



## IP Audio Without Compromise

Tieline's Genie STL is the World's most powerful DSP-based IP audio codec for mission critical point-to-point connections and studio-to-transmitter links.

Designed for the latest digital IP broadcast networks, Genie STL is the most feature-packed STL-grade IP audio codec with multiple levels of power, audio and network redundancy.

## Applications

Genie STL delivers superior quality IP audio over LANs, WANs, the internet, satellite IP and the full range of wireless networks<sup>[1]</sup>. It is specifically designed for 365/24/7 operation over mission critical audio paths throughout broadcast IP networks and is ideal for:

- Stereo Studio-to-Transmitter Links (STLs)
- Stereo Studio-to-Studio Links.
- Other mission-critical point-to-point connections.

## Multiple Backup Options

Genie features dual Gigabit Ethernet ports (10/100/1000), dual redundant power supplies, audio silence detection and IP network backup solutions to ensure you're always on the air.

Automated network failure detection provides switching to a backup IP

LAN connection and automatic silence detection can failover to backup audio files on a thumb drive connected to the codec's USB port.

## Unsurpassed Clarity

Genie STL is capable of 24bit 96kHz low latency linear PCM audio, delivering unsurpassed sonic clarity. The codec also features a full complement of professional algorithms including the low delay and cascade-resilient E-apt-X algorithm, as well as the popular LC-AAC, HE-AAC v1 and v2, MPEG Layer II, MP III, Tieline Music and MusicPLUS, G.722 and G.711 algorithms.

Asymmetric<sup>[2]</sup> encoding and decoding lets you send high quality audio in one direction and save on data by sending low bandwidth program on the return channel.

## SmartStream IP Technology

Tieline's renowned proprietary SmartStream IP technology provides advanced network management tools for dynamically responding to variable conditions, especially in situations when QoS is unavailable.

Some other manufacturers charge thousands of dollars for IP management software as if it's an optional extra. Tieline believes high performance and rock-solid reliability is an essential part of each and every broadcast and delivers its renowned SmartStream IP management software for free. SmartStream ensures:

- The highest audio fidelity
- Performance reliability over inexpensive unmanaged IP audio links like the public internet, despite varying network conditions
- Interoperability with other manufacturers and IP protocols

## SmartStream Compatibility

Genie STL supports both IPv4 and IPv6 (Dual Stack) protocols, so broadcasters can be assured that they have made a smart investment for the future. You can also connect over IP with any SIP-enabled IP codec brand supporting the EBU N/ACIP tech 3326 standard.

## Codec Management

Each device can be individually controlled using a Java-based web-browser Graphical User Interface launched from each codec. View and configure parameters such as algorithms, jitter buffers, forward error correction and more.

Genie STL is also designed to be managed using Tieline's standalone Codec Management System<sup>[3]</sup> (CMS) product. Purchase and install the CMS and use any computer to manage your entire network of IP codecs remotely using a Graphical User Interface on your computer.

## Input/Output Specifications

Analog Audio Inputs	2 x Female XLR line inputs
Analog Audio Outputs	2 x Male XLR
AES3 In	1 x female XLR (Channel 1 in; shared with Ch1 analog input)
AES3 Out	1 x male XLR
Aux Input	1 x 6.35mm (1/4") Mic/Line level Jack on rear panel
Headphones Out/Aux Out	1 x 6.35mm (1/4") Jack on rear panel and 1 x 6.35mm (1/4") Jack on the front panel
Sync Input	BNC Wordclock input
Control Port In/Out	Four relay inputs and four opto-isolated outputs for machine control via a DB15 connector.
Audio Input Impedance	High Impedance > 5K ohm
Output Impedance	<50 ohm Balanced
Clipping Level	+22dBu (input and outputs)
A/D & D/A Converters	24 bit
Frequency Response	20Hz to 22kHz
Total Harmonic Distortion	<0.03% at +4dBu, unweighted
Signal To Noise Ratio	>90dB at +22dBu, unweighted

### Sample Frequencies

IP Sample Frequencies	8kHz, 16kHz, 24kHz, 32kHz, 44.1kHz, 48kHz, 96kHz
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### Algorithms

IP	Tieline Music, Tieline MusicPLUS, G.711, G.722, MPEG Layer 2, MP III
IP	AAC-LC, AAC-HE
IP	16/24 bit Enhanced apt-X
IP (uncompressed)	Linear PCM16/24 bit 32kHz, 44.1kHz, 48kHz, 96kHz

### Data and Control Interfaces

USB	USB 2.0 Host port on the front panel
LAN	2 x 10/100/1000 RJ45 connectors
Serial	RS232 up to 115kbps with or without CTS/RTS flow control can be used as a proprietary data channel
Protocols	Tieline; SIP (EBU N/ACIP 3326 compliant); IPv4/IPv6 compatible
ISDN	Optional via module slot**
POTS	Optional via module slot**

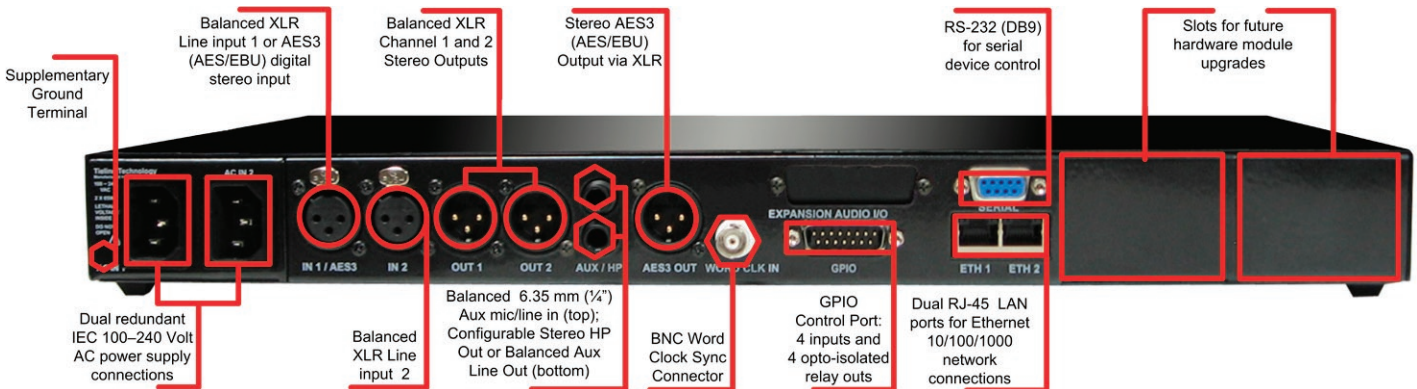
### Front Panel Interfaces

Display	256 x 64 monochrome LCD
Keypad	21 button keypad
Navigation	5 button keypad

### General

PC Configuration	User-configurable settings and matrix audio mixer** via browser-based Toolbox Graphical User Interface
Multilingual	Multilingual menus and configuration software
Remote Control	Compatible with Codec Management System software (optional purchase)
Size	1U x 19" Rackmount
Dimensions	18.98" x 1.73" x 13.5" [482mm (W) x 44mm (H) x 343mm (D) including rear connectors]
Weight	6lb 3.47oz/2.82Kg
Power Consumption	Dual 100-240V AC power inputs
Operating Temperature	0°C to 45°C (40°F to 113°F)
Humidity Operating Range	0 to 70% (at 35°C non-condensing)

\*\* Available in later releases



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