PERSONAL RADIO
SENTRY MESH 6161

A CODAN COMPANY

DTC's Sentry Mesh 6161 is the ultimate personal radio for demanding applications that require performance, range, and versatility in a lightweight and compact, wearable unit that minimises the burden on users.

KEY FEATURES

- MeshUltra™ Waveforms
  - Up to 144 total nodes
  - Predictable IP latency
  - Non-collision based channel access
- Up to 2 watts RF
- 2 x 2 MIMO
- Simple controls
- Built-in GPS
- SWaP optimised
- Multi-channel voice
- User selectable Presets/Talkgroups with voice announcements
- Emergency zeroise, protected from accidental activation
- High speed IP data
- Optional DES-56 and AES-256 Encryption
- Standards compliant
  - MIL-STD-461G
  - MIL-STD-810H
  - IEC60529: IP68
  - FIPS 140-2 L1
  - FIPS 140-3 L2 (pending)
- 3 year warranty
- USB and Ethernet Connectivity
- Multi-lingual Web User Interface

SWAP OPTIMISED

With the weight of just under 410g, the Sentry Mesh 6161 features a compact, light, and ergonomic design which supports integration with a range of accessory devices such as power and data hubs and off-the-shelf battery solutions, ensuring flexibility and scalability of configuration.

SIMPLE CONTROLS

Primary functions of the Sentry Mesh 6161 are controlled by a simple rotary control, which provides power on / off, Preset selection, and a zeroise capability. Two user programmable function keys located on the side of the radio can be assigned to volume control or talkgroup selection. A single LED indicator provides indications for built-in test results, mesh network status, and radio power state.

PROVEN, ROBUST MESHULTRA WAVEFORMS

The Sentry Mesh 6161 is a Software Defined Radio hosting our highly robust MANET waveforms that have been proven in applications from Public Safety to Unmanned Systems and Covert Operations. MeshUltra™ optimises the use of available channel bandwidth through a "Token Passing" technology, which avoids collisions and provides a bound, predictable data packet latency. Wider bandwidth together with superior RF performance and optional Interference Avoidance System (IAS) maximises communications effectiveness in the presence of interference.

The Software Defined architecture of the Sentry Mesh 6161 radio supports integration of additional waveforms to address sovereign or interoperability customer requirements.

With up to 2 watts output and a 2x2 MIMO RF architecture, the Sentry Mesh 6161 maximises throughput and avoids drop-outs using two independent transmit / receive channels. In complex environments where multiple obstacles cause signal reflections and cancellation, MIMO results in far superior performance.

CLEAR ROBUST MULTI CHANNEL VOICE

The Sentry Mesh 6161 uses Digital Voice (DV) technology with high clarity voice to provide multiple simultaneous talkgroups over the same channel (up to 32 in total), with each handheld able to join two talkgroups simultaneously.

PERSONAL RADIO
SENTRY MESH 6161

A CODAN COMPANY

HIGH SPEED IP DATA
The Sentry Mesh 6161 forms a robust, self-forming, self-healing wireless network that can support sensor data, video streaming, and high availability situational awareness. With peak data rates of up to 87 Mbps, the Sentry Mesh 6161 waveforms are fully interoperable with our Mesh unmanned range of products, providing the ability to extend range and share the operational picture.

The Sentry Mesh 6161 radio has native support for the Android Team Awareness Kit (ATAK) and Windows Team Awareness Kit (WinTAK), enabling 6161 Mesh radio networks to support mission requirements.

EMBEDDED WEB CONFIGURATION
More advanced features such as frequency settings, talkgroup configuration, network settings, and access to real time system performance metrics can easily be accessed through the Sentry Mesh 6161's embedded web user interface (WUI). For larger deployments, this can also be used to facilitate centralised bulk firmware and setting changes.

CRYPTO
Protection of voice and data is assured through the FIPS140-2 L1 and FIPS140-3 L2 (pending) certified AES-256 bit encryption. Optional AES-256 or DES-56 encryption is also available. Operation of the encryption is entirely transparent to the end user, and simply requires for the periodic fill of encryption keys in accordance with operational requirements.

