AUDIOTX STL-IP-16 DATASHEET

IP Audio Multiplexer & Distribution system for Transmission Grade, permanent live audio over TCP/IP, UDP and UDP Multicast –
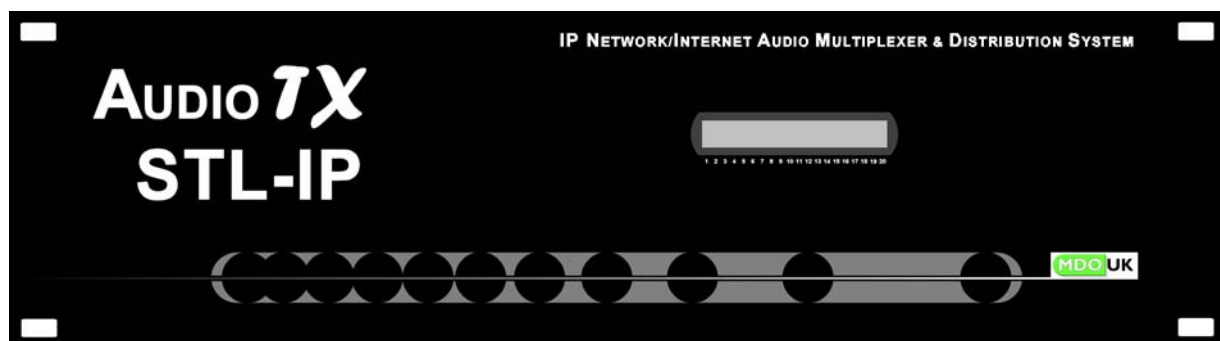
Designed for Live Programme Audio Distribution and STL applications.

OVERVIEW

AudioTX STL-IP-16 is part of the AudioTX STL-IP family of products, which deliver live audio over IP networks with transmission grade audio quality & robustness and an extremely low delay of just 5ms! AudioTX STL-IP-16 is a 3RU sized unit, which has 16 audio inputs and 16 outputs[*1] and is available with a choice of Analog or AES digital connections. STL-IP-16 is a highly flexible and advanced IP Audio Multiplexer - allowing audio to be sent and received to/from a variety of other remote locations (using any of the products in the STL-IP range) and in a virtually unlimited number of scenarios. Some examples are illustrated on the back of this datasheet.

Audio can be sent and received using point-to-point UDP or TCP/IP, and point-to-multipoint UDP Multicast network protocols and with Linear (uncompressed) audio at up to 24 bits and 96kHz sample rate, professional grade MPEG Layer 2 and Layer 3 compression, J.41 and G.722. Optional Forward Error Correction (FEC) and network jitter compensation plus synchronous transmission of serial ancillary data and/or contact closures (GPIO) make this an incredibly flexible and cost-effective solution.

1 16 Mono in/outputs, which can of course be combined for Stereo channels

APPLICATIONS

- Studio to Transmitter links (STL) over any IP Network: including Telco, Private/Dedicated, LAN/WAN, MPLS, Wireless or Satellite, and the Internet.
- Distribution of live or shared programming and inter-studio connectivity for radio stations and groups.
- Permanent and ad-hoc broadcast quality audio connectivity between sites.
- Multicast audio distribution over Telco networks, Satellite, LAN/WAN and all multicast capable networks .
- Telco carrier-grade distribution of live audio signals (one or two way) via TCP/IP or UDP (including multicast) over IP networks.

FEATURES AND SPECIFICATIONS

System Features

AudioTX STL-IP-16 acts as a sophisticated IP Audio Multiplexer. You can setup the system to use multiple 'TX Channels' (up to 20), each of which will send live audio from any of the inputs to one or more remote destinations. If you wish, you can send the same audio to multiple destinations, using the same or different audio formats (mono/stereo, compression settings etc) and whether using multicast or multiple point-to-point (unicast) connections. The RX Channels allow you to receive multiple audio channels from remote locations, limited only by the 16 physical outputs on the unit.

Audio Specifications & Protocols

Choice of Professional grade line level balanced analogue or AES/EBU digital inputs and outputs (see separate 'Available System Configurations' sheet for more details). System Audio Clock can be sourced from the external wordclock input, generated internally, or derived from the AES input stream on any input. Audio in/out at up to 24 bit, 96 kHz sample rate

Mono/Stereo audio transmit/receive using any combination of TX Channels setup for Linear Audio (uncompressed) mode at up to 24 bit, 96 kHz sample rate, MPEG Layer 2 at up to 384 kbps, MPEG Layer 3 at up to 320kbps, J.41 at 384 kbps (mono) or 768 kbps (stereo) or G.722.

Mono, Stereo, Joint-Stereo, Dual-Mono operation

Built in Silence and overload Detectors

Network Capabilities & Specifications

Supports all IP networks including Telco, Private/Dedicated circuits, LAN/WAN, MPLS, Satellite, Wireless, ATM, T1/E1 and Internet

Network modes: UDP, TCP/IP, UDP Multicast modes

Audio transmit/receive bitrates between 24 kbps and 4.6 MB/s per TX Channel

Optional transmission of ancillary serial data (via RS232 port) at up to 128 kbps on any one or more TX Channels, up to 4 in / 4 out GPIO contact closures which can be mapped separately to any one or more TX/RX Channels

Optional use of FEC (forward error correction) and/or network jitter compensation/safety buffer on each RX Channel

Monitoring of hardware, network and connection status via SNMP, email alerts, TTL level outputs and via front panel display

ADDITIONAL INFORMATION

Detailed product information available at www.stl-ip.com

Example 1

Up to 16 channels of Live Audio (16 mono, or 8 stereo, or a mixture). Bi-directional or one-way audio connection. All channels optionally Synchro-Locked to sample level accuracy.

Example 2

Up to 16 channels of Live Audio sent to Units A and B simultaneously and optionally Synchro-Locked. And/Or up to 16 channels received from Unit A, or from Unit B, or some from each.

A   B

Example 3

Live Audio between multiple units in various separate TX/RX Channel connections.

Example 4

Any units can send audio, receive audio, or both in any combination.

Note: In each case, ancillary data (RS232) and/or GPIO (TTL level signals) can be sent/received with audio. Multiple audio channels sent between any 2 units can be Synchro-Locked.