

# DATA SHEET

## TESIRAFORTÉ® AVB AI FIXED I/O DSP



TesiraFORTÉ® AVB AI is a fixed I/O DSP with 12 analog inputs and 8 analog outputs and 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 AI 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 DSPs, expanders, and controllers. TesiraFORTÉ AVB AI also provides extensive audio processing, including but not limited to: 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 AI is best-suited for small- to medium-sized rooms that require high-quality audio solutions using voice lift and mix-minus, such as conference rooms or council chambers.

### FEATURES

- 128 x 128 channels of AVB
- 12 mic/line level inputs, 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
- Supports port authentication via IEEE 802.1X
- Internal universal power supply
- Fully compatible with Tesira AVB DSPs, amplifiers, 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

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## ARCHITECTS & ENGINEERS SPECIFICATION

The fixed I/O DSP shall be designed exclusively for use with Tesira® systems. The fixed I/O 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 fixed I/O DSP shall support Ethernet connection for programming and control on a RJ-45 connector. The fixed I/O DSP shall have internal DSP processing. The fixed I/O 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 fixed I/O DSP shall include a RS-232 connection for control data transmission into or out of the fixed I/O DSP and such operation shall be software programmable. The fixed I/O DSP shall include a Universal Serial Bus (USB) connection on a standard USB-B type connector. The fixed I/O DSP shall be software configurable to stream up to 8 channels of digital USB Class 1 Audio transmission either into or out of the fixed I/O DSP or simultaneous input and output. The fixed I/O DSP shall support port authentication via IEEE 802.1X. The fixed I/O DSP shall provide 12 balanced input connections for receiving of microphone or line level analog audio signals on screw-down, removable connectors. The fixed I/O 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 fixed I/O DSP shall provide front panel OLED identification of device power, status, alarm, and activity as well as system-wide alarm. The fixed I/O 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 fixed I/O DSP shall control and proxy all Tesira expander-class devices and Tesira control devices. The fixed I/O DSP shall be CE marked, UL listed, and shall be compliant with the RoHS directive. Warranty shall be five years. The fixed I/O DSP shall be TesiraFORTÉ® AVB AI.

## TESIRAFORTÉ AVB AI SPECIFICATIONS

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

## TESIRAFORTÉ AVB AI BACK PANEL

