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.

www.worldcastsystems.com
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.
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

Key Features

- 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
**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 Ω
- **Digital Audio I/O**: AES-3, 24 Bit, transformer balanced, Imp. 110 Ω, XLR-Connectors
- **Digital Ref Input**: AES, transformer balanced, 110 Ω, 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 send and receive, Tx and Rx clock domains
- **Digital Operation**: Output Fs, 32 kHz, 44.1 kHz, 48 kHz
- **Audio Bandwidth**: 10kHz to 20kHz mono & stereo, 88kHz for digital MPX over AES (option)
- **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, IGMP, VLAN, UPnP (G2), 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 (bit 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

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**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: 100-250V / 50-60 Hz
  - Power Consumption: < 20W
  - Guaranteed Working Temperatures: 0°C - +55°C
  - Humidity: Up to 95% relative humidity (non-condensing)

**Order information**

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<tr>
<th>REF</th>
<th>DESCRIPTION</th>
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<tbody>
<tr>
<td>TFP0100</td>
<td>APT IP CODEC with AC PSU</td>
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<tr>
<td>TFP0100-DC</td>
<td>APT IP CODEC with DC PSU</td>
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<td>CD00123</td>
<td>SureStream - APT IP CODEC</td>
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<td>L00074</td>
<td>Digital MPX Over IP option for APT IP CODEC</td>
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<td>SPP00100</td>
<td>Dual AC PSU - for APT IP CODEC AC</td>
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<td>SPP00114</td>
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<tr>
<td>SPP00123</td>
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*Cost option

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**Technical specifications are subject to change without prior notice - 09/2016**