

**TELE-
TECHNIKA**

**TELE-
TECHNIKA**

**AUDIO STREAMER
TRANSMITTER AST1000,
RECEIVER ASR1000**

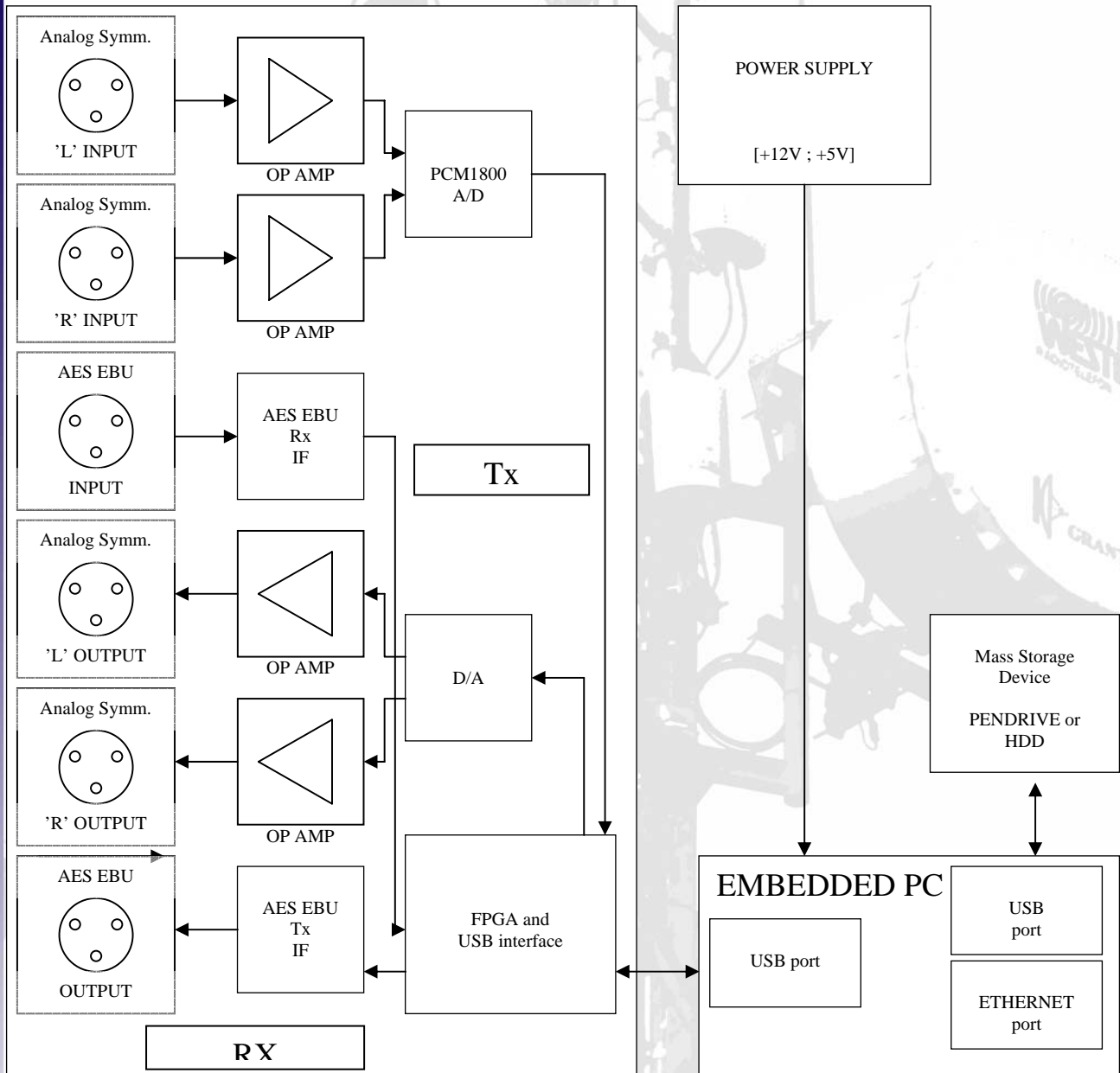
Professional
Audio encoder and decoder
With IP in/outputs

General Technical Description

The Teletechnika AUDIO STREAMER equipment can transmit 1 stereo or 2 mono audio channel and RDS text information or digital audio (AES/EBU) through IP network. The equipment is able to encoding and decoding TS with AST-1000 Transmitter and ASR-1000 Receiver units. The IP network can be LAN, Wan or Internet. The equipment can be used in codec pairs for audio transmitting or broadcasting, or even as a webradio server. The transmission can be Unicast or Multicast. In case of service error, a mass storage equipment can be attached to the USB port (pendrive or HDD) to play audio files.

The equipment is able to transmit analogue or AES/EBU audio and data streams and additional RDS text information. It can grant the transition between analogue and AES/EBU systems. The RDS text can be transmitted by the RS-232 port or embedded into AES/EBU signal. The RS-232 port grants you the full duplex connection between the receiver and transmitter. Beside the RDS text, any additional information (example AtmoLight light controlling) can be transmitted. Also the equipment is able to embed the RDS text into AES/EBU signals.

The block scheme of the equipment:



Teletechnika Ltd. AUDIO STREAMER TRANSMITTER and RECEIVER

The equipments grant you the next audio transmitting options:

- **Analog transmitting - analog receiving**

In this option symmetric 600 Ohm audio connection can be used on both transmitters and receivers in/outputs in order to connect encoder and decoder to other analog studio equipments. The attached RDS information is accessible through the encoders and decoders serial port.

