



The compact E5710 is the best performing MPEG-2 real-time encoder for distribution and broadcast applications available on the market.



Business Benefits

- Easily adaptable to a wide range of professional applications requiring top level performance and functionality
- Retain your viewers with the highest performance compression and flawless picture quality
- Maximize bandwidth utilization by minimizing bit-rates. This is achieved by a unique combination of pre-processing and encoding techniques
- Gain even more bandwidth efficiency by working collaboratively with other encoders in a Reflex (statistical multiplexing) group

Application

Its compact size and low-bit rate performance make the E5710 an ideal component in multi-channel solutions for Broadband DSL/FTTH, Cable, Satellite, Digital Terrestrial or Distribution applications.

Base units

E5710 Encoder (M2/ENC/E5710)

The encoder features 2 physical expansion slots for hardware options and has a range of software enabled options for flexibility to suit specific applications.

- SDI and composite Video inputs
- Analogue, digital AES-EBU and embedded SDI audio input
- 3 ASI outputs
- Control via front panel, SNMP, RS-232/RS-485, web browser or TANDBERG nCompass Control systems

Software options

Performance Upgrade (M2/ESO2/PU)

The Performance Upgrade enables advanced TANDBERG Television coding algorithms that increase the efficiency by at least 0.75Mbps per channel. It also reduces the lower bit-rate limit to 256kbit/s.

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 professional-grade adaptive noise reduction.

Reflex and VBR (M2/ESO2/VBR)

Automatic variable bit-rate at a fixed quality setting for optimum bandwidth usage in stand-alone or Reflex™ statistical multiplexing modes.

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

For professional editing quality pictures, 1.5Mbps to 50Mbps.

Software options (continued)

RAS (M2/ESO2/RAS)

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

Dolby AC-3 Two Channel Encoding (M2/ESO2/AC3)

Enables Dolby Digital (AC-3) stereo encoding.

DTS (Digital Theatre Sound) (M2/ESO2/DTS)

Enables pass through of pre encoded DTS audio.

Hardware options

Please contact TANDBERG Television or an approved reseller to confirm which combinations of options are supported.

Audio Option Card (M2/EOM2/AUDLIN2)

- Two stereo pairs supported per card
- Analogue input levels: 12, 15, 18, 21, 22 and 24dB
- MPEG Layer II audio encoding
- Dolby Digital® (AC-3) encoding
- Dolby Digital® (AC-3) 1 – 5.1 channel and Dolby E pass-through
- Linear PCM and DTS pass-through

Up to two audio option cards may be fitted supporting a total of 6 stereo pairs in the unit.

IP Output (M2/EOM2/IP)

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

G703 Output (M2/EOM2/G703)

The G703 card supports both DS-3 at 44.736 Mbps and E3 at 34.368 Mbps.

Range of ATM Outputs (M2/EOM2/ATMS34, M2/EOM2/ATMS45, M2/EOM2/ATMS155)

Range of ATM outputs to support AAL-1 & AAL-5.

REMUX (M2/EOM2/REMUX)

The REMUX card will re-multiplex three external transport streams with the locally generated stream. The card supports automatic PID re-mapping and resolves service name conflicts.

The REMUX card also supports the insertion of externally generated dynamic PSIP into the transport stream.

SSI – SMPTE 310 (M2/EOM2/SSI)

This card provides three SSI outputs to support links to 8VSB transmitters in ATSC applications.

ASI Optical (M2/EOM2/ASI-OPT)

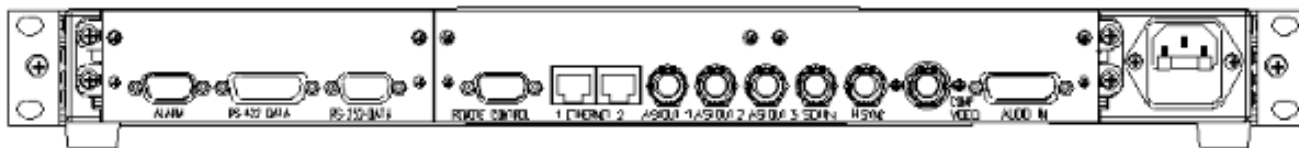
This card provides an ASI optical output as specified by EN 50083-9.

