

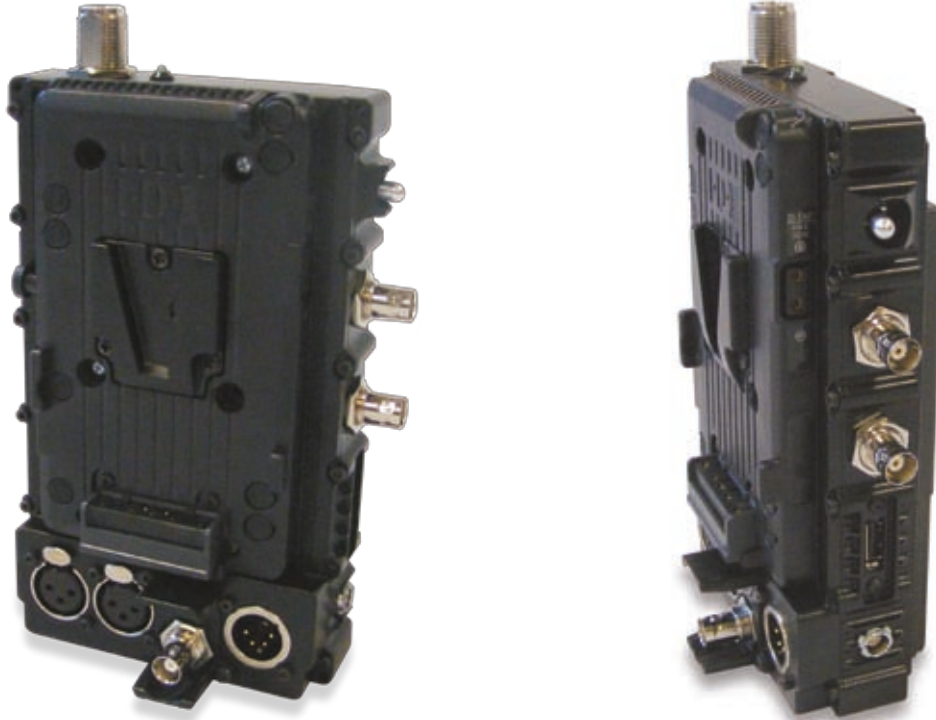
# SOLO ENG H.264 COFDM Transmitter

COFDM - Video, Audio Telemetry and IP Products

**COBHAM**

June 2011 Data Sheet

The most important thing we build is trust



The SOLO ENG Transmitter from Cobham is a rugged, SD/HD COFDM digital video transmitter specifically designed for Electronic News Gathering (ENG) applications. The unit docks neatly onto all types of ENG cameras via integrated V-mount or AB battery plates.

Standard broadcast connectors are used for video (BNC), audio (XLR3) and power (XLR4) inputs and are accessed via a horizontal connection panel. This eliminates clashes with the camera's own connectors, minimises cable strain and enables the camera to be placed on the ground when not in use.

The increased compression and efficiency of the MPEG4 H.264 encoder offers users additional range with the added benefit of small size, low latency and low power consumption. In particular, HD transmission is possible using 40% lower bit-rates than conventional MPEG2 systems, enabling true HD transmission in a single 8MHz DVB-T channel whilst using robust modulation settings. Able to transmit images in a non-line of sight environment up to 1km depending on mode and frequency, the ENG Transmitter can achieve even greater range with an optional clip-on booster PA.

The transmitter can operate in a variety of transmission bandwidths, allowing the user to trade off image quality against range to suit all types of applications. Excellent range, performance and spectral efficiency

are offered when operating in the optional narrow bandwidth mode, which, combined with the ultra efficient H.264 encoding, allows true broadcast quality pictures to be transmitted in only 2.5MHz bandwidth. This enables users to maximise usage of limited RF spectrum as 2 or 3 cameras can occupy the bandwidth previously required by a single MPEG2 system. All modes of DVB-T modulation are also supported.

Designed to offer maximum flexibility in the pressurised and rapidly-changing ENG environment, the unit has a variety of video input options including composite, SDI, HD-SDI and HDMI – particularly useful when accessing material in the field from prosumer and semi-professional equipment. Analogue audio inputs feature switchable mic/Line level with variable gain and P12 microphone powering. AES and SDI/HD-SDI embedded audio inputs are also offered as standard. An optional ASI in/out interface is also available, enabling the unit to be used as a stand-alone encoder or modulator.

