AVP4-ES100
EtherSound Digital Power Amplifier

AVP4-ES100 overview

AuviTran's AVP4-ES100 is a configurable dual 20W/8Ω or quad 10W/8Ω integrated stand-alone EtherSound digital power amplifier.

AVP4-ES100 is ideal for Public Address and Voice Alarm systems.

Built-in AVP4-ES100 parametric equalizers and Dynamic Range Control (DRC) allows speaker and room correction to enhance audio quality and intelligibility in any environment.

AVP4-ES100 is able to detect automatically priority announcement messages and switch on with selectable nominal value level output thanks to a smart automated software programmable trigger.

Speaker fault monitoring at any time allows remote and local alerts in case of speaker failure.
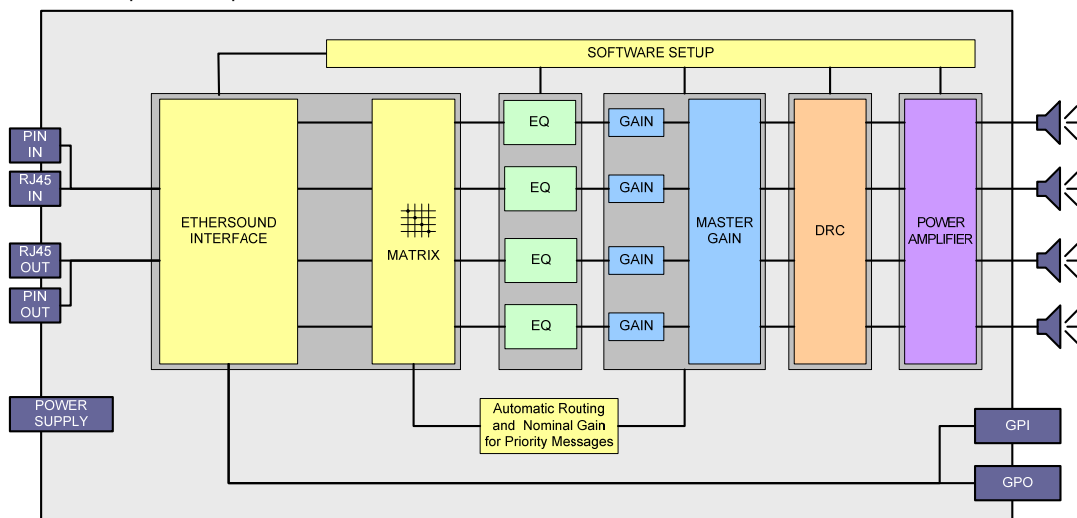
Standard RJ45 and fast-wiring connectors are available for EtherSound links, to make installation extremely easy and fast.

A set of 4 GPI and 4 GPO makes the AVP4-ES100 locally or remotely controllable.

GPOs connector are configurable to be used as standard RS232 interface or 150mW headphones output.

Key Features

- 2x20W or 4x10W audio output power for 8 ohms speakers, bandwidth 20Hz – 20KHz @ -3dB.

- 128 EtherSound channels (64 upstream and 64 downstream) of 24 bits of audio transmission over standard CAT5 Ethernet cable in bidirectional mode or 64 channels in unidirectional mode.

- Up to 4 outputs depending on working mode can be dynamically "extracted" from any of the 128 EtherSound channels.

- Individual automatic switch between general purpose and security channels on software programmable trigger.

- Continuous speaker fault monitoring.

- 2+2 EtherSound™ ES100 connectors allow the daisy-chaining and ring of multiple AVP4-ES100 or other 3rd-party EtherSound™ devices.

- Remote management with ESMonitor software through the EtherSound Network. Dedicated control page for monitoring and controlling all the device parameters.

- 4x7 Programmable biquads equalizers. Global Dynamic Range Control (DRC).

- 4 GPI plus 4 GPO for local control and monitoring, hardware configurable as a standard RS232 interface or headphones output.

