

**....Now reach your Audience Much Farther with
a Lively, Crispy, Clear and Loud Sound**



Perceptual SoundMax™ Model Q24 -4888

8-Channel (Stereo) Audio Processor, Encoder & Streamer
Digital AES Input/output, Analog Input

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Perceptual SoundMax™

Lively, Crispy, Clear and Loud Sound:

Craft a breathtakingly detailed, consistent, and balanced sound for your Internet Streams and using Perceptual SoundMax™ 24 Band Audio Processor & Encoder developed by ATC Labs. This product brings numerous novel innovations in audio processing & perceptual coding specifically designed for Professional Internet & Digital Broadcasters by a team of some of the world's leading audio and speech scientists (former Bell Labs alumni) specializing in audio signal modeling, psychoacoustics, and signal processing.

Perceptual SoundMax™ is a two-in-one audio processing and encoding/streaming platform featuring an unmatched 24-band audio processor, and a highest quality AAC+/MP3 encoder for internet streaming that links seamlessly with distribution servers like Icecast. It supports chunking and HTTP Live Streaming (HLS).

Perceptual SoundMax™ Model **Q24-4888** is a compact unit which is a game changer as:

1. It replaces 8 processors/encoders/streamers with one (also providing simultaneous HE-AAC/MP3 encoding in multiple rates!).
2. It provides a smart way to visualize/configure individual stream from remote PC through manager software
3. It shrinks several feet of rack space taken by multiple processor and streaming encoders.

Audio Processing Tools Powered by Latest Research in Sound Perception:

- ❖ Multi-band (24-band) Intelligent Dynamic Range Compression (DRC), using high resolution processing deploying detailed time-frequency sound analysis.
- ❖ Perceptually Optimized Look-ahead Automatic Loudness Control.
- ❖ Voice Enhancement: Enhances vocals and speech
- ❖ Bass Boost using a sophisticated bass enhancement model
- ❖ Adaptive Wide-band Noise Removal
- ❖ Stereo image stabilization & enhancement.
- ❖ Dynamic Listening Fatigue Reduction (DLFR): envelope conditioning for improved listener experience.

Audio Encoding Powered by Latest Research in Sound Perception:

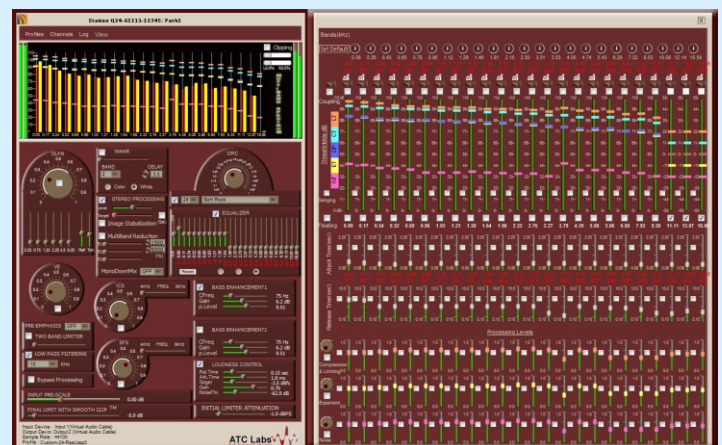
- ❖ Industry standard AAC/HE-AAC v1/v2 encoder enhanced by advanced ATC Labs Psychoacoustic Models.
- ❖ MP3 Encoding
- ❖ Supports 32 kbps – 256 kbps encoding
- ❖ Compatible with desktop, web-players, and apps
- ❖ Simultaneous multi-format/multi-rate encoding

Remote Control- Networked PC Interface:

Model **Q24-4888** supports an Ethernet port to connect to a local network. The primary utility of this feature is to allow for remote control of the processor using a *Controller Software* called **SoundMax™ Manager** running on any PC present on the same Ethernet. The presence of one or more Perceptual SoundMax™ processors on the network is automatically sensed once the Controller is run on a PC.

Following operations can be done through the SoundMax™ Manager:

- ❖ Tuning of profiles: All processing modules can be tuned in real time.
- ❖ Configuration of Internet streaming parameters such as bit rate, codec type.
- ❖ Monitoring of health & status of the processors.
- ❖ One or more processors can be monitored and controlled centrally.