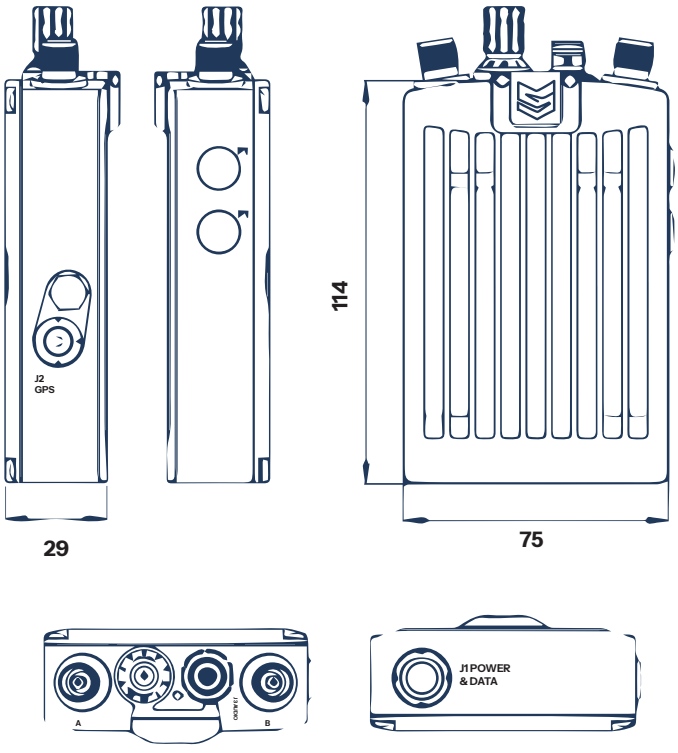
FIPS140-3 Level 2 approval is in progress.

STANDARDS COMPLIANT
The Sentry Mesh 6161 is built to exacting standards to ensure trouble free operation in service. It is designed and certified to relevant provisions of MIL-STD-461G and MIL-STD-810H, covering extremes of temperature, shock, humidity, vibration, altitude, and more.

GPS
The Sentry Mesh 6161 has an in-built GPS receiver with a built-in antenna, to provide Position Location Information (PLI) which can operate in conjunction with an optional external GPS antenna, if required.

WARRANTY, SERVICE, AND SUPPORT
The Sentry Mesh 6161 provides proven product reliability and performance, backed up by our standard three-year warranty. The ability to independently sustain your equipment, complimented by field upgradeable unique option codes, enables you to truly utilise SDR technology. Should your mission change, features can easily be enabled.

ACCESSORY SUPPORT
- Headsets
- Single and dual PTT
- Molle mount and soft pouch
- Antennas (conventional and wearable)
- Power & Data hubs
- Batteries (conventional and wearable)
- Wearable camera
- Interconnection cables



PERSONAL RADIO
SENTRY MESH 6161

DTC
A CODAN COMPANY

GENERAL	
Waveforms	MeshUltra™ Set of user selectable MESH waveforms (up to 144 nodes, 1.25 to 20 MHz Bandwidth)
Talkgroups	Up to 32 simultaneous per channel, with user programmable primary and secondary Talkgroup control
Vocoder	CODEC2
Network size	Up to 144 nodes
Data throughput	87 Mbps maximum, dependent upon number of active nodes, settings, channel conditions, and MESH waveform selected
Supply characteristics	Wide range DC supply input (9 - 17 VDC) Power consumption 6 W typical
Battery life	SoloPack Battery (98 Wh): Up to 11 hours typical at 2 x 1 W Up to 17 hours typical at 2 x 0.5 W
GPS	Internal GPS unit with built-in antenna (GPS/GNSS, GLONASS, and QZSS). Optional external antenna (SMB connector)
Compliance	MIL-STD-810H, MIL-STD 461G, IEC 60529: IP68, FIPS 140-2 Level 1, FIPS 140-3 Level 2 (Pending)
Interfaces	J3 Audio Interface (2-channel, dual PTT support) and Ethernet - ODU, 16-pin, J2 GPS Antenna, External (Optional) - SMB connector, J1 Power & Data Interface (DC input, power distribution control) - Nett Warrior, 7-pin, RF x 2 - TNC
Controls	Power / Preset selection / Zeroise F1 / F2 Function Keys (user programmable push button controls)
Indicators	Status LED (Power / Network / Built-In Test status)

