

UK/TSC503 SATELLITE FIELD TERMINAL

TSC503 is a compact multi-role tactical satcom bridging system providing world-wide communications access for in-theatre users to strategic infrastructure networks.

On air in 30 minutes, the two-man portable Rapid Deployed Terminal (RDT) can be dispersed around the deployment base with network interface baseband containers located with users up to 4 km from the radio equipment, which is co-located with the antenna. The antenna may also be remotoped up to 50 metres from the radio electronics as required.

FEATURES

The SFT has two basic configurations the RDT and the Full Capability Terminal (FCT). In addition, the modular design offers full flexibility for user reconfiguration to meet specific mission needs. A double hop relay station function is included.

The RDT provides very rapid, 'first in' capacity up to 2Mbps and utilises a 2-metre antenna. The FCT supports later build-up of capacity, supporting multiple trunks through the 4-metre antenna.

The antennas use snap-on, lightweight composite reflector panels mounted on tripods which pack into carry cases and provide automatic satellite tracking.

They can be quickly assembled with no special tools by two- and four-person crews in 30 minutes and three hours respectively. Assembly of the 4-metre reflector is facilitated by the unique telescoping pedestal. A lightweight fabric radome enables full performance of the 4 metre antenna in up to hurricane force winds. Easily deployable into buildings and remote locations with no vehicle access, the terminal is suitable for civil air cargo and all standard military transport, including helicopter lift.



The antenna-mounted electronics enable the modem group to be located up to 50 metres from the selected antenna. Only three lightweight cables are required for the cross-site link for transmit, receive and control. Two high capacity modems can be used, as can ECCM types.

The Baseband Interfacing Group provides multiplexing and cryptographic equipment and can be selected to work with customers' existing tactical and local area networks. A single operator can remotely control all elements of the system from a PC with an intuitive graphical user interface.

The electronic equipment is housed in rugged aluminium containers which provide physical protection, electromagnetic screening and automatic temperature conditioning. Ancillary equipments such as workstations are transported in robust transit cases. UK/TSC503 is equipped with adaptable power supplies enabling operation from 110v or 230v mains. With two compact, low-noise diesel generators included, the terminal is self-contained.



LOGISTIC SUPPORT

The terminals are equipped with a comprehensive set of detachment spares, each packaged in its own transit case. Maximum repair time is 30 minutes for LRU replacement and the MTBF is over 1,200 hours. A full range of contractor logistic support options are available through our world-wide support organisations.

- > Fully self-supporting includes baseband switch, cryptos and power generators

- > 'On air' in under 30 minutes
- > Multi-role capability from fully flexible modular design
- > Communications capacity up to 4Mbps/design
- > Modules are two-man portable
- > Field rugged construction
- > Fully dispersible around HQ areas
- > Remote control from a single point, with minimal routine maintenance
- > Jamming resistant
- > COMSEC compliant

PARAMETER/FUNCTION	RAPID DEPLOYMENT TERMINAL	FULL CAPABILITY TERMINAL
Frequency band	7.9GHz 8.4GHz transmit 7.25GHz 7.75GHz receive	7.9GHz 8.4GHz transmit 7.25GHz 7.75GHz receive
Antenna diameter	2 metre	4 metre
EIRP	60.5 dbW	66.4 dbW
G/T	21 db /K	26.0 db /K
Maximum data range	512Kbit/s	2,048kbit/s
Antenna coverage (continuous)	+90° azimuth 0° to 90° elevation	+90° azimuth 0° to 90° elevation
Acquisition	Manual, search scan or automatic, using GPS and attitude sensors	Same as RDT
Tracking - fully automatic with manual back-up	Smoothed step-track and memory track on beacons, pseudo-beacons and traffic	Same as RDT
Deployment time	30 minutes with 2-man crew	2 hours with 4-man crew
Temperature range	-40°C to + 49°C operating	-40°C to + 49°C operating
Humidity	Up to 95%	Up to 95%
Weight	820kg (minimum set)	1,950kg
Generators and spares	Included	Included