Merlin PLUS

AUDIO CODEC

WHEATNET

W IP

| ISDN | OPUS | SIP | IPv4 IPv6 | USB Modem Wi-Fi | W! | SMART STREAM PLUS | Fuse-IP |

CLOUD CODEC CONTROLLER ✔

TieLink ✔

www.tieline.com

Tieline®
The Codec Company
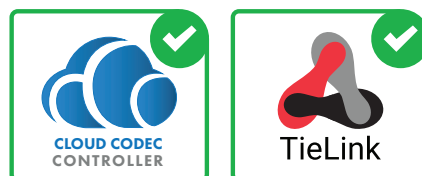
Merlin PLUS (TLR5200MPW)

Rapidly expand your remote capability with the award winning Merlin PLUS with WheatNet-IP. Manage up to 6 bidirectional mono connections with IP codecs or smartphones using Report-IT, saving money on codec hardware costs and reducing studio rack space requirements.

The codec includes a WheatNet audio card which provides a WheatNet-IP LAN interface for connecting to the WheatNet-IP Environment.
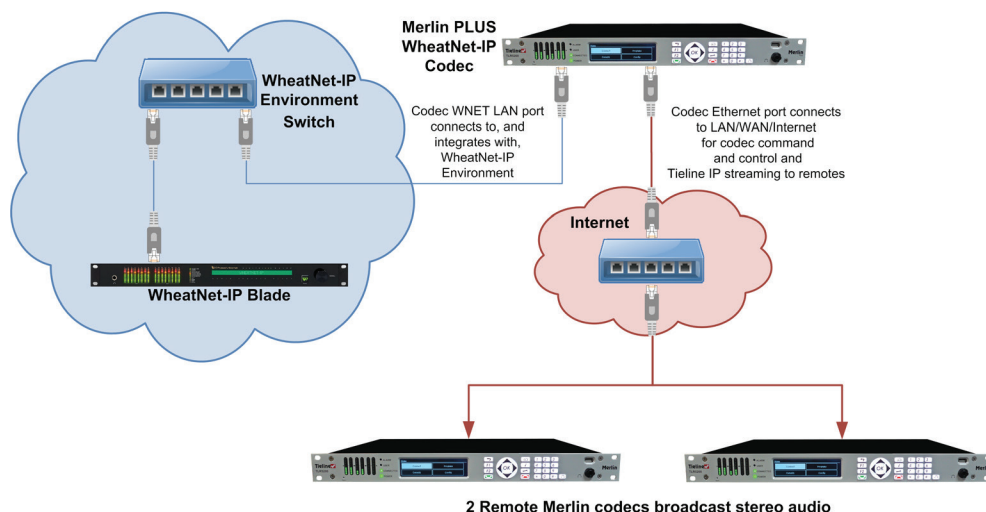

Merlin PLUS and WheatNet-IP configuration

Flexible Applications

Merlin PLUS with WheatNet-IP is a simple, compact and scalable solution delivering:

➤ Bidirectional stereo or mono

➤ 3 Bidirectional mono connections

➤ Up to 6 simultaneous bidirectional mono remote connections, or

➤ 2 x Bidirectional mono or stereo remotes, each with a separate bidirectional IFB communications channel.

Merlin PLUS codec at the studio

6 bidirectional mono remotes
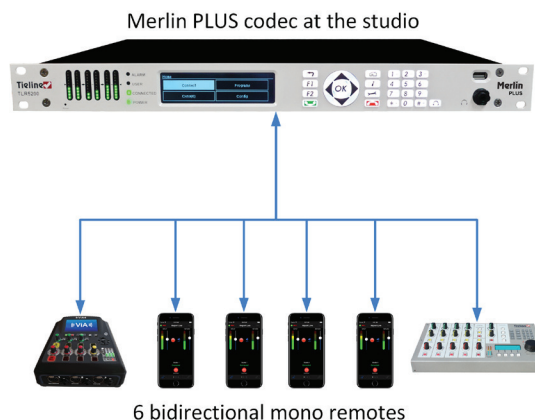
## Fuse-IP and SmartStream PLUS

With Tieline's proprietary Fuse-IP data aggregation technology you can bond multiple IP interfaces you choose, including options like:

➤ USB Wi-Fi Modem and LAN port, or

➤ Dual Ethernet LAN Ports.

Imagine the peace of mind knowing you can bond 2 links from different Telcos and let Tieline's Fuse-IP technology automatically manage the data capability of each link!

Tieline's SmartStream PLUS dual redundant streaming software has set the benchmark for redundant IP streaming over the public internet. Tieline supports up to 3 redundant streams with each primary audio stream[2]. Some manufacturers charge thousands of dollars for IP management software like SmartStream PLUS as an optional extra, however Tieline believes high performance and rock-solid reliability is an essential part of each and every broadcast, so you get it for FREE!

