



AUDIO CODEC



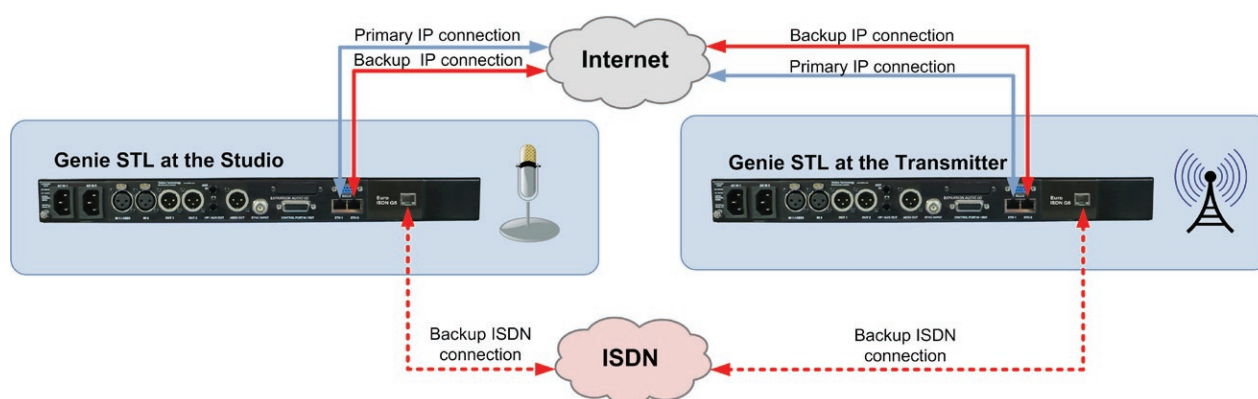
Genie STL (TLR5200S)

Tieline's Genie STL is the World's most powerful DSP-based stereo IP audio codec for mission critical point-to-point connections. It has dual Gigabit Ethernet ports, dual internal power supplies, audio silence detection and IP network backup solutions to ensure you're always on the air.

Applications

Genie STL is specifically designed for continuous operation over the full range of both wired and wireless IP networks ^[1]. It is ideal for:

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



Unsurpassed Clarity

Genie STL is capable of 24bit 96kHz low latency linear PCM audio for unsurpassed sonic clarity. It also includes the low delay and cascade-resilient aptX® Enhanced algorithm, as well as other popular algorithms including the full AAC suite, variable bit-rate Opus, MPEG Layer II, MP3, Tieline Music and MusicPLUS, G.722 and G.711 algorithms.

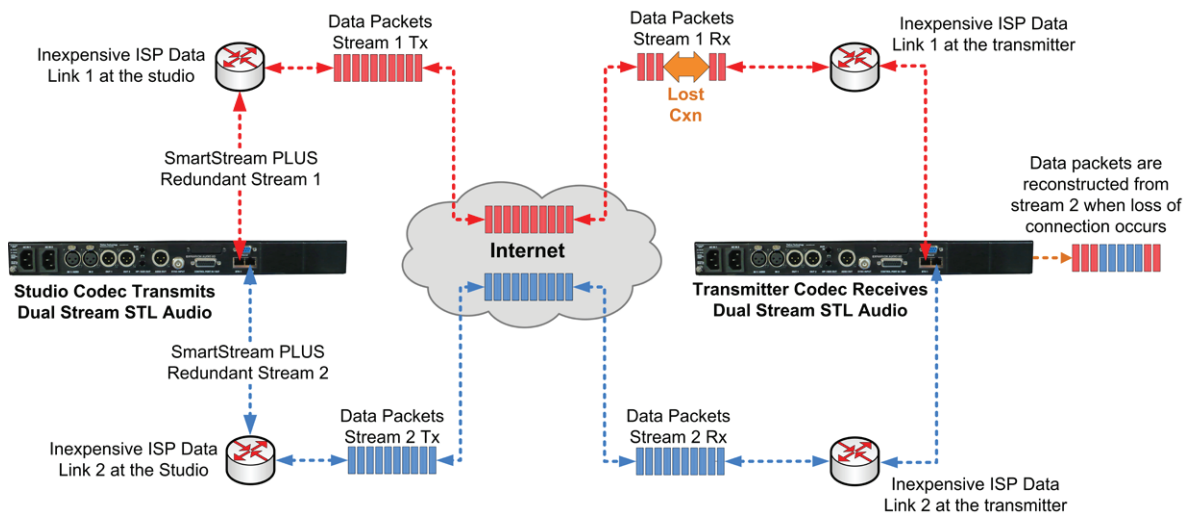
Rock Solid Audio over Low-Cost IP Links

Tieline's SmartStream PLUS is revolutionising IP broadcasting. It delivers the rock solid and reliable STL-grade audio quality you would normally expect over a T1/E1 link, by using inexpensive unmanaged IP networks like the internet for STLs, audio distribution and remotes.

SmartStream PLUS

Use SmartStream PLUS to stream simultaneous redundant data streams from both Ethernet ports and deliver seamless redundancy by switching back and forth, without loss of audio, from the nominated primary data link to the backup link if one fails and then subsequently recovers. Use IP links from two different IP network providers for optimal redundancy over mission critical STL connections.





