



The E5740 is a future proof DSNG system allowing deployment in a variety of applications from low data rate flyaways to high bandwidth, multi-channel SNG trucks.



## Business Benefit

### Quick and easy to set up

- Clear front panel display with intuitive menu navigation
- Input confidence monitoring
- Automatic parameter calculations

### Top performance video and satellite transmission

- TANDBERG Television's 5<sup>th</sup> generation MPEG-2 video encoder
- QPSK modulator upgradeable to 8PSK and 16 QAM

### Highly versatile and cost-effective

- IF or L-band output options
- Integrated comms options
- Extensive range of software and hardware options to tailor to specific requirements

## Application

The E5740 can be deployed within Digital Satellite News Gathering (DSNG) systems requiring either L-Band or IF modulation output capability in an upgradeable 2 rack unit chassis.

## Base units

The encoder platform has the flexibility and performance to meet the needs of a wide variety of outside broadcast (OB) applications. Packaged in a 2 rack unit chassis the E5740 can be upgraded with both an IRD and SNG comms card to offer a complete uplink and comms system.

The two modulator configurations allow the E5740 to be applied to a wide range of DSNG applications that interface at either L-Band or IF.

Voyager E5740 L-BAND DSNG (M2/VOY/E5740-LBAND or M2/VOY/E5740-LBAND/12-36V)

Voyager E5740 IF DSNG (M2/VOY/E5740-IF or M2/VOY/E5740-IF/12-36V)

## Software Options

### Performance Upgrade (M2/ESO2/PU)

The Performance Upgrade enables patented Tandberg Television advanced coding algorithms that increase the coding efficiency by at least 0.75Mbps per channel.

### Low symbol rate software option (M2/ESO2/LSYM)

Low symbol rate operation, down to 300 kSym/s, allows operation on a tight link budget using low power amplifiers and small dishes.

### 8PSK (M2/ESO2/SM38PSK) / 16 QAM (M2/ESO2/SM316QAM)

Higher Order Modulation upgrade.

### Auto Concatenation (M2/ESO2/ACON)

Aligns the encoder to the previous encoder's GOP structure to significantly reduce coding artefacts caused by successive coding and decoding.

### Noise Reduction (M2/ESO2/NR)

Three levels of adaptive noise reduction

## Software Options (continued)

### **MPEG-2 422P @ ML (M2/ESO2/422)**

For professional editing quality pictures, 1.5Mbps to 50Mbps

### **RAS (M2/ESO2/RAS)**

Allows material to be protected from illegal viewing using TANDBERG Television's proprietary scrambling system.

### **Dolby Digital® (AC-3) encoding (M2/ESO2/AC3)**

Enables Dolby Digital® (AC-3) encoding of a stereo pair.

## Hardware Options

### **FXS SNG Communications Card**

4 FXS/Tipline Voice, serial data (V.24, V.11, RS530, V.35 or RS449) and IP / network connection (10/100 base-T)

**TP/COMMS/FXS**

### **FXS Software Upgrade for additional 4 FXS Channels**

### **FXS Software Upgrade for STU-IIB/STU-III relay on first 4 voice channels**

**TP/VOC/SWO/FXS8**

**TP/VOC/SWO/STU**

### **FXO SNG Communications Card**

4 FXO/Tipline Voice, serial data (V.24, V.11, RS530, V.35 or RS449) and IP / network connection (10/100 base-T)

**TP/COMMS/FXO**

### **FXO Software Upgrade for additional 4 FXO Channels**

### **FXO Software Upgrade for STU-IIB/STU-III relay on first 4 voice channels**

**TP/VOC/SWO/FXO8**

**TP/VOC/SWO/STU**

### **Audio Option Card (M2/EOM2/AUDLIN)**

- The audio option card supports two stereo pairs.
- MPEG Layer II audio encoding standard
- Dolby Digital® (AC-3) encoding
- Dolby Digital® (AC-3) 1 – 5.1 channel pass-through
- Audio option card to support Linear PCM pass through, Dolby E pass through and DTS pass through.

Up to two audio option cards may be fitted in an E5710 supporting 6 stereo pairs.

### **IP Output (M2/EOM2/IP)**

The IP card conforms to the DVB-IPI specification (including FEC) and supports transport stream rates up to 80Mbps.

### **REMUX (M2/EOM2/REMUX)**

The REMUX card will re-multiplex three external transport stream with the locally generated stream. A maximum of 13 services can be multiplexed together. The card supports automatic PID re-mapping.

### **BISS Scrambler Card (M2/EDCOM2/BISS)**

Allows material to be protected from illegal viewing, supports BISS Modes 0, 1 and Mode E for encrypted session words.