- **AES/EBU digital transmitting – analog receiving**

In this option the transmitting studio has AES/EBU audio signal source but the receiving studio has only analog equipments. In this case on the transmitting side there can be used digital inputs and on receiving side there can be used normal analog audio outputs. The ASR-1000 receiver equipment transforms analog audio signal from the incoming AES/EBU signals. The RDS text information gets to the receiver side's serial output from the incoming AES/EBU signals.

- **Analog transmitting AES/EBU receiving**

As the opposite option if the above connection type the transmitting side has analog connections and receiving side has an AES/EBU inputs. In case of analog transmitting the signal transmission is digital because of the sampling method, so the receiving side gives digital AES/EBU signals through the AES/EBU output after the signal transformation. The RDS text information is embedded into AES/EBU signals.

- **AES/EBU digital transmitting – AES/EBU digital receiving**

This is the most up-to-date solution for audio transmission. Both transmitting and receiving studios has AES/EBU interface so the analog connection is only necessary for monitoring options. The incoming digital stream goes through the transmission system without any transformation. Thanks to the inner multiplexing, any information can be transmitted through the RS-232 ports. In generally through the RS-232 any additional information can be transmitted because the equipments work in any standard baudrate and type. All of these rates can be configured. This interface is a separated data channel with its own IP address and port.

Optional transmission quality in case of MPEG layer2 encryption:

(16 bit stereo, 44.1 kHz sampling)

4 ... 1500 kbps

Optional transmission quality in case of MPEG layer3 (MP3) encryption:

(16 bit stereo, 44.1 kHz sampling)

4 ... 1500 kbps

Optional transmission quality in case of MPEG4 AAC encryption:

4 ... 320 kbps

IP network interface:

Physical interface: RJ-45 10/100 ETHERNET

Protocols: TCP, UDP, RTP, HTTP, IGMP, DDNS- able, SNMP (optional)

Configuration: .NET 3.5 based Windows application, Network Management System

Software and log option

Cast modes: Multicast, Unicast

Server modes: Icecast, Shoutcast

The equipments front options:

TRANSMITTER and RECEIVER are the same



- POWER LED (green): A power supply indication
- STREAM LED (green): Transport Stream indication
- SERVICE LED (yellow): External error, service outage
- MAINT LED (red): Fatal error, shutdown
- RESET : Restarts the equipment
- USB connector: Pendrive or HDD connection
- SOUND: Earphone 6,3mm JACK

Backboard options:



230V AC: Power supply

POWER: Power switch

Transmitter:

LIN: Analog audio input left XLR negative connector

RIN: Analog audio input right XLR negative connector

AES/EBU: Digital AES/EBU input XLR negative connector

Receiver:

LOUT: Analog audio output left XLR positive connector

ROUT: Analog audio output right XLR positive connector

AES/EBU: Digital AES/EBU output XLR positive connector

100BaseT: ETHERNET connector

RS232: RDS text serial port

PS2: PC keyboard connector

MONITOR: Monitor connector

Advantages:

- Professional audio quality for studio applications
- Comprehensive codec support
- Compact design
- No external PC needed
- No other software needed
- Optional Uni- or Multicast
- Comprehensive protocol support

Technical details:

AST1000: AUDIO STREAMER TRANSMITTER:

Audio connectors	
System	Analog
Connector	XLR Female In
Impedance	600 Ohm Balanced
Number	2 (L+R) input
System	Digital AES EBU
Connector	XLR Female In
Number	1 input
Audio process	
MPEG Layer2 Encoding rate	4 ... 1500 kbit/s
MP3 Encoding rate	4 ... 1500 kbit/s
MPEG-4 AAC	4 ... 320 kbit/s
Audio sampling frequency	Analog: 44.1 kHz
	AES/EBU: 32 ... 96 kHz
Resolution	16bit-24bit/channel
RDS Text	
System	RS-232 full duplex
Bitrate	115200 Baud max
Connector	DSUB-9 Female
IP platform	
Physical layer	RJ-45 UTP ETHERNET
Protocol	TCP/IP, UDP, RTP, HTTP, IGMP, SNMP
Management	.NET 3.5 Windows software
Power Supply	
	230 V / 50 Hz
Size	
	Standard 19" x 1U RACK
Temperature Range	
	+5 to +40 °C as per ETSI 300 019-1-3

ASR1000: AUDIO STREAMER RECEIVER:

Audio connectors	
System	Analog
Connector	XLR Male Out
Impedance	600 Ohm Balanced
Number	2 (L+R) output
System	Digital AES EBU
Connector	XLR Male Out
Number	1 output
Audio process	
MPEG Layer2 Encoding rate	4 ... 1500 kbit/s
MP3 Encoding rate	4 ... 1500 kbit/s
MPEG-4 AAC	4 ... 320 kbit/s
Audio sampling frequency	Analog: 44.1 kHz
	AES/EBU: 32 ... 96 kHz
Resolution	16bit-24bit/channel
RDS Text	
System	RS-232 full duplex
Bitrate	115200 Baud max
Connector	DSUB-9 Female
IP platform	
Physical layer	RJ-45 UTP ETHERNET
Protocol	TCP/IP, UDP, RTP, HTTP, IGMP, SNMP
Management	.NET 3.5 Windows software
Power Supply	
	230 V / 50 Hz
Size	
	Standard 19" x 1U RACK
Temperature Range	
	+5 to +40 °C as per ETSI 300 019-1-3