BROADCAST AUDIO PROCESSOR
Combines Nielsen® Watermarking, Dolby® Loudness Leveling and Dolby® Digital on COTS hardware

The Broadcast Audio Processor is your versatile playout application based on softGear™ microservice architecture running on commercial-off-the-shelf hardware. softGear’s flexible architecture is designed to accommodate your current and future audio needs by allowing additional processing blocks as required. The Broadcast Audio Processor offers a robust, standalone solution with transmission path protection that allows you to integrate with any playout system. As a result, you can customize your automation, master control, and graphics engine.

BASED ON SOFTGEAR™
Modern OS-level virtualization technology allows easy scaling, migration and redundancy, giving ultimate flexibility in deployments.

MULTIPLE AUDIO WORKFLOWS
A playout may require independent Dolby Digital / Dolby Digital Plus workflows. Up to 4 concurrent audio processing paths are supported, with up to 32 channels.

SIGNAL COMPLIANCE
Broadcast Audio Processor fits in program playout and distribution environments, fulfilling today’s needs for cable and TV networks.
**Broadcast Audio Processor - Specifications**

- **High-density design** – Up to 4 concurrent workflows
  - Up to 2 HD/3G-SDI input
  - Up to 2 HD/3G-SDI output
  - Hardware bypass relay on each I/O

- **Audio Processing**
  - BS-1770 compliant, Real Time Loudness Leveler by Dolby® (RTLL®)
  - Dolby® Digital / Dolby Digital Plus encoding requirements

- **Audio Formats**
  - 1 – 32 channels (1 - 16 channels per SDI)
  - Sampling rate of 48kHz and bit-depth of 24-bit

- **Supported Video formats**
  - 1080p @ 23.98/24/25/29.97/30/50/59.94
  - 1080i @ 50/59.94
  - 1080psf 23.98/24 PsF
  - 720p @ 50/59.94

- **Watermarking**
  - Nielsen® SIDs supporting channel groups of 2.0, 5.1 or 2.0 + 5.1 clusters
  - NAES SID and CBET SID for US/Nielsen® customers
  - CBET SID only for Canada/Numeris customers

- **Synchronization**
  - Alignment with media timeline and broadcaster master clock
  - Multi-frame video buffer to compensate for processing delay

- **Ancillary Data Processing**
  - Pass through

- **Control**
  - Full configuration, setup and monitoring via DashBoard™

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**Block Diagram**

- **Software**
  - SoftGear® Core
  - Linux OS
  - Matrox SDI with Hardware Bypass

- **Hardware**
  - SDI Input
  - SDI Output

- **Components**
  - Matrox Audio Receiving
  - Dolby Loudness Leveling
  - Nielsen Watermarking Encoder
  - Dolby AC-3 Encoder
  - Matrox Audio Sender

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**Ordering Information**

- **SG-BAP-PKG**
  - SoftGear® SG-BAP-PKG bundle can enable Dolby RTLL micro-service, Nielsen Watermark Encoding micro-service, and Dolby AC3 encoding micro-service