### **QPSK direct conversion demodulator hardware option (M2/EOM2/QPSKDEMOM)**

Implements QPSK demodulation capable of supporting low symbol rates

### **DVB-S demodulator (QPSK, 8 PSK and 16 QAM) hardware option (M2/EOM2/SATDEMOM)**

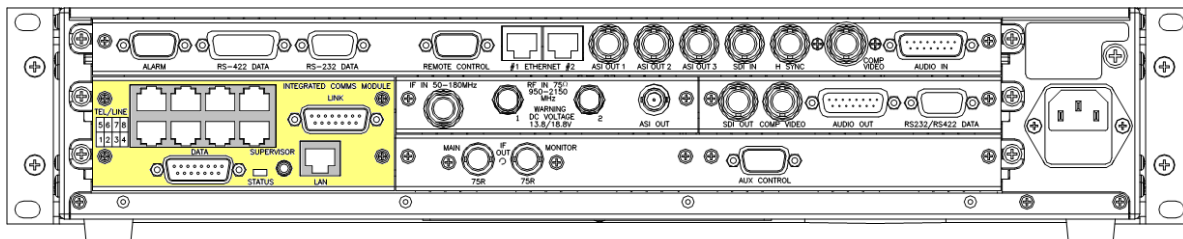
Implements all DVB-S demodulation modes

### **MPEG decoder hardware option (M2/EOM2/DEC)**

Complete MPEG decoder capable of decoding all MPEG modes supported by the encoder



Sample configuration: E5714-IF with Vocality SNG Comms card, QPSK demodulator and SD decoder options



<b>INPUTS</b>	<p><b>Video:</b> SDI Serial Digital video with EDH error detection and health monitoring Analogue composite video (PAL/NTSC) SDI component 625 and 525 line standard supported HSYNC support for 625 and 525 line</p> <p><b>Audio:</b> 2 stereo pairs input via; analogue audio balanced 600 <math>\Omega</math>/20k<math>\Omega</math> or AES-EBU or SDI Up to 4 stereo pairs can be de-embedded from SDI</p>	<b>ADVANCED PRE-PROCESSING</b> <p>"Pixel Perfect" fully exhaustive motion estimation TANDBERG professional grade adaptive spatio &amp; temporal noise reduction (option) "Auto-Concatenation" I frame detection and alignment system option Film mode inverse 3:2 pulldown Frame re-synchronisation Image re-sizing filters from full to <math>\frac{3}{4}</math>, <math>\frac{2}{3}</math>, <math>\frac{1}{2}</math> or <math>\frac{1}{4}</math> resolution</p>
<b>OUTPUTS</b>	<p><b>IF Output Option</b> IF Frequency: 50 to 180 MHz (1kHz steps) Output Power: -20 to +5 dBm (0.1 dB steps) Monitor Output: -20 dB relative to main IF output.</p> <p><b>L-Band Output Option</b> Frequency: 950 to 1750 MHz (1kHz steps) Output Power: -20 to +5 dBm (0.1 dB steps) Monitor Output: -30 dB relative to main output Upconverter Power: +24VDC, 500mA max, switchable on/off</p> <p><b>Signal conditioning:</b> EN 300 421 (DVB-S) and EN 301 210 (DVB-DSNG) Modulation: QPSK, 8-PSK (option) and 16-QAM (option) Symbol rate: 1 to 48 MSym/s variable in 1 Sym/s increments Spectrum roll-off factor <math>\alpha</math>: 0.25 or 0.35 user selectable</p> <p><b>Transport Stream:</b> 3 x ASI Single Programme Transport Stream</p>	<b>FEATURES</b> <p>Selectable range of delay modes for low latency Front panel LCD with easy set up and operation 16 fully adjustable operational configurations Internal test tone and test pattern generation Auto switching on loss of input source to test pattern, coloured image, last good video frame with selectable text Logo insertion</p>
<b>VIDEO ENCODER</b>	<p>MPEG-2 4:2:0 MP@ML 0.256 to 15Mbit/s (with performance upgrade) MPEG-2 4:2:0 MP@ML 1.5 to 15Mbit/s (without performance upgrade) MPEG-2 422P@ML 1.5 to 50Mbit/s (option)</p>	<b>CONTROL</b> <p>Front panel LCD with quick access keys and alpha numeric keypad RS-232 &amp; RS-485 interfaces for remote control Support for external SNMP control.</p>
<b>AUDIO ENCODER</b>	<p>2 x stereo audio channel processing MPEG Layer II audio encoding standard</p> <ul style="list-style-type: none"> <li>• encoding rates from 32kbps to 384kbps</li> <li>• encoding rates from 56kbps to 640kbps</li> </ul> <p>Dolby Digital® (AC-3) Dolby Digital® (AC-3) 1 – 5.1 channel pass-through, linear PCM and DTS pass-through</p>	<b>PHYSICAL AND POWER</b> <p><b>Dimensions:</b> (W x D x H) 442.5 x 545 x 88.9mm (17.5" x 20.7" x 2RU)</p> <p><b>Approx Weight:</b> 11.5kg</p> <p><b>Power Input:</b> 100 – 120 Vac or 220 – 240 Vac wide ranging DC 12-36V option available</p> <p><b>Consumption:</b> 110W no options. 250W maximum, depending on the option cards selected</p>
<b>VBI</b>	<p><b>Supported VBI:</b> World Standard Text (WST – ETS300472) 625 only Closed Captioning Nielson data AMOL I &amp; AMOL II 525 only Video Index and Active Format Descriptor (AFD) Video programming signal (VPS) 625 only Wide screen signalling (WSS) 625 only</p>	

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Europe, Middle East and Africa +44 (0)23 8048 4666  
Americas +1 407 380 7055

Asia +852 2899 7000  
Australasia +61 2 9356 8599

www.tandbergtv.com