

SOL8SDR-H2

Enhanced Special Role Radio 2x1W

Overview:

Based on DTC's game changing software defined radio platform (SOL8SDR), the SOL8SDR-H2 is the enhanced next generation Special Role Radio designed to meet a diverse range of applications. With the same rugged body worn form factor, the SOL8SDR-H2 offers enhanced GPS performance with on-board magnetics for a simplified Ethernet interface and future support for dual push-to-talk (PTT) communications.

The versatile Special Role Radio can be operated as a mobile ad hoc network (MANET) IP Mesh node, a point-to-point (P2P) COFDM transmitter or a P2P receiver streaming video to a tablet PC. It also offers dual on-board HD-capable video encoders and support for a variety of different camera interfaces, an "open mic" full duplex audio channel and on-board SD card storage as well as 2W total output power.



Features and Benefits:

- MeshUltra™, MIMO and Standard IP Mesh capability
- Enhanced GPS performance
- On-board Ethernet magnetics
- Gigabit Ethernet via USB 2.0 adaptor
- 2W total output power
- Dual high profile HD H.264 independent video encoders
- Low latency Mesh radios - under 180ms for video; less than 20ms data only
- Optional AES128/256 encryption (accredited to FIPS140-2 for MeshUltra™ waveforms)
- Native SD/HD-SDI or composite/HDMI via adaptor
- Microphone inputs and headphone output for recording, transmission or talkback
- USB support for peripherals such as 3G/4G/Wi-Fi dongles
- Low power consumption, typically 7.5W to 10W
- Battery life - up to 12 hours
- Range NLOS - >1.5km single hop; >15km air to ground

Product Information:

Product Includes

AP009562	GPS/GLONASS antenna SMA
CA3813	ODU to RJ45 Ethernet cable

Power Accessories (sold separately)

AP010166	MBITR AN/PRC148 battery 7.0Ah
AP009603	MBITR battery charger 1-way
AP009604	MBITR battery charger 4-way
#AP010167	MBITR battery charger 2-way, US
#AP010394	MBITR battery charger 2-way, UK
#AP010395	MBITR battery charger 2-way, EU
#AP010396	MBITR battery charger 2-way, AU

#subject to exemption from RoHS compliance

Antenna Accessories (sold separately)

AP009679	Omni antenna 225-512MHz 2dBi, TNC (m) whip
DTC-SDR-I_ANT_198270	Omni antenna 1.98-2.7GHz 2dBi, TNC (m) gooseneck
AP010118	Omni antenna 4.40-5.90GHz 3.5dBi, TNC (m) gooseneck
AP010277	Omni antenna 1.25-1.85GHz 2.05dBi, TNC (m) gooseneck (GPS filter)
AP010278	Omni antenna 2.20-2.50GHz 2dBi, TNC (m) gooseneck (GPS filter)

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Product Information (cont.):

*Cable Accessories (sold separately)

CA2396	BNC (f) to DIN 1.0/2.3 (m) cable
CA3807	ODU to 3.5mm jack microphone cable
CA3814	ODU to Ethernet, 2 x 3.5mm jack headphone/microphone cable
CA3465	MBITR battery eliminator to 4-way Lemo (f) cable
CA3472	Cambion to data and Lemo power in/out cable
CA3474	Cambion to data, USB A and Lemo power in/out cable
CA3567	Cambion (north) to USB A socket and 2.1mm power out cable
CA3803	Cambion (south) to USB A socket and 2.1mm power out cable
CA3823	Cambion (north) to USB A plug cable
CA3824	Cambion (south) to USB A plug cable
CA3962	Cambion to Fischer Ethernet cable

Supported Standards

MIL-STD-810H	500.6 - Low Pressure (Altitude) 501.7 - High Temperature 502.7 - Low Temperature 507.6 - Humidity 509.7 - Salt Fog 514.8 - Vibration 516.8 - Shock
MIL-STD-461G	CS118 - Personnel Borne Electrostatic Discharge RE102 - Radiated Emissions

*Misc. Accessories (sold separately)

CA3691 CA3952	Cambion USB and power to Nett Warrior cable Nett Warrior to USB-C cable
CA3976 CA3990 AP010637	ODU to NATO 6-pin and RJ45 ODU to NATO 6-pin Lightweight tactical headset NATO 6-pin
AP011529 AP011352 or AP011370	ODU to Invisio Dual PTT cable Invisio V20 PTT control unit black Invisio V20 PTT control unit tan
CA3810 or CA3852	ODU to Peltor (standard) ODU to Peltor (NATO)
AP011462 or AP011463 AP010699 AP010700 AP011534	ODU to Falcom PTT cable tan ODU to Falcom PTT cable black Falcom MFC2000 PTT control unit two port Falcom MFC1000 PTT control unit one port Falcom to Peltor (standard)
CA3930 AP010203	ODU to Savox cable Savox TRICS PTT
CA3850 AP010208 AP010298	ODU to Sylinx cable Sylinx Clarus PTT Sylinx Clarus to Peltor (NATO)
CAMBHD-IP CA3808	Bullet HD IP camera, incl. Cambion interface and Picatinny mount ODU interface option for HD IP camera
CAMBHD	Bullet HD-SDI camera, incl. Picatinny mount
SOL8SDI	HDMI/composite to SDI converter

