

# TECHNICAL SPECIFICATIONS

FREQUENCY RANGE	Tx	1.6 to 30MHz
	Rx	250KHz to 30MHz
POWER OUTPUT	30 W RF± 1dB (two-tone or voice), user-programmable in 1W steps (low/medium/high)	
CHANNELS	Up to 1000 entries	
CONTACTS	Up to 500 entries	
HF NETWORKS	Up to 20 networks (simultaneously scanning)	
LANGUAGE SUPPORT	English, Spanish, Russian, Chinese, French, Arabic, Dari, Pashto and Portuguese	
WAVEFORMS	Digital Voice (MELPe/TWELP)	
	Selcall	
	FED-STD-1045; MIL-STD-188-141B; STANAG 4538 3G ALE	
	MIL-STD-188-110A/B (STANAG 4539) data ECCM	
ENCRYPTION	CES-128 voice and AES-256 digital voice and data	
SIZE	284mm (without handles, 324 with handles) x 246 mm x 96 mm (L x W x H) including battery compartment	
WEIGHT	Less than 5 kg including battery	
TEMPERATURE RANGE	Operational at -30 to +60°C; 95% RH maximum, non-condensing	
ENVIRONMENTAL STANDARDS	MIL-STD-810G (Immersion, Shock, Drop, Vibration, Humidity, High temp, Low temp, Blowing Dust, Salt Fog, Fungus, Contamination, Altitude)	

# CONFIGURATIONS



The Sentry-H 6110-MP radio is fully customisable to your specific mission requirements with software enabled capabilities and a wide range of peripherals and accessories.

12-30055-EN Issue 2

## CONTACT US

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MANPACK

# SENTRY-H 6110-MP

## OUR PROCESS

Solving challenging requirements is what we do best



### ASSESS

Our technical consultants will conduct a detailed on-the-ground assessment of:

- Human needs
- Operational environment
- Opportunities and challenges
- Cultural context
- Scenario planning



### DESIGN

Our field service team will then design a custom solution for those challenges, using the right hardware and software from Codan or one of our technology partners.



### DEPLOY

Our specialist logistics team gets the hardware and the resources to wherever you are, getting your system up and running fast.



### TRAIN

We'll train operators and communications staff on how to use the system – which will be a short process, thanks to our easy-to-use interfaces and interoperability.



### SUPPORT

We're available to be deployed within 24 hours for any support required. And we're always on hand for any advice you require.



BE HEARD

[CODANCOMMS.COM](http://CODANCOMMS.COM)



# CHALLENGING REQUIREMENTS? NO PROBLEM

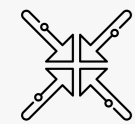


Codan's Sentry-H 6110-MP delivers a rugged man-portable Software Defined Radio (SDR) solution for military organisations that demand uncompromised, secure voice and data communications, while on the move.



## COMPACT AND LIGHTWEIGHT

The 6110-MP sets a new standard for size and weight for HF manpack radios with ruggedness and reliability as a focus. It weighs less than 5 kg including battery, with one of the smallest form factors available.



## HIGH POWER

The 6110-MP packs a full 30W RF power output in a high efficiency SDR platform that can deliver up to 55 hours of battery run time. With extremely clean transmit signal and industry leading receiver performance, the 6110-MP provides exceptional HF communications clarity.



## EXCEPTIONAL DIGITAL AND ANALOGUE VOICE CLARITY

Codan's Digital Voice technology provides significantly reduced hiss, crackle, pops, and multipath effects typical of HF, enabling voice quality similar to modern cellular phones.



## INTELLIGENT PERFORMANCE

Codan 6110-MP's internal SDR architecture comprises the latest-generation high-performance Digital Signal Processor (DSP), Field Programmable Gate Array (FPGA), and system on chip (SoC) technology devices. It provides exceptional performance, and future upgradability via IP connectivity over Ethernet/Wi-Fi and USB.



## SECURE COMMUNICATION

The 6110-MP ensures your information and team remains safe and secure through use of AES-256 bit encryption applied to data transfers, digital voice and 3G ALE. An option for internal frequency hopping is provided to prevent third party interference and monitoring and keep your intel safe.



## INTUITIVE OPERATION

Codan knows that when lives are on the line, operation of the radio must be second nature. The 6110-MP provides an intuitive user interface that can be switched into various languages for fast and instinctive control.

# YOUR CODAN 6110-MP SOLUTION

## POWER SOLUTIONS

### BATTERIES

The 6110-MP is designed to operate from standard military off-the-shelf BB-2590 style batteries, capitalising on latest technology advances and supply flexibility.

