

# 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



## Technical specifications

<b>Platform</b>	SDR platform	<b>Dimensions with handles</b>	105mm (H) x 210mm (W) x 305mm (D)
<b>Frequency range</b>	HF: 1.6 - 30 MHz, VHF 30 - 54 MHz	<b>Weight</b>	Under 5 kg without battery
<b>Bandwidth</b>	Up to 48 kHz	<b>Battery type</b>	BB-2590/U
<b>TX Power</b>	HF: 25 W, VHF: 5 W (PEP)	<b>Battery charger</b>	Built-in
<b>RX Sensitivity</b>	Better than -125 dBm (Bandwidth: 1.875 kHz)	<b>DC input</b>	20-32V
<b>WAVEFORMS</b>			
<b>HF</b>	CNHF Normal & Robust Mode - Bandwidth: up to 48 kHz - Modulations: BPSK - 256QAM - FEC - Data rates: up to 300 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.		
<b>VHF</b>	CNHF Normal Mode (see HF Waveforms for details) Analog FM (F3E) Possible to implement other narrow band waveforms if required.		
<b>SERVICES</b>			
	Digital encrypted voice (unicast, multicast, broadcast), email w/attachments, instant and voice messaging, blue force tracking, file transfer, data transfer, broadcast and multicast messaging etc. Built-in web based email and instant messaging clients SMTP and IMAP interfaces for external email client and server XMPP interface for external XMPP client and server Analog SSB voice		
<b>INTERFACES</b>			
<b>Audio</b>	Analogue handset		
<b>Ethernet</b>	Built-in, 100 Mbit/s		
<b>Serial</b>	RS-485		
<b>USB</b>	USB-C, power and data		
<b>GNSS</b>	Commercial. GPS, GALILEO, GLONASS, BEIDOU. Simultaneous tracking of multiple GNSS systems. Spoofing and jamming detection and reporting.		
<b>LTE</b>	Built-in		
<b>WLAN</b>	Built-in. AP & client modes. 2.4 GHz, IEEE 802.11b/g/n. Up to 8 clients in AP mode.		
<b>User Interface</b>	320 x 480 color display, arrow keys.		
	Browser based user interface with access control.		
<b>OTHER</b>			
<b>Tuner</b>	Built-in antenna tuner		
<b>Environmental</b>	MIL-STD-810H ground mobile, operational temperature -40 - +55 °C		
<b>EMC</b>	MIL-STD-461G		
<b>Security</b>	CNHF Normal & Robust Mode: AES256 encryption, static & changing keys Radio platform: Secure boot, signed software, zeroize function		