

# SOL8SDR-H

## Special Role Radio (MANET)

### Overview:

Based-on DTC's game-changing SOL08 Software Defined Radio (SDR) platform, the SDR-H is equally at home operating as a tactical ad hoc network (MANET) IP Mesh node, a P2P COFDM transmitter or a P2P receiver streaming video to a tablet PC. The SDR-H also offers dual on-board HD-capable video encoders and support for a variety of different camera interfaces including HDMI (with optional cable), an "open mic" full duplex audio channel, in-built GPS receiver and on board SD card storage as well as 2W of total output power.

The Special Role Radio joins DTC's versatile family of IP Mesh and P2P COFDM radios designed to meet the requirements of a diverse range of surveillance and battlefield applications. It combines a familiar "soldier radio" physical form factor, "bullet proof" construction and simplified user interface with the ability to use standard MBITR-style battery packs, chargers and holsters.

### Features and Benefits:

Dual high profile HD H.264 independent video encoders  
2W total output power

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

Growing USB support for peripherals such as 3G/4G/Wi-Fi dongles

Ethernet, RS232 and RS485 connectivity and 128GB built in storage

Low power consumption, typically 7.5W to 10W based on encoder output

Battery life - 5hrs @ 12Mbps; 12hrs data/audio only

Range NLOS - 1.5km single hop; 15km air to ground



### Product Information:

#### Product Includes

CA2396	BNC female to DIN 1.0/2.3 plug - RG179; 178mm
TBA	ODU Ethernet/audio cable
AP009495	GPS Antenna SMA
COFDM antennas x 2	Variant dependent

#### Accessory Options (sold separately)

SOL8SDI	HDMI/composite to SDI converter
AP009534	MBITR 4.7Ah battery AN/PRC148
TBC	MBITR 6.8Ah battery AN/PRC148
TBC	Side connector - HDMI/power
TBC	Side connector - RS232/RS485 data
TBC	Dual battery charger

#### Related Documents

Resource ID 100217	SOL8SDR Hardware and Basic Setup Guide
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## Special Role Radio (MANET)

### 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 50Ω
HDMI video input	Spring probe connector 32-way
Gigabit Ethernet	Multiway circular 16-way
USB	Spring probe connector 32-way
Power input	MBITR AN/PRC148 battery 4.7Ah/6.8Ah or Multiway circular 16-way
Power output (12V)	Spring probe connector 32-way
Microphone/line input	Multiway circular 16-way
Headphone output	Multiway circular 16-way
Data	Spring probe connector 32-way
GPIO	Spring probe connector 32-way

#### 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 dependant
Tuning step	125kHz

#### Receiver\*\*

Required Application	SDRAPP-RX**
Sensitivity	Up to -107dBm
Streaming Output	
Tuning Range	Frequency variant dependant
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)
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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

#### Physical

Dimensions (incl. connectors)	146mm (L), 71mm (W), 38mm (D)
Weight	650g

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### Technical Specification (con't):

#### Power (ext PSU)

DC input	8V to 18V reverse polarity protected
Typical power consumption	TBC

#### Environment

Temperature range	-20°C to +60°C
Humidity	Less than 85% non-condensing
Cooling	Passive
Sealing	IP67

#### Frequency

032047	320-470MHz
114150	1.14-1.50GHz

#### Software License Code

SDRAPP-TX*	SDR Application COFDM Transmitter
SDRAPP-RX**	SDR Application Receiver
SDRAPP-ENC*	SDR Application IP Encoder
SDRAPP-MESH*	SDR Application IP Mesh NETNode
AES128TX	AES128-bit Encryption License
AES256TX	AES256-bit Encryption License

\*Refer to separate datasheets for SDRAPP requirements

\*\*Future development

Export of encrypted products is subject to United Kingdom regulatory export controls.

For further information contact your Sales Account Manager, one of our Regional Sales Offices, or email [solent.enquiries@domotactical.com](mailto:solent.enquiries@domotactical.com)

**DTC – Solent**  
Fusion 2, 1100 Parkway  
Solent Business Park  
Whiteley, Hampshire  
PO15 7AB, UK

T: +44 (0) 1489 566 750

**DTC – Tampa (Head Office)**  
3845 Gateway Centre Boulevard  
Suite 360  
Pinellas Park, FL  
33782, USA

T: +1 727 471 6900

**DTC – Randers**  
Haraldsvej 64B  
DK-8960  
Randers SØ  
Denmark

T: +45 8791 8100

**DTC – Singapore**  
21 Media Circle  
Infinite Studios #06-04  
Singapore  
138562

T: +65 6643 4700

**DTC – Brazil**  
Alameda Araguaia 2  
190 – Ed. CEA II – suite 1109  
Alphaville - Barueri  
São Paulo, Brazil  
06455-000

T: +55 11 2321 5055

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[domotactical.com](http://domotactical.com)



**Planet Communications Asia PLC.**

157 Soi Ramindra 34, Ramindra Rd., Tarang, Bangkok, Bangkok 10230  
Tel: +66 2 792 2400 | Fax: +66 2 792 2499, +66 2 943 5771 | E-mail: [sales@planetcomm.com](mailto:sales@planetcomm.com)



PlanetComm: