TWR-205

Wireless
Tactical Edge Router

Main Features

— Frequency range: 47–2700 MHz

— RF output power: up to 10 W

— Data rate: 10 Kb/s – 20 Mb/s

— Excellent receiver sensitivity

— Seamless IP integration

— Adaptive waveform with MANET

— Flexible SDR architecture

— SDN support

Wireless Tactical Edge Router

Tactical Edge Router TWR-205 is a fully featured embeddable wireless router designed for integration into mobile platforms such as UAV, UGV, armored vehicles and other network systems operating at tactical edge.

Equipped with broadband high power GaN amplifier, TWR-205 enables seamless wired and wireless IP networking across

extremely broad frequency range 47 MHz – 2700 MHz supporting variable data rate, modulation and coding.

State-of-the-art mobile ad hoc network (MANET) waveform SRDN Release 1.0 designed to meet challenging electromagnetic environment in tactical edge ensures reliable, scalable and secure network-centric communi-

cations for tactical networks operating under disconnected, intermittent, disturbed and bandwidth-limited conditions.

Highly flexible software defined radio (SDR) architecture, based on BitSDR™ system-on-module, allows rapid adjustment to any customer specific requirements using different optimization strategies: distance, throughput, balance in LOS and NLOS scenarios etc.

Defence& Aerospace

TRW-205 delivers reliable, robust and secure network-centric communications in the most challenging electromagnetic environment.

Unmanned platforms

The router fits unmanned platforms enabling disaster management, search and rescue, law enforcement and maritime security applications.
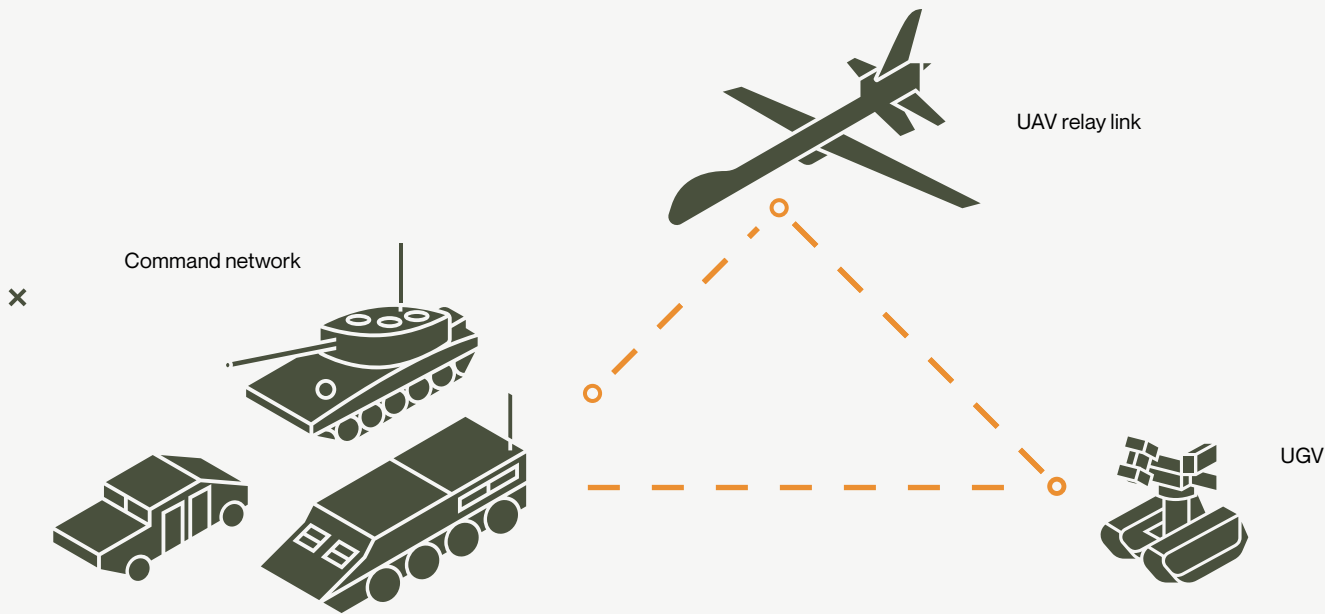
Civil& Commercial

TRW-205 perfectly suits the needs of civil industries including precision agriculture, remote sensing, surveying and mapping and other commercial applications.

Typical Performance

Bandwidth	Sensitivity	Link bitrate	Throughput[1]	Typical use case	Application
25 kHz	-121.2 dBm	12.5 kb/s	10.25 kb/s	Fixed IoT	Sensor, Text, LPI
1 MHz	-105.0 dBm	800 kb/s	410.0 kb/s	MANET	Secure data
5 MHz	-95.8 dBm	8 Mb/s	5.24 Mb/s	UAV/UGV	Secure video
20 MHz	-78.5 dBm	30.72 Mb/s	20.99 Mb/s	Fixed P2P/P2MP link	Broadband Internet

Typical Application

Command network

UAV relay link

UGV

Waveform Features

Features	Value
Release	1.0
Occupied bandwidth	Up to 20 MHz, configurable
Link bitrate	Up to 30.72 Mb/s, configurable
Modulation	BPSK/QPSK
Coding	BCH, configurable
MAC	TDMA with guaranteed throughput
Capacity	100+ nodes
Comsec	AES-256
Transec	FHSS, configurable up to 2000 hops/sec
Configuration	Built-in web interface

Router Features

Features	Value
Size	208×110×49mm
Weight	1.5 kg
RF connector	N female
Frequency range	47–2700 MHz
Typical power consumption	10 W (Rx), 30 W (Tx)
Tx output power	Up to 10 W
Gain flatness	±1.5 dB (<1 GHz), ±3 dB (>1 GHz)
Supply voltage	9–36 V
Interfaces	Ethernet 100Base-T
Waveform	SDRN Release 1.0
IP throughput	Up to 20.9 Mb/s

Features	Value
Protocols	IPv4, IPv6, DHCP, DNS
MANET	Up to 8 hops
SDN	OpenFlow v1.5
Accessories	Power cable[2]
Environmental	IP67

1 — Packet loss <1%, UDP traffic in iperf3 application

2 — USB data cable available on demand

Visit www.wp2p.org for more information and ordering