



Multichannel Playout MPEG Encoder / TS Multiplexer

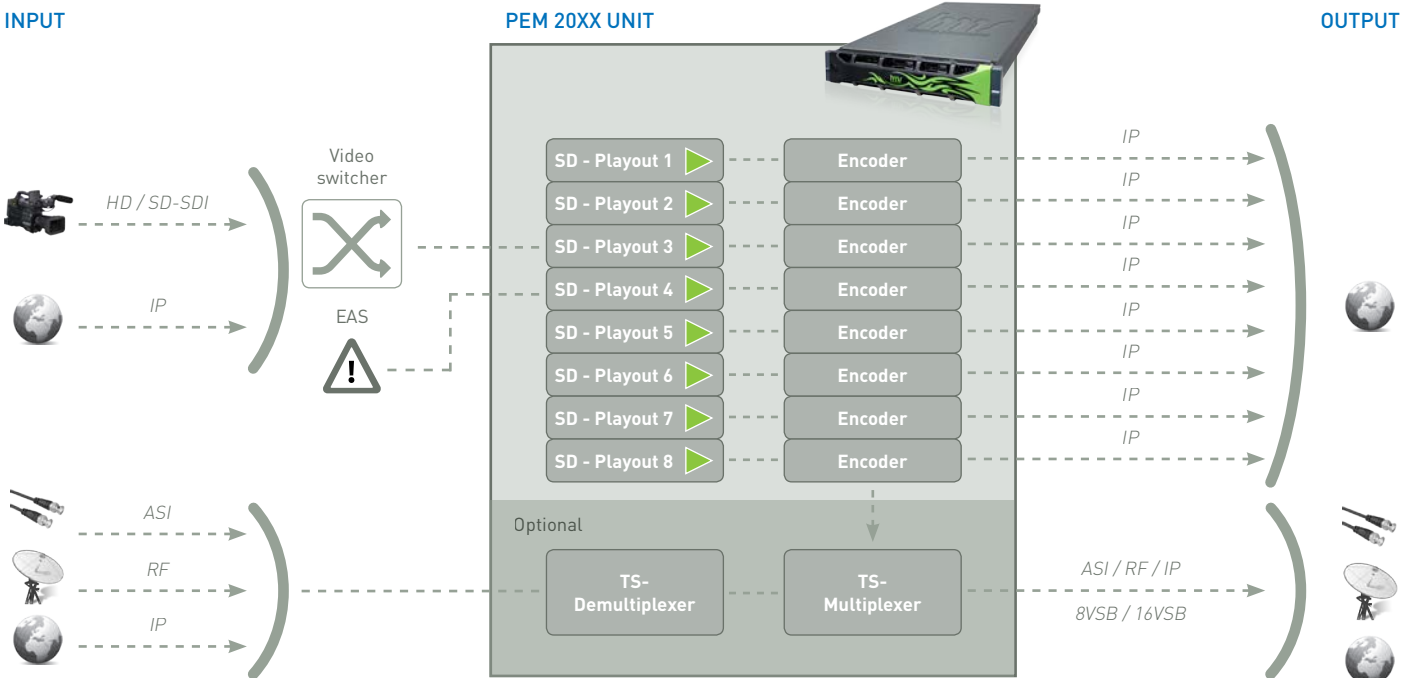
PEM 20XX Series



Key features

- ▶ Unique “channel-in-the-box” combination of SD playout, encoder and multiplexer
- ▶ Simultaneous 8 channel H.264 / MPEG-2 encoder
- ▶ Stereo audio encoding (MPEG-1 Layer II / AAC / Dolby® Digital)
- ▶ DVB / ATSC compliant MPEG-TS multiplexer
- ▶ Optional MPEG-TS remultiplexer
- ▶ Integrated video switcher (live pass through)
- ▶ SDI, IP, ASI and RF input / output (see ordering info)
- ▶ Internal static SI/PSI (DVB), PSIP (ATSC) generator
- ▶ Powerful render engine for real-time insertion of templated graphics with independent layers
- ▶ Live pass through of third party broadcast signals with cue tone (DTMF) detection

