

CONVERGENCE

ENHANCED MULTIMEDIA

MULTIMEDIA

VALUE

MSM7600™ Chipset Solution

Wireless now has the speed and power to converge seamlessly with other consumer and business electronics

The QUALCOMM® Convergence Platform makes it possible to incorporate the fastest, most in-demand consumer-electronic features into new wireless devices. With dual processors on a single chipset, the Convergence Platform is a breakthrough that not only promises major expansion for traditional wireless companies, but also opens the door for the entire wireless industry to create a new generation of hardware, software and services.

Powered by the Convergence Platform chipsets, wireless applications — from business tools to games, from top music picks to video that's created on the go — now have the processing power to deliver the data-intensive multimedia consumers use everyday. Products enabled by the Convergence Platform chipsets combine the power of personal electronics with the convenience of wireless to deliver portable business and infotainment devices that are always right at hand. New categories of wireless devices including entertainment, business, communication and portable file storage are a reality.

Now it's possible to deliver practically any personal electronics device to the wireless handset, with no loss of quality and functionality. Life without wires has truly arrived.



THE QUALCOMM CONVERGENCE PLATFORM MAKES IT POSSIBLE TO INCORPORATE THE FASTEST, MOST IN-DEMAND CONSUMER-ELECTRONIC FEATURES INTO NEW WIRELESS DEVICES

PERFORMANCE

Maximize design and development potential

- Air interfaces supported:
 - IS-95 A/B
 - CDMA2000® 1X (Release 0 and Revision A)
 - CDMA2000 1xEV-DO (Rel. 0 and Rev. A)
 - WCDMA (UMTS) R5
 - High-Speed Downlink Packet Access (HSDPA), up to 7.2 Mbps (Category 8)
 - High-Speed Uplink Packet Access (HSUPA), up to 5.76 Mbps (Category 6)
 - GSM Release 4
 - GPRS/EGPRS Multislot Class 12, Release 4
 - DTM Multislot Class 11/SAIC
 - GPS
- Integrated 400 MHz ARM11™ applications processor and 274 MHz ARM9™ microprocessor deliver accelerated applications processing and simultaneous modem processing; the dual-core implementation provides hardware-based security domains
- QVM™ Java® environment with Multitasking Virtual Machine (MVM) and ARM's Jazelle™ Java acceleration speeds execution of multiple, concurrent games and applets
- QDSP4000™ and QDSP5000™ high-performance digital signal processors (DSP)
- Memory support for Large Block (LB) and MLC NAND/DDR SDRAM
- Advanced 543-pin 1.4 mm CSP packaging technology (15 mm x 15 mm)
- Integrated secure boot, secure software and secure storage
- Support for major third-party operating systems
- OpenBREWapi™ software for developing BREW® applications

MSM7600™ Chipset Solution

The Mobile Station Modem™ (MSM™) MSM7600™ chipset and system software solution for CDMA2000 1xEV-DO, WCDMA (UMTS)/HSDPA/HSUPA and GSM/GPRS/EDGE networks features the next-generation technology required to run the world's most advanced applications on mobile handsets. From rich multimedia experiences to complex data applications, the MSM7600 chipset offers the ability to meet the needs of the savviest wireless users.

GRAPHICS



Blazing fast 3D graphics rivaling the best dedicated handheld gaming devices

- Advanced 2D/3D graphics support with up to 4 million 3D triangles per second, and 133 million 3D textured pixels per second fill rate
- Q3Dimension™ rendering engine with OpenGL® ES-compliant 3D graphics
- Supported by leading third-party game titles
- Dedicated hardware accelerating the entire 3D rendering process
- Up to Video Graphics Array (VGA) resolution

VIDEO



Uncompromising video quality setting new standards for mobile handsets

- Qtv™ Decoder
- High-performance video player powers broadcast video, streaming video- and audio-on-demand plus video messaging at 30 fps VGA
 - Video Codecs: MPEG-4, H.263, H.264, Windows Media® and RealNetworks®
 - Audio Codecs: QCELP®, EVRC, AMR-NB, AMR-WB/+, AAC, aacPlus™ and Enhanced aacPlus, Windows Media and RealNetworks

Qvideophone™ Video Conferencing Application

- Two-way mobile videoconferencing solution that delivers 15 fps quality
- 3GPP/2 standards compliant
- Video Codecs: MPEG-4 and H.263
- Audio Codecs: AMR-NB, EVRC and 4GV