RF	
Frequency bands	L-Band: 1.2 to 1.7 GHz S-Band: 1.98 to 2.7 GHz
Bandwidth	1.25 MHz, 1.5 MHz, 1.75 MHz, 2.5 MHz, 3 MHz, 3.5 MHz, 4 MHz, 5 MHz, 6 MHz, 7 MHz, 8 MHz, 10 MHz, and 20 MHz
Power Output	Programmable, up to 2 x 1 W per channel (2 W total), default 2 x 0.5 W

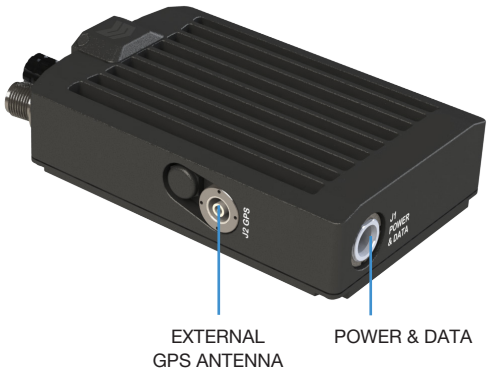
MECHANICAL AND ENVIRONMENTAL	
Size (D x W x H)	29 x 75 x 114 mm, excluding connector protrusions (1.14 x 2.95 x 4.49 in)
Weight	410g, excluding cables and antennas (0.9 lbs)
Temperature range	Operational: -45°C to +55°C (with dynamic power control) (-49°F to +131°F) Storage: -50°C to +80°C (-58°F to +176°F)
Ingress protection	IP68, 2 metres for 1 hour
Military standards	MIL-STD-810H (high temperature, low temperature, shock, vibration, altitude, dust, humidity, salt fog, fungus, contamination by fluids, immersion, rain, temperature shock)
Environmental protection	RoHS 2011/65/EU, REACH (EC 1907/2006)

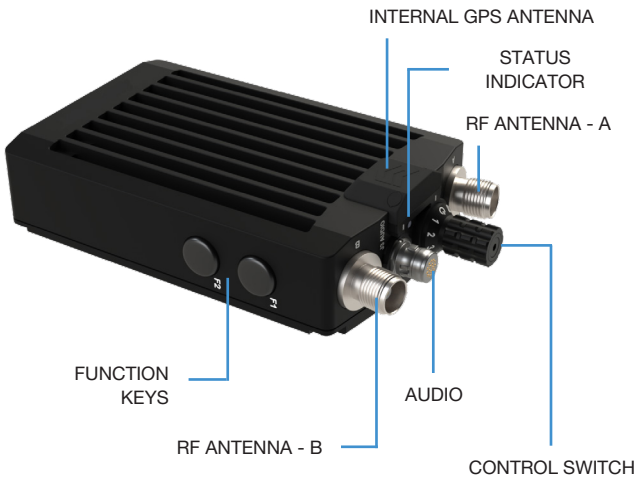
Values noted are typical. Equipment descriptions and specifications subject to change without notice or obligation.

PERSONAL RADIO
SENTRY MESH 6161

DTC
A CODAN COMPANY

RECOMMENDED ACCESSORIES	
Headsets	FalCom OTE2000 INVISIO T7 Sylinx HSI CJ Lightweight Tactical Headset CJ Tactical Handset CJ Fist Microphone/Speaker Note: Dual and Single PTT configurations available for some headset solutions
Power & Data Hubs	Galvion PDH-4 Fischer KEYSTONE™ Glenair STAR-PAN™ 2 Glenair STAR-PAN™ 4
Batteries	Galvion SoloPack™ Other: BB-2590, MBITR variants, and STUB battery compatible
RF Antennas	SWA L-Band Gooseneck antennas Mastodon L-Band Conformal antennas SWA S-Band Gooseneck antennas
External GPS Antennas	Mastodon Conformal GPS antenna
Cameras	MOHOC® USB camera MOHOC® IP camera
Mounting solutions	Soft pouch with MOLLE straps – Camo & Black Rigid MOLLE Mount – Black
Cables	Nett Warrior interface cables Ethernet programming cable Ethernet/Audio device split cable H-250 Audio cable Other





DATASHEET: Sentry Mesh 6161, 12-20373-EN, Issue 9 © 2025

AUSTRALIA +61 8 8305 0311 | **UK** +44 1489 566 750 | **US** +1 571 563 7077 | **UAE** +971 44 53 72 01

SALES@CODANCOMMS.COM
WWW.DTCCODAN.COM