

# H.264 SD/HD Encoder

COFDM – Video, Audio Telemetry and IP Products

**COBHAM**

September 2011 Data Sheet

The most important thing we build is trust



The SOLO H.264 Encoder from Cobham is a rugged, High Definition digital video encoder, ideal for law enforcement surveillance or sports and news links applications. A range of upgrade options allow flexible customisation to purpose.

The increased compression and efficiency of the MPEG4 H.264 encoder in Cobham's SD and HD solution offers users additional bit rate savings with the added benefit of small size, low latency and low power consumption. An ASI output allows for connection with 3<sup>rd</sup> party transmitters.

Equipped with SD/HD-SDI, HDMI and composite video interface and audio de-embedding, the SOLO H.264 encoder can be easily connected to any camera type. A range of camera brackets are available to facilitate easy mounting of the SOLO H.264 encoder to satisfy many different camera styles.

With an optional bright OLED front panel you have the ability to adjust parameters in the field without the use of a PC.

With an optional RF output upgrade. The H.264 encoder can operate in a variety of transmission bandwidths allowing the user to trade off image quality against range to suite all types of applications. For excellent image quality the 8MHz DVB-T modulation can be employed. Excellent range, performance and spectral efficiency are offered when operating in the optional 2.5MHz/1.25MHz/625kHz narrow bandwidth modes. A range of frequencies from 230MHz to 8.6GHz are available to suit your needs.

Greater security of the transmission can be ensured using the optional internal AES128/256.

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## Specification:

### Input

SD Composite Video	BNC
SD/HD-SDI	BNC
HDMI	HDMI Type A
ASI In	SMB
Balanced Stereo Audio	5 way OB Lemo
RS232 (optional USB) Control	3 (6) way OB Lemo
Power	4 way OB Lemo
Data channel	4 way OB Lemo

### Output

RF (optional)	SMA
ASI Out	SMB

### RF (with TX-RFUP option)

Frequency Bands	Frequencies available on request from 230MHz to 8.6GHz
Tuning Step Size	250kHz
O/P Power	100mW

### DVB-T Modulation (with TX-RFUP option)

DVB-T Bandwidth	8MHz, 7MHz 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
DVB-T Bit-rates	3.6Mbps to 32Mbps

### Narrowband Modulation (with TX-RFUP + TX-NBUP options)

SOLO Bandwidth	2.5MHz, 1.25MHz and 625kHz modes
SOLO Guard	1/16, 1/8
SOLO FEC	1/3, 2/3
SOLO Modulation	QPSK, 16QAM, BPSK, 8PSK
SOLO Bit-rates	140kbps to 4.8Mbps

### Video

Video Input	SD-SDI, HDMI, Composite
Compression Type	AVC/H.264/MPEG-4 Part 10
SD Resolution modes	720x480i 59.94Hz, 720x576i 50Hz
Other modes	Horizontal downsampling of 3/4, 2/3, 1/2 Vertical downsampling of 1/2 Sub-frame rate of 1/2, 1/4, 1/8, 1/24
Coding Mode	High profile level 4.1, I/IP 4:2:0 Progressive or Interlaced (MBAFF)
Encoder Delay	<65ms in low delay mode Variable in standard delay mode
Encoder Bitrates	0.25 to 30Mb/s

### HD Video (with TX-HDUP option)

Video Input	HD-SDI, HDMI
HD Resolution modes	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

### Audio

Audio Input	SD/HD-SDI, HDMI 2 digital stereo pairs 1 Analogue stereo pair Mic/Aux level
Sample Rate	48kHz
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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### ASI

Mode	Byte Mode
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### Encryption

Type	AES 32bit as standard AES128/256 (optional)
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### Control (without TX-CTRLUP)

Remote Control	RS232 Control from PC GUI Application or other control source
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### Control (with TX-CTRLUP)

Front Panel	Integrated Field Controller 2 Buttons and OLED Screen
Remote Control	USB Control from PC GUI Application

### Physical

Dimensions	L 130mm, W 80mm, H 30mm
Weight Base Unit	370g with TX-RFUP and TX-CTRLUP

### Power

DC Input	6 to 17V Reverse Polarity Protected
Power Consumption	SD encoding - 5.0W (worse case) HD encoding - 8.4W (worse case) with TX-RFUP add 4.2W (100mW RF) with TX-CTRLUP add 0.4W

### Environment

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

## Product Codes:

**SOLH264ENC** - H.264 SD Encoder, Comp/SDI/HD-SDI/HDMI in, ASI Out

### Product Code Includes

RS232 Control Cable (or USB Control Cable with TX-CTRLUP)	
XLR Audio Input Cable	RS232 Data Input Cable
DC Power Input Cable	BNC Video Lead

### Accessory Options

TX-HDUP	HD Encoder Upgrade
TX-CTRLUP	Front Panel / USB Upgrade
TX-RFUP-xxxxxx	RF Output Upgrade / Band Swap
HDTXBRAC-V	V-Mount Camera Bracket

### Licensing Options

TX-NBUP	2.5MHz/1.25MHz/625kHz Narrowband Modulation
AES128TX	AES 128 Internal Encryption
AES256TX	AES 256 Internal Encryption

For further information please contact:

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