Application



Specifications

PLAYOUT	
Channels	8 x SDTV
SD resolution / frame rates	576i @ 25 x 720 480i @ 29.97 x 720
Loudness normalization	EBU R128 / ITU BS-1770-1 / -2
Closed captioning	CEA-608 / -708
VBI	VPS, TTX, WSS
EAS	RS232C / RCA audio, standard protocol
Channel branding	real-time

INPUT	
Audio / Video	
SDI	SMPTE 259M
HD-SDI	SMPTE 292M
Transport stream	
ASI	DVB-ASI (optional)
Ethernet	IP Stream (RTMP, RTSP, TS over UDP/RTP/TCP)
RF	8VSB / 16VSB (optional)
Signal synchronization	
External	Black Burst / Tri-SYNC
Resolution and frame rates	
SD	576i @ 25 x 720 480i @ 29.97 x 720, 704
HDV	720p @ 50, 59.94 x 1280
HDTV	1080i @ 25, 29.97 x 1920

OUTPUT	
Audio / Video	
SDI	SMPTE 259M
HD-SDI	SMPTE 292M
Transport stream	
ASI	DVB-ASI (optional)
Ethernet	IP Stream (RTMP, RTSP, TS over UDP/RTP/TCP)
RF	8VSB / 16VSB (optional)
Error correction	
FEC	Pro-MPEG
Resolution and frame rates	
SD	576i @ 25 x 720 480i @ 29.97 x 720, 704

MPEG-ENCODER	
SD video	
MPEG-2	MP @ ML 1 to 15 Mbps 4:2:0
H.264 / AVC (max. 4 x)	MP @ L3 0.5 to 10 Mbps 4:2:0
Audio	
MPEG-1 Layer II	32 to 384 kbps
AAC-LC	16 to 576 kbps
AAC-HE V1 / V2	16 to 128 kbps
Dolby® Digital	up to 640 kbps (AC-3 2.0)

TS-MULTIPLEXER	
Video format	MPEG-2 / H.264
Audio format	MPEG-1 Layer II / AAC / Dolby® Digital
Standard	DVB / ATSC
SI/PSI insertion	all mandatory DVB tables
PSIP insertion	all mandatory ATSC tables

TS-REMULTIPLEXER (OPTIONAL)	
Input sources	DVB ASI / IP / RF
Ancillary data	automatic PSI and DVB-SI extraction, regeneration and insertion
Table processing	adaptation of PIDs, services, tables and descriptors

PHYSICAL DIMENSIONS	
H x W x D	3.40 x 17.35 x 31.21 in (2 RU) [86.3 x 440.6 x 792.7 mm]
Weight	approx. 55 lb [25 kg]

POWER	
Voltage	100 V to 240 V, 12.00 A to 6.00 A, 50 Hz to 60Hz
Wattage	1023 W on 100 VAC to 120 VAC, 1100 W on 200 VAC to 240 VAC
Maximum heat dissipation	4774 BTU/hr

ENVIRONMENTAL	
Operating temperature	50 °F to 95 °F (10 °C to 35 °C)
Storage temperature	-40 °F to 149 °F (-40 °C to 65 °C)
Relative humidity	20 % to 80 % (noncondensing)
Quality mark	CE compliant
Safety	EN 60950, EN 62311
EMC	EN 55022, EN 55024, EN 61000, IEC 61000

ORDERING INFORMATION*	
PEM 2000	8 x SD payout 8 x SD MPEG encoder 1 x DVB / ATSC multiplexer 2 x IP in / out 1 x ASI in / out
PEM 2010	1 x PEM 2000 + 4 x SD / HD SDI in
PEM 2015	1 x PEM 2000 + 8 x SD / HD SDI in
PEM 2020	1 x PEM 2000 + 1 x RF out
PEM 2021	1 x PEM 2000 + 2 x RF in + 1 x ASI in / 1 x ASI out
PEM 2022	1 x PEM 2000 + 2 x RF in / 1 x RF out + 1 x ASI in / 1 x ASI out
PEM 2032	1 x PEM 2000 + 3 x ASI out

* Example configurations, other configurations available on request.
All PEM 20XX units available with optional TS-Remultiplexer (PEM 20XXR).