TECHNICAL SPECIFICATIONS

Model Q24-4888

24 Band Audio Processing & Perceptual Encoding for Audio Streaming & Digital Broadcasts

Digital Audio Input (AES/EBU):

Configuration: 8 Stereo AES/EBU Balanced
Sampling Rate: 32, 44.1, 48, 96 kHz (Auto Sense)
Word Length: 16 bit or 24 bit
Input Reference Level: -25.0 to 0 dBFS
EMI Suppressed: Yes
Connector: AES-XLR Female

Analog Audio Input:

Configuration: 8 Stereo Un-Balanced
Maximum Input Level/Impedance: +24dBu/ >10kΩ
Nominal Input Level: Adjustable -10.0 to +12.0 dBu
A/D Convertor Resolution: 24-bit
EMI Suppressed: Yes
Connectors: TRS (for unbalanced stereo)

Digital Audio Output (AES/EBU):

Configuration: 8 Stereo AES/EBU Balanced
Output Level: -20.0 to 0.0 dBFS
Sampling Rate: 32, 44.1, 48, 96 kHz (User Selectable)
EMI Suppressed: Yes
Connector: AES – XLR Male

Audio Encoding:

Configuration: Independent Encoding of 8 Inputs
Encoding Formats: Enhanced AAC+ (AAC, HE-AAC v1, HE-AAC v2), MPEG2-LayerIII (MP3)
Bit Rates: 32 kbps – 256 kbps
Simultaneous Encodings: 2 Formats with 2 bitrates/format

Streaming Outputs:

Configuration: 8 independent streams
Encapsulation Format: ADTS
Streams: .aac, .mp3, .m3u8 (HLS with 2-rate chunks)
Streaming Media Formats: Icecast, HLS
Distribution Servers: Icecast, HLS, In-built HTTP/HLS
Distribution Modes: *push* (TCP/UDP/FTP), *post/pull* (HTTP)
Player Compatibility: VLC, WMP, iPhone/Android
Browser Compatibility: Edge, Chrome, Safari, Mozilla

Ethernet & Remote PC Control:

Configuration: Auto Presence Broadcast on Ethernet
Management Control: Powerful *SoundMax Manager Software* on any networked PC for auto sense monitoring, configuration and control.
Connectors: RJ-45, EMI Suppressed

USB Connection:

Connector: 1 USB 2.0 (EMI Suppressed)

Power:

Power Requirements: 105-260 V AC Single Phase, 45-60 Hz
Connector: IEC, EMI Suppressed, Detachable 3-wire chord with earthing.
Safety Standards: UL, CE

Operating Temperature range: 0° to 50° C

Relative Humidity: 95%

Working Altitude: 3000-meter AMSL

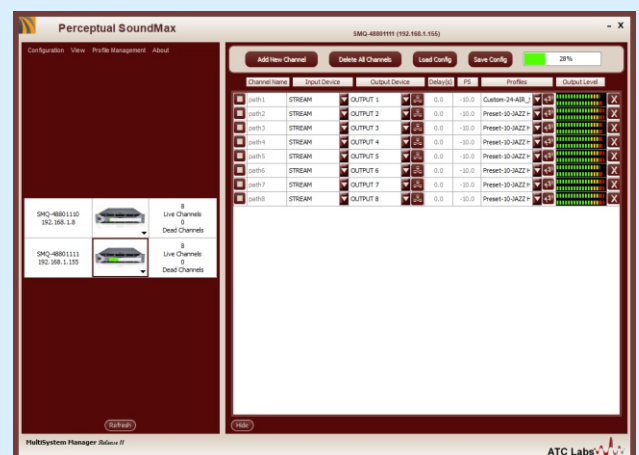
Dimensions:

