



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 over 2500 calling channels listened to simultaneously

- 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 56 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



Technical specifications

Platform	SDR platform	Size	115 mm (H), 210 mm (W), 275 mm (L)
Frequency range	HF: 1.5 - 30 MHz, VHF 30 - 56 MHz	Weight	Under 5 kg without battery
Bandwidth	Up to 48 kHz	Battery type	BB-2590/U
TX Power	25 W (PEP)	Battery charger	Built-in
RX Sensitivity	Better than -125 dBm (Bandwidth: 1.875 kHz)	DC input	20-32V
WAVEFORMS			
HF	CNHF Normal & Robust Mode <ul style="list-style-type: none"> - Bandwidth: up to 48 kHz - Modulations: BPSK - 256QAM - FEC - Data rates: up to 300 kbit/s - ALE: GNSS independent cognitive ALE with more than 2500 calling channels listened simultaneously - 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			
	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		
INTERFACES			
Audio	Analogue handset		
Ethernet	Built-in, 100 Mbit/s		
Serial	RS-485		
USB	USB-C, power and data		
GNSS	Commercial. GPS, GALILEO, GLONASS, BEIDOU. Simultaneous tracking of multiple GNSS systems. Spoofing and jamming detection and reporting.		
LTE	Built-in		
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.		
OTHER			
Tuner	Built-in antenna tuner		
Environmental	MIL-STD-810H ground mobile, operational temperature -40 - +55 °C		
EMC	MIL-STD-461G		
Security	CNHF Normal & Robust Mode: AES256 encryption, static & changing keys Radio platform: Secure boot, signed software, zeroize function		