AERO.200

Trusted Linear Acoustic® television processing, upmixing, and available Dolby® Digital Plus / Dolby Digital coding in a compact 1RU package.

Telos Alliance®



Linear Acoustic® AERO.200

DTV Audio Processor





Compact 1RU Design with Graphical OLED Display

Overview

Uncompromised loudness control and quality.

AERO.200 hosts one or two AEROMAX® processing instances in your choice of AMX5.1 (5.1+2+2), AMX2.0 (2+2+2), or AMX 5x2 (2+2+2+2+2) configurations (a minimum of one is required) plus upmixing/downmixing via our UPMAX®-II algorithm.

Optional Dolby® Digital Plus transcoding provides for decoding of Dolby Digital/Dolby Digital Plus content to PCM audio for loudness processing and encoding to Dolby Digital/Dolby Digital Plus for transmission.

I/O includes de-embedding and re-embedding of up to 16 pairs of 3G/HD/SD-SDI audio, four pairs of AES3 audio, along with along with AoIP via AES67 for SMPTE ST2110-30 support as well as Livewire+.

Support for SAP/DVS, EAS, local emergency audio, local voiceover, and optionally, Audio Description (warble tone) functionality is included. CrowdControl™ is standard for increased dialogue intelligibility.

ITU-R BS.1770 and selectable EBU R-128 or ATSC A/85 metering and logging (including True Peak) is provided for all program outputs. NfRemote software is included for remote configuration, control and metering over an Ethernet connection while a built-in HTTP server enables control of I/O, presets, and individual processing parameters using simple IP commands. Compensating SDI video delay and dual redundant internal power supplies are standard.

Available Dolby Digital Plus / Dolby Digital coding and Nielsen® and Verance® Aspect® Watermark Encoding



Features

- Linear Acoustic AEROMAX loudness and dynamics control
- UPMAX-II automatic upmixing and downmixing
- One or two processing instances in AMX5.1 (5.1+2+2), AMX2.0 (2+2+2), or AMX 5x2 (2+2+2+2+2) configuration
- CrowdControl for increased dialog intelligibility
- Support for SAP/DVS
- Available Dolby® Digital Plus transcoding, including Dolby Digital/Dolby Digital Plus decoding to PCM and encoding to Dolby Digital/Dolby Digital Plus for transmission
- Available Nielsen watermark encoding
- Available Verance® Aspect® watermark encoding
- 16 audio pairs via dual 3G/HD/SD-SDI I/O with included compensating video delay
- 4 audio pairs of AES3 I/O with reference input
- AoIP via AES67 for SMPTE ST2110-30 support as well as Livewire+
- Dual auto-ranging power supplies
- Relay bypass of all I/O
- Extensive TCP/IP remote control and HTTP control
- Logging of loudness and True Peak data



Windows®-Compatible TCP/IP Remote Control Application

In Depth

AERO.200 brings our industry standard, no-compromise AEROMAX television loudness control and UPMAX-II upmixing/downmixing algorithm to a space-saving 1RU design. Add ITU- and EBU-compliant loudness metering and logging to the package along with the ability to host two processing instances and it's clear that preserving valuable rack space doesn't require giving up features or performance.

Ideal for situations where a full front panel display and controls are not required, AERO.200 includes a comprehensive TCP/IP remote to provide control over all system settings and processing parameters plus extensive loudness metering. It also offers reporting of physical I/O details, power supply status, and environmental health. The remote application also delivers remote audio, up to 5.1 channels, so the user can audition signal quality anywhere link bandwidth permits. An HTTP server is included for simple get/set control of all parameters and retrieval of status and logging information.

Constantly active logging captures 24-hour, 48-hour, and 7.5-day rolling weekly reports as well as specific time slots controlled by start/stop. Loudness measurements with multiple integration times as well as True Peak measurements are captured and available for download.

Failover bypass relays on all I/O maintain signal continuity and dual auto-ranging power supplies enable redundancy and worldwide compatibility.

