



# Fully Featured AoIP Transport



## POWERFUL PERFORMANCE

- Professional duplex stereo IP audio codec
- High quality audio transport over IP networks using RTP/UDP and SDP
- 192kHz Sampling supports Digital MPX over AES and fully digital transfer
- Robust DSP-based platform for mission-critical operation
- Dual IP ports configurable for back up



## POWERFUL CONTROL

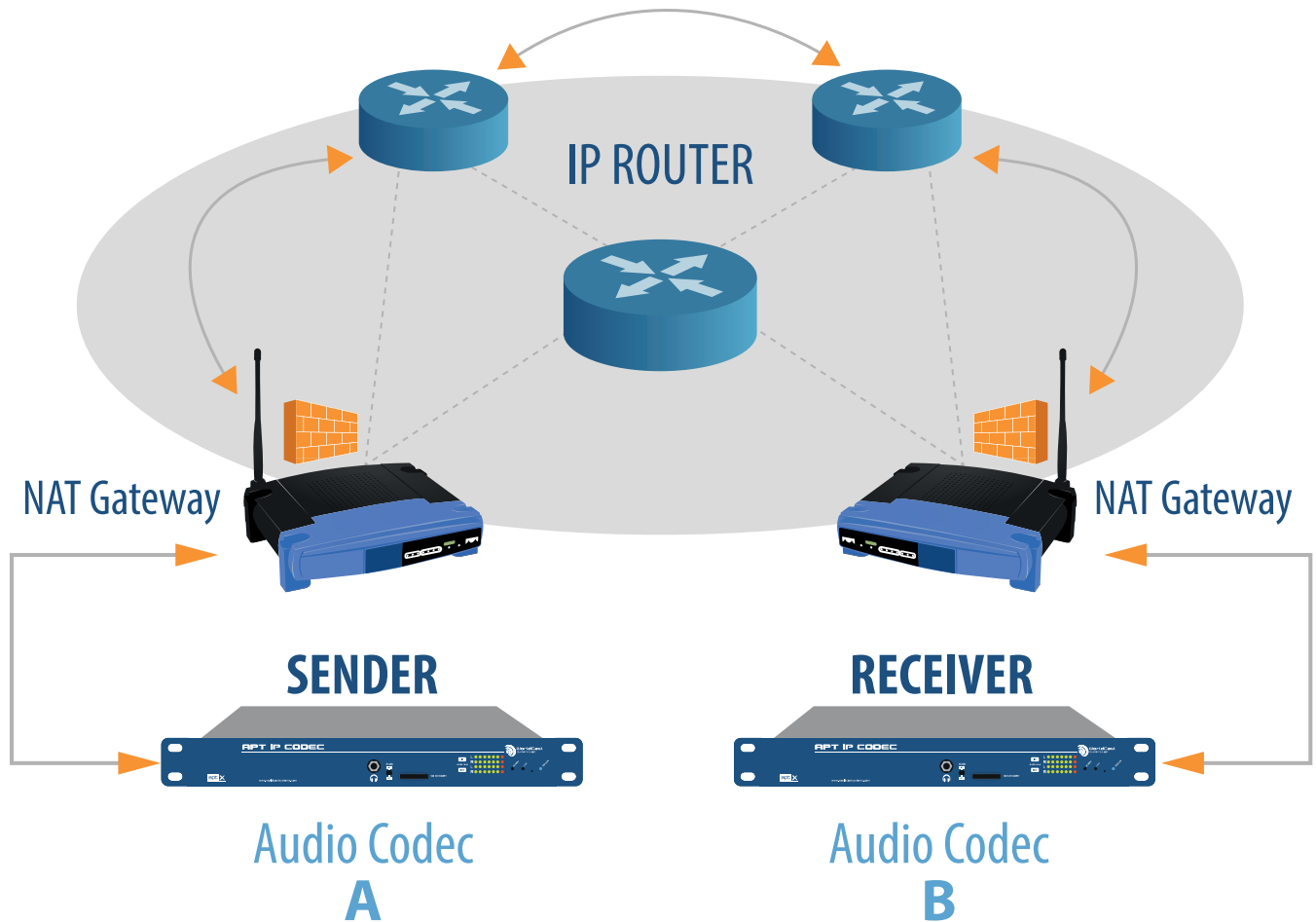
- Virtual LAN and virtual Interfaces for flexible network management
- Highly intuitive Network Management Software (NMS)
- Embedded Web Server for access & control from any location
- Allows management of network conditions such as packet size, buffers and QoS levels for optimum audio performance



## POWERFUL SAVINGS

- Competitively priced professional platform
- SureStream for broadcast-grade reliability and audio quality over open internet links
- Performance history, trends for Protection of Network Investment
- Support for Unicast, Multiple Unicast & Multicast networking ensuring minimal and flexible operational costs.

## Typical IP Transmission Chain Point-to-Point via Unicast



### Broadcast Audio over the Public Internet

SureStream technology is a revolutionary innovation from APT that enables broadcasters to use inexpensive IP links and still maintain professional broadcast-grade audio quality and reliability.

