# DATA SHEET
# TESIRAFORTÉ® AVB CI
# FIXED AUDIO DSP



The TesiraFORTÉ® AVB CI is a fixed audio DSP with 12 analog inputs and 8 analog outputs and includes Acoustic Echo Cancellation (AEC) technology on all 12 inputs. It also includes up to 8 channels of configurable USB audio. USB audio allows TesiraFORTÉ to interface directly with USB audio hosts, as well as to take full advantage of today's most sophisticated conferencing solutions. TesiraFORTÉ AVB CI utilizes Audio Video Bridging (AVB) for digital audio networking, and can be used as a standalone device or combined with other TesiraFORTÉ devices and Tesira servers, expanders, and controllers. TesiraFORTÉ AVB CI also provides extensive audio processing, including but not limited to: AEC technology, signal routing and mixing, equalization, filtering, dynamics, and delay, as well as control, monitoring, and diagnostic tools; all configured through the Tesira configuration software. TesiraFORTÉ AVB CI is best suited for small- to medium-sized rooms that require high-quality audio solutions using AEC, voice lift, and mix-minus, such as conference rooms or distance learning environments.

## BENEFITS

• AVB allows audio networking via IEEE open standards protocol
• Includes default configuration file, allowing for plug-and-play usage
• Highly scalable and cost-effective solution that can grow over time with the needs of the customer
• Acoustic Echo Cancellation (AEC) technology on all 12 inputs
• SpeechSense™ technology enhances speech processing
• Integrates directly with soft codecs and other USB audio hosts

## FEATURES

• 128 x 128 channels of AVB
• 12 mic/line level inputs with AEC, 8 mic/line level outputs
• Gigabit Ethernet port
• Up to 8 channels of configurable USB audio
• RS-232 serial port
• 4-pin GPIO
• 2-line OLED display with capacitive-touch navigation
• Rack mountable (1RU)

• System configuration and control via Ethernet
• Internal universal power supply
• Fully compatible with Tesira AVB servers, endpoints, expanders, and controllers
• Signal processing via intuitive software allows configuration and control for signal routing, mixing, equalization, filtering, delay and much more
• CE marked, UL listed, and RoHS compliant
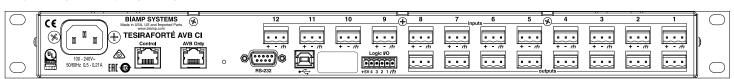• Covered by Biamp Systems' 5-year warranty

## ARCHITECTS & ENGINEERS SPECIFICATION

The fixed audio DSP shall be designed exclusively for use with Tesira® systems. The audio DSP shall support Audio Video Bridging (AVB) digital audio networking that shall allow up to 128 x 128 channels. The AVB networking connection shall be implemented on a RJ-45 connector. The audio DSP shall support Ethernet connection for programming and control on a RJ-45 connector. The audio DSP shall have internal DSP processing. The audio DSP shall include 4 channels of General Purpose Input and Output connection (GPIO) for sending or receiving logic signals. The programming of the GPIO ports shall be software configurable. The audio DSP shall include a RS-232 connection for control data transmission into or out of the audio DSP and such operation shall be software programmable. The audio DSP shall include a Universal Serial Bus (USB) connection on a standard USB-B type connector. The audio DSP shall be software configurable to stream up to 8 channels of digital USB Class 1 Audio transmission either into or out of the audio DSP or simultaneous input and output. The audio DSP shall provide 12 balanced input connections for receiving of microphone or line level analog audio signals on screw-down, removable connectors. The input connections shall include Acoustic Echo Cancellation (AEC) hardware and firmware, the parameters, routing and operation of which shall be software programmable. The audio DSP shall provide 8 balanced output channels for the transmission of microphone or line level analog audio signals on screw-down, removable connectors. Each individual channel shall have its own dedicated connection. The audio DSP shall provide front panel OLED identification of device power, status, alarm, and activity as well as system-wide alarm. The audio DSP shall be rack mountable (1RU) and feature software-configurable signal processing, including but not limited to: signal routing and mixing, equalization, filtering, dynamics, and delay, as well as control, monitoring, and diagnostic tools. The audio DSP shall control and proxy all Tesira expander-class devices and Tesira control devices. The audio DSP shall be CE marked, UL listed, and shall be compliant with the RoHS directive. Warranty shall be five years. The fixed audio DSP shall be TesiraFORTÉ AVB CI.

## TESIRAFORTÉ AVB CI SPECIFICATIONS

| | | | |
|---|---|---|---|
| **Frequency Response:** | | **Phantom Power:** | +48VDC (7mA/input) |
| 20Hz to 20kHz, +4dBu output: | +0.25 dB/-0.5 dB | **Crosstalk, channel to channel, 1 kHz:** | |
| **THD+N (22Hz to 22kHz):** | | 0dB gain, +4dBu input: | < -85dB |
| 0dB gain, +4dBu input: | < 0.006% | 54dB gain, -50dBu input: | < -75dB |
| 54dB gain, -50dBu input: | < 0.040% | **Sampling Rate:** | 48kHz |
| **EIN** (no weighting, 22Hz to 22kHz): | < -125dBu | **A/D - D/A Converters:** | 24-bit |
| **Dynamic Range** (in presence of signal) | | **Power Consumption:** | |
| 22Hz to 22kHz, 0dB gain: | > 108dB | 100-240VAC 50/60Hz: | < 35W |
| **Input Impedance** (balanced): | 8kΩ | **USB:** | |
| **Output Impedance** (balanced): | 207Ω | Bit Depth: | 16- or 24-bit |
| **Maximum Input:** | +24dBu | Number of Channels: | up to 8 |
| **Maximum Output** (selectable): | +24dBu, +18dBu, +12dBu, +6dBu, 0dBu, -31dBu | Sample Rate: | 48kHz |
| **Input Gain Range** (6dB steps): | 0-66dB | **Compliance:** | |
| **Overall Dimensions:** | | | FCC Part 15B (USA) |
| Height: | 1.75 inches (44 mm) | | CE marked (Europe) |
| Width: | 19.0 inches (483 mm) | | UL und C-UL listed (USA and Canada) |
| Depth: | 10.5 inches (267 mm) | | RCM (Australia) |
| Weight: | 8 lbs (3.63 kg) | | RoHS Directive (Europe) |
| **Environment:** | | | |
| Ambient Operating Temperature Range: | 32-104° F (0–40° C) | | |
| Humidity: | 0–98%, non-condensing | | |
| Altitude: | 0-6,600 feet (0–2000 Meters) MSL | | |

## TESIRAFORTÉ AVB CI BACK PANEL