Qcamcorder™ Encoder

- A real-time wireless video recording solution that captures movies at 30 fps VGA
- 3GPP/2 standards compliant
- Video Codecs: MPEG-4, H.263 and H.264
- Audio Codecs: AMR-NB, EVRC, QCELP and AAC

POSITION LOCATION

Highly accurate positioning for location-based services (LBS)

- Next-generation gpsOne® A-GPS solution with an enhanced GPS engine for greater sensitivity and faster start times
- Enhanced filtering software optimizes GPS accuracy and availability for personal and automotive navigation applications
- Full integration with JAVA and BREW-based development environments to support commercially deployed location services
- Support for MS-Assisted, MS-Based and Standalone GPS modes which enable high availability and high accuracy performance both on and off-network
- Support for all key deployed location standards including 1X, UMTS and GSM Control Plane and OMA SUPL 1.0, Trusted, V1 and V2 User plane Assisted-GPS protocols

CONNECTIVITY

Seamless connection with indispensable consumer electronics

- Supports QUALCOMM's Mobile Digital Display Interface (MDDI), high-speed serial interconnection technology, for increased reliability in clamshell phones
- Supports external Bluetooth® 2.0 + EDR solution for wireless connectivity to BT mono and stereo headsets, PDAs, printers and other BT enabled peripherals
- Hi-speed universal serial bus (USB) on-the-go (OTG) functionality
- TV-out support for viewing video and photos or playing 3D games
- Support for 802.11a/b/g and Voice-over-IP capabilities
- Support for multicast technologies, including QUALCOMM's FLO™ technology DVB-H and ISDB-T
- SecureMSM™ security suite v3.0: includes support for OMA DRM, subsidy protection and device-identifier integrity, including IMEI



IMAGING

Integrated high-megapixel camera support for high-quality imaging

- Qcamera™ software with 30 fps VGA viewfinder resolution
- Support for up to 8.0 megapixel camera sensors with a flexible, integrated interface to CCD and CMOS sensors
- Hand jitter reduction, adaptive lighting
- Hardware-based image signal processor and JPEG encoder
- Full image processing capabilities, including color correction, crop, resize, rotation, image blurring and sharpening, image overlay, picture frame support and visual noise reduction

AUDIO

Outstanding audio performance with support of industry-wide codecs

- Support for stereo output up to 48 kHz
- PureVoice® Audio AGC (automatic gain control) for better calls, especially under noisy conditions
- Digital audio support for MP3, AAC, aacPlus, Enhanced aacPlus, AMR-WB/+, Windows Media Audio and RealNetworks Audio
- CMX® multimedia software for customized ringtones, screensavers and greeting cards:
 - MIDI-based voice (up to 128 polyphony)
 - Playback support for compact MIDI, General MIDI, SMAF™ (audio only), SP-MIDI, XMF/DLS and MFi
 - Scaleable Vector Graphics (SVG) Tiny
- QConcert™ surround-sound engine and QAudioFX™ enhanced gaming audio for positional audio
- In-call concurrency allows for simultaneous music play and voice call
- QUALCOMM Audio Post Processing functionality
- Enhanced echo cancellation for full-duplex calls
- Fourth-Generation Vocoder™ (4GV™) voice codec to provide network operators with the flexibility to prioritize voice quality and network capacity

THIRD-PARTY APPLICATION PLATFORMS

Fully tested Windows Mobile® board support package with integrated multimedia and graphics

- LTK and CETK-tested implementation of the OEM Adaptation Layer, boot code and device drivers for all on-chip peripherals
- Turnkey integration of video, audio and imaging engines into DirectShow® sub-system
- Hardware accelerated DirectDraw®, Direct3D® and Position Location drivers