Designed and assembled in the USA, the lightweight and rugged single rack-unit AERO.200 is a solid investment in performance and flexibility today and in the future.

AES3 and Dual 3G/HD/SD-SDI I/O



Specifications

Processing

- Can host one or two instances of AEROMAX processing in your choice of AMX5.1 (5.1+2+2), AMX2.0 (2+2+2), or AMX 5x2 (2+2+2+2+2) configurations
- Dual UPMAX-II two-channel to 5.1 channel upmixers per instance plus main channel downmixing and automatic bypass of discrete content

Audio Encoding/Decoding

- Available Dolby® Digital Plus transcoding in stereo and 5.1-channel configurations, including Dolby Digital/Dolby Digital Plus decoding to PCM and encoding to Dolby Digital/Dolby Digital Plus for transmission
- Optional Nielsen watermark encoding, including N2, N6, and CBET
- Optional Verance® Aspect® Aspect watermark encoding

Audio Processing Core

- Audio processing core supports workflows containing up to 34 input channels and 34 output channels

Sample Rate/Resolution/Frequency Response

- 48kHz, 24-bit, 20Hz to 20kHz below threshold

Reference

- 48kHz via AES3 DARS (or any AES3 signal applied to the Ref In connector), AES3 In 1, SDI, or from the internal 48kHz clock (standalone use only).

AES3 I/O

- Four audio input pairs plus reference via 75-Ohm BNC female connectors. Four audio output pairs outputs plus encoder output. All digital inputs are 75 Ohm internally terminated, unbalanced. Signal levels per SMPTE 276M/AES-3ID-2001

SDI I/O

- Dual, auto-sensing, 3G/HD/SD-SDI (SMPTE ST 424/292M/259M) inputs, up to 1080p/60/59.94/50Hz. De-embed up to 16 audio pairs from applied SDI signals, process and/or encode, and re-embed up to 16 audio pairs. Supports SMPTE 2020 A and B VANC metadata



Full-Featured Loudness Logging

AoIP I/O

- AES67 for SMPTE ST2110-30 (Level A) support plus Livewire+

Parallel GPI/O Control Port

- 5-pin female D connector, 0-5V TTL levels for 5 inputs and 5 outputs; controls simple preset recalls, voiceover/EAS insertion, or customized scripts

Ethernet

- Gigabit Ethernet via RJ45 supports included TCP/IP remote control application; HTTP server included for get/set control of all parameters

Remote Control

- Windows®-compatible TCP/IP remote control application for full setup and control is included. ITU-R BS.1770 metering for all programs, encoder statistics, and return audio for remote monitoring (network speed permitting). HTTP server allows get/set control from PC and downloading of loudness logs.

Front Panel Controls and Indicators

- Graphical OLED display

Loudness Logging

- Constantly active logging captures 24-hour, 48-hour, and 7.5 day rolling weekly reports as well as specific time slots controlled by start/stop. Loudness measurements with multiple integration times as well as True Peak measurements are captured and available for download.

Dual Redundant Power Supplies



Power Requirements

- Dual power supplies, each rated at 100-264 VAC, 50/60Hz, auto-sensing, 100W max. total

Dimensions and Weight

- One rack unit - 1.75”H x 19”W x 15.5”D (4.5 x 48.3 x 39.4 cm)
- Net weight: 10 lbs (4.6 kg), approximate.

Shipping Dimensions and Weight

- 7”H x 22”W x 20”D (18 x 56 x 51 cm)
- Net weight: 15 lbs. (6.80 kg), approximate.

Environmental

- Fan cooled. Operating: 0 to 50 degrees C, non-operating -20 to 70 degrees C

Regulatory

North America: FCC and CE tested and compliant with UL-approved power supplies.

Europe: Complies with European Union Directive 2011/65/EU + (EU) 2015/863 of the European Parliament and of the Council of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS). Compliant with the CE EN 62368-1:2020, EN 55032:2015 and EN 55035:2017 requirements

Warranty

For the latest Telos Alliance warranty, visit: telosalliance.com/warranty

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