LMNTS (Loudness Management for n-Transport Streams) is a first in comprehensive transport-based loudness processing. LMNTS represents a new level in multi-stream loudness processing integration ease, economy, confidence, and consistency. Operating at the MPEG transport layer, LMNTS provides a practical loudness management solution for MVPD operators without the need or complexity of external codecs transferring between baseband and MPEG interfaces.
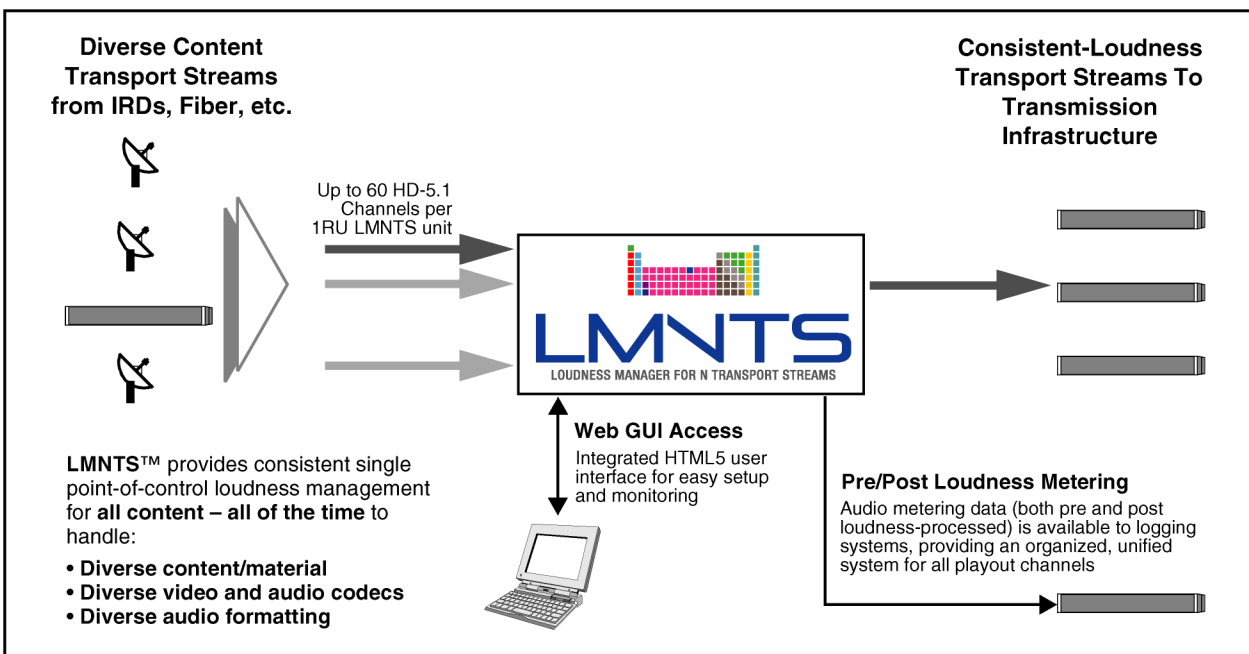
Using unique depacketing/repacketing processing and decode/re-encode, LMNTS extracts and decodes audio codec packets from the program stream, performs high-quality PCM loudness processing, and then re-encodes and re-packets the audio with its stream. An ASI option provides additional ASI transport stream support. Physically, all data connection to LMNTS is via GigE IP or ASI interfaces using an industry-standard IT hardware platform with no intermediary breakouts.

Because LMNTS uses the same high-quality Linear Acoustic® Aeromax™ loudness processing for each stream, perfect loudness consistency is assured for all programming passing through the system. For AC-3 streams, LMNTS can accommodate varying received loudness and dialnorm, and repackage the audio using consistent loudness and consistent re-authored dialnorm for perfect loudness matching for all programming.

LMNTS is fully scalable, with licenses available to progressively add the number of audio programs accommodated.