With Tieline's SmartStream PLUS and Fuse-IP technologies, as well as automated jitter buffer management and error correction strategies, you can be assured of trouble-free motoring on the information superhighway!
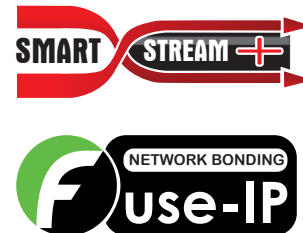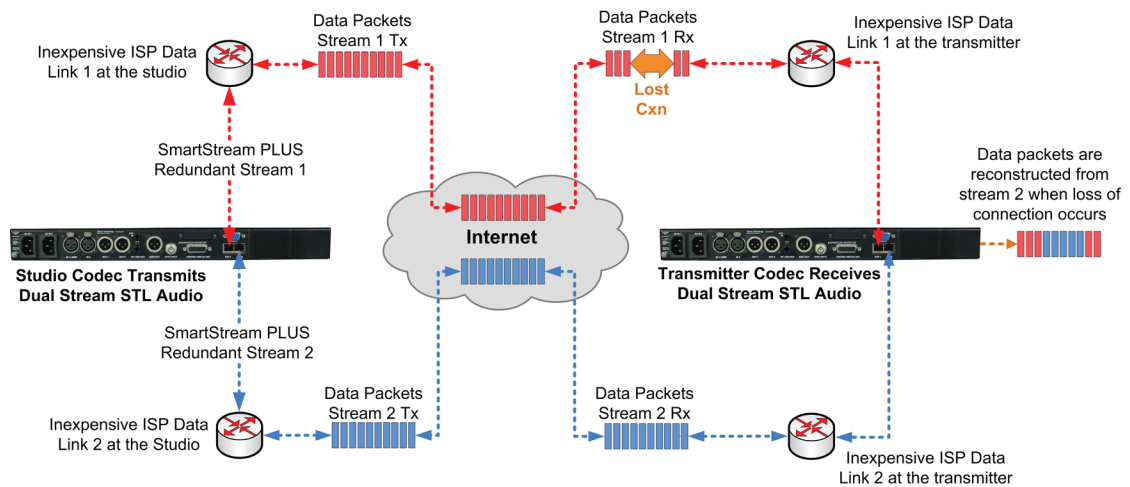
SmartStream PLUS Redundant Streaming Reconstitutes Lost Packets from Stream 1 using Stream 2

Algorithms

The codec 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.

Program Scheduler

The Program Scheduler is a powerful tool which automatically connects and disconnects scheduled programs using a simple calendar-based user interface.

➤ Drag and drop to add programs into the scheduler.

➤ Drag the top or bottom of a scheduled program to adjust the scheduled time.

➤ Customization of time-zones.

➤ Day, week, month, list and timeline views available.

➤ Enable and disable events in a snap.

➤ Automatically switch program types from dialing to answering.
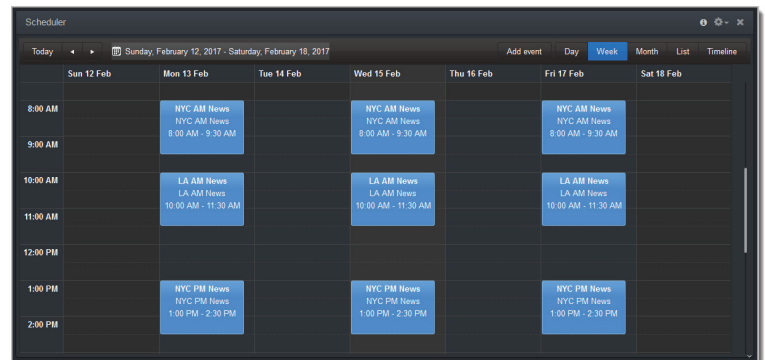
The Web-GUI Program Scheduler

Codec Management

Configure and control all your Tieline codecs from anywhere you can connect to the internet. Two versions are available, including:

➤ HTML5 ToolBox Web-GUI: Fully configure all codec and connection settings.

➤ HTML5 ToolBox Quick Connect Web-GUI: Simplified GUI for less technical users. Load existing programs and simple point-to-point dialing.

➤ Use the Cloud Codec Controller to configure & manage your entire codec network remotely.

➤ The Tieline Traversal Server centralizes contact list management and provides self discovery of codecs within customized call groups.