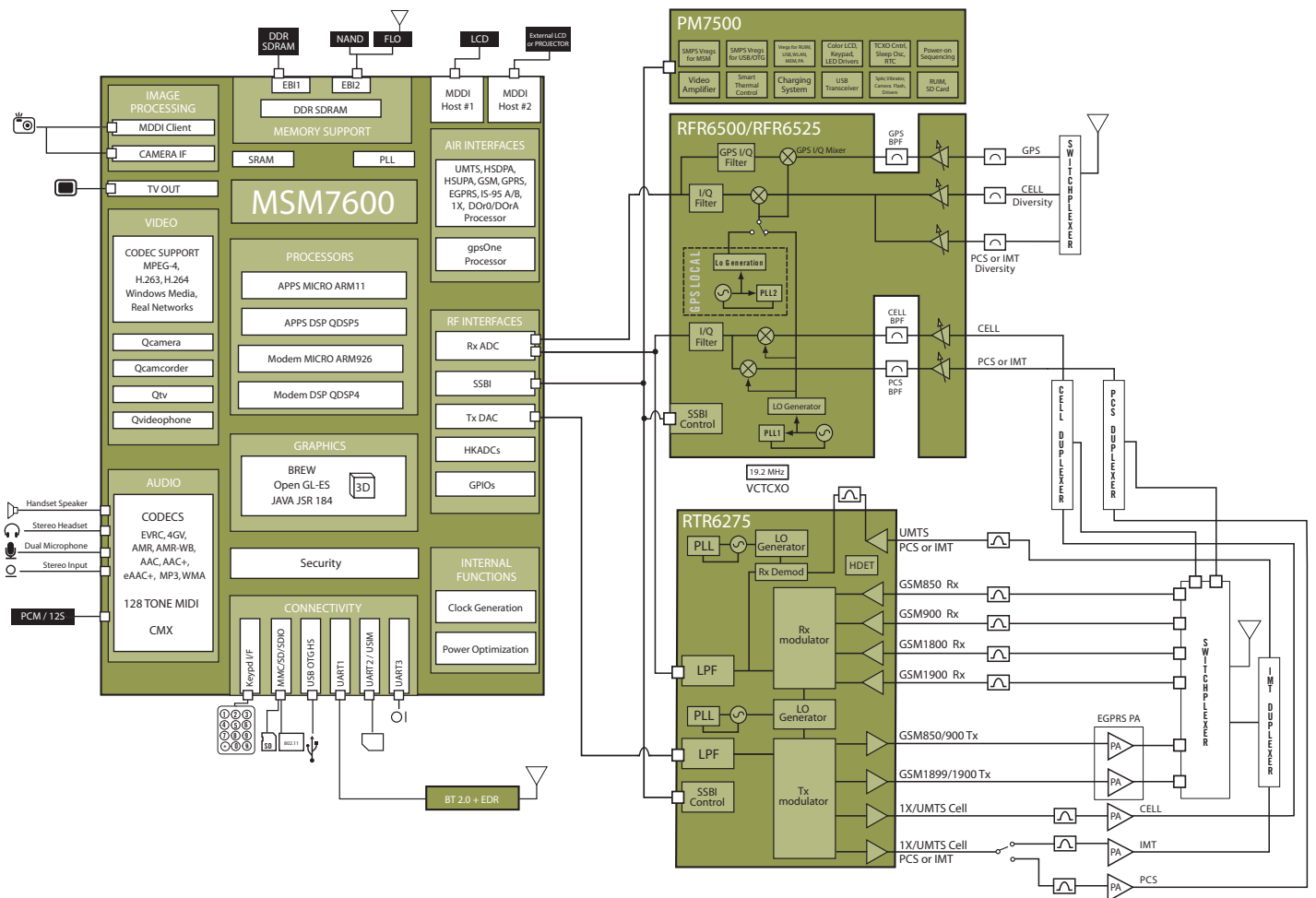
OPTIMIZED SYSTEM SOLUTIONS

QUALCOMM's MSM baseband modem, radioOne® zero-IF frequency, and powerOne™ power management solutions are optimized for seamless operation to enable efficient, price-competitive wireless devices. Expect a higher return on investment with our integrated solutions—fewer discrete parts means lower development costs, lower BOM costs and ultimately lower handset costs. With our innovative RF CMOS processing technology on select chipsets and lead-free packaging solutions, handset manufacturers can be confident that wireless devices based on our complete solutions will be power-efficient, dependable and cost-competitive.

MSM 7600 | AVAILABLE RF & PM CHIPSET COMBINATIONS

RF Chipset Configurations	RFR6500™ RTR6275™	RFR6525™ RTR6275™	
Power Management IC	PM7500™	PM7500™	
CDMA2000	CELL 850 MHz	■	■
	JCDMA 800 MHz	■	■
	KPCS 1800 MHz	■	
	PCS 1900 MHz	■	
	IMT 2100 MHz		■
GSM/EGPRS	800/900/1800/1900 MHz	■	■
	2100 MHz		■
UMTS	1900 + 850 MHz		■
	2100 + 800 MHz	■	■
	2100 + 1700 + 800 MHz		■
	2100 + 1900 + 850 MHz	■	
GPS	■	■	
Receive Diversity	■	■	

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Go Online CHIPSET COMPARISON ONLINE TOOL

Please visit www.cdmatech.com/convergenceplatform to view the chipset comparison tool that details specific chipset features.

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