### CHARGERS

A range of battery charging accessories are available from Codan, including those that can operate AC mains, DC and solar power sources.

The military standard battery compatibility of the 6110-MP provides an added advantage of being able to use the wide range of MOTS charging accessories that are now available.

## DATA

### EMAIL/FILE

Codan offers various solutions for email and file transfer for both HF and web based communications.

### CHAT

Codan's chat software enables users within a HF, or external network to communicate via chat.

### SMS

Send and receive SMS messages on your HF radio to/from any cellular phone.

## REMOTE

### VIRTUAL CONTROL POINT

Control the 6110-MP radio through a PC via the Virtual Control Point, a digital replica of your front panel that emulates similar functionality.

### INTERNET PROTOCOL

Control and communicate through your 6110-MP transceiver using remote solutions through the internet, even if the transceiver is on the other side of the world.

## WARRANTY AND WORLDWIDE SUPPORT

Codan products are backed by an extensive distribution and support network, and include a three year extendable warranty.

## HANDSETS

### H-250 AUDIO

A comprehensive range of H-250 compatible audio accessories are available including; handsets, headsets.

### 2320 HANDSET

The 2320 smart handset enables remote operation of the manpack, with all the capability of the front panel in the palm of your hand.

### BACKPACK

The 6110-MP backpack is designed for strong and stable load carriage, with a fully adjustable harness system, maximizing comfort regardless of task.

## CARRIAGE

## ASSET MANAGEMENT AND TRACKING

### RTS

Codan's Remote Tracking Software provides an effective means to locate, track and manage remote assets with no on-going subscription fees.

## ANTENNAS & MASTS

### BROADBAND

A range of tactical broadband antenna solution are available to support different mission requirements. From compact tuned long wires to larger, more efficient broadband dipoles, there is an antenna to suit.

### WHIPS

For tactical, on the move or temporary halt communications, a range of retractable tuned whip antennas are available.

### MASTS

Designed for tactical use where rapid deployment and ease of transportation is important.





HF TRANSCEIVER

# 2110 MANPACK



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COMMUNICATIONS

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## CHALLENGING REQUIREMENTS?

# NO PROBLEM

Codan's Patrol 2110 Manpack is a reliable, rugged and secure solution for your portable long-range high frequency (HF) voice and data communications.

With second-generation Digital Voice and 3G ALE, you have the confidence to communicate quickly and reliably without the need for existing infrastructure. Comfortable to carry and packed with easy-to-use features via the rugged smart handset or front panel, the Patrol 2110 is ideal for all types of terrain and weather conditions, complying with the toughest environmental standards including MIL-STD-810F. The Patrol transceiver, handset and battery compartment are made from lightweight alloys and high-impact plastics, both capable of withstanding immersion to a depth of 1m.

The Patrol AES-256 or CES-128 encryption options ensure sensitive information can be communicated with confidence. Codan's 3G ALE option for Patrol enables robust and efficient on-air linking, providing capabilities for quick and reliable voice and data communications, as well as enhanced GPS tracking.



### DIGITAL VOICE

2110 series second generation Digital Voice capability delivers clearly intelligible speech no matter the conditions, ensuring you're always heard, loud and clear.



### ADVANCED ALE

2110s support standards FED-STD-1045, MIL-STD-188-141B, and 3G ALE STANAG 4538 with advanced capabilities for voice, message, GPS tracking and radio status for simple and reliable communication.



### LONGER LIFE, LIGHTWEIGHT AND TOUGH

2110s eliminate the need to carry heavy spare batteries, operating for up to 65 hours. Weighing only 2.9 kg, they also comply with MIL-STD-810F standards.



### INTERNAL DATA MODEM

With an optional fully integrated high-speed data modem, 2110s are capable of data-rates of up to 9600 bps, secured with AES-256 bit encryption to ensure your information remains confidential.



### INTEGRATED GPS

With a convenient one-button emergency facility and encrypted position information, the 2110's internal GPS provides position awareness for all HF network participants.



## SMART AND RUGGED HANDSET

Patrol's smart handset enables remote operation of the Manpack, with all the capability of the front panel now available in the palm of your hand. The handset's built-in speaker automatically switches to a loud mode when docked in its custom designed cradle meaning calls will be heard when the handset is not being held. It is manufactured from high grade plastic polymers and built for the world's toughest environments.