It delivers the audio quality and reliability you expect from a T1/E1 link at a fraction of the associated cost. SureStream also offers the added benefit of «Always-On Redundancy». With SureStream technology, you can save thousands on your audio transport bills and still offer your listeners the highest quality sound.



SureStream Awards

# Key Features

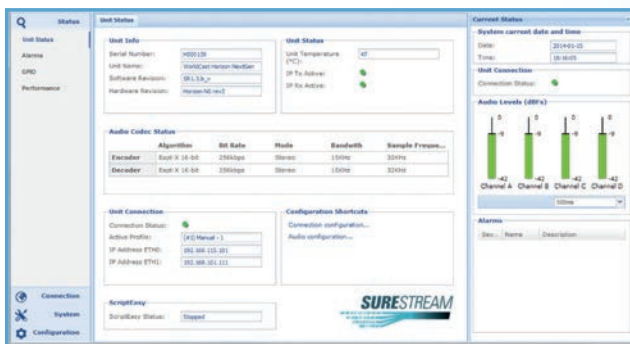
## FEATURES

- Professional & Affordable IP Audio Codec
- Dual IP Ports, configurable for management and redundant streaming
- Multi-Algorithm Support as standard, including HE-AAC
- Non-Destructive, Cascade-Resilient Real-Time Coding with Enhanced apt-X
- Audio Backup from SD card
- 192kHz Sampling supports transmission of Digital MPX over AES\*
- SureStream Technology enables broadcast-grade audio over inexpensive IP Links\*

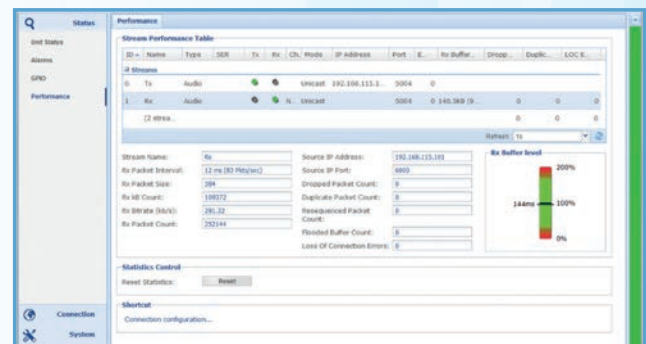
\* Cost option

- Distributed Intelligence powered by ScriptEasy
- Forwarding of audio or non-audio UDP Streams, such as PAD or HD Exporter Data
- Auto-Detection of received audio format
- Auxiliary data for transmission of RBDS / RDS or PAD
- 4 Opto-coupled Inputs and 4 Relay Outputs
- Support for SNMP, Alarm & Event Logging
- Network Security features with Firewall capability
- Intuitive Web Interface
- Reliable DSP-based architecture