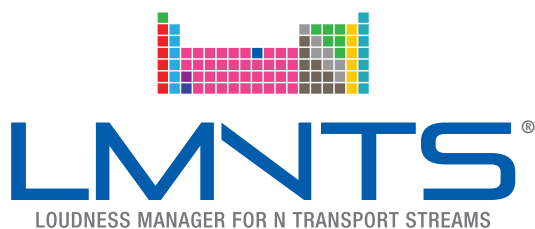

LMNTS®
LOUDNESS MANAGER FOR N TRANSPORT STREAMS

LMNTS • Transport Stream Loudness Processor

FEATURES

Unmatched integration ease and practicality for multi-stream head-end loudness processing. Directly interfaces with GigE-based playout servers.

Integrated HTML5 user interface for easy setup and local or remote monitoring

ASI option provides ASI transport stream processing

Low delay latency (500 msec)

Consistent, uniformly controlled loudness processing across all program channels (including interstitials). Loudness processing performed in PCM domain.

Post-processed AC-3 is re-encoded using re-authored matching dialnorm across all programming

Full compatibility with MPTS and SPTS streams

Integrated video/audio delay re-alignment compensates for any internal processing delays

Transparent processing maintains payload size and video/audio quality. No added re-compression or de-compression.

Three year warranty with extension options available

OPTIONS

ASI Transport I/O Interface (LMNTS-OPT-ASI-1x1) Adds an ASI I/O BNC pair (with relay bypass protection). Capacity for various models is as follows:

- LMNTS-500: Supports up to (2) ASI options (second ASI interface card installed deletes (2) IP media ports).
- LMNTS-1000: Supports up to (2) ASI options (second ASI interface card installed deletes (2) IP media ports).
- LMNTS-2000: Supports up to (7) ASI options (second ASI interface card installed deletes (2) IP media ports).
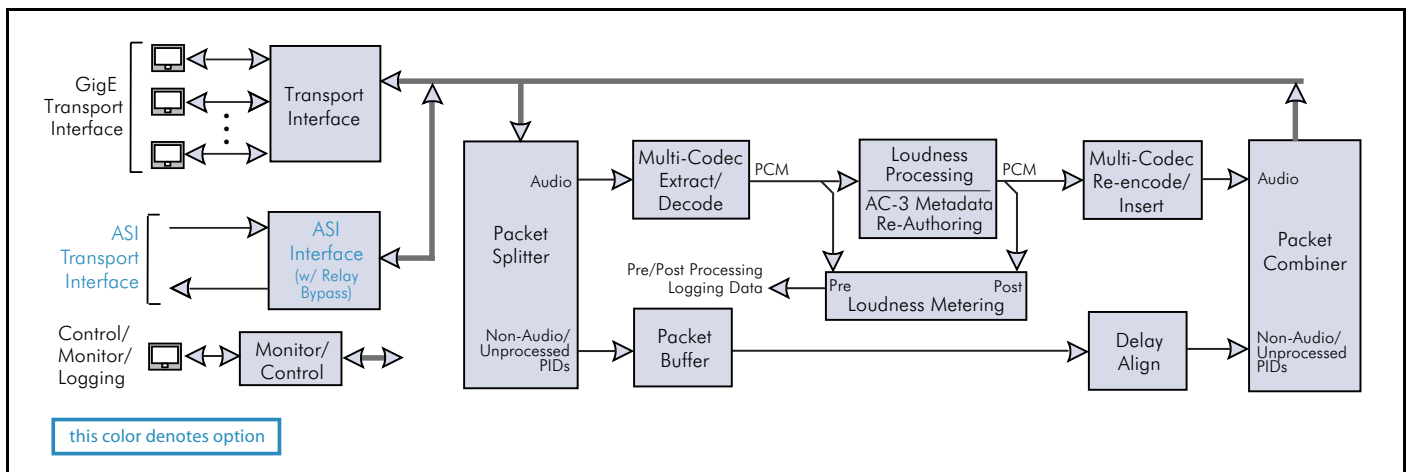
SPECIFICATIONS

Physical

LMNTS-500
Power: 120/240 VAC, 50/60 Hz, 350 W (max)
Size: 1RU
Depth required: 24 in (61 cm) minimum

LMNTS-1000
Power: 120/240 VAC, 50/60 Hz, 550 W (max)
Size: 1RU
Depth required: 24 in (61 cm) minimum

LMNTS-2000
Power: 120/240 VAC, 50/60 Hz, 750 W (max)
Size: 2RU
Depth required: 24 in (61 cm) minimum

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SPECIFICATIONS (cont.)

