

SOL8SDR-C

SOL8 Software Defined Radio (Concealment)

Overview:

The SOL8 Software Defined Radio is an ultra-miniature COFDM digital video transceiver from Domo Tactical Communications (DTC), designed specifically for Point of View (PoV), body worn and concealment applications. Dependent on the applications loaded, the platform can operate as a Transmitter, Receiver, Dual Encoder, Standard IP Mesh and MIMO IP Mesh. Further information on software capability can be found in the SDRAPP datasheets.

Three enclosure variants are available: Concealment (-C), Robust (-R), Plain (-P).

Concealment (-C) is an ultra-miniature package ideal for integration into the smallest concealment solutions.

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.

One/two 2W PA accessories can be connected via D1806 for extended range.



Features and Benefits:

Dual high profile HD H.264 independent video encoders (NEW)
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

Compact packaging with ultra-miniature connectors

Very low power consumption: typically 7.5W

Exceptionally small size: 50mm x 50mm x 18mm (24mm UHF)

Weighs 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 required for 2W PAs
AMP2W-032047-B-OEM	2W PA with bypass (320-470MHz)
AMP2W-120170-B-OEM	2W PA with bypass (1.20-1.70GHz)
AMP2W-165240-B-OEM	2W PA with bypass (1.65-2.40GHz)
AMP2W-198270-B-OEM	2W PA with bypass (1.98-2.70GHz)
AMP2W-440500-B-OEM	2W PA with bypass (4.40-5.00GHz)
SOL8SDR-C-CAKIT	Cable accessory kits A, B and C available to aid integration. Refer to CAKIT guide.
SOL8SDR-CK	SOL8SDR Concealment kit
SOL8SDR-C-HSK	Passive heatsink accessory for SOL8SDR-C

Related Documents

100210	SOL8SDR-C OEM Integration Document
100217	SOL8SDR Hardware Guide

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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	Harwin Gecko or JST (4 pins)
Power output	Harwin Gecko or JST (2 pins)
PA control	Harwin Gecko or JST (4 pins)
Microphone/line input 1	Harwin Gecko or JST (3 pins)
Microphone/line input 2	Harwin Gecko or JST (3 pins)
Headphone output	Harwin Gecko or JST (2 pins)
PTZ control or data IO	Harwin Gecko or JST (7 pins)
Gigabit Ethernet	Harwin Gecko or 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 pass-through (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 (con't):

Frequency

039091	320-470MHz + 902.00-928.00MHz
132043	1.14-1.50GHz + 433.05-434.79MHz
201043	1.67-2.35GHz + 433.05-434.79MHz
204091	1.78-2.30GHz + 902.00-928.00MHz
234043	1.98-2.70GHz + 433.05-434.79MHz
234091	1.98-2.70GHz + 902.00-928.00MHz
470043	4.40-5.00GHz + 433.05-434.79MHz
470091	4.40-5.00GHz + 902.00-928.00MHz
575091	5.50-6.00GHz + 902.00-928.00MHz

Software License Code

SDRAPP-ENC*	SDR Application IP Encoder
SDRAPP-TX*	SDR Application COFDM Transmitter
SDRAPP-RX*	SDR Application Receiver
SDRAPP-MESH*	SDR Application IP Mesh NETNode
SDRAPP-GOLD	All Gold level SDRAPPs (ENC/TX/RX/MESH)
SDRAPP-PLATINUM	All Platinum level SDRAPPs (ENC/TX/RX/MESH)
AES128TX	AES 128-bit Encryption License
AES256TX	AES 256-bit Encryption License

* Refer to separate datasheets for SDRAPP requirements

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

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