* Please refer to SDR-H2 cable guides for headsets and further accessories

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Technical Specification:

I/O

COFDM transceiver 1	TNC (f) 50Ω
COFDM transceiver 2	TNC (f) 50Ω
GPS/GNSS	SMA (f) 50Ω
SD/HD-SDI video input	DIN 1.0/2.3 (f) 75Ω
Power input	24-way Cambion spring probe connector MBITR AN/PRC148 battery
Power output	24-way Cambion spring probe connector 16-way ODU circular connector
USB 2.0	24-way Cambion spring probe connector
RS-232/RS-485 data	24-way Cambion spring probe connector
Ethernet 100Base-T	16-way ODU circular connector
Microphone/line input	16-way ODU circular connector
Headphone output	16-way ODU circular connector

COFDM Transceivers

Required application	*SDRAPP-TX or *SDRAPP-MESH
Power	1W (30dBm) per output, 2W (33dBm) total
Power step	0.25dB incremental control
Tuning range	Frequency variant dependent
Tuning step	125kHz

Receiver

Required application	*SDRAPP-RX
Sensitivity	Up to -110dBm
Streaming Output	Single service (first received)
Tuning range	Frequency variant dependent
Tuning step	125kHz
Receive input level	+20dBm max.

Video

Required application	*SDRAPP-ENC
Digital input	SD/HD-SDI (supports SOL8SDI option for HDMI/composite)

Audio

Required application	*SDRAPP-ENC or *SDRAPP-MESH
Digital audio input	SD/HD-SDI digital stereo pair
Sample rate	16kHz-48kHz
Coding modes	MPEG Audio Layer 1 64-448kbps MPEG Audio Layer 2 32-384kbps MPEG Audio Layer 3 8-256kbps
Talkback audio	Analogue mic/head with bias
Compression	G726 32kbit audio 8kHz sampling and mute
Input level (600Ω impedance)	2.5mV to 2.3V RMS
Output level	32mW RMS max into a 16Ω load

Data

Data configuration	1k2 to 115k2, 7/8 bit, no/odd/even parity
Data interface	RS232 or RS485 or USB peripherals

Storage

Medium	Internal microSD 128GB (>8 hours recording at max DVB-T bitrate) (>29 hours recording at max NB bitrate)
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Control

Rotary switch	Off, config select (on) and zeroise keys
USB	PC application control and SD card mounting
Ethernet	PC application control and file download Web GUI control and file download
Access	User, Super User and Admin accounts

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Technical Specification (cont.):

Power (ext PSU)

DC input	8V to 18V reverse polarity protected
DC output	1A limited passthrough (switchable)
Camera/adaptor power	5V over video input (switchable)
Power consumption	Up to 20W (RMS) dependent on mode and peripherals, 10W typical Mesh mode

Physical

Dimensions (excluding protrusions)	128mm (L), 67mm (W), 38mm (D)
Weight	634g

Environment

Standard	Designed to meet MIL-STD-810G
Temperature range	-20°C to +60°C
Cooling	Passive
Sealing	IP68

Frequency

032047	320-470MHz
114150	1.14-1.50GHz
167235	1.67-2.35GHz
198270	1.98-2.70GHz
440500	4.40-5.00GHz

Software License Options

SDRAPP-MESH	IP Mesh
SDRAPP-TX	COFDM Transmitter
SDRAPP-RX	COFDM Receiver
SDRAPP-ENC	IP Encoder
SDRAPP-IAS	Interference Avoidance Scheme for Mesh
SDRAPP-P2MP	Point-to-Multipoint System for Mesh
SDRAPP-L2BRIDGE	Transparent Layer 2 Bridging Mode for Mesh
SDRAPP-LOWBIT	Low Bitrate Video Encoding
SDRAPP-SPAPSHOTS	Triggered JPEG Stills with Associated Timestamps
SDRAPP-IPX	IP Encapsulation for COFDM
SDRAPP-GOLD	Gold-TX, Gold-RX, Gold-ENC, MESH, IAS, IPX
SDRAPP-PLATINUM	Platinum-TX, Platinum-RX, Platinum-ENC, MESH, IAS, IPX, LOWBIT, P2MP, RANGING
†AES128	AES128 Cryptography Licence
†AES256	AES256 & AES128 Cryptography Licence

Note: Refer to separate datasheets for SDRAPP requirements

† Accredited to FIPS140-2 for MeshUltra™ waveforms

Encrypted products are subject to regulatory export controls

For further information contact your Sales Account Manager, one of our Regional Sales Offices, or email solent.info@domotactical.com

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