Capacity

LMNTS-500
  Data throughput: (3) GigE (1000 Base-T) RJ-45 Media Ports
  Channel capacity: Up to 10 surround audio PIDs; up to 25 stereo audio PIDs (see Note below)
  Processing latency delay: 500 msec

LMNTS-1000
  Data throughput: (5) GigE (1000 Base-T) RJ-45 Media Ports
  Channel capacity: Up to 60 surround audio PIDs; up to 100 stereo audio PIDs (see Note below)
  Processing latency delay: 500 msec

LMNTS-2000
  Data throughput: (5) GigE (1000 Base-T) RJ-45 Media Ports
  Channel capacity: Up to 100 surround audio PIDs; up to 140 stereo audio PIDs (see Note below)
  Processing latency delay: 500 msec

Note: Channel capacities above are typical maximum capacities. Practical capacity is a function of licenses added. Capacity is based on processing "credits". For example on LMNTS-500, 100 credits are available for which each surround PID consumes 10 credits, and each stereo PID consumes 4 credits. Any combination of stereo and surround PIDs can be supported, noting the total available processing credits. For any of the models listed above, a Cobalt Sales Manager can assist you in determining the maximum processing capacity to support your requirements.

Control/Monitoring

HTML5 web browser via dedicated 10/100/1000 Ethernet port

Interface

IP Transport: GigE (1000 Base-T) via RJ-45
ASI Transport (Optional; LMNTS-OPT-ASI-1X1): ASI I/O, 75Ω BNCs with relay bypass

Format Supported

Transport: MPEG over IP or ASI, UDP, RTP
Multicast: Supports IPV4 multicast and IGMPV2/V3 multicast management
Audio Codecs: Dolby® Digital (AC-3), Dolby® Digital Plus™ (E-AC-3), MPEG 1 Layer 2, AAC
Video Codecs: Supports all video codecs; video passed without alterations

ORDERING INFORMATION

LMNTS-500 Transport Stream Loudness Processor, 1RU, (10) 5.1-channel capacity, (25) 2.0-channel capacity. 1 Control IP Port, 3 Media IP Ports.

LMNTS-1000 Transport Stream Loudness Processor, 1RU, (60) 5.1-channel capacity, (100) 2.0-channel capacity. 1 Control IP Port, 5 Media IP Ports.

LMNTS-2000 Transport Stream Loudness Processor, 2RU, (100) 5.1-channel capacity, (140) 2.0-channel capacity. 1 Control IP Port, 5 Media IP Ports.

Note: Channel capacities listed above for all models are typical max. Refer to Specifications for more details.

LMNTS-OPT-ASI-1X1 Adds one ASI input and output to any LMNTS unit

LMNTS-LICENSE-E-AC-3-SURROUND Loudness processing license for one stream (one PID) of 5.1 (surround) Dolby Digital Plus (EAC-3). Can also be used to process Dolby Digital (AC-3)

LMNTS-LICENSE-E-AC-3-STEREO Loudness processing license for one stream (one PID) of 2.0 (stereo) Dolby Digital Plus (EAC-3). Can also be used to process Dolby Digital (AC-3)

LMNTS-LICENSE-AC-3-SURROUND Loudness processing license for one stream (one PID) of 5.1 (surround) Dolby Digital (AC-3)

LMNTS-LICENSE-AC-3-STEREO Loudness processing license for one stream (one PID) of 2.0 (stereo) Dolby Digital (AC-3)

LMNTS-LICENSE-AAC-SURROUND Loudness processing license for one stream (one PID) of 5.1 (surround) AAC-LC or HE-AACv1

LMNTS-LICENSE-AAC-STEREO Loudness processing license for one stream (one PID) of 2.0 (stereo) AAC-LC or HE-AACv1

LMNTS-LICENSE-MP1L2 Loudness processing license for one stream (one PID) of MPEG 1 Layer II

Note: A 5.1 (surround) license can be used to process a 2.0 (stereo) stream of the same codec type.