

SOLO5 - Transmitter

COFDM – Video, Audio Telemetry and IP Products

COBHAM

September 2011 Data Sheet

The most important thing we build is trust

The SOLO5 Transmitter from Cobham Tactical Communications and Surveillance is a feature-rich COFDM digital video transmitter. The SOLO5 Transmitter can operate in a variety of transmission bandwidths allowing the user to trade off image quality against range to suite all types of missions. Excellent range, performance and spectral efficiency are offered when operating in the 2.5MHz/1.25MHz and in the 625kHz narrow bandwidth modes. For excellent image quality at shorter ranges the 8MHz DVB-T modulation can be employed. The SOLO5 Transmitter is the first to offer this choice in one product. MPEG2 and MPEG4 image compression is also a user selectable feature.

The SOLO5 Transmitter has Cobham technology at its core and is ideal for establishing rugged wireless video links in all environments including mobile and urban environments. Security is ensured with built-in 32 bit ABS encryption or, for greater security, AES128/256 bit encryption is also available, subject to export controls. The SOLO5 Transmitter is available in a variety of frequency bands from 300MHz to 6.0GHz.

Able to transmit images from 200m to 16Km depending on-line-of-sight conditions, frequency, bandwidth and the environment. The SOLO5 Transmitter can achieve further range with the 1W clip-on booster PA.

The SOLO5 Transmitter is typically used as a stand-alone uni-directional video link, however if a bi-directional system is required, it can be deployed in conjunction with the SOLO Telemetry system.

The Solo5 transmitter is small, lightweight and weather proof. It is highly power efficient drawing only 4W at 12V and can run off batteries or mains using anywhere between 6-16V. This makes it ideal for indoor or outdoor deployments, used as a body worn application or mounted on any kind of vehicle, manned or unmanned, in any overt or covert applications.



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Specification:

Input

Composite Video	5 pin OB Lemo
Audio 1	5 pin OB Lemo
Audio 2	5 pin OB Lemo
SVideo	Hirose 16 pin 3500 series
RS232 Data	Hirose 16 pin 3500 series
RS232 Control	Hirose 16 pin 3500 series
Chaining I/O	Hirose 16 pin 3500 series
General Purpose I/O	Hirose 16 pin 3500 series
Power	4 pin OB Lemo

Output

RF Output	SMA (f)
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RF

Frequency Bands	300MHz – 6GHz
Power	100mW
Power Control	30dB in 1dB steps
Tuning Steps	250kHz

Video – Default modes see table below

Line Standard	PAL/NTSC
Resolution	704, 528, 480, 352
Coding Mode	MPEG2 (MPEG4 optional)
Delay	59ms to 908ms depending on mode
Frame Rate	MPEG 2 - 25f/s MPEG4 - Selectable 1f/s to 25f/s

Audio

Input	Line Level or Microphone
Sample Rate NICAM	32kHz, 16kHz, 8kHz switchable
Bits per Sample NICAM	12 or 8 bit switchable
MPEG L2 or L2	64kbits – 384kbits 48kHz sampling

Data Interface

RS232 Data Input	1K2 to 115K2 baud switchable
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Default Modes:

	Lights	Range	Bandwidth	MPEG	Modulation	FEC	Resolution	Bit Rate	Frame Rate	Delay End to End
1	Solid	Short	2.5MHz	2	16 QAM	2/3	704	4.7Mb/s	25f/s	59ms
2	Solid	Medium	2.5MHz	2	QPSK	2/3	528	2.3Mb/s	25f/s	59ms
3	Solid	Long	2.5MHz	2	QPSK	1/3	528	1.1Mb/s	25f/s	128ms
			*(upgrade)	4	QPSK	1/3	528	1.1Mb/s	25f/s	153ms
4	Solid	Ultra	1.25MHz	4	QPSK	1/3	528	530kb/s	12.5f/s	700ms
5	Flash Slow	Ultra X	625kHz	4	QPSK	1/3	CIF	260kb/s	25f/s	908ms
6	Flash Fast	Ultra X	625kHz	4	BPSK	1/3	QCIF	82kb/s	6.25f/s	908ms

Encryption

Format	ABS 32 bit as standard AES128 and AES256 (optional)
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Control

Remote Control	RS232 Control from PC GUI Application
Local Control	Front Panel 16 channel select, RF on/off, Range mode, Lock, Alarm

Physical

Dimension	L 102mm, W 71mm, H 22mm
Unit Weight	217g

Power

DC Input	5.9 to 16V Reverse Polarity Protected
Power Consumption	3.7 W to 4.1W depending on mode

Environment

Temperature Range	-20 to +70 deg C
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Product Codes:

SOL5TX-550600	Solo5 TX 5.50-6.00GHz
SOL5TX-440500	Solo5 TX 4.40-5.00GHz
SOL5TX-300370	Solo5 TX 3.00-3.70GHz
SOL5TX-165250	Solo5 TX 1.65-2.50GHz
SOL5TX-100150	Solo5 TX 1.00-1.50GHz
SOL5TX-045067	Solo5 TX 450-675MHz
SOL5TX-030045	Solo5 TX 300-450MHz

Product Code Includes

1 x CA0002	SOLO 12V DC Power Lead Lemo-wire 3m
1 x CA0063	3rd Generation Man-worn Control Cable
1 x CA0122	3rd Generation Bodycam AV Cable Lemo-BNC/Phono 2m

Accessory Options

None

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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