SmartStream PLUS Redundant Streaming Reconstitutes Lost Packets from Stream 1 using Stream 2

Automated jitter buffer management and Forward Error Correction (FEC) assist in maintaining reliable, rock solid connections and automatic silence detection can fail over to backup audio files on a drive connected to the codec's USB port if required.

Save Money with SmartStream PLUS

Tieline can show you how an investment in new codecs will pay for itself in months by using inexpensive IP links at a fraction of the cost of leased lines. Some other manufacturers charge thousands for IP management software like SmartStream 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 PLUS IP management software for free!

Unrivalled Compatibility

Genie Distribution 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.

Optional ISDN^[3] and POTS^[3] modules allow you to interface with your existing infrastructure, as your network transitions to IP.

Codec Management

Use Tieline's Toolbox web-browser Graphical User Interface to connect to your codec and configure individual codec settings over a LAN, WAN or the internet.

The Codec Management System^[3] allows you to use any computer to manage your entire network of IP codecs remotely.



Tieline
TECHNOLOGY

**CODEC
MANAGEMENT
SYSTEM**

© Tieline Technology 2003 - 2013

All copyright and other intellectual property rights of the Codec Management System subsists with the owner Tieline Pty. Ltd. Including, without limitation, the software, GUI design, workflow, text and graphics images comprised in the Codec Management System are owned or licensed by Tieline Pty. Ltd. and are protected by the laws of Australia and International copyright law.

The Tieline logo is a registered trademark of Tieline Pty. Ltd.

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	<0.0035% at +16dBu or -89 dBu unweighted
Signal To Noise Ratio	>98.5dB at +22dBu, unweighted

Sample Frequencies

IP Sample Frequencies	8kHz, 16kHz, 32kHz, 44.1kHz, 48kHz, 96kHz
-----------------------	---

Algorithms

IP	Tieline Music, Tieline MusicPLUS, Opus, G.711, G.722, MPEG Layer 2, MPEG Layer-3
IP (uncompressed)	LC-AAC, HE-AAC, HE-AACv.2, AAC-LD, AAC-ELD, AAC-ELDV2, 16/24 bit aptX® Enhanced algorithm 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/SDP (EBU N/ACIP 3326 compliant), RTP, DHCP, SNMP, DNS, HTTP, IGMP, ICMP, VLAN, IPv4/IPv6
ISDN	Optional via module slot
POTS	Optional via module slot

Advanced Networking

VLAN Tagging	IEEE 802.1Q, 802.1p
--------------	---------------------

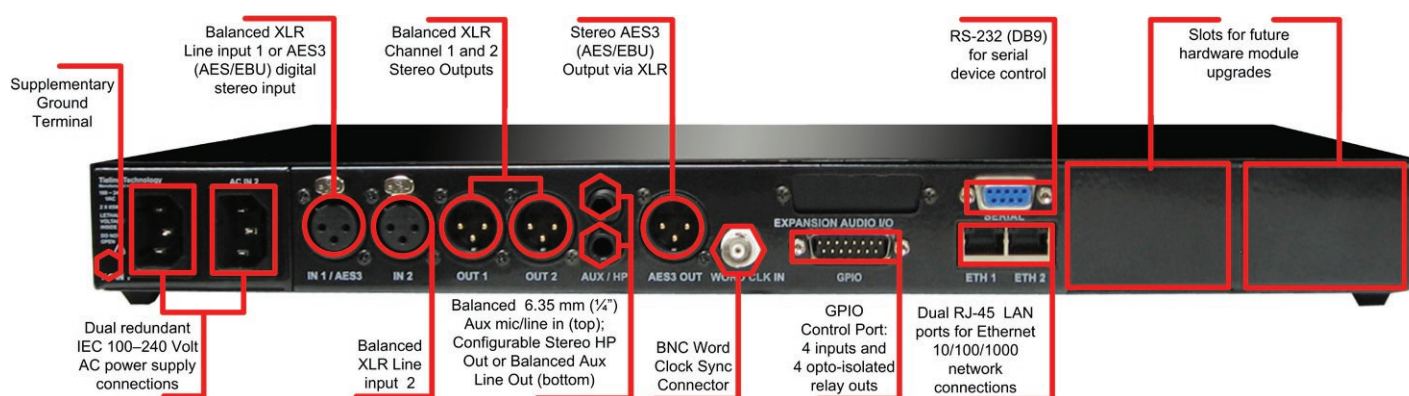
Front Panel Interfaces

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	19" x 1.75" x 13.5" [482mm (W) x 44mm (H) x 343mm (D) including rear connectors]
Weight	6lb 7.7oz/2.94Kg
Power Consumption	Dual 100-240V IEC power inlets; 1A 50-60Hz
Operating Temperature	0°C to 45°C (32°F to 113°F)
Humidity Operating Range	20% ≤ RH ≤ 70% (0 to 35°C/32°F to 95°F), non-condensing.

** Available in later releases



Genie STL rear panel

Extensive dealer network with global telephone support in 2 strategic locations around the world

Americas

Tieline America LLC
7202 E. 87th Street, Suite #116,
Indianapolis, IN 46256 USA
Direct Ph: 317-845-8000
Fax: 317-913-6915
E-mail: sales@tieline.com

International

Tieline Pty Ltd
1/25 Irvine Drive
Malaga, WA. 6090 Australia
Ph: +61(0)8 9249 6688
Fax: +61(0)8 9249 6858
E-mail: info@tieline.com

Tieline®
The Codec Company