Overview

The Digital Signal Processor shall be a Dante-enabled audio interface for installations in meeting rooms. It shall include the Shure IntelliMix® DSP algorithms with 8 channels of microphone processing. The DSP algorithm shall provide acoustic echo cancellation, noise reduction and automatic gain control on all eight channels, in addition to automatic mixing, matrix mixing, delay, compressor and PEQ. Pre-defined templates and presets shall be included to optimise use with Shure Microflex® Advance™ and Microflex® Wireless conferencing microphones.

It shall provide connections including Dante (10 inputs, 2 outputs), Analog (2 block in / 2 block out), USB (1 in / out) and Mobile (3.5 mm). A USB 2.0 connection that carries 2 input and 2 output channels (Summed mono) and a 3.5mm Input/Output TRRS connection shall be provided, and both shall be compatible with computers, mobile devices or other all-in-one collaboration devices. The Digital Signal Processor shall be Power-over-Ethernet (PoE+). It shall be of a half rack size with mounting accessories that enable installation under a table or in a cupboard.

Specifications

Analog Connections

Input	(2) 3-pin block connector (Active Balanced)
Output	(2) 3-pin block connector (Impedance Balanced)
Mobile	(1) TRRS 3.5 mm (1/8")

USB Connections
(1) USB 2.0, Type B

Single port carries 2 input and 2 output channels (Summed mono)

Network Connections (Dante Digital Audio)
(1) RJ45

10 Dante input channels, 2 output channels

Polarity

Non-inverting, any input to any output

Power Requirements

802.3 at Type 2 (PoE Plus), Class 4

Power Consumption

17.5 W, maximum

Weight

1710 g (3.8 lbs)

Dimensions
H x W x D

4 x 21 x 22.6 cm (1.6 x 8.3 x 8.9 in.)

control application

HTML5 Browser-based

Operating Temperature Range

–6.7°C (20°F) to 50°C (122°F)

Storage Temperature Range

–29°C (-20°F) to 74°C (165°F)

Thermal Power Dissipation

Maximum	17.5 W (60 BTU/hr)
typical	14.6 W (50 BTU/hr)

Audio

Frequency Response
+1, -1.5 dB

20 to 20,000 Hz

Dante Digital Audio

Sampling Rate	48 kHz
Bit Depth	24

USB Audio

Sampling Rate	44.1, 48 kHz
Bit Depth	16, 24

Latency

Does not include Dante latency	Dante 1-8 in to Dante out (AEC enabled)	12.5 ms
	Dante 1-8 in to Dante out (AEC disabled)	5.8 ms
	Dante 9-10 in to Dante out	1.8 ms
	Analog in to Analog out	2.2 ms

Networking

Cable Requirements

Cat 5e or higher (shielded cable recommended)

Analog Connections (Block Connectors)

Dynamic Range
20 Hz to 20 kHz, A-weighted, typical

Analog-to-Dante	113 dB
Dante-to-Analog	117 dB

Equivalent Input Noise
20 Hz to 20 kHz, A-weighted, input terminated with 150Ω

Line	-86 dBV
Aux	-98 dBV

Total Harmonic Distortion
@ 1 kHz, 0 dBV Input, 0 dB analog gain

<0.05%

Common Mode Rejection Ratio
150Ω balanced source @ 1 kHz

>50 dB

Input Impedance

9.6 kΩ

Input Clipping Level

Line	+27 dBV
Aux	+15 dBV

Output Impedance

80 Ω

Output Clipping Level

Line	+20 dBV
Aux	+0 dBV
Mic	-26 dBV

Mobile Connection (3.5 mm Connector)

Pin Assignments

Tip	Audio Input (Left)
Ring 1	Audio Input (Right)
Ring 2	Ground
Sleeve	Audio Output (To Phone)

Dynamic Range

20 Hz to 20 kHz, A-weighted, typical

Analog-to-Dante	99 dB
Dante-to-Analog	90 dB

Equivalent Input Noise

20 Hz to 20 kHz, A-weighted, input terminated with 20Ω

-95 dBV

Total Harmonic Distortion

@ 1 kHz, 0 dBV Input, 0 dB analog gain

<0.05%

Input Impedance

3.7 kΩ

Input Clipping Level

+4 dBV

Output Impedance

1.4 kΩ

Output Clipping Level

Output terminated with 2.2 kΩ

-20 dBV