

SOLO4 – Miniature Robust Transmitter

COFDM – Video, Audio Telemetry and IP Products

COBHAM

September 2011 Data Sheet

The most important thing we build is trust



MRTX - Miniature Robust Transmitter

The Robust SOLO4 Transmitter unit from Cobham Tactical Communications and Surveillance is a feature-rich COFDM digital video transmitter, which can operate in a variety of transmission bandwidths allowing the user to trade off image quality against range, to suit all types of missions. Excellent range, performance and spectral efficiency are offered when operating in the unique 2.5MHz, 1.25MHz and 625kHz narrow bandwidth modes.

The Robust SOLO4 Transmitter has Cobham technology at its core and is ideal for establishing prolonged rugged wireless video links, in harsh external environments, including mobile and urban environments. Security is ensured with our built-in 32 bit ABS encryption or, for greater security, AES128/256 bit encryption is also available, subject to export controls. The Robust SOLO4 Transmitter is available in a variety of frequency bands from 300MHz to 6.0GHz.

Able to transmit images in a Non-Line of Sight (NLOS) environment up to 750m depending on mode and frequency, the Robust SOLO4 Transmitter can achieve even further range with the fitment of the internal 1W booster PA (optional).

Supplied in a sealed IP 67 rated aluminium enclosure, the Robust SOLO4 Transmitter can be used in a variety of applications and is available in microwave and UHF frequencies.

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Specification:

Input

12V DC In	3 pin amphenol
Comp Video/Audio/Ctrl/Data	13 pin amphenol
Blank	4 pin amphenol
ASI In	BNC

Output

RF Out	TNC
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RF

Frequency Bands	300 to 450 MHz 1.0 to 1.50 GHz 1.65 to 2.50 GHz 4.4 to 5.00 GHz 5.5 to 6.00 GHz
Power	100mW 1W (optional and dependant on band)
Power Control	20dB in 1dB steps
Tuning Steps	250 kHz

Modulation

Bandwidths (DVB-T or SOLO)	8/7/6/2.5MHz (1.25MHz, 625kHz optional)
Default Modes:	
Mode 1 - Short Range	2.5MHz, 16QAM, FEC2/3, 4.8Mb/s
Mode 2 - Normal Range	2.5MHz, QPSK, FEC2/3, 2.4Mb/s
Mode 3 - Long Range	2.5MHz, QPSK, FEC1/3, 1.2Mb/s
Mode 4 - Ultra Long Range	(1.25MHz, QPSK, FEC1/3, optional)
Mode 5 – Ultra-X Narrow	(625kHz, QPSK, FEC1/3 optional)

Video

Line Standard	PAL/NTSC
Resolution	704, 528, 480, 352
Coding Mode	MPEG2 (MPEG4 optional)
Delay	43ms to 500ms depending on mode
Frame Rate	Full/Half/Quarter/Eighth (selectable)

Audio

Input	Line Level or Microphone
Sample Rate	32kHz, 16kHz, 8kHz switchable
Bits per Sample	12 or 8 bit switchable

Data Interface

RS232 Data Input	1k2 to 115k2 baud switchable
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Encryption

Format	ABS 32 bit as standard AES128/256 (optional)
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Control

Remote Control	Field programmer or RS232
Local Control	Front Panel 8 config select, RF on/off, Range mode, Lock, Alarm

Physical

Dimension	L 150mm, W 120mm, H 35mm
Weight	Unit Weight 100mW =674g, 1W=819g

Power

DC Input	10 to 16V
Power Consumption	4.8 to 13W depending on mode/PA

Environment

Temperature Range	-20 to +50 deg C
Sealing	IP67

Product Codes:

100mW units

MRTX -440500	MRTX 100mW 4.40-5.00GHz
MRTX -300370	MRTX 100mW 3.00-3.70GHz
MRTX -165250	MRTX 100mW 1.65-2.50GHz
MRTX -100150	MRTX 100mW 1.00-1.50GHz
MRTX -030045	MRTX 100mW 300-450MHz

1W units

MRTX1W -165250	MRTX 1W 1.65-2.50GHz
MRTX1W -100150	MRTX 1W 1.00-1.50GHz
MRTX1W -030045	MRTX 1W 300-450MHz

Product Code Includes

1 x CA0006	BNC Video Lead 3m
1 x CA0252	Robust external shielded power cable 2M
1 x CA0653	External Vid/Aud/Ctrl Cable Assembly 1.5M

Accessory Options

FCON	Frequency and Encryption Controller
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Licensing Options

TX-UP	Upgrade from 2.5MHz to 1.25MHz
TX-UPX	Upgrade from 1.25MHz to 625kHz
AES128TX	AES Transmitter 128 Bit encryption
AES256TX	AES Transmitter 256 Bit encryption

For further information please contact:

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Products are available to security users only, in licensed frequency bands. These products are not approved for use by unlicensed users.

Commercial products are available to unlicensed users - contact Cobham Tactical Communications and Surveillance direct for details.

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