SOL8SDR-H2

Enhanced Special Role Radio 2×1W

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

Designed to MIL-STD-810G

Product Information:

Product Includes

AP009562	GPS/GLONASS antenna SMA
SA4536	USB support stick
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
AP009680	Omni antenna 1.00-1.50GHz 2.15dBi, TNC (m) gooseneck
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 2.15dBi, 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 cable
CA3807	ODU to microphone only cable
CA3814	ODU to Ethernet, headphone and microphone cable
CA3465	MBITR battery eliminator to 4-way Lemo
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

Misc. Accessories (sold separately)

AP010343	Samsung S20 Tactical Edition
AP010342	S20 operators case kit tan
CA3691	Cambion USB and power to Nett Warrior cable
CA3952	Nett Warrior to USB-C cable
AP010140	INVISIO T5 headset
AP010141	INVISIO V20 PTT
CA3805	ODU to INVISIO cable
AP010204	Savox NC200 headset
AP010203	Savox TRICS PTT
AP010447	Savox MOLLE clip
CA3930	ODU to Savox cable
AP010345	Peltor ComTac XPI headset
AP010298	Peltor to Sylinx Clarus adaptor
AP010208 or	Sylinx Clarus PTT
AP010296	Sylinx dual comms splitter
CA3850	ODU to Silynx cable
CAMBHD-IP	Bullet HD IP camera, incl. Cambion interface and Picatinny mount
CA3808	ODU interface option for HD IP camera
CAMBHD	Bullet HD-SDI camera, incl. Picatinny mount
SOL8SDI	HDMI/composite to SDI converter

Technical Specification:

I/O

COFDM transceiver 1	TNC socket 50Ω
COFDM transceiver 2	TNC socket 50Ω
GPS/GNSS	SMA socket 50Ω
SD/HD-SDI video input	DIN 1.0/2.3 socket 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

Video

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

Audio

Required application	*SDRAPP-ENC or *SDRAPP-MESH
Headphone output	Mono headphone driver
Analogue input	High gain microphone stereo pair 10V microphone bias (cable dependent)
Digital input	SD/HD-SDI de-embedding

Data

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

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Technical Specification (cont.):

Storage

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

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

Power (ext PSU)

DC input	8V to 18V reverse polarity protected
DC output	1A limited passthrough (switchable)
Camera/adapter 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 Code

*SDRAPP-MESH	IP Mesh
*SDRAPP-IAS	Interference Avoidance Scheme for Mesh
SDRAPP-P2MP	Point-to-Multipont System for Mesh
SDRAPP-L2BRIDGE	Transparent Layer 2 Bridging Mode for Mesh
*SDRAPP-TX	COFDM Transmitter
*SDRAPP-ENC	IP Encoder
*SDRAPP-RX	COFDM Receiver
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
†AES128 (TX/RX/NN)	AES 128-Bit Encryption
†AES256 (TX/RX/NN)	AES 256-Bit and AES 128-Bit Encryption

* Refer to separate datasheets for SDRAPP requirements

† Accredited to FIPS140-2 for MeshUltra™ waveforms

Export of encrypted products is subject to regulatory export controls.

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