The SOLO ENG Transmitter has an integrated control panel with sunlight-readable OLED display covering all major functions and has 16 user-defined presets. A power on-off switch is also provided to minimise camera battery consumption when the RF link is not in use. A wide range of RF frequency bands is available from 340MHz to 8.2GHz. Users can upgrade the RF section to an alternative frequency band as a low-cost option.

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## Specification:

### Input

SD Composite Video	BNC
SD/HD-SDI	BNC
HDMI	HDMI Type A
ASI In	BNC (option)
Balanced Stereo Audio	2x XLR3-F
USB Control	6-way OB Lemo
Power	XLR4-M
Data channel	4-way OB Lemo

### Output

RF	N(f)
ASI Out	BNC (option)

### RF

Frequency Bands	340-470MHz, 2.0-2.5GHz, 2.5-3.0GHz, 3.0-3.5GHz 5.5-6.0GHz, 6.5-7.0GHz*, 7.0-7.5GHz*, 8.1-8.6GHz
Tuning Step Size	250kHz
O/P Power	100mW

### Modulation

DVB-T Bandwidth	8, 7 and 6MHz modes
DVB-T Guard	1/32, 1/16, 1/8, 1/4
DVB-T FEC	1/2, 2/3, 3/4, 5/6, 7/8
DVB-T Modulation	QPSK, 16QAM, 64QAM
Sensitivity	-95dBm best case mode
Domo Narrow-Band	2.5MHz mode
Sensitivity	-102dBm best case mode

### Video

Video Input	SD/HD-SDI, HDMI, Composite
Compression Type	AVC / H.264 / MPEG-4 Part 10
HD Resolution modes	1920*1080i @30/29.97/25 1920*1080p @30/29.97/25/24/23.97 1920*1080psf @30/29.97/25/24/23.97 1280*720p @60/59.94/50
SD Resolution modes	720*480i @29.97, 720*576i @25
Coding Mode	High profile level 4.1, I/PP 4:2:0 Progressive or Interlaced (MBAFF)
Encoder Delay	<100ms end-to-end
Encoder Bitrates	0.25 to 30Mb/s

### Audio

Audio Inputs	SD/HD-SDI, HDMI 2 digital stereo pairs 1x Analogue stereo pair Mic/Line level P12 switchable phantom power
Sample Rate	48 kHz
Coding Modes	2 channels stereo or mono MPEG Audio Layer 1 64-448kbps MPEG Audio Layer 2 48-384kbps

### Data Interface

RS232 Data Input	1k2 to 115k2 baud switchable 7/8 bit, none/odd/even parity
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### Control

Front Panel	Integrated Control Panel + OLED display
Remote Control	USB Control from PC GUI Application

### Physical

Dimensions	H 200mm, W 110mm, D 71mm
Weight Base Unit	900g

### Power

DC Input	6 to 16V Reverse Polarity Protected
Power Consumption	10W

### Environment

Temperature Range	-10 to +50o C
Sealing	Splash Proof

### Product Code:

ENGTX-034047	ENG H.264 SD TX 340-470MHz 100mW
ENGTX-200250	ENG H.264 SD TX 2.0-2.5GHz 100mW
ENGTX-250300	ENG H.264 SD TX 2.5-3.0GHz 100mW
ENGTX-300350	ENG H.264 SD TX 3.0-3.5GHz 100mW
ENGTX-550600	ENG H.264 SD TX 5.5-6.0GHz 100mW
ENGTX-650700	ENG H.264 SD TX 6.5-7.0GHz* 100mW
ENGTX-750800	ENG H.264 SD TX 7.0-7.5GHz* 100mW
ENGTX-810860	ENG H.264 SD TX 8.1-8.6GHz 100mW

### Options

TX-VBAT	V-Mount Battery Plates
TX-ABBAT	AB Battery Plates
TX-HDUP	Upgrade SD unit to HD
TX-NBUP	Enable 0.625/1.25/2.5MHz
TX-RFUP-xxxxxx	RF Band Swap
TX-ASIUP	ASI in/out BNCs

### Supplied Accessories

Flexible Omni Antenna
USB Control Cable
RS232 Data Input Cable
DC input cable XLR4F to bare ends 3m

For further information please contact:

### Cobham Tactical Communications and Surveillance

Broadcast Products

The Cobham Centre – Solent, Fusion 2

1100 Parkway, Solent Business Park

Whiteley, Hampshire

PO15 7AB, UK

T: +44 (0)1489 566 750

F: +44 (0)1489 880 538

css.sales@cobham.com

All product specifications are subject to change without notice.

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\* = Currently under development