## SUPERIOR AND RELIABLE ANTENNAS

Codan has a reputation for building superior and reliable HF antennas. Our range of tactical antennas for the 2110 Patrol Manpack are no exception and include a lightweight tactical whip antenna, rugged tactical long wire antenna, a broadband antenna kit solution and a dipole antenna kit solution. They provide maximum durability and mobility with quick deployment for short and long range communications.

## FEATURES AND OPTIONS

- 1.6 to 30 MHz continuous, 25 W (125 W with amplifier)
- Second generation Digital Voice technology
- Rugged smart handset with visual display
- Lightweight (2.9 kg without battery)
- Long battery life (up to 65 hours) with intelligent battery management
- Rugged (shock, vibration and immersion), MIL-STD-810F
- Advanced Automatic Link Establishment (ALE): MIL-STD-188-141B, 3G ALE (STANAG 4538)
- CES-128 voice and AES-256 digital voice and data encryption
- Smart and fast internal fully automatic antenna tuner
- Clear communications with DSP noise reduction – Easitalk™
- Internal MIL-STD-188-110A/B high-speed Data Modem
- Integrated GPS receiver and antenna, and integrated speaker
- Intuitive and user-friendly interface
- 3 year warranty





# OUR PROCESS

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## ASSESS

Our technical consultants will conduct a detailed on-the-ground assessment of:

- Human needs
- Operational environment
- Opportunities and challenges
- Cultural context
- Scenario planning



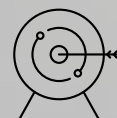
## DESIGN

Our field service team will then design a custom solution for those challenges, using the right hardware and software from Codan or one of our technology partners.



## DEPLOY

Our specialist logistics team gets the hardware and the resources to wherever you are, getting your system up and running fast.



## TRAIN

We'll train operators and communications staff on how to use the system – which will be a short process, thanks to our easy-to-use interfaces and interoperability.



## SUPPORT

We're available to be deployed within 24 hours for any support required. And we're always on hand for any advice you require.

12-30042-EN Issue 5

## CONTACT US

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HF TRANSCEIVER

# 2110M MANPACK



**CODAN**  
COMMUNICATIONS

**BE HEARD**

[CODANCOMMS.COM](http://CODANCOMMS.COM)





# CHALLENGING REQUIREMENTS?

# NO PROBLEM

Codan's Patrol 2110M Manpack is a reliable, rugged and secure solution for your portable long-range high frequency (HF) voice and data communications.

With second-generation Digital Voice and 3G ALE, you have the confidence to communicate quickly and reliably without the need for existing infrastructure. Comfortable to carry and packed with easy-to-use features via the rugged smart handset or front panel, the Patrol 2110M is ideal for all types of terrain and weather conditions, complying with the toughest environmental standards including MIL-STD-810F. The Patrol transceiver, handset and battery compartment are made from lightweight alloys and high impact plastics, both capable of withstanding immersion to a depth of 1 m.

The Patrol AES-256 or CES-128 encryption options ensure sensitive information can be communicated with confidence, it also has an option for internal Frequency Hopping to prevent third party interference and monitoring of classified communications. Codan's 3G ALE option for Patrol enables robust and efficient on-air linking, providing capabilities for quick and reliable voice and data communications, as well as enhanced GPS tracking.



## DIGITAL VOICE

2110M Manpacks' second generation Digital Voice capability delivers clearly intelligible speech no matter the conditions, ensuring you're always heard, loud and clear.



## LONGER LIFE, LIGHTWEIGHT AND TOUGH

The 2110M eliminates the need to carry heavy spare batteries and operates continuously for up to 65 hours. Weighing only 2.9 kg, it also complies with MIL-STD-810F standards.



## INTEGRATED GPS

With a convenient one-button emergency facility and encrypted position information, the 2110M's internal GPS provides position awareness for all HF network participants.



## ADVANCED ALE

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## INTERNAL DATA MODEM

With an optional fully integrated high-speed data modem, the 2110M is capable of data-rates of up to 9600 bps, secured with AES-256 bit encryption to ensure your information remains confidential.





## VEHICULAR AND BASE SYSTEMS

With a complete range of easy-to-use mounting accessories and fast-tuning antennas, Codan 2110M Manpacks are an unbeatable HF solution for communications on the move. Optional shock mounts provide added protection for harsh environments.

2110M Manpacks and accessories are quick and simple to install in a base station. The quick-release design means you can secure or remove the unit fast for on-the-run operations. The 2110M Expansion Module enables you to connect accessories such as a Data Terminal / Crosspatch / PC, an auto-tuning antenna, and a morse key.

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12-30041-EN Issue 6

## CONTACT US

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