BRIDGE-IT
XTRA

CLOUD CODEC CONTROLLER

Affordable, High Quality STL or Multi-point IP Audio

Tieline's 1RU Bridge-IT XTRA is a cost effective, high-performance, point-to-point and multi-point stereo IP audio codec with all the features of the Bridge-IT IP codec and more!

Bridge-IT XTRA includes additional features such as all algorithms as standard, dual internal power supplies, a front panel stereo headphone output and 4 GPIO in/outs. It also includes SD/SDHC card for audio clip playback & firmware upgrades.

IP Audio Applications

Bridge-IT XTRA is capable of transporting audio streams reliably, simply and effectively over IP data networks such as wired and wireless LANs, WANs, the internet, satellite IP, Wi-MAX and Wi-Fi. It is perfect for:

- Studio-to-Transmitter Link (STL) applications
- Studio-to-Studio Links
- IP Multi-unicasting
- IP multicasting on compatible IP networks
- Simple remote broadcast links

Affordable IP Audio

Bridge-IT XTRA features a full hardware front panel interface including navigation buttons, LCD display, PPM metering and dialing key pad. Bridge-IT XTRA also has all the broadcast input connectors you would expect on a full-featured codec. Simultaneous analog and digital AES/EBU audio outputs are provided on XLR connectors and it includes front and rear panel ¼" (6.35mm) stereo headphone outputs.

*Bridge-IT XTRA has 1 LAN interface only

SmartStream PLUS and Fuse-IP...

Nobody likes a traffic jam, least of all broadcasters dealing with IP packet congestion! With Tieline's SmartStream PLUS and Fuse-IP* technologies, as well as automated jitter buffer management and error correction strategies,

NETWORK BONDING Fuse-IP

SMART STREAM+

Bridge-IT XTRA IP Codec transmits up to 6 multi-unicast connections

Multi-unicast audio stream

Return audio from the first multi-unicast connection

Internet

Return audio stream from the first multi-unicast connection

you can be assured of trouble-free motoring on the information superhighway!
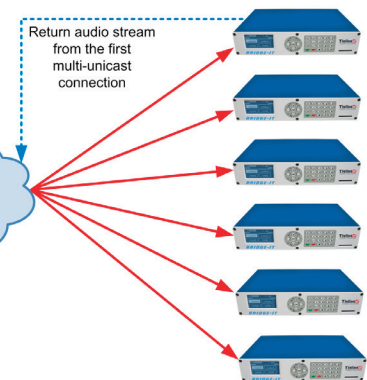
Algorithm Technology

Bridge-IT XTRA comes with 16 or 24bit, 48kHz linear audio for crystal clear, low-latency uncompressed sound. Standard broadcast algorithms available include:

- AAC-LC and AAC-HE v.1 and v.2
- AAC-LD, AAC-ELD
- aptX® Enhanced
- MPEG Layer 2
- Tieline Music (15kHz)

- Tieline MusicPLUS (22kHz) which delivers stereo audio with 20 ms encode delay at 96Kbps, offering huge savings on your data bills.
- G.711 (u-law and a-law)
- G.722
- MP3 playback from an SD/SDHC card.
- Opus

Compatibility

Bridge-IT XTRA will connect to any SIP-enabled IP codec brand with industry standard algorithms like LC-AAC, HE-AAC, MPEG Layer 2, G.711 & G.722. Bridge-IT XTRA is also EBU N/ACIP Tech 3326 compatible using SIP for connecting to other codec brands and devices. It is also internet/satellite streaming and HD radio compatible.

Broadcast Multiple Connections

Multicast stereo audio over compatible networks to unlimited end-points, or send up to 6 stereo multi-unicast audio streams over WANs like the internet.

Tieline®
The Codec Company

Ver 5.0

Audio Backup

Insert an SD/SDHC card with MP3 or linear backup audio and Bridge-IT XTRA will automatically play out the audio if your IP service fails.

Remote Control Interfaces

4 control inputs and outputs (DB-15) are provided and the ToolBox web-GUI enables custom control of relay functionality and ancillary RS232 data connections.

