The Evertz® Media Clients are highly optimized digital Audio/Video I/O platforms that perform real-time, multi-channel HD or SD ingest and playout for broadcast and post-production facilities. Individual Media Clients can be provided with optional local RAID6 storage to allow a simple, standalone HD/SD ingest/playout platform as an inexpensive broadcast or post-production solution. The ability to exploit either networked or local storage allows the Evertz® Media Client to be used in multiple operational models that feature real-time ingest and playback from central storage, local storage or both. Broadcast and post-production workflows are no longer operationally constrained by the architecture of the server system or an individual box.

The Evertz® Ingest Client is a broadcast-quality, frame-accurate, digital baseband ingest station that performs real-time SW-based encoding/decoding, and multiplexing/de-multiplexing of HD/SD-SDI content in either MPEG-2 or MPEG-4 formats. Currently supported HD codecs include XDCAM HD 4:2:2 and AVC-Intra HD 4:2:2. In addition to the HD/SD-SDI ingest channel, each ingest channel supports a HD/SD-SDI Confidence Playback output of the ingested content (with a minimal delay), as well a separate HD/SD-SDI Jog/Shuttle/Play output. The Jog/Shuttle/Play output can be used to review the content as its being ingested. This allows media to be qualified and prepared for on-air use during ingest. Alternately, this output can be used as a general-purpose Play output for any local or network stored content.

While ingesting and playing back the high-resolution content, a low-resolution MPEG-4 Proxy is also generated. This eliminates the need for off-line, post-ingest proxy generation thereby significantly accelerating, simplifying and reducing the cost of low-resolution, off-line workflows.

Real-time Record and Jog/Shuttle/Play I/Os are controlled via popular protocols over an IP network or individual RS-422 ports. For Ingest Clients provided with local RAID6 storage, file transfers are accomplished using FTP or NFS.

▶Features & Benefits

- Real-time, frame-accurate, broadcast-quality Audio/Video codecs
- Low-latency Confidence Playback while recording
- Low-latency Jog/Shuttle/Play while recording
- Low-res MPEG-4 Proxy creation while recording

- Optional real-time Record/Playback to/from local RAID6 storage
- IP-based non real-time File Transfers to/from local RAID6 storage
- IP-based or RS-422 control of Record inputs and Jog/Shuttle/Play outputs
- IPMI ready out-of-band management and KVM capability

▶Specifications

Inputs:
Number and type of video inputs per Ingest channel:
- 1 x Serial Digital Interface (SDI), as per SMPTE ST 292-1 for HD and SMPTE-259M for SD

Outputs:
Number and type of video outputs per Ingest channel:
- 2 x Serial Digital Interface (SDI), as per SMPTE ST 292-1 for HD and SMPTE-259M for SD

Video Signal Format:
- 4:2:2 Y/C 8-bit sampling

Supported Raster Formats:
- 1920 x 1080i (29.97 Hz)   • 1920 x 1080i (25 Hz)
- 1280 x 720p (59.94 Hz)   • 1280 x 720p (50 Hz)
- 720 x 487i (29.97 Hz)   • 720 x 576i (25 Hz)

Supported Video Codec Profiles/Levels/Bit Rates:

HD	SD
• XDCAM HD422 50Mbps	• IMX SD422 30Mbps, 40Mbps, 50Mbps

Supported Multiplexes:
- MXF: SMPTE-378M Operational Pattern 1A (Single Item, Single Package)

Audio:
- HD/SD-SDI embedded per SMPTE-272M
- Support for up to eight (8) AES pairs per video I/O 48kHz sampling
- Support for 16-bit, 20-bit and 24-bit samples
- Support carriage of AES audio ancillary and user data

Supported Audio Formats:

- XDCAM HD422 Codec
  - Eight (8) PCM mono channels, 24-bit samples
- IMX SD422 Codec
  - Four (4) PCM mono channels, 24-bit samples
  - Eight (8) PCM mono channels, 16-bit samples

Low-res Proxy:
- Video Format
  - Quarter resolution (half-horizontal, half-vertical)
- Video Codec
  - MPEG-4 Part 10, Main Profile, Level 2.1, 4Mbps for HD rasters
- Audio Format
  - Four (4) AES pairs, 48kHz, 16-bit samples
- Audio Codec
  - AAC, 96kbps per AES pair
- Multiplex
  - MPEG-2

Time Code:
- VITC pass-thru for each ingest channel

Genlock:
- Lock to SD video black

Vertical Blanking Interval:
- Uncompressed VANC data per video channel:
  - Pass-thru of all VBI lines
- Encoded VANC data per video channel:
  - Pass thru of Closed Caption (CC) per CEA-708 and CEA 608
  - Pass thru of VITC per SMPTE-12M
  - Pass thru of AFD per SMPTE-2016-1-2007

Real-time Ingest/Playback Control:
- Protocols
  - VDCP

- Interfaces
  - RS-422, IP

Non Real-time File Transfers from Local RAID6 Storage (Optional):
- Protocols
  - FTP, NFS
- Interfaces
  - IP

Media Client Platform Specifications:
- Based on multi-core Linux Server architecture
- Includes four (4) 1Gb E ports
- Includes one (1) RS-422 port per Record input and Jog / Shuttle / Play output
- Includes one (1) IPMI port
- Includes dual-redundant, hot-swappable power supplies

Dimensions:
- 28" L x 17" W x 3.5" H (72cm L x 44cm W x 9cm H)
- Gross Weight: 55 lbs (25 kg) w/local RAID6 storage
- 2U Rackmount

Operating Environment:
- Operating Temperature 10° to 30°C (50° to 85°F)
- Non-operating Temperature -40° to 70°C (-40° to 158°F)
- Operating Relative Humidity 8% to 90% (non-condensing)
- Non-operating Relative Humidity 5% to 95% (non-condensing)
- RoHS Compliant

Power Requirements:
- 100-240 VAC
- 50/60 Hz (auto-sensing)
- 375W (Max with no local storage)
- BTU/h 1,280 (Max with no local storage)
- 425W (Max with RAID6 local storage)
- BTU/h 1,450 (Max with RAID6 local storage)

▶Ordering Information

EMS-MC-20220
Dual-channel HD/SD XDCAM/IMX Encoder, Confidence Playback, Jog/Shuttle/Play, MPEG-4 Low-res Proxy, No Local Storage

EMS-MC-20220-R8-7200-1000
Dual-channel HD/SD XDCAM/IMX Encoder, Confidence Playback, Jog/Shuttle/Play, MPEG-4 Low-res Proxy, 8x1TB 7.2K RPM HDDs, ~6TB RAID6 Local Storage

EMS-MC-20220-R8-7200-3000
Dual-channel HD/SD XDCAM/IMX Encoder, Confidence Playback, Jog/Shuttle/Play, MPEG-4 Low-res Proxy, 8x3TB 7.2K RPM HDDs, ~18TB RAID6 Local Storage