AERO.20

Industry standard Linear Acoustic® television processing and upmixing for PCM audio applications.



Linear Acoustic® AERO.20

DTV Audio Processor





Cost-Effective Loudness Control for PCM Audio

Overview

Cost-effective PCM loudness control without compromising quality.

AERO.20 hosts a single AEROMAX® processing instance in AMX5.1 (5.1+2+2), AMX2.0 (2+2+2), or AMX 5x2 (2+2+2+2+2) configurations (user-selectable) plus upmixing/downmixing via our UPMAX®-II algorithm.

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 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.

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.

Features

- Linear Acoustic AEROMAX loudness and dynamics control
- UPMAX-II automatic upmixing and downmixing
- Single processing instance AMX5.1 (5.1+2+2), AMX2.0 (2+2+2), or AMX 5x2 (2+2+2+2+2) configuration (user-selectable)
- 16 audio pairs via dual 3G/HD/SD-SDI I/O with included 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
- Comprehensive PC based GUI plus extensive TCP/IP and HTTP control
- Logging of loudness and True Peak data

No-Compromise Loudness Control, Upmixing, and Downmixing



In Depth

The highest quality industry standard television loudness control has never been more affordable. AERO.20 is a full-featured audio processor specifically for PCM (non-coded) audio that uses the same AEROMAX processing engine as our AERO.200, AERO.2400, and other products. Add upmixing, downmixing, and ITU- and EBU-compliant loudness metering and logging and it's easy to see why AERO.20 is such a powerful solution for nearly any application despite its low cost.

Comprehensive TCP/IP remote provides 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 AES and SDI 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.20 is a solid investment in performance and flexibility.



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

Specifications

Processing

- AEROMAX processing for PCM audio in your choice of AMX5.1 (5.1+2+2), AMX2.0 (2+2+2), or AMX 5x2 (2+2+2+2+2) configurations (user-selectable)
- Dual UPMAX-II two-channel to 5.1 channel upmixers plus main channel downmixing and automatic bypass of discrete content

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, internally terminated; Four audio output pairs; Signal levels per SMPTE 276M/AES-3ID-2001

SDI I/O

- Dual, auto-sensing, 3G/HD/SD-SDI (SMPTE ST 424/292M/259M) paths, supporting embedding and de-embedding of up to 16 I/O audio pairs, with video resolutions up to 1080p/60/59.94/50Hz

AoIP I/O

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

Parallel GPI/O Control Port

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

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.

Full-Featured Loudness Logging



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.

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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