

# TACTICAL NETWORK ROVER® 2e (TNR 2e) TYPE-1 WIDEBAND ISR HANDHELD TRANSCEIVER

# Delivering wideband reliable and secure communications to the tactical edge

TNR 2e builds on the legacy of previous generation ROVER handheld products by offering the widest ISR platform compatibility to date. TNR 2e is the perfect choice for ISR handheld applications where interoperability, security and performance are all important considerations.

### **PRODUCT DESCRIPTION**

The TNR 2e handheld transceiver supports both analog and digital waveforms enabling interoperability with commonly fielded U.S. and NATO airborne platforms. The TNR 2e also supports Type-1 encryption/decryption (using a National Security Agency (NSA) certified Communications Security Module), ensuring that your communications are reliable and secured.

In addition to traditional video downlink capability, TNR 2e provides bidirectional IP networking (Net-T). This kind of network connectivity allows for Digitally Aided Close Air Support (DaCAS), ground force position sharing, chat and large file transfer capabilities to provide unprecedented situational awareness to dismounted ground troops.

TNR 2e is also a software defined radio, which allows for field upgrades for future waveforms.





Unprecedented Situational Awareness to Dismounted Ground Troops

# **KEY BENEFITS**

#### EASY TO CONFIGURE

The TNR 2e is easy to configure, but also flexible enough for any mission.

- > Auto configuration via "ROVER code"
- > Keypad selectable presets
- Comprehensive configuration available via USSOCOM designed Graphical User Interface

## UPDATED PERFORMANCE

Updated high performance hardware and software.

- > Expanded UHF and S-Band coverage
- > Secure digital communications
  - Type-1 encryption/decryption
  - USG and Coalition cryptographic interoperability
- AES
- > NSA Type-1 certified
  - Interoperability with legacy systems
- Software defined radio allows for field upgrades for future waveforms

#### SPECIFICATIONS

Ku-Band <sup>1</sup> (RX only) Waveforms CDL (RX only) BE-CDL						
UHF (RX only) L-Band S-Band C-Band (RX only) Ku-Band <sup>1</sup> (RX only) <b>Waveforms</b> CDL (RX only) BE-CDL Tactical	225–512 MHz, 1 kHz steps 1625–1850 MHz, 0.25 MHz steps 2025–2110 MHz and 2200–2500 MHz, 0.25 MHz steps 4400–4950 MHz and 5250–5850 MHz, 1.0 MHz steps 14.40–14.83 GHz and 15.15–15.35 GHz, 0.25 MHz steps 2.0 Mbps and 10.71 Mbps Modes 1–6, 9-11, 101–105 (up to 10 Mbps) 1.6 Mbps, 3.2 Mbps, 6.4 Mbps					
L-Band S-Band C-Band (RX only) Ku-Band <sup>1</sup> (RX only) <b>Waveforms</b> CDL (RX only) BE-CDL Tactical	1625–1850 MHz, 0.25 MHz steps 2025–2110 MHz and 2200–2500 MHz, 0.25 MHz steps 4400–4950 MHz and 5250–5850 MHz, 1.0 MHz steps 14.40–14.83 GHz and 15.15–15.35 GHz, 0.25 MHz steps 2.0 Mbps and 10.71 Mbps Modes 1–6, 9-11, 101–105 (up to 10 Mbps) 1.6 Mbps, 3.2 Mbps, 6.4 Mbps					
S-Band C-Band (RX only) Ku-Band <sup>1</sup> (RX only) <b>Waveforms</b> CDL (RX only) BE-CDL Tactical	2025–2110 MHz and 2200–2500 MHz, 0.25 MHz steps 4400–4950 MHz and 5250–5850 MHz, 1.0 MHz steps 14.40–14.83 GHz and 15.15–15.35 GHz, 0.25 MHz steps 2.0 Mbps and 10.71 Mbps Modes 1–6, 9-11, 101–105 (up to 10 Mbps) 1.6 Mbps, 3.2 Mbps, 6.4 Mbps					
C-Band (RX only) Ku-Band <sup>1</sup> (RX only) Waveforms CDL (RX only) BE-CDL Tactical	4400–4950 MHz and 5250–5850 MHz, 1.0 MHz steps 14.40–14.83 GHz and 15.15–15.35 GHz, 0.25 MHz steps 2.0 Mbps and 10.71 Mbps Modes 1–6, 9-11, 101–105 (up to 10 Mbps) 1.6 Mbps, 3.2 Mbps, 6.4 Mbps					
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CDL (RX only) BE-CDL Tactical	Modes 1–6, 9-11, 101–105 (up to 10 Mbps) 1.6 Mbps, 3.2 Mbps, 6.4 Mbps					
BE-CDL Tactical	Modes 1–6, 9-11, 101–105 (up to 10 Mbps) 1.6 Mbps, 3.2 Mbps, 6.4 Mbps					
Tactical	1.6 Mbps, 3.2 Mbps, 6.4 Mbps					
DDL (RX only)	1.5 Mbps and 4.5 Mbps					
	T.9 Lipp3 and 4.9 Lipp3					
VNW (RX only <sup>2</sup> )	0.05 Mbps to 5.0 Mbps					
Legacy ROVER 455k (RX only)	455 kbps					
ROVER 466 ER (RX only)	466 kbps					
Analog FM (RX only)						
DVB-T (RX only)	3.75 Mbps to 21.11 Mbps					
IW (RX only)	400 kbps, 3.5 Mbps, 10.0 Mbps (Ku-band only) 750 kbps, 1.5 Mbps, 3.0 Mbps, 6.0 Mbps					
Encryption						
Type-1 (SCM 100)						
AES						
Video						
Decode	H.261, H.264, MPEG-2, MPEG-4, MJPEG, Analog NTSC/PAL					
SWaP (without battery)						
Size (excluding connectors)	2.3" x 7.3" x 3.0"					
Weight	< 2.5 lbs					
Input Voltage	11 VDC to 13 VDC					
Power Consumption	11 W max (RX only) 27.5 W max (TX/RX)					
Battery	MBITR					

WAVEFORM COMPATIBILITY MATRIX	CDL	BE-CDL	TACTICA	DDL	٨N٧	455K	466 ER	ANALOG	DVB-T	IW
Frequency Bands										
UHF	RX	RX	RX		RX		RX			RX
L-Band	RX	TX/RX	TX/RX	RX	TX <sup>2</sup> /RX		RX	RX	RX	RX
S-Band	RX	TX/RX	TX/RX	RX	TX <sup>2</sup> /RX		RX	RX	RX	RX
C-Band	RX	RX	RX		RX	RX	RX	RX	RX	RX
Ku-Band <sup>1</sup>	RX	RX	RX		RX		RX			RX
Encryption										
Type-1	Х	Х	Х		Х		Х			
AES	Х	Х	Х	Х	Х		Х		Х	Х

1. Compatible data rates and frequencies only available with optional Ku-Band accessory 2. Transmit in 5 Mbps, FEC 4/5 mode only

#### TACTICAL NETWORK ROVER 2e (TNR 2e) Type-1 Wideband ISR Handheld Transceiver

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