

BluSDR™ 30W Radio Module

Overview:

As part of the DTC BluSDR™ family of products, BluSDR-200 is designed for either mobile or fixed site applications, particularly suitable for drone platforms operating in extra-long range applications up to 200km.

Based around DTC's SOL8SDR (software defined radio) architecture and offering a full 30W of output power, BluSDR-200 includes MANET IP Mesh capability to allow up to 144 nodes in a self-healing network using DTC's industry leading MeshUltra-X™ waveform.

BluSDR-200 includes a rich set of interface options including Ethernet, USB, serial data, audio and dual HD-SDI video inputs.



Features and Benefits:

- 30W total output power (2x15W COFDM transceivers)
- Ideal for extra long range applications up to 200km
- Rugged IP66 design for environmental resistance
- MeshUltra™ MANET waveforms included to support up to 144 nodes in a self forming self healing Mesh network
- Optional AES128/256 encryption (accredited to FIPS140-2 for MeshUltra™ waveforms)
- USB support for peripherals such as 3G/4G/Wi-Fi dongles
- RNDIS support for Ethernet over USB
- Data capacity up to 90Mbps in 20MHz channel bandwidth
- Built-in video encoders
- Interlink mode for enhanced capability and large scale systems
- 64GB built-in storage

Product Information:

Product Codes

BluSDR-200-210230-B	BluSDR-200 Boxed 2x15W, 2.10-2.30GHz
BluSDR-200-230250-B	BluSDR-200 Boxed 2x15W, 2.30-2.50GHz
BluSDR-200-420440-B	BluSDR-200 Boxed 2x15W, 4.20-4.40GHz

Product Includes

CA3791	Souriau 3-way circular to banana plugs power cable
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Accessory Options (sold separately)

AP000481	UK IEC power supply cable for use with CA3958
AP001483	US IEC power supply cable for use with CA3958
AP004634	EU IEC power supply cable for use with CA3958
AP007192	AU IEC power supply cable for use with CA3958
CA3958	Souriau 3-way circular to 24V PSU
CA3959	Souriau 3-way m-f power extension
NETR-HPMB-AS	High power antenna mounting bracket and spacer
SOL8SDI	HDMI or composite video to SDI converter

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Technical Specification:

Interfaces

COFDM RF interfaces	N-Type x 4 (2 x Tx/Rx, 2 x Rx)
Power	3-way Souriau UTS7103P
Ethernet0/1	RJ45 x 2
Data/audio/Ethernet	22-way Amphenol 38999 series 3
SDI/HD-SDI 1/2	BNC female 75Ω x 2
USB	Type A

COFDM Transceivers

RF power	15W (42dBm) per output, 30W total
Power step	0.25dB incremental control
Tuning step	125kHz step
Bandwidth	1.25/1.5/1.75/2.5/3.0/3.5/4.0/5.0MHz (MeshUltra-M/-80/-X) 6.0/7.0/8.0/10.0/12.0/14.0/16.0/20.0MHz (MeshUltra-M/-80)
Mesh capacity	87Mbps MeshUltra
Carrier modulation	BPSK/QPSK/16QAM/64QAM* (adaptive)
FEC rate	FEC1/2, FEC2/3 (adaptive)
Receive sensitivity	-98dBm (BW 2.5MHz/QPSK 1/2)

Video

Video input	Two video streams Max total throughput of 1920x1080p30 Currently both video input resolutions must be identical
SDI input formats	1920x1080i 60/59.94/50Hz 1920x1080p 30/29.97/25/24/23.97Hz 1920x1080psf 30/29.97/25/24/23.97Hz 1280x720p 60/59.94/50Hz 720x576i 50Hz or 720x480i 59.94Hz
H.264 compression	AVC / H.264 / MPEG-4 Part 10 High profile level 4.0
Coding options	Horizontal scaling of 3/4, 2/3, 1/2, 1/4 Vertical scaling of 1/2, 1/4 Sub-frame rate of 1/2, 1/4, 1/8, 1/24
Encoder delay	1s to 10ms (mode dependent)
Encoder bitrates	0.25Mbps to 32Mbps

Audio

Digital audio input	SD/HD-SDI digital stereo pair
Sample rate	16kHz-48kHz
Coding modes	4 channels stereo or mono MPEG Audio Layer 1 64-448kbps MPEG Audio Layer 2 32-384kbps MPEG Audio Layer 3 8-256kbps
Talkback audio input	Microphone level/headphone output
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 Interface

RS232/RS485 bi-directional data (shared with user camera control)	1k2 to 115k2 baud switchable with UDP and TCP routing protocol
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Encryption

Standard	DES
Licensed	*AES128/256 (subject to export control)

Power

DC input	12-32V (28V nominal)
Power consumption	120W typical (200W peak)

Physical

Dimensions	H 254mm, W 210mm, D 71mm
Weight	5kg approx.

Environment

Sealing	IP66 minimum
Temperature range	-20°C to +50°C

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Technical Specification (cont.):

Standards

RTCA DO-160G: Environmental Conditions and Test Procedures for Airborne Equipment	Section 15 Magnetic Effect Section 20.4 RF Conducted Susceptibility Section 20.5 RF Radiated Susceptibility
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Note: Tests were carried out on 2.30-2.50GHz variant

License Options

Includes DTC MeshUltra™ MANET Mesh capability as standard. See MeshUltra family brochure for more details.

BluSDR-IAS	Interference Avoidance Scheme
BluSDR-LOWBIT	Low Bitrate Video Encoding
BLUSDR-P2MP	Point-to-Multipoint System
BluSDR-RANGING	Ranging Measurements for BluSDR Radios
BluSDR-SNAPSHOTS	Triggered JPEGs with Associated Timestamps
*AES128	AES128 Cryptography Licence
*AES256	AES256 & AES128 Cryptography Licence

* Accredited to FIPS140-2 for MeshUltra™ waveforms

† Enables split frequency TX/RX operation for special applications. Contact DTC for more information.

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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