The Web-GUI

[1]Requires 3rd Party Device [2]Algorithm dependent [3]Additional purchase
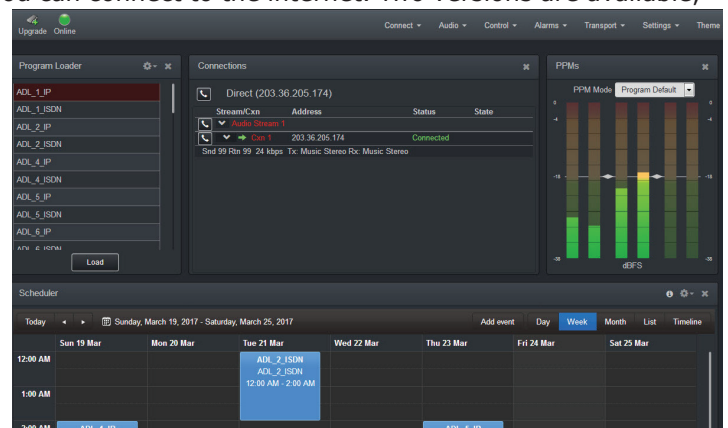
Input/Output Specifications

Analog Audio Inputs	2 x Female XLR line inputs
Analog Audio Outputs	2 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
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

Algorithms

IP	Tieline Music, Tieline MusicPLUS, Opus, G.711, G.722, MPEG Layer 2, MPEG Layer-3 LC-AAC, HE-AAC, HE-AACv.2, AAC-LD, AAC-ELD, 16/24 bit aptX® Enhanced algorithm
IP (uncompressed)	Linear PCM16/24 bit 32kHz, 44.1kHz, 48kHz

Data and Control Interfaces

|	
Web Audio Monitoring	Selectable web audio monitoring of IP audio streams
USB	USB 2.0 Host port on the front panel (support for USB upgrades & Wi-Fi USB Modems)
LAN	2 x 10/100/1000 RJ45 connectors
WheatNet-IP LAN	1 x 10/100 RJ45 connector to distribute WheatNet-IP audio (WheatNet-IP Logic support)
Serial	RS232 up to 115kbps with or without CTS/RTS flow control can be used as a proprietary data channel
Protocols	SIP (EBU N/ACIP 3326 & 3368 compliant), RTP, DHCP, SNMP, DNS, HTTP, IGMP, IPv4/IPv6, RTCP, STUN, SSL Security Certificate, WNET LIOs, I3P EBU3347 Compliant, FTP
ISDN	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 via browser-based Toolbox Graphical User Interface
Multilingual	Multilingual menus and configuration software
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 4.59oz/2.85Kg
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.
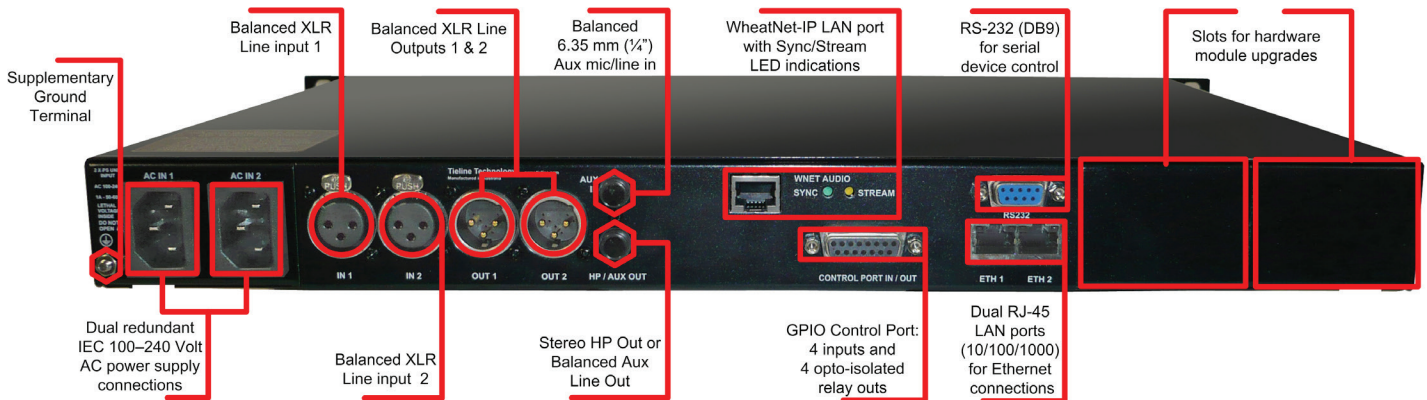
Merlin PLUS with WheatNet-IP rear panel

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
4 Bendsten Place
Balcatta WA 6021 Australia
Ph: +61(0)8 9413 2000
E-mail: info@tieline.com

Tieline®
The Codec Company

All information is subject to change without notice. * All trademarks mentioned belong to their respective owners and are used for reference only