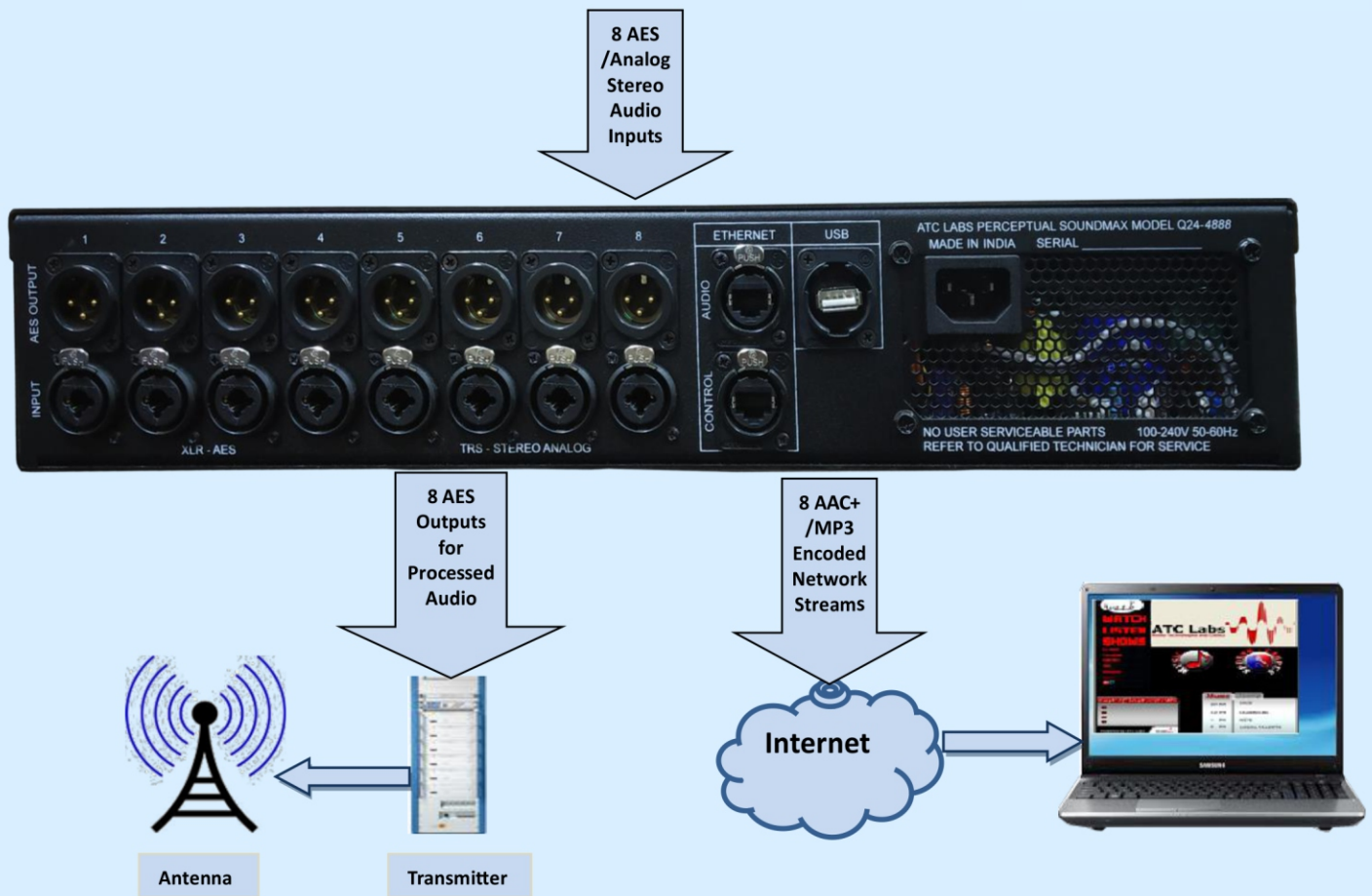
Width: 19"

Height: 2 U (3.5")

Depth: 16.9"

Weight: About 6.5 Kg





Features:

- ❖ **Enhanced Loudness:** 24 Band Audio Processing allows packing in much higher volume as compared to 5 band processing;
- ❖ **Increased Clarity:** High quality encoding leads to increased clarity and fidelity in your digital streams.
- ❖ **Crispier Sound:** 24 Band Intelligent Dynamic Range Compression (DRC) with High Resolution Processing provides better detailing/presence of various Instruments thereby enhancing clarity.
- ❖ **Lively Broadcast:** The Vocal Enhancement, Stereo Image Stabilization, Bass Boosting and Sweetening Tools make your broadcasts sound livelier.

*These unique features incorporated by **ATC Labs** in the **Perceptual SoundMax Audio Processors** gives an unmatched boost and unsuppressed quality of sound with enhanced presence & coverage.*

- ❖ **Internet Streaming:** The Built in Internet Streaming allows your Broadcast to be accessed by anyone anywhere.

After Sales & Service support:

ATC Labs provides to its customer the unique benefits of 24x7 After Sales & Service support through its team of experts. As such you don't have to wait long for attending to any complaints/faults/repairs. Also, the Software Upgrades are incorporated regularly by **ATC Labs** (being the **OEM**) as part of the after sales support.

For After Sales Support you can reach us at [<support@atc-labs.com>](mailto:support@atc-labs.com)

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