Applications

- Product for fixed installation with high quality Audio distribution, paging and zone management:
  - Stadium, museum and arts centre
  - Opera, theatre dressing room
  - Theme parks and resorts
  - Public Address: fixed sound reinforcement
  - Government administrative offices
  - Exhibition and conference Centres
  - Security, voice alarm system
  - Exhibition and conference Centres
- Product for Transportation public address
  - Train and bus stations terminals
  - Airport facilities and audio distribution
  - Cruise Ships including onboard entertainment
  - Paging system for music and announcements

Mechanical Specifications

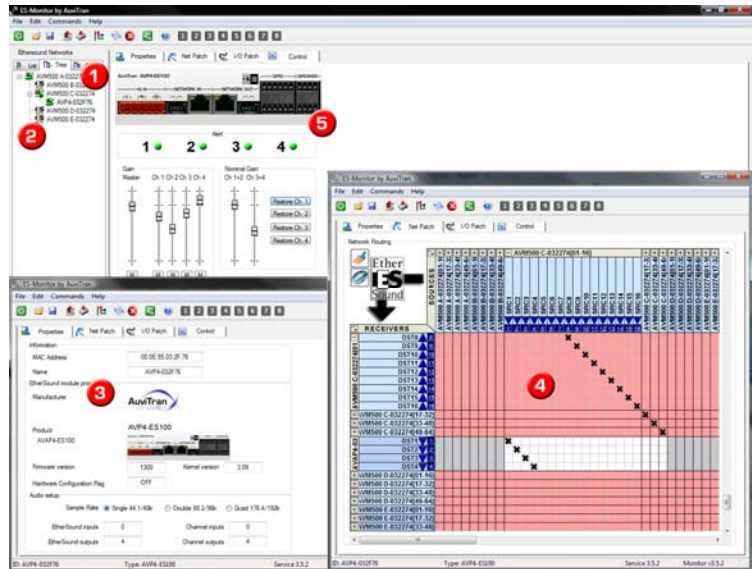145mm x 40mm x 203mm : 5.5" x 1.4" x 8".

Audio Distribution over Standard Ethernet: EtherSound™ enhances established technologies to provide easy-to-implement, high-quality audio networks. The patented EtherSound™ protocol provides fully deterministic, very low-latency (125µs plus 1.4µs per additional network node) transmission of synchronized audio channels over standard Ethernet. EtherSound™ provides a cost effective fully digital path between a virtually infinite number of networked audio devices with up to 128 channels of 24-bit digital audio at 48 KHz, with bi-directional status and control data. Off-the-shelf Ethernet components such as 100baseTX switch can be used to extend the number of audio devices, as well as the distance between the devices on the network.

ESMonitor Software overview

Downloadable on www.auvitran.com web site, AuviTran's ES-Monitor is a Windows Vista/XP application running on a remote PC connected to the Primary Master of an EtherSound™ network segment, through standard Ethernet connections. ESMonitor offers:

1. Automatic discovery of AVP4-ES100 devices and/or any EtherSound™ compatible device on the segment, as well as automatic hierarchical interconnection between them. It enables the use of aliases to identify the modules, network name and group management.

2. Monitoring of connection, disconnection and error status for all devices and EtherSound™ links.

3. Automatic identification of manufacturer ID, product ID and the Channel I/O.

4. Network Patch assignment of any EtherSound device input to any reachable EtherSound™ device output.

5. Dedicated control page for the AVP4-ES100. Monitor channels status and speakers health. Individual gain, volume and all other specific parameters control.

Technical Specifications

General

Size	145 mm x 40 mm x 203mm
Power Consumption	50 Watts
Power Supply	100-240V~ 50/60Hz 1.4A Max (Phase / Neutral / Earth)
Storage: Temp/Humidity	- 5°C to 70°C / 0% to 95% (non-condensing)
Operating: Temp/Humidity	0 °C to 50°C / 5% to 90% (non-condensing)
Connectors	1x6 pole Euroblock connector (pitch 5.08mm) for AC power supply; 1x4 pole double row Euroblock connector (pitch 3.81mm) for speaker output; 1x6 pole double row Euroblock Connector (pitch 3.81mm) for GPIO. 2x RJ45 connectors for network connections. 2x4 pole Euroblock Connectors (pitch 3.81 mm) for network connections.

Audio Inputs and Outputs

Number of inputs	N.A.
Number of outputs	Up to 4 channels extracted from any of the 128xEtherSound™ channels(64 upstream or 64 downstream)

Audio Specifications

Total Output Power	2x20W RMS or 4x10W RMS outputs under 8 Ohms loads / 150mW Headphones output
Frequency response	20Hz – 20Khz @ -3dB

GPIO Specifications

GP In	4x Opto-isolated. +60Vdc maximum input voltage.
GP Out	4x +60Vdc/1A open drain Darlington per GPO. Internal +24Vdc available (100mA max).

Development and Integration Environment

OS Supported	Windows 32 bits Vista/XP - ready for Seven
ES-Monitor	ES-Monitor enables to remotely set, control and monitor an EtherSound network and provides enhanced control pages to manage the AVP4-ES100 specific parameters.
Development Tools	PC Telnet based development tools allowing access and control of all of the EtherSound devices devices' parameters.

Part number

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