HANDHELD
SOL8SDR-H2

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 bulletproof soldier radio 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 including HDMI, an "open mic" full duplex audio channel and on-board SD card storage as well as 2W total output power.

KEY FEATURES

- 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
- Native SD/HD-SDI or composite/ HDMI via adaptor; HDMI via side connector
- 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

AP009562	GPS/GLONASS antenna SMA
SA4536	USB support stick
CA3813	16-way ODU to RJ45 Ethernet cable

ACCESSORY OPTIONS (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 RoSH compliance

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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
AP009681	Omni antenna 1.85-2.60GHz 2.4dBi, 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)
AP010277	Omni antenna 2.20-2.50GHz 2.15dBi, TNC (m) gooseneck (GPS filter)

CABLE ACCESSORIES (SOLD SEPARATELY)

CA2396	BNC (f) to DIN 1.0/2.3 cable
CA3807	16-way ODU to microphone only cable
CA3808	16-way ODU to Fischer, HD IP camera cable
CA3814	16-way ODU to Ethernet, headphone and microphone cable
CA3472	Cambion to data and power in/out cable
CA3473	Cambion to USB and power in/out cable
CA3474	Cambion to data, USB and power in/out cable
SA4283	Cambion to HDMI input cable

MISC. ACCESSORIES (SOLD SEPARATELY)

CAMBHD-IP	Cambion cable to bullet HD IP camera, incl. Picatinny mount
CAMBHD	Bullet HD-SDI camera, incl. Picatinny mount
SOL8SDI	HDMI/composite to SDI converter

RELATED DOCUMENTS

Resource ID 100308	SOL8SDR-H2 Hardware Guide

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TECHNICAL SPECIFICATIONS

IO

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
HDMI video input	24-way Cambion spring probe connector
Power input	24-way Cambion spring probe connector MBITR AN/PRC148 battery
Power output (12V)	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 setup	0.25dB incremental control
Tuning range	Frequency variant dependent
Tuning setup	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) HDMI via side connector option

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

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

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POWER (EXT PSU)

DC input	8V to 18V reverse polarity protected
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	SDR Application IP Mesh NETNode
*SDRAPP-IAS	SDR Application Interference Avoidance Scheme
*SDRAPP-ENC	SDR Application IP Encoder
*SDRAPP-TX	SDR Application COFDM Transmitter
*SDRAPP-RX	SDR Application Receiver
SDRAPP-IPX	SDR Application IP Encapsulation for COFDM
SDRAPP-GOLD	Gold-TX, Gold-RX, MESH, IAS, IPX
SDRAPP-PLATINUM	Platinum-TX, Platinum-RX, MESH, IAS, IPX
AES128TX	AES 128-Bit Encryption
AES256TX	AES 256-Bit and 128-Bit Encryption

* Refer to separate datasheets for SDRAPP requirements.

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