SOL8SDR2×1W-UC

SOLO8 SDR 2×1W Single Board OEM Clamshell

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 7W IP Mesh
- Exceptionally small size: 95mm x 60mm
- Weighs only 110g

Product Information:

Product Codes

SOL8SDR2x1W-UC-xxxyyy	SDR 2x1W single board OEM clamshell

Note: xxxyyy 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 CA0002	4-way JST to 4-way Lemo (f) power cable 4-way Lemo (m) to banana plugs power cable
CA2095 CA0001	3-way JST to 3-way Lemo (f) RS-232 cable 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 CA3903	SMA jack to MMCX plug cable 100mm SMA jack to MMCX plug 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

Audio

Application license	SDRAPP-MESH, SDRAPP-TX
Interface	Analogue microphone/headphone with bias

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)

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	8V to 17V overvoltage protection up to 30V
Power consumption	7W typ. IP Mesh 14W typ. COFDM TX single output 24W typ. COFDM TX dual output 6W typ. COFDM RX

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Technical Specification (cont.):

Environment

Temperature range	-20°C to +55°C with additional cooling
Humidity	Less than 85% non-condensing
Cooling	External heat sink or fan required
EMC conformance	None guaranteed, not CE marked

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	Transparent Layer 2 Bridging Mode for Mesh
SDRAPP-LOWBIT	Low Bitrate Video Encoding
SDRAPP-IPX	IP Encapsulation for COFDM TX/RX
SDRAPP-GOLD	Gold-TX, Gold-RX, MESH, IAS, IPX
SDRAPP-PLATINUM	Platinum-TX, Platinum-RX, MESH, IAS, IPX, LOWBIT, P2MP
†AES128 (TX or RX)	AES 128-Bit Encryption
†AES256 (TX or RX)	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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