.

Optic transmitter must be connected to the DVD Player through an HDMI cable and one Audio cable in the case is not desired to use the embedded audio.

If DVD must be commanded by RS232 it's necessary to connect this cable as well.

In the remote location, the RS232 terminal or PC that have to send the command to DVD Player must be connected to the optical receiver through a RS232 cable.

If DVD Player must be commanded by IR, the IR emitter, outgoing from optical transmitter must be placed in order to spot the DVD Player.

In the remote location, the IR receiver that receives the IR light from the IR Control, must be connected to the optical receiver.

In this way, remotely, we are able to command all the functions of the DVD player.

Maximum distance is 360 m.

Features:

- Transmit DVI-D 1920x1200 60Hz With Crisp, Perfect Image
- Transmit Crystal-Clear Stereo Audio
- Transmit HDMI Signals up to 1200 Feet Without HDCP Dropouts or Errors
- Full IR and RS-232 Control
- High-Definition Resolutions up to 1920 x 1200 Achieved Over Fishing Line-Thin 'Invisible' Fiber Optics Cable Without Video or Audio Quality Loss
- Perfect 1080p HDTV Resolution
- IR Transparent IR Signal
- Full Creative Control Over Arrangement/Setup of Home Theater Components and Professional Digital Signage Displays Without Restrictive, Bulky Cables
- Unit Uses Extremely Cost-Effective Fiber Optics Cabling
- LC Fiber Plug Type
- Compatible With all Operating Systems
- Quick and Easy Setup

| FIBER OPTIC | HDMI | 3,5 mm UNBAL. AUDIO | RS232 | IR |

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FIBER OPTICS SOLUTIONS 7

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ACCESSORIES

SM-LED

Applications:

SM-LED is an IR emitter led provided of a 1.8m cable ending with a 3.5mm jack.

It operates, in conjunction with the SM-EYE receiver, with a CAT5 Transmitter/Receiver pair and is usually connected to the CAT5 transmitter which is close to the source.

The SM-LED emitter needs to be placed so the light beam it emits hits the sensitive area of the source to be controlled.

IR

SM-EYE

IR RECEIVER

Applications:

SM-EYE is an IR receiver provided of a 1.8m cable ending with a 3.5mm jack.

It operates, in conjunction with the SM-LED emitter, with a CAT5 Transmitter/Receiver pair and is usually connected to the CAT5 receiver which is close to the destination.

The user, who stays close to the destination, hits the SM-EYE receiver with the IR beam emitted by the SM-LED.

The signal, through the CAT5 cable, will be carried to the SM-LED emitter which will control the source device.

IR

HDC-VX-RXS

CV + AUDIO + IR CAT5 RECEIVER

Applications:

The HDC-VX-RXS receiver is a CAT5 receiver which regenerates on its output a CV signal and a stereo audio one.

It is designed to work with a CAT5 matrix of the SmartNet-V kind. The outputs on the matrix are channeled on the CAT5 cable and at the end of it the signals are sent to destination through the interfacing of this receiver on CAT5.

An IR receiver such as the SM-EYE may be connected to the HDC-VX-RXS receiver to control a source from a distance though the IR remote control.
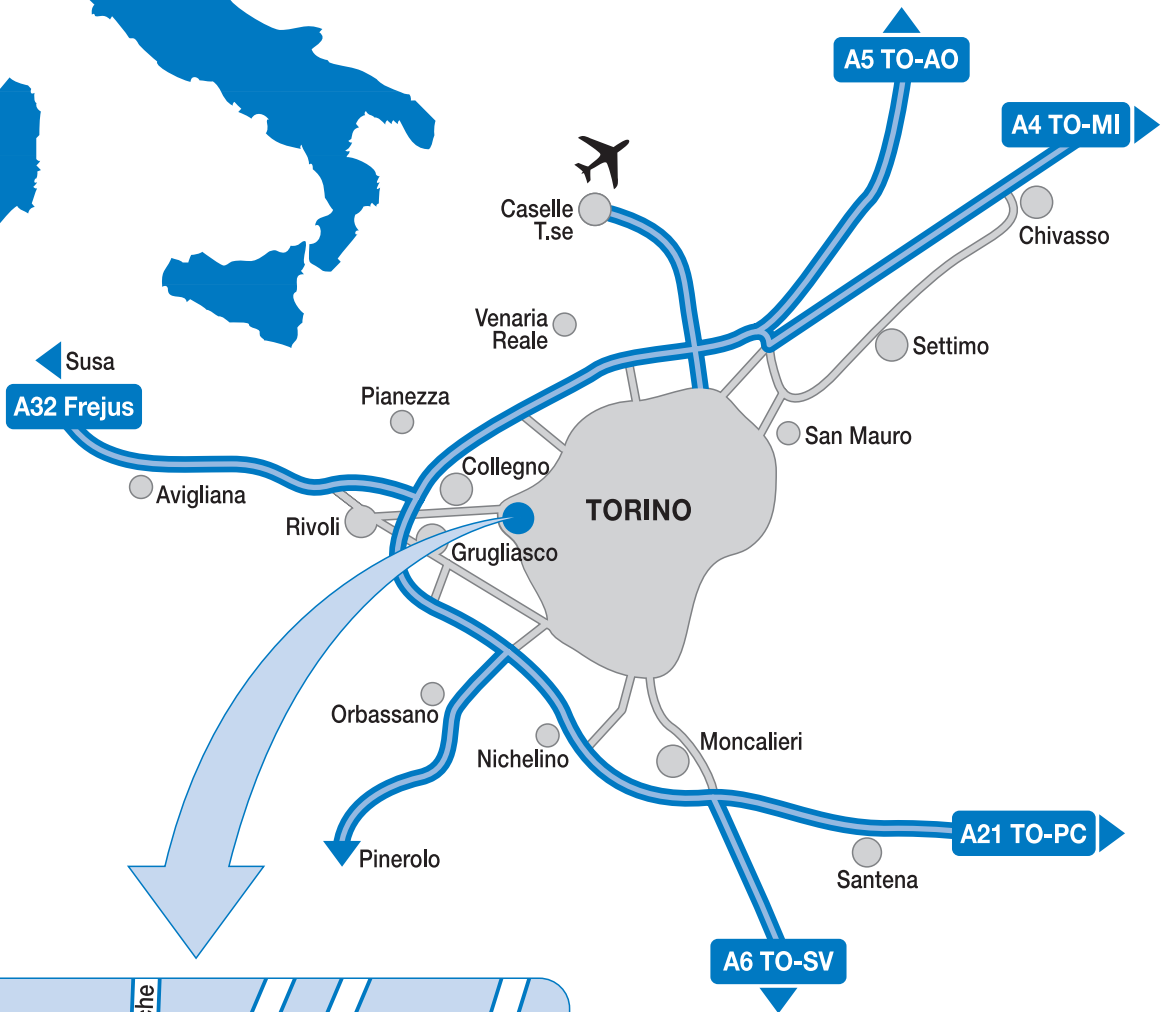
Features:

- Receives Composite Video Stereo Audio, IR over CAT5 cable
- Supports CAT5 length up to 300m
- Supports PAL, NTSC and SECAM
- Video 100 MHz Bandwidth
- Video cable compensation (automatic)
- Compatible with line level stereo audio signals
- High ground loop immunity
- Built-in lightning, power surge and transient protection
- Remote units come with buffered outputs
- Compact enclosure

CV   **UNBAL AUD**   **IR**   **CAT5**

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Signal Management**
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A32 Frejus

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Nichelino

A21 TO-PC

Santena

Pinerolo

A6 TO-SV

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