

SOL8SDR2x1W-UC

SOLO8 SDR 2x1W OEM Radio Module

Overview:

The SOL8SDR2x1W-UC is a compact single-board Software Defined Radio Transceiver with 2x1W RF output power. Leveraging DTC's industry-leading MeshUltra™ MANET waveforms and also capable of operating as a unidirectional COFDM Transmitter or Receiver, the SOL8SDR2x1W-UC is ideally suited for integration into long range UxV applications.

The SOL8SDR2x1W-UC also includes a rich set of interface options including Ethernet, serial and dual USB as well as an on-board headset audio interface.

The SOL8SDR2x1W-UC also offers the option of USB-C powering direct from a suitable end user device or USB-C battery (USB PD compliant).



Features and Benefits:

- 2x1W transceivers for use as IP Mesh radio, COFDM transmitter or receiver
- USB-C power option compliant with USB PD
- USB support for peripherals such as 3G/4G/Wi-Fi dongles
- RNDIS support for Ethernet over USB
- Ethernet and RS-232 data connectivity
- Optional AES128/256 encryption (accredited to FIPS140-2 for MeshUltra™ waveforms)
- Up to 128GB SD card storage
- Rugged self-screened OEM clamshell enclosure (additional heatsinking required)
- Very low power consumption, typically 12W IP Mesh
- Exceptionally small size: 95mm x 60mm
- Weighs only 110g

Product Information:

Product Codes

SOL8SDR2x1W-UC-xxxxyy	SDR 2x1W OEM clamshell radio module
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Note: xxxxyy denotes frequency variant, see over.

Accessory Options (sold separately)

AP007377	USB-A (m) to USB micro-B (m) cable
AP010399	USB-A (m) to USB-C (m) cable
CA3865	4-way JST to banana plugs power cable
CA3900	4-way JST to 4-way Lemo (f) power cable
CA0002	4-way Lemo (m) to banana plugs power cable
CA2095	3-way JST to 3-way Lemo (f) RS-232 cable
CA0001	3-way Lemo (m) to 9-way D-sub RS-232 cable
CA3740	5-way JST to USB-A (f) cable
CA3742	5-way JST to USB micro-B (f) cable
CA3866	6-way JST to 3.5mm jack x2 audio cable
CA3867	8-way JST to RJ45 Ethernet
CA3983	5-way JST to USB Ethernet adaptor
CA3752	MMCX (m) to SMA (f) cable 100mm
CA3903	MMCX (m) to SMA (f) cable 200mm
CA4237	MMCX RA (m) to SMA (f) cable 200mm
SOL8SDR-U-CAKIT-A	Cable accessory kit: see CA kit guide

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Technical Specification:

IO

RF COFDM transceiver 1	MMCX (female 50Ω)
RF COFDM transceiver 2	MMCX (female 50Ω)
GPIO and power out	6-way 1mm JST
Gigabit Ethernet	8-way 1mm JST
USB1 control and download	5-way 1mm JST
USB2 control and download	USB-C (PD) 5-way 1mm JST
Power input	4-way 2mm JST USB2 with power delivery (USB-C PD)
Analogue audio	6-way 1mm JST
RS-232	3-way 1mm JST

COFDM Transceivers

Application license	SDRAPP-MESH, SDRAPP-TX
Power	1W (+30dBm) max per output, 2W total
Power step	0.25dB incremental control
Tuning step	125kHz

Receiver

Application license	SDRAPP-RX
Sensitivity	Up to -110dBm
Streaming output	Single service (first received)
Tuning range	Frequency variant dependent
Tuning step	125kHz
Receive input level	+20dBm max.

Audio

Application license	SDRAPP-MESH, SDRAPP-TX
Interface	Analogue mic/head with bias
Compression	G726 32kbit audio 8kHz sampling and mute
Input level (600Ω impedance)	0.25mV to 1.14V RMS
Output level	32mW RMS max into a 16Ω load

Data

Data configuration	1k2 to 115k2, 7/8 bit, no/odd/even parity
Data interface	RS-232 or USB peripherals

Storage

Medium	Up to 128GB MicroSD (supplied) (>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	95mm x 60mm x 15mm
Weight	110g

Power

DC input	8-17V overvoltage protected up to 30V
Power consumption	12W RMS @13V 25% data occupancy 18W RMS @13V 100% data occupancy
Inrush current (power up)	10A @13V

Environment

Temperature range	-20°C to +55°C with additional cooling
Humidity	Less than 85% non-condensing
Cooling	External heat sink or fan required

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Technical Specification (cont.):

Frequency

120170	1.20-1.70GHz
178229	1.78-2.29GHz
198270	1.98-2.70GHz
440500	4.40-5.00GHz
550600	5.50-6.00GHz

Software License Code

SDRAPP-MESH	IP Mesh
SDRAPP-TX	COFDM Transmitter
SDRAPP-RX	COFDM Receiver
SDRAPP-IAS	Interference Avoidance Scheme for Mesh
SDRAPP-P2MP	Point-to-Multipoint for Mesh
SDRAPP-L2BRIDGE	Layer 2 Bridging Mode for Mesh
SDRAPP-LOWBIT	Low Bitrate Video Encoding
SDRAPP-IPX	IP Encapsulation for COFDM TX/RX
SDRAPP-SNAPSHOTS	Triggered JPEG Stills with Associated Timestamps
SDRAPP-GOLD	Gold-TX, Gold-RX, MESH, IAS, IPX
SDRAPP-PLATINUM	Platinum-TX, Platinum-RX, MESH, IAS, IPX, LOWBIT, P2MP, RANGING
†AES128	AES128 Cryptography Licence
†AES256	AES256 & AES128 Cryptography Licence

Note: Refer to separate datasheets for SDRAPP requirements

† Accredited to FIPS140-2 for MeshUltra™ waveforms

Encrypted products are 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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