



TR7000

WIDEBAND VHF/UHF TRANSCEIVER

The TR7000 range of 19" wideband VHF, UHF and V/UHF transceivers for use in base stations, shelters, or maritime installations, and provides the user with a secure digital voice and up to 48 kHz wideband data capability. The high performance and customer configurability of the TR7000 family is made possible by using the latest software defined radio (SDR) technology.



TOMORROW'S SOLUTIONS TODAY



WIDEBAND VHF/UHF TRANSCEIVER

TR7000

FEATURES

- Up to 256 kbps Encrypted Data via wideband modem
- COSMEC - User definable INFSEC & TRANSEC
- Automatic Own Position reporting (internal GPS)
- Wi-Fi hotspot for control and data interface
- TCP/IP interface for remote control
- High MTBF > 10 000 hrs
- 100% Duty Cycle
- VoIP

GENERAL CHARACTERISTICS

Frequency Range	See family table
Channel Spacing	8.33 kHz, 12.5 kHz, 25kHz
Modulation Formats	AM, FM, NBFM
Voice Capabilities	Analog Voice, High Quality VOCODERS ⁽¹⁾
Data Capabilities	Proprietary circuit modem ⁽¹⁾
Rate	300 bps - 256 kbps
ECCM	Frequency Hopping ⁽¹⁾
Hop Bandwidth	Full Band, Downloadable Hop Tables, Narrow Band
Encryption	Embedded (Digital), Algorithm Customisation ⁽¹⁾
Frequency Stability	± 0.1 ppm
Power Supply	85- 265 VAC (47 - 63 HZ), 24 - 30 VDC
GPS Receiver	Built-in for Synchronisation, Position reporting

RECEIVER CHARACTERISTICS

Sensitivity	< -112 dBm (5 kHz dev), 10 dB SINAD
IF Rejection	> 100 dB (equivalent)
Image Rejection	> 95 dB (equivalent)

TRANSMITTER CHARACTERISTICS

RF Output Power	100 W
Harmonic Emissions	≤ -80 dBc
Spurious Emissions	≤ -55 dBc (>150 kHz from Fc)
Noise Floor	≤ -155 dBc/Hz @30% from Fc (Standard) ≤ -165 dBc/Hz @10% from Fc (Co-Loc Fitted)
Duty Cycle	100%
Preotection	Power foldback with over temperature and high VSWR

SPECIFICATION

Digital Voice ⁽¹⁾	TWELP (Tri-Wave Excited Linear Prediction) 1200, 2400 bps , AES-256 Encryption Auto lock on data Crypto re-sync
ECCM Frequency Hopping ⁽¹⁾	User defined hopping Voice Data
Encryption ⁽¹⁾	Customer Configured Algorithm Hardware Encryption Data & Digital Voice Software Encryption
Embedded co-site filters ⁽¹⁾	
Split Site capability ⁽¹⁾	
Guard Receiver ⁽¹⁾	

INTERFACES

Audio	Two six pin audio connector 0 dBm 600 ohm Audio In/Out
Connectivity	RS232 USB 2.0 Device (USB-C Connectors) Wi-Fi IEEE 802.11ac LAN (10/100BASE-T)

ENVIRONMENTAL CHARACTERISTICS

Operating Temperature	-20°C to +45°C
Vibration, Shock, etc.	MIL-STD-810G
EMC	MIL-STD-461G

PHYSICAL CHARACTERISTICS

Size	19" Rack, 400 mm
Weight	< 30 kg

FREQUENCY TABLE

Designation	Frequency	TX Power	TX Harmonics	Size
TR7000V	30 - 88 MHz	50 W	60 dBc	2U
TR7000VU	100 - 400 MHz	100 W	80 dBc	3U
TR7000U	225 - 400 MHz	100 W	80 dBc	3U
TR7000	30 - 512 MHz	50 W / 100 W	60 dBc	2U/3U

Products are supplied both locally and internationally, and cater for short, medium, long range and intra-platform communications. Typical applications include command and control, situational awareness, virtual radar, forward observation link and messaging services. Capabilities include design, development, product customization and manufacture to military standards. Full product life cycle support packages suit individual customer requirements, while joint development partnerships and transfer of technology ensure local indigenisation and in-country support.

TOMORROW'S SOLUTIONS TODAY



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