AVB32-ES Overview

AVB32-ES is an EtherSound to AES/EBU bridge device in a 19″ 1U rack box for high integration of digital audio distribution over Ethernet with ultimate low propagation delay.

AVB32-ES is available in 3 formats: 32 in or 16 in and 16 out or 32 out mono channels. The AES/EBU inputs and outputs are split on 4 DB25 for size and cabling optimisation. A word clock in on a BNC connector is available for external synchronisation and 4 individual BNC connectors enable the direct word clock synchronisation of 4 external devices.

8 protected General Purpose Input/output (GPIO) are available to remotely survey or switch ON/OFF external device. A RS232 interface provides an easy way to manage and control external equipments.
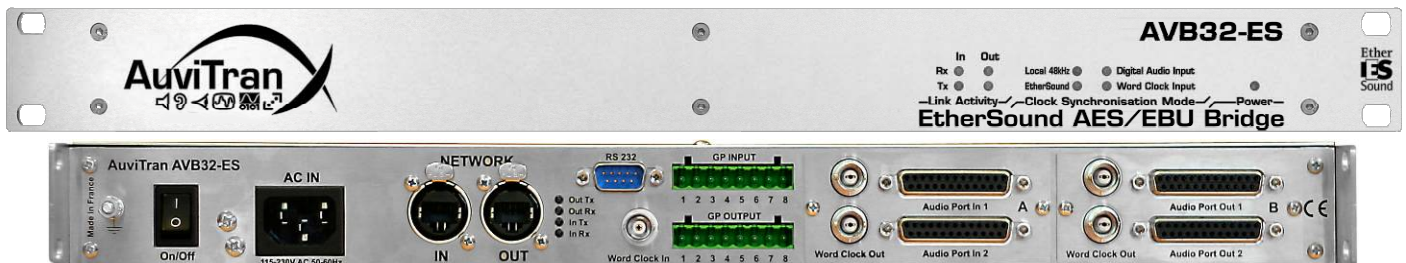
AVB32-ES enables network remote installation monitor and control thanks to its native integrated network status report capability. Any AVB32-ES can be fully monitored and controlled from a PC using ESMonitor software available for free download on AuviTran web site.

Mechanical Specifications

19 inches 1U rack box

Key Features

- 32 mono inputs or 32 mono outputs or 16 mono Inputs and 16 mono outputs AES/EBU Bridge from/to EtherSound in a 19″ 1U rack.
- Two AVB32-ES and a single Ethernet cable are all that's required to build a self-contained 32 channel digital AES/EBU multi-core.
- 8 AVB32-ES interconnected via Ethernet cables, bridges up to 64 mono AES/EBU inputs and 64 mono AES/EBU outputs between 2 distant points with integrated full matrix capability.
- User selectable local GPIO for internal parameter status or remote controlled status
- AuviTran's ES-Monitor, a Windows XP application running on a remote PC connected to the EtherSound™ network, which allows automatic discovery and management of AVB32-ES products; monitors connection & disconnection of products and link quality status; controls the individual products' parameters and allows remote assignment of the GPIO
- Serial Bridge feature via EtherSound network allows AD8HR or AD824 head-amp control between an AVB32-ES and an AVY16-ES in a Digital Yamaha mixing console such as PM5D, DM2000, DM1000 or DME64/24N.
- Selectable word clock source from AES/EBU input, BNC Word Clock In, local clock or EtherSound network

Applications

- Product for Distribution, routing and control of audio for live and touring installations
  - Live broadcast PA/announcement
  - Live entertainment and concerts
  - TV and Radio Outside Broadcast
  - Electro acoustic music productions
  - Itinerant Museums and Theatres

