

SOL8SDR-C

SOLO8 Software Defined Radio (Concealment)

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.

SOL8SDR Concealment is an ultra-miniature package ideal for integration into the smallest concealment solutions. 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-C 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 via D1806 PCB for extended range.



Features and Benefits:

- RNDIS support for Ethernet over USB
- Dual high profile HD H.264 independent video encoders
- 2x100mW COFDM transceivers for use as COFDM Transmitter, Receiver or IP Mesh
- 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
- Optional AES128/256 encryption (accredited to FIPS140-2 for MeshUltra™ waveforms)
- Compact packaging with ultra-miniature connectors
- Very low power consumption: typically 7.5W
- Exceptionally small size: 50mm x 50mm x 18mm (24mm UHF)
- Weights only 70-82g

Product Information:

Product Includes

CA2856	Ethernet JST cable
CA3043	DC power JST lead
D918	Ethernet Magnetics PCB
D1804	Gecko breakout PCB
SA3774	SOL8SDR-C support USB stick

Accessory Options (sold separately)

CA3115	SMP (female) to SMA (female) cable 200mm
CA3116	SMP (female) to SMA (female) cable 100mm
D1806	Gecko active breakout PCB for amplifier integration
*AMP2x1W-xxxxxx-B-OEM	Dual 1W amplifier with bypass (xxxxxx denotes frequency band)
*AMP2W-xxxxxx-B-OEM	2W amplifier with bypass (xxxxxx denotes frequency band)
*AMPD5W-xxxxxx-B-OEM	5W amplifier with bypass (xxxxxx denotes frequency band)
SOL8SDR-C-CAKIT	Cable accessory kits (various), CAKIT guide available
SOL8SDR-C-HSK	Passive heatsink accessory for SOL8SDR-C
SOL8SDR-CK	SOL8SDR concealment kit

* Refer to separate datasheet

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Technical Specification:

IO

RF COFDM transceiver 1	SMP (male 50Ω)
RF COFDM transceiver 2	SMP (male 50Ω)
RF telemetry transceiver	SMP (male 50Ω)
Video SD/HD-SDI 1	MCX (female 75Ω)
Video SD/HD-SDI 2	MCX (female 75Ω)
USB control and download	USB 3.0 Micro-B
Power input	D1804 JST 4 pins
Power output	D1804 JST 2 pins
PA control	D1804 JST 4 pins
Microphone/line input 1	D1804 JST 3 pins
Microphone/line input 2	D1804 JST 3 pins
Headphone output	D1804 JST 2 pins
PTZ control or data IO	D1804 JST 7 pins
Gigabit Ethernet	D1804 JST 10 pins + 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 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

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 50mm, W 50mm, H 18mm L 50mm, W 50mm, H 24mm (UHF)
Weight	70g 82g (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), 4W (Receiver)

Environment

Temperature range	-20°C to +60°C with additional cooling
Humidity	Less than 85% non-condensing
Cooling	External heat sink or fan required
Sealing	IP40
EMC conformance	None guaranteed, not CE marked

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Technical Specification (cont.):

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

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