BISS Scrambler Card (M2/EDCOM2/BISS)

BISS (Basic Interoperable Scrambling System) for secure contribution links. Allows material to be protected from unwanted viewing using the BISS open standard. Supports BISS Modes 0, 1 and Mode E for encrypted session words (as defined in EBU Tech 3292 May 2002). This option is a daughter card and so does not occupy an option slot.



Sample configuration:



INPUTS	<p>Video</p> <ul style="list-style-type: none"> 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>Audio</p> <ul style="list-style-type: none"> 2 stereo pairs input via; Analogue audio balanced 600 Ω/20kΩ Input levels: 12, 15, 18, 21, 22 and 24dB AES-EBU or SDI. Up to 4 stereo pairs can be de-embedded from SDI 	FEATURES	<ul style="list-style-type: none"> Selectable range of delay modes for low latency operation 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 message Input freeze frame and audio silence detection Logo insertion
OUTPUTS	<ul style="list-style-type: none"> 3 x ASI copper Single Programme Transport Stream 	CONTROL	<ul style="list-style-type: none"> Front panel LCD with quick access keys TANDBERG nCompass Control supported via dual Ethernet RS-232 & RS-485 interfaces for remote control Support for external SNMP control Support for SNMP traps Full control & monitoring via web browser
VIDEO ENCODER	<p>MPEG-2 4:2:0 MP@ML</p> <ul style="list-style-type: none"> 0.256 to 15Mbit/s (with performance upgrade) 1.5 to 15Mbit/s (without performance upgrade) <p>MPEG-2 4:2:2P@ML (option)</p> <ul style="list-style-type: none"> 1.5 to 50Mbit/s <p>TANDBERG Reflex™ statistical multiplexing support (option)</p>	PHYSICAL AND POWER	<p>Dimensions (w x d x h)</p> <ul style="list-style-type: none"> 442.5 x 545 x 44.5mm (17.5" x 20.7" x 1RU) <p>Approx Weight</p> <ul style="list-style-type: none"> 7.5kg <p>Power Input</p> <ul style="list-style-type: none"> 100 – 120 Vac or 220 – 240 Vac wide ranging, or -48Vdc <p>Consumption</p> <ul style="list-style-type: none"> 85W no options, 150W maximum, depending on the option cards selected
AUDIO ENCODER	<p>2 x stereo audio channel processing</p> <p>MPEG Layer II audio encoding standard</p> <ul style="list-style-type: none"> encoding rates from 32kbps to 384kbps <p>Dolby Digital® (AC-3)</p> <ul style="list-style-type: none"> encoding rates from 56kbps to 640kbps <p>Dolby Digital® (AC-3) 1 – 5.1 channel pass-through, linear PCM and DTS pass-through</p>	ENVIRONMENTAL CONDITIONS	<p>Operating Temperature</p> <ul style="list-style-type: none"> -10°C to 50°C (14°F to 122°F)
VBI	<ul style="list-style-type: none"> World Standard Teletext (WST – ETS300472) 625 only Closed Captioning Nielson data AMOL I & AMOL II 525 only Video Index and Active Format Descriptor (AFD) Video programming signal (VPS) 625 only Wide screen signalling (WSS) 625 only 	COMPLIANCE	<p>CE marked in accordance with EU Low Voltage and EMC Directives</p> <p>EMC Compliance</p> <p>EN55022, EN55024, AS/NZS3548, EN61000-3-2 and FCC CFR47 Part 15B Class A</p> <p>Safety Compliance</p> <p>EN60950, IEC60950</p>
ADVANCED PRE-PROCESSING	<ul style="list-style-type: none"> "Pixel Perfect" fully exhaustive motion estimation TANDBERG professional grade adaptive spatio & temporal noise reduction offering 3 levels (option) "Auto-Concatenation" I frame detection and alignment system – optimizes re-encoding performance (option) Film mode inverse 3:2 pulldown Frame re-synchronisation Image re-sizing filters from full to ¾, ⅔, ½ or ¼ resolution 		

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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