- Broadcast and Studio:
  - Radio and TV Studio recording
  - AES/EBU routing network matrix for broadcast
  - Recording and monitoring studio
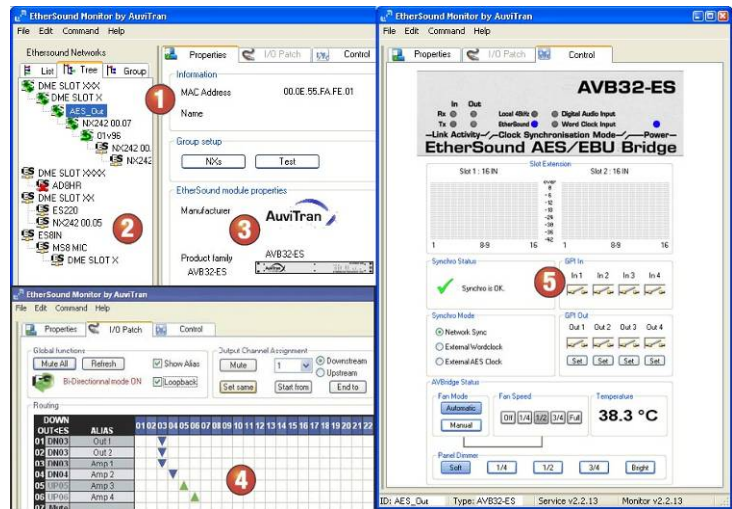 - Multi channels Broadcasting

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 1.6μs 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 AuviTran web site, AuviTran's ES-Monitor is a Windows XP application which runs on a remote PC connected to EtherSound™ Primary Master, through standard Ethernet connections. ESMonitor offers:

1. Automatic discovery of AVB32-ES 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 the manufacturer ID, the product ID and the Channel I/O.
4. Local Patch assignment of any EtherSound device input or output to the required EtherSound™ channel.
5. Control and monitoring of the individual parameters of the AVB32-ES; the GPIO states; Control synch; The Temperature and Fan Control speed.

Technical Specifications

General

Size	483 x 253 x 44mm (19' rack / 1U Height)
Power Consumption	<25 Watts
Power Supply	100-240VAC 50/60Hz 47W Max
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)
Front Panel	Network and links Rx and Tx Activities; Active synch running ; Power On Display
Rear Panel	1 IEC Power inlet; 2 Neutrik Ethercon RJ45; Network activity LEDs; 2x8 poles Euroblock Connector; 1 BNC for word clock synch in
	4 AES/EBU DB25 connectors, 4 BNC connectors for word clock synch out, 1 RS232 DB9 connector

AVB32-ES Features

3 Operating modes	32 mono AES/EBU inputs or 32 mono AES/EBU outputs or 16 mono AES/EBU inputs and 16 mono AES/EBU outputs
EtherSound I/O	IN and OUT port
AES/EBU to AES/EBU Latency	8 samples (166µs at 48 kHz)
Clock Synchronisation mode	48 kHz local clock (when Primary Master) or EtherSound Network (When not PM)
	Digital AES/EBU In 1 used for synchronisation
	Word clock In used for synchronisation

Output Relays Specifications

Type	8x2 Poles Relays on 2x8 poles Euroblock connectors
Operating range	24V / 1A
GPIO control	4 General purpose protected inputs monitored by remote application via EtherSound
	4 General purpose switch relay outputs controlled by remote application via EtherSound

Temp / Fan monitoring

Temp Monitoring	Network Monitoring of Temperature inside the Box
4 Fan Control modes set by external dip switch	Automatically Controlled by internal Temperature
	Software set (via ES Monitor)
	Full speed
	Off

Development and Integration Environment

OS Supported	Windows XP
ES-Monitor	ES-Monitor enables to remotely set, control and monitor an EtherSound network and provides enhanced property pages to manage the AVB32-ES specific parameters.
Remote Network Management	Links status, Relays status and Temperature monitoring
	Fan remote control and Relays remote control

Part numbers

AVB32-ES/AS2i   - EtherSound AES/EBU Bridge from 32 mono inputs
AVB32-ES/AS2o - EtherSound AES/EBU Bridge to 32 mono outputs
AVB32-ES/ASio   - EtherSound AES/EBU Bridge from/to 16 mono inputs and 16 mono outputs

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