IP MESH NODE
SOL8SDR-C

MASER

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

SOL8SDR-C is an ultra-miniature package ideal for integration into the smallest communications solutions. Dependent on the applications loaded the platform can operate as a Transmitter, Receiver, Dual Encoder and IP Mesh Radio node.

KEY FEATURES

- 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
- 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

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
*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) to aid integration. CAKIT guide available.
SOL8SDR-C-HSK	Passive heatsink accessory for SOL8SDR-C
SOL8SDR-CK	SOL8SDR Concealment kit

* Refer to separate datasheet

RELATED DOCUMENTS

Resource ID 100210	SOL8SDR-C OEM Integration Document
Resource ID 100217	SOL8SDR Hardware Guide

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TECHNICAL SPECIFICATIONS

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 & 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 setup	0.25dB incremental control
Tuning range	Frequency variant dependent
Tuning setup	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

Required application	*SDRAPP-ENC
Digital input	Dual SD/HD-SDI (supports SOL8SDI for HDMI or composite)

STORAGE

Medium	Internal microSD 128GB (>8 hours recording at max DVB-T bitrate) (>29 hours recording at max NB bitrate)

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)

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TECHNICAL SPECIFICATIONS

POWER

DC input	8V to 18V reverse polarity protected
DC output	1A pass-through (switchable)
Camera/adapter power	5V over video input (switchable)
Typical power consumption	7.5W (SD), 8.5W (HD), 9.5W (Dual), 4W (Receiver)

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 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.

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