Input/Output Specifications

Analog Audio Inputs	2 x Female XLR (Channel 1 mic/line; channel 2 line only)
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
Headphones	1 x 6.35mm (1/4") Jack on rear and front panels (Drives one output)
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 +4dBu unweighted
Signal To Noise Ratio	>90dB at +22dBu, unweighted

Sample Frequencies

IP Sample Frequencies	8kHz (G.711), 16kHz (G.722), 32kHz, 44.1kHz, 48kHz

Algorithms

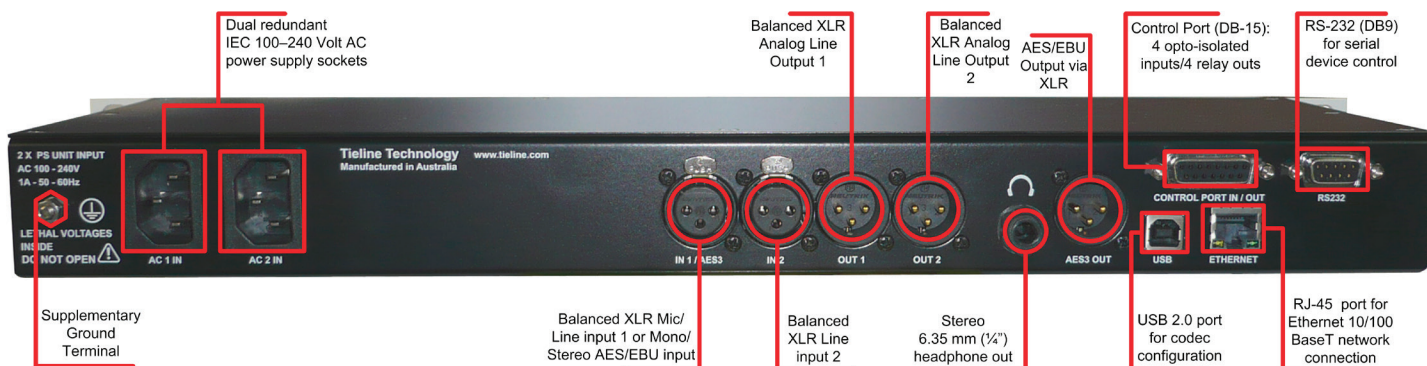|	
IP	Tieline Music, Tieline MusicPLUS, G.711, G.722, MPEG Layer 2, Opus AAC-LC, AAC-HE v1 and v2, AAC-LD, AAC-ELD, 16/24 bit Enhanced apt-X, MP3 Playback, Linear PCM16/24 bit (uncompressed)

Data and Control Interfaces

USB	USB 2.0 (Type B) Host port on the rear panel
LAN	10/100 RJ45 connector
GPIO Control Ports	4 opto-isolated inputs and 4 solid state relay outputs via a DB-15 connector
Serial	RS232 up to 115kbps with or without CTS/RTS flow control via female DB9 connector, can be used as a proprietary data channel
Protocols	SIP (EBU N/ACIP 3326 compliant), RTP, DHCP, SNMP, DNS, HTTP, IGMP, IPv4/IPv6, RTCP, STUN, SSL Security Certificate

Front Panel Interfaces

Display	128 x 64 monochrome LCD
SD/SDHC Card Slot	Supports SDHC Flash Cards for program and fail over to audio backup
Keypad	20 button keypad
Navigation	5 button keypad

General

SmartStream PLUS	Auto Jitter Buffer, Forward Error Correction and error concealment strategies, dual redundant IP streaming
Dimensions	19" x 1.75" x 6.42" [482mm (W) x 44mm (H) x 163mm (D) including rear connectors]
Weight	3lb 8oz/1.6Kg
Power Consumption	~12W one PSU, ~18W both PSU at 240VAC dual IEC Power Inlets
Operating Temperature	0°C to 50°C (40°F to 115°F)
Humidity Operating Range	20% ≤RH ≤70% (0 to 35°C), non-condensing

Dual redundant IEC 100–240 Volt AC power supply sockets

Balanced XLR Analog Line Output 1

Balanced XLR Analog Line Output 2

AES/EBU Output via XLR

Control Port (DB-15): 4 opto-isolated inputs/4 relay outs

RS-232 (DB9) for serial device control

2 X PS UNIT INPUT AC 100 - 240V 1A - 50 - 60Hz

LETHAL VOLTAGES INSIDE DO NOT OPEN

AC 1 IN AC 2 IN

IN 1 / AES3 IN 2 OUT 1 OUT 2 AES3 OUT USB ETHERNET CONTROL PORT IN / OUT RS232

Supplementary Ground Terminal

Balanced XLR Mic/ Line input 1 or Mono/ Stereo AES/EBU input

Balanced XLR Line input 2

Stereo 6.35 mm (¼") headphone out

USB 2.0 port for codec configuration

RJ-45 port for Ethernet 10/100 BaseT network connection

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