

CNHF Manpack

Reliable. Resilient. Ready.



CNHF Manpack is a software defined radio capable of transmitting both voice and data communications. It's designed to serve a number of use cases, all while being simple, secure and reliable to operate.

Revolutionary way to get connected

Our cognitive radios are the next generation HF radios offering highest performance, security and reliability for long-range communications. CNHF Manpack is KNL's new line of portable manpack radios.

For governments, defence and security

Our cutting-edge radio solutions adapt to the needs and requirements of modern military and security operations with fast and reliable data links in any operating environment.

Game-changing software defined radio

The CNHF Manpack is a software defined radio making it possible for remote configurations and updates. Our software has multiple game-changing features not currently found elsewhere:

- cognitive spectrum usage
- extremely fast GNSS independent ALE supporting more than 4000 calling channels listened to simultaneously (on HF and VHF)
- wideband HF data up to 300 kbit/s

- extremely robust modes are able to operate with less than -10 dB SNR

The innovative multihop functionality ensures that a route from source to destination is always found. Lastly, as the CNHF Manpack also covers VHF up to 54 MHz, interoperability with legacy VHF FM radios can be achieved when required.

Engineered with superior usability in mind

With CNHF Manpack user can establish their own independent communication network ranging from a few kilometres to thousands of kilometres

- Intuitive user interface – always secure and up-to-date
- Fully autonomous – independent from other networks and infrastructure
- Military grade encryption

Part number: KNL-2001

Product name: CNHF-MP1 transceiver

NSN: 5820-58-001-9440

Commodity code: 8517 62 00 00



TECHNICAL SPECIFICATIONS

Platform	SDR platform	Dimensions with handles	105mm (H) x 210mm (W) x 314mm (D)
Frequency range	HF: 1.6 - 30 MHz, VHF 30 - 54 MHz	Weight	5kg without battery
Bandwidth	Up to 48 kHz	Battery type	BB-2590/U
TX Power	HF: 25 W, VHF: 5 W (PEP)	Battery charger	Built-in
RX Sensitivity	Better than -125 dBm (Bandwidth: 1.875 kHz)	DC input	20-32V
		Antenna tuner	Built-in
WAVEFORMS			
HF	CNHF Normal & Robust Mode - Bandwidth: up to 24 kHz - Modulations: BPSK - 256QAM - FEC (Forward Error Correction) - Data rates: up to 153 kbit/s - ALE: GNSS independent cognitive ALE with more than 4000 calling channels listened simultaneously (on HF and VHF) - ARQ & Non-ARQ modes - Unicast, multicast, broadcast - Multihop Analog SSB (J3E), CW. Possible to implement legacy & future MIL-STD and STANAG HF and WBHF waveforms if required.		
VHF	CNHF Normal Mode (see HF Waveforms for details) Analog FM (F3E) Possible to implement other narrow band waveforms if required.		
SERVICES (OPTIONAL)			
	<ul style="list-style-type: none"> - UDP/IP over HF interface (unicast, multicast and broadcast & IPsec support) - Built-in webmail client (support for attachments and coordinates) - Built-in instant messaging client (support for voice messages and attachments) - Digital secure voice (unicast, multicast, broadcast) - SMTP/IMAP interface for external email client and server - XMPP interface for external clients - Blue force tracking 		
INTERFACES			
HF antenna	N connector (female)		
Audio	Analogue handset		
Ethernet	Built-in, 100 Mbit/s		
Serial	RS-485		
USB	USB-C, power and data		
GNSS	GPS, GALILEO, GLONASS, BEIDOU (commercial). Simultaneous tracking of multiple GNSS systems. Spoofing and jamming detection and reporting.		
GNSS antenna	Built-in & SMA connector (female) for external antenna		
LTE	Built-in		
LTE antenna	Built-in & SMA connector (female) for external antenna		
WLAN	Built-in. AP & client modes. 2.4 GHz, IEEE 802.11b/g/n. Up to 8 clients in AP mode.		
User Interface	320 x 480 color display, arrow keys.		
	Browser based user interface with access control.		
SECURITY			
CNHF Normal & Robust Mode	AES256 encryption, static & changing keys		
Transceiver platform	Secure boot, signed software, zeroize function		
ENVIRONMENTAL & STANDARDS			
Operational temperature range	-40...+55 °C		
Ingress protection (IP Code)	IP68		
Environmental standards	MIL-STD-810H		
EMC standards	MIL-STD-461G		