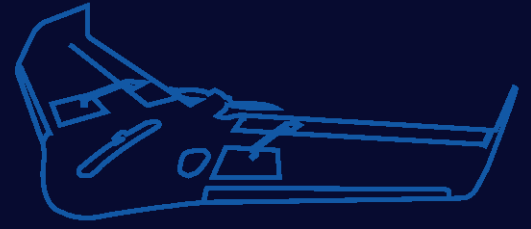


# DTC BluSDR™



## DTC BluSDR™-30 DTC BluSDR™ 2x1W Module

### Overview:

As part of the DTC BluSDR™ family of products, BluSDR™-30 is designed for a wide range of UxV applications, and is particularly suitable for small drone platforms operating in medium range applications up to 30km in range.

Based around DTC's SOL8SDR (software defined radio) architecture and offering a full 2x1W of output power, BluSDR™-30 provides bidirectional point-to-point COFDM RF communications (for two radios), or optional IP Mesh to allow up to 144 nodes in a self-healing network using DTC's industry leading MeshUltra-X™ waveform.

BluSDR™-30 includes a rich set of interface options including Ethernet, serial and dual USB as well as an on-board headset audio interface. BluSDR™-30 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 COFDM transceivers, 2W total
- Ideal for medium range applications up to 30km
- USB-C power option compliant with USB PD
- RNDIS support for Ethernet over USB
- Ethernet and RS-232 data connectivity
- Standard bidirectional point-to-point COFDM RF communications included
- Optional IP Mesh upgrade to support up to 144 nodes
- Optional AES128/256 encryption (accredited to FIPS140-2 for MeshUltra™ waveforms)
- USB support for peripherals such as 3G/4G/Wi-Fi dongles
- 128GB built-in storage
- Compact packaging with EMC screening included
- Low power consumption, typically 7W IP Mesh
- Small size and weight
- Available as a core PCB or a boxed module

### Product Information:

#### Product Codes

BLUSDR-30-xxxxxyy-C	BlueSDR-30 2x1W Core PCB
BLUSDR-30-xxxxxyy-C-NC	BlueSDR-30 2x1W Core PCB (no cables)
BLUSDR-30-xxxxxyy-B	BlueSDR-30 2x1W Boxed

xxxxxyy denotes frequency, see over

#### Core PCB Product Includes

CA3740	5-way JST to USB A socket cable
CA3742	5-way JST to USB micro socket cable
CA0002	4-way Lemo to banana plugs power cable
CA3900	4-way JST to 4-way Lemo power cable
CA3903 x 2	MMCX plug to SMA 200mm

#### Boxed Product Includes

CA0002	4-way Lemo to banana plugs power cable
CA3172	12V 6.67A 80W PSU with Lemo

#### Accessory Options (sold separately)

AP007377 (PCB/boxed)	USB A to micro USB B cable
CA0001 (PCB)	3-way Lemo to 9-way D-sub RS-232 cable
CA2095 (PCB)	3-way JST to 3-way Lemo cable
CA3752 (PCB)	SMA jack to MMCX plug cable 100mm
CA3865 (PCB)	4-way JST to banana plugs power cable
CA3866 (PCB)	6-way JST to audio phono cable
CA3867 (PCB)	8-way JST to RJ45 Ethernet
CA3983 (PCB)	5-way JST to USB Ethernet adaptor
CA3978 (boxed)	GPIO/RS-232 - 6-way Lemo to free end cable
CA3986 (boxed)	6-way Lemo to 9-way D-sub RS-232 cable



## DTC BluSDR™-30

### DTC BluSDR™ 2x1W Module

#### Technical Specification:

##### IO (Core PCB)

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

##### IO (Boxed)

RF COFDM transceiver A	SMA 50Ω (female)
RF COFDM transceiver B	SMA 50Ω (female)
Power input	4-way circular USB2 with power delivery (USB PD)
Gigabit Ethernet	RJ45
USB1 control and download	USB Type-A
USB2 control and download	USB Type-C
Analogue audio	3.5mm jack
GPIO and RS-232 serial	6-way circular

##### COFDM Transceivers

Power	1W (+30dBm) max per output, 2W total
Power step	0.25dB incremental control
Tuning step	125kHz
Bandwidth	1.25, 1.5, 1.75, 2.5, 3.0, 3.5, 5.0, 6.0, 7.0, 8.0, 10.0MHz (all modes) 12.0, 14.0, 16.0, 20.0MHz (MeshUltra only)
Mesh capacity	Up to 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)

##### Audio

Interface	Analogue microphone/headphone with bias
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##### Data

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

##### Encryption

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

##### Storage

Medium	Internal microSD 128GB
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##### Physical (Core PCB)

Dimensions	95mm x 60mm x 15mm
Weight	110g

##### Physical (Boxed)

Dimensions	150mm (160mm incl. connectors) x 75mm x 24mm
Weight	462g approx.

##### Power

DC input	8V to 17V overvoltage protected up to 30V
Power consumption	7W IP Mesh typ.

##### Environment

Temperature range	-20°C to +55°C with additional cooling
Humidity	Less than 85% non-condensing



## DTC BluSDR™-30

### DTC BluSDR™ 2x1W Module

#### 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

\* In development

##### License Options

Point-to-point link capability included as standard

BLUSDR-MESH	IP Mesh upgrade for BluSDR products
BLUSDR-IAS	Interference Avoidance Scheme for Mesh
#AES128TX	AES 128-Bit Encryption
#AES256TX	AES 256-Bit and AES 128-Bit Encryption

# 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.enquiries@domotactical.com](mailto:solent.enquiries@domotactical.com)

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