# Mic/Line Inputs and Outputs

| Inputs                                 | Balanced Audio Inputs: 0.15" / 3.81 mm Orange<br>Color Phoenix/Euroblock Male Header, Push-On<br>Mini-Terminal Block |
|--|--|
| Outputs                                | Balanced Audio Outputs: 0.15" / 3.81 mm Black<br>Color Phoenix/Euroblock Male Header, Push-On<br>Mini-Terminal Block |
| Frequency Response                     | 20 Hz to 22 kHz at +4 dBu, ±0.5 dBu  |
| Equivalent Input Noise                 | 20 kHz BW, Max Gain, Rs = 150 Ohms, -126 dBu   |
| Total Harmonic Distortion (THD) +<br>N | 20 Hz to 22 kHz at +4 dBu, Line Level, 0.006% 20 Hz to 22 kHz at -56 dBu, Mic Level, < 0.04%                         |
| Dynamic Range                          | 20 Hz to 20 kHz at 0 dB, > 105 dB  |
| Crosstalk                              | Mic/Line: Channel to Channel, Stimulus at 20 dBu to Receptor at -56 dBu, 1 kHz, < -98 dB                             |
| Input Impedance                        | Balanced (Line to Ground), 2.2 Kilohms, 1%   |
| Nominal Input Level                    | Adjustable -56 dB to 0 dB, 7 dB Step Coarse Gain   |
| Maximum Input Level                    | -65 dBu to 20 dBu  |
| Phantom Power                          | 48 V, 6.81 Kilohms   |
| Output Impedance                       | Balanced (Line to Ground), 95 Ohms, 1%   |
| Output Level                           | Nominal: 0 dBu<br>Maximum: 20 dBu<br>Selectable: -40 dBu   |

## **USB** Audio

| Port Type   | USB-B Connector                             |
|-------------|---|
| Audio       | Digital Audio, 2 x 2 Bidirectional Channels |
| Sample Rate | 48 kHz                                      |
| Bit Depth   | Sample: 24-Bit                              |
| Compatible  | USB 2.0<br>USB 3.0                          |

## Telephone Specifications

| Port Type                              | RJ11   |
|--|--|
| Frequency Response                     | Mic/Line Input to Telephone Out: 250 Hz to 3.4 kHz, ±2 dB, 4 dBu Telephone In to Mic/Line Out: 250 Hz to 3.4 kHz, ±2 dB, -15 dBu |
| Total Harmonic Distortion (THD) +<br>N | Mic/Line Input to Telephone Out: < 0.1% at 4 dBu<br>Telephone In to Mic/Line Out: < 0.3% at -15 dBu                              |
| Dynamic Range                          | Mic/Line Input to Telephone Out: >67 dBu<br>Telephone In to Mic/Line Out: >87 dBu  |
| REN                                    | Ringer Equivalent Number: 0.2  |
| Transhybrid Balance                    | 30 dB (1 kHz, All AC Terminations)   |



| Port Type | RJ45, 10/100 Mb/s Ethernet Network, Auto<br>Negotiation  |
|-----------|--|
| Audio     | 5 Lines  |
| Codec     | G.711 uLaw, G.711 ALaw, G.722  |
| Skype     | Skype for Business (S4B):<br>Microsoft Skype for Business Support (1 Client)<br>Choose Either Regular VoIP or S4B Through<br>Configuration |

#### Ethernet

| Port Type             | RJ45, 10/100 Mb/s Ethernet Network, Auto<br>Negotiation           |
|-----------------------|---|
| IP Address Assignment | IPv4 (IPv6 Upgradeable Through Future Software, Firmware Upgrade) |

#### Dante Network

| Port Type | RJ45 Gigabit Ethernet Connectors for Primary and<br>Secondary Ports   |
|-----------|---|
| Audio     | Digital Audio, 16 x 16 Bidirectional Channels<br>Sample Rate: 48/96 kHz<br>Sample Bit Depth: 24-Bit<br>AES67 Mode: Enabled through Dante Controller<br>Software |

## C-Link Expansion Bus

Port Types

RJ45 (Cat 5e or Cat 6)

C-Link In & Out: Proprietary Expansion Bus

Audio: 64 Expansion Channels

Cable: Solid Core, Factory Terminated Cat 5e or 6

Cable

Distance: Up to 150' / 45 m

## P-Link Peripheral Bus

| Port Types           | RJ45 (Cat 5e or 6)   |
|----------------------|--|
| P-Link Connector     | In and Out: Proprietary Peripheral Bus   |
| PoE                  | In: P-Link In Port PoE 802.3 af Mode B, Midspan Power On "Spare Pairs" 4, 5 and 7, 8 Input Voltage Range: 48 to 56 V   |
| Audio                | Up to 3 Beamforming Microphone Array 2 Units + Up to 3 DIALOG 20 Wireless Receiver Units + Up to 3 USB Expander Units + Up to 3 GPIO Expander Units  |
| Cable                | Solid Core, Factory Terminated Cat 5e or 6 Cable   |
| Distance             | Up to 200' / 60 m  |
| Long Distance P-Link | Increases P-Link Distance from 200 x 650' / 61.0 x 198.1 m 650' / 200 m Maximum Cable Distance Between any Two Units Cat 6, 550 MHz, 23 AWG, Solid Conductor Cable Do Not Use Copper Clad Aluminum (CCA) Cable Available Only for BFM2 Peripheral Units 48 V PoE Midspan Mode B Power Injector for 1 BFM2 Unit 56 V PoE Midspan Mode B Power Injector for 3 BFM2 Units |

#### RS232 Parameters

| Port Type | DB9 Female   |
|-----------|--