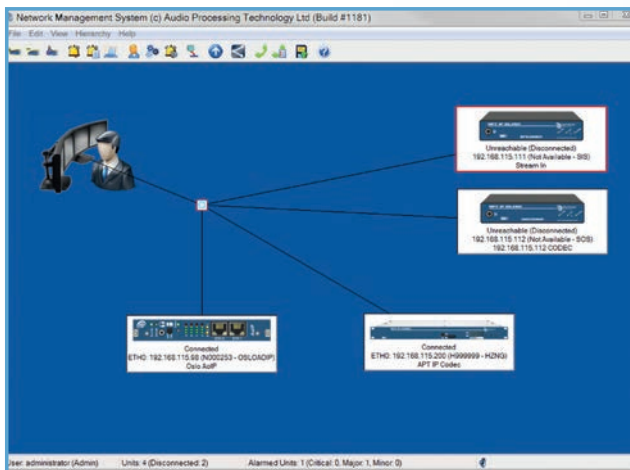
**COMPATIBLE**  
WORLDCAST MANAGER



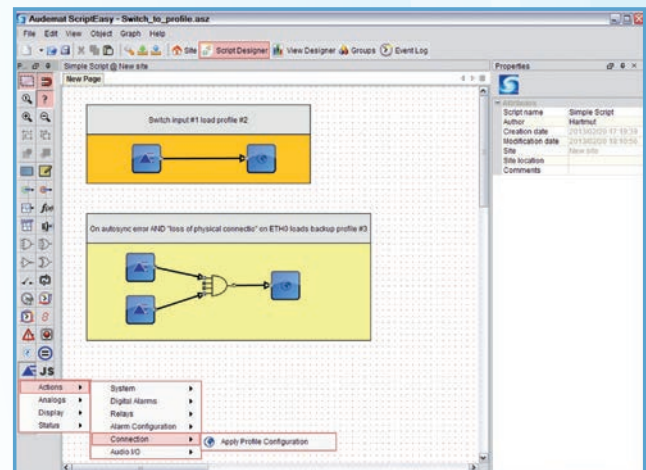
Unit Status GUI



Unit Performance GUI

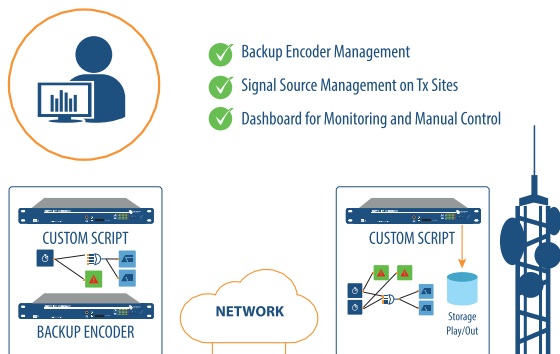


Unit NMS View



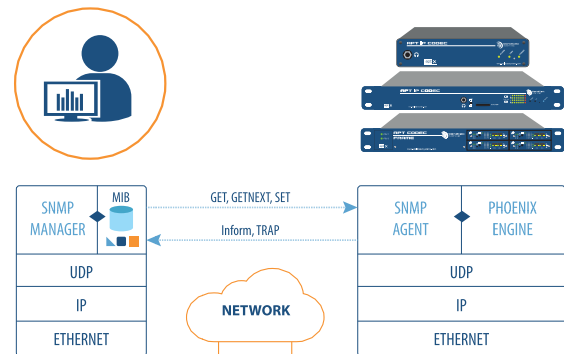
ScriptEasy IDE

## Custom Backup Management utilizing ScriptEasy



Backup Example

## SNMP Management



SNMP Example

# Technical Features



## Technical specification

Interfaces	
Ethernet	Dual physical Ethernet ports, RJ45 for management and streaming
Virtual Network	Virtual Interfaces and VLAN tagging
Analog I/O	Electronically balanced, capacitive isolated XLR for Left/Right, Imp. Hi/Lo and 600 $\Omega$
Digital Audio I/O	AES-3, 24 Bit, transformer balanced, Imp. 110 $\Omega$ , XLR-Connectors
Digital Ref Input	AES, transformer balanced, 110 $\Omega$ , XLR
Serial Aux Data	9 pin D Type, RS232 level
GPIO	15 pin D-Type
Management	Web GUI, APT NMS, SNMP, XML API available with a later release
Audio	
Asymmetric Audio	Independent audio modes for sent and receive, Tx and Rx clock domains
Digital Operation	Output FS, 32 kHz, 44.1 kHz, 48 kHz
Audio Bandwidth	10Hz to 20kHz mono & stereo 88kHz for digital MPX over AES (option)
Standard Coding Algorithms	Enhanced apt-X 16 & 24 Bit, Linear PCM 16 & 24 Bit MPEG 1/2 Layer II, MPEG4: AAC-LC/LD/ELD, MPEG2/4: HE-AAC v1/v2
Coding Delay	min. 2ms on Eapt-X and higher depending on chosen algorithm
Dynamic Range	16 Bit >85dB, 24 Bit >120dB
Phase Response Linear	DC to Fs/2
Pass Band Ripple	< 0.2dB
Network and IP	
IP Protocols Supported	RTP/UDP/IP, RTCP, DNS, Dynamic DNS, DHCP, ICMP, IGMP, VLAN, UPnP (IGD), NTP, SNMP, SMTP, HTTPS (management)
IP Statistics	Complete IP Statistics for each stream
Casting Modes	Unicast, multiple unicast, multicast, multi-multicast
De-Jitter Buffer	Buffer size 5 - 5,000ms adjustable, automatic packets re-sequencer
RTP/UDP Streaming and Modes	Stereo audio multiple Tx-Streams, UDP stream forwarding, Auto-Detection of received Stream, Auto-Reply to sender
Quality of Service	DiffServ, with separate DSCP values per stream, SureStream Technology* and Error Concealment
Backup Features	SD Card for audio file storage
Network Security	Service Filter and Firewall Features
Data	
Serial Data Rates (embedded)	1200, 2400, 4800, 9600 Baud
Serial Data Rates via IP	1200 - 115,200 Baud (8 rates)
AUX Data via UDP	UDP forwarding PAD or private Data
GPIO	4 switch inputs, 4 relays; GPI transmitted as separate UDP stream or embedded in Eapt-X

## Physical specification

19" rack mount 1U Dimensions (W / L / H)	44mm x 482mm x 160mm
Weight	< 1,5 kg - 3.355 lbs
Main Power Supply	100-250 V / 50-60 Hz
Power Consumption	< 20W
Guaranteed Working Temperatures	0°C - +55°C
Humidity	Up to 95% relative humidity (non-condensing)

## Order information

APT IP CODEC (ex Horizon NG)	
REF	DESCRIPTION
TFP0100	APT IP CODEC with AC PSU
TFP0100-DC	APT IP CODEC with DC PSU
Software Option	
CD00123	SureStream - APT IP CODEC
L00074	Digital MPX Over IP option for APT IP CODEC
Hardware Option	
SPP00100	Dual AC PSU - for APT IP CODEC AC
SPP00114	Dual DC PSU - for APT IP CODEC DC
SPP00123	Dual AC PSU - for APT IP CODEC DC

\*Cost option

Technical specification are subject to change without prior notice – 09/2016