



Based on experience from over ten years of MPEG-2 video compression development, this is the first truly dedicated real-time hardware encoder for Windows Media 9 Series. A dedicated hardware and software implementation of the powerful Microsoft Windows Media Video & Audio 9 algorithms gives the very lowest possible bit-rate for the professional broadcaster or streaming operator.



Business Benefits

- Up to half the bit-rate for the same picture quality compared to existing formats.
- Combine Windows Media 9 Series with professional real time hardware and deliver Windows Media 9 Series in real time at 100kbit/s to 3 Mbit/s.
- Simultaneously encode in Windows Media 9 Series and MPEG-2 enabling easy transitions and targeting of alternative receive devices.
- Better IP network management. Set the bit rate and know that the stream will be on that rate every second of every day whatever the content.
- Enable high value video service to more xDSL customers than ever before.
- Simple to configure without video or broadcast experience.
- Professional grade quality including real-time operation and no frame dropping.
- Space efficient 1U rack mount package.
- Fully integratable into TANDBERG Television TV over IP solution.
- Part of TANDBERG Television's Windows Media 9 Series Pilot system: a pre-packaged small-scale system solution.

Application

- Low bit-rate broadcasting over digital cable, satellite and terrestrial networks
- Broadband operators offering video services over xDSL or FTTH
- Content Delivery Networks
- Video streaming over corporate and hospitality networks
- UMTS and DAB mobile media networks
- Very low bit-rate satellite news gathering
- Surveillance and security systems
- Archiving and clip capture systems
- Digital dailies and remote production

Base units features

EN5920 Encoder (EN5920/BAS)

- SDI video input
- Composite NTSC and PAL video input
- Four audio channels
- Digital and Analogue audio support plus SDI embedded audio
- Advanced video pre-processing
 - Noise reduction
 - Key-frame alignment
 - Broadcast rate control
- Windows Media 9 Series video compression 100 kbit/s to 3 Mbit/s
- Massive range of picture sizes
 - From 720 x 576, full resolution, to 176 x 144, QSIF resolution
- Up to 50% improvement on MPEG-2 depending on resolution and type of content
- Logo insertion (bug burning)
- Easy front panel operation or Web control
- Gigabit Ethernet® output interface
- Quality, power and reliability of dedicated hardware development: No PC, no HDD, no platform OS. Bring broadcast product qualities to low bit-rate applications
- TANDBERG Television can provide a full compression head-end for Windows Media 9 Series with control management and redundancy options



Options

Simultaneous MPEG-2 encoding (EN5920/SWO/MPEG2)

Professional grade MPEG-2 compression engine with DVB ASI output interface.

- Simultaneous broadcasting to multiple networks
- Easy side-by-side testing
- 256kbit/s – 15Mbit/s for 4:2:0, [MP@ML](#)
- 256Kbit/s – 50 Mbit/s for 4:2:2, 422P@ML
- Shared video and audio inputs with Windows Media 9 Encoder
- IP output option for the carriage of MPEG-2 over IP.
- Plus all the other features supported by the E5710 MPEG-2 Encoder

Pilot System

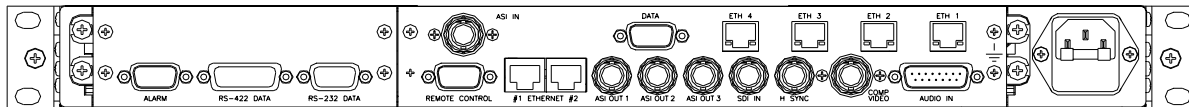
TANDBERG Television offers a pre-packaged Windows Media 9 System to make trials, small-scale deployments or technical evaluations quicker and easier to start and run. This Pilot package includes a complete "Windows Media 9 Series" head-end for delivery of broadcast and on-demand video/audio services as well as consumer premises equipment. Each system is delivered already wired, configured and tested ready to power up and operate. A comprehensive documentation pack is included consisting of a complete set of product and system user guides as well as a clear and concise *Getting Started* guide. The head-end includes:

- Input sub-system turnaround of MPEG-2 signals
- EN5920 encoder
- Streaming/VOD server
- Multicast enabled IP router
- Consumer premises equipment

There is also a DVB/ATSC option for the Windows Media 9 Pilot that will include the additional components to adapt the system for delivery of services over traditional MPEG-2 broadcast networks.



Sample configuration:



INPUTS	<p>Video: SDI serial digital video with EDH error detection and health monitoring Analogue composite video (PAL/NTSC) Black and Burst video HSYNC SDI component 625 and 525 line standard supported HSYNC support for 625 and 525 line</p> <p>Audio: 2 stereo pairs input via; analogue audio balanced 600Ω/20kΩ or AES-EBU or SDI. Up to 4 stereo pairs can be de-embedded from SDI</p>	<p>ADVANCED PRE-PROCESSING</p> <p>TANDBERG professional grade adaptive spatial and temporal noise reduction. Key frame alignment between decoded MPEG-2 feeds and Windows Media 9 Video compression engine. Image resizing from full to 1/2, 1/4 and 1/16 resolution.</p>
OUTPUTS	<p>Gigabit Ethernet® Windows Media 9 Series streaming server interface format DVB-ASI output (part of MPEG-2 option)</p>	<p>FEATURES</p> <p>Easy to Use front panel Web based control Auto input switching Logo insertion Simple pre-configured set ups Accurate bit rate control No frame loss guarantee</p>
VIDEO ENCODER	<p>Windows Media 9 Video compression with customised core for broadcast applications. 0.1 to 3Mbit/s No loss frame retention software MPEG-2 professional MP@ML 4:2:0 encoder 0.256 – 15 Mbit/s (part of MPEG-2 option)</p>	<p>PHYSICAL AND POWER</p> <p>Dimensions: (W x D x H) 442.5 x 545 x 44.5mm (17.5" x 20.7" x 1RU) Approx Weight: 7.5kg Power Input: 100 – 120 Vac or 220 – 240 Vac wide ranging, or – 48Vdc</p>
AUDIO ENCODER	<p>2 x stereo audio channels with Windows Media 9 Audio encoder 8 kbit/s to 192 kbit/s. MPEG Layer II audio encoding (part of MPEG-2 option)</p>	<p>ENVIRONMENTAL CONDITIONS</p> <p>Operating Temperature: -10°C to 50°C (14°F to 122°F)</p>
		<p>COMPLIANCE</p> <p>CE marked in accordance with EU Low Voltage and EMC Directives EMC Compliance: EN55022, EN55024, AS/NZS3548, EN61000-3-2 and FCC CFR47 Part 15B Class A Safety Compliance: EN60950, IE60950</p>

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