



OVERVIEW

The **Hornet-USP** is a compact software-defined radio transceiver featuring 2x1W RF output power. The Hornet-USP is perfectly tailored for Unmanned Systems application. Additionally, the Hornet-USP boasts a comprehensive range of interface options, including native Ethernet, dual USB, serial, and an audio headset interface.

Moreover, it provides the flexibility of USB-C powering directly from a compatible end-user device or USB-C battery (compliant with USB PD). Data Rates are automatically varied from 0.5 to 87 Mbps depending on the available SNR. The best throughput during a mission is achieved by automatically adapting the frequency bandwidth between 1.25Mhz and 20Mhz and the modulation between 4QAM(QPSK) to 64QAM with the option to switch over to another available link with a better link throughput capacity.

FEATURES & BENEFITS

- 2x1W transceivers for use as IP Mesh radio, COFDM transmitter or receiver
- Optional AES128/256 encryption
- USB-C power option compliant with USB PD RNDIS support for Ethernet over USB
- USB support for peripherals such as 3G/4G/Wi-Fi dongles
- Ethernet and RS-232 data connectivity
- 128GB in-built SD card storage
- Compact enclosure
- Very low power consumption, typically 10W IP Mesh

PRODUCT INFORMATION

Product Includes:

12V DC power lead Lemo to banana plugs
12V 6.67A 80W PSU with Lemo
USB type-A to type-C USB cable
GPIO/RS-232 6-way Lemo to free end cable
6-way Lemo (m) to DB9 (f) RS-232 data cable, 1m

TECHNICAL SPECIFICATIONS

IO	
RF COFDM transceiver A	SMA 50Ω (female)
RF COFDM transceiver B	SMA 50Ω (female)
Power input	4-way circular USB2 with power delivery (USB PD)
Gigabit Ethernet	RJ45
USB1 control and download	USB Type-A
USB2 control and download	USB Type-C
Analogue audio	3.5mm jack
GPIO and RS-232 serial	6-way circular

COFDM Transceivers	
Application license	USP-SW-MESH, USP-SW-TX
Power	1W (+30dBm) max per output, 2W total
Power step	0.25dB incremental control
Tuning step	125kHz

Receiver	
Application license	USP-SW-RX
Sensitivity	Up to -110dBm
Streaming output	Single service (first received)
Tuning range	Frequency variant dependent
Tuning step	125kHz

Audio	
Application license	USP-SW-MESH, USP-SW-TX
Interface	Analogue microphone/headphone with bias

Data	
Data configuration	1k2 to 115k2, 7/8 bit, no/odd/even parity
Data interface	RS-232 or USB peripherals RS-232 or USB peripherals

Storage	
Medium	Up to 128GB MicroSD (supplied) (>8 hours recording at max DVB-T bitrate) (>29 hours recording at max NB bitrate)

Control	
USB	PC application control and SD card mounting
Ethernet	PC application control and file download Web GUI control and file download
Access	User, Super User and Admin accounts

Physical	
Dimensions	150mm (160mm incl. connectors) x 75mm x 24mm
Weight	462g approx.



Power	
DC input	8V to 17V reverse polarity protected
USB PD input	5V (half RF power), 9V to 15V (full RF power)
Power consumption	7W typ. IP Mesh 14W typ. COFDM TX single output 24W typ. COFDM TX dual output 6W typ. COFDM RX

Environment	
Temperature range	-10°C to +55°C
Humidity	Less than 85% non-condensing
EMC conformance	CE marked

Model	Frequency
HNT-USP-01	1.20-1.70GHz
HNT-USP-02	1.78-2.29GHz
HNT-USP-03	1.98-2.70GHz
HNT-USP-04	4.40-5.00GHz

Software License Options	
USP-SW-MESH	IP Mesh
USP-SW-TX	COFDM Transmitter
USP-SW-RX	COFDM Receiver
USP-SW-IAS	Interference Avoidance Scheme for Mesh
USP-SW-P2MP	Point-to-Multipont System for Mesh
USP-SW-L2BRIDGE	Transparent Layer 2 Bridging Mode for Mesh
USP-SW-LOWBIT	Low Bitrate Video Encoding
USP-SW-IPX	IP Encapsulation for COFDM
USP-SW-GOLD	Gold-TX, Gold-RX, Gold-ENC, MESH, IAS, IPX
USP-SW-PLATINUM	Platinum-TX, Platinum-RX, Platinum-ENC, MESH, IAS, IPX, LOWBIT
USP-SW-AES128	AES 128-Bit Encryption
USP-SW-AES256	AES 256-Bit and AES 128-Bit Encryption

Product specifications are correct at time of print. Please verify specifications with our sales department.

