

# SOL8SDR-R

## SOLO8 Software Defined Radio (Robust)

### Overview:

The SOLO8 Software Defined Radio is an COFDM digital video transceiver from Domo Tactical Communications (DTC), designed specifically for Point of View (PoV), body worn and concealment applications.

The SOL8SDR Robust provides a passively cooled IP66 rated enclosure ideal for outdoor, or body worn applications.

Dependent on the applications loaded the platform can operate as a Transmitter, Receiver, Dual Encoder and IP Mesh Radio node. Further information on software capability can be found in the SDRAPP datasheets.

The UHF version is larger than the standard SOL8SDR-R due to the lower frequency of operation (320-470MHz).

Please see the SOL8SDR UHF Operation Guidelines publication for important application notes.

PA accessories can be connected for extended range.



### Features and Benefits:

Dual high profile HD H.264 independent video encoders

2x100mW COFDM transceivers for use as COFDM Transmitter, Receiver or IP Mesh

Optional AES128/256 encryption (accredited to FIPS140-2 for MeshUltra™ waveforms)

ISM band telemetry transceiver for control, PTZ and low power standby

Dual SD/HD-SDI video inputs for recording, transmission and analysis

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

Robust packaging with IP66 rated connectors

Very low power consumption: typically 7.5W

Exceptionally small size: 130mm x 100mm x 25mm (30.5mm UHF)

Weighs only 314-372g

### Product Information:

#### Product Includes

AP007377	Micro-B USB cable
CA0002	12V DC power lead Lemo-wire 3m
CA2396 x 2	DIN 1.0/2.3 to BNC female cable
CA2521	UltiMate Ethernet breakout
CA2522	UltiMate USB breakout
CA3123	UltiMate microphone/headphone cable
CA3173	UltiMate DC power cable
SA3741	SOL8SDR-R support USB stick

#### Accessory Options (sold separately)

CA2520	UltiMate DC/audio/RS232 cable
CA3164	UltiMate DC/USB/RS485 wire breakout
CA3238	GlobalSat BU-353-S4 GPS with UltiMate
*AMP2x1W-B-OEM	Dual 1W amplifier with bypass
*AMP2W-B-OEM	2W amplifier with bypass
*AMPD5W-B-OEM	5W amplifier with bypass
SOL8SDR-RSK	SOL8SDR-R surveillance kit

\* See separate datasheet

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### Technical Specification:

#### IO

RF COFDM transceiver 1	SMA (female)
RF COFDM transceiver 2	SMA (female)
RF telemetry transceiver	SMA (female)
Video SD/HD-SDI 1	DIN 1.0/2.3 (female)
Video SD/HD-SDI 2	DIN 1.0/2.3 (female)
USB control and download	Fischer UltiMate (to USB 2.0 Micro-B)
Power input	Fischer UltiMate (to 4-way Lemo)
Power output	Fischer UltiMate (to 4-way Lemo)
PA control	Fischer UltiMate (to wire)
Microphone 10V	Fischer UltiMate (to wire)
Microphone/line input	Fischer UltiMate (to male RCAs)
Headphone output	Fischer UltiMate (to 3.5mm socket)
PTZ control, or data IO	Fischer UltiMate (to 9-way D-sub)
Gigabit Ethernet	Fischer UltiMate (to RJ45 Magnetics)

#### COFDM Transceivers

Required application	*SDRAPP-TX or *SDRAPP-MESH
Power	100mW (+20dBm) per output, 200mW total
Power step	0.25dB incremental control
Tuning range	Frequency variant dependent
Tuning step	125kHz

#### Telemetry Transceiver

Required application	*SDRAPP-TX
Power	+11dBm frequency dependent
Tuning range	Frequency variant dependent
Receiver sensitivity	-114dBm

#### 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	Dual SD/HD-SDI (supports SOL8SDI for HDMI or 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 (optional cable) or RS485 (optional cable) 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

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	L 130mm, W 100mm, H 25mm L 130mm, W 100mm, H 30.5mm (UHF)
Weight	314g 372g (UHF)

#### Power

DC input	8V to 18V reverse polarity protected
DC output	1A passthrough (switchable)
Camera/adaptor power	5V over video input (switchable)
Typical power consumption	7.5W (SD), 8.5W (HD), 9.5W (Dual)

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## SOLO8 Software Defined Radio (Robust)

### Technical Specification (cont.):

#### Environment

Temperature range	-20°C to +60°C
Humidity	Less than 85% non-condensing
Cooling	Passive, external heat sink or fan
Sealing	IP66
EMC conformance	CE marked

#### Frequency

039091	320-470MHz + 902-928MHz tel.
132043	1.14-1.50GHz + 433.05-434.79MHz tel.
132086	1.14-1.50GHz + 863-870MHz tel.
201043	1.67-2.35GHz + 433.05-434.79MHz tel.
201086	1.67-2.35GHz + 863-870MHz tel.
201091	1.67-2.35GHz + 902-928MHz tel.
234043	1.98-2.70GHz + 433.05-434.79MHz tel.
234086	1.98-2.70GHz + 863-870MHz tel.
234091	1.98-2.70GHz + 902-928MHz tel.
470043	4.40-5.00GHz + 433.05-434.79MHz tel.
470086	4.40-5.00GHz + 863-870MHz tel.
470091	4.40-5.00GHz + 902-928MHz tel.
575091	5.50-6.00GHz + 902-928MHz tel.

#### 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-SNAPSHOTS	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
†AES128 (TX/RX/NN)	AES 128-Bit Encryption
†AES256 (TX/RX/NN)	AES 256-Bit and AES 128-Bit Encryption

Note: Refer to separate datasheets for SDRAPP requirements

† Accredited to FIPS140-2 for MeshUltra™ waveforms

Export of encrypted products is 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](mailto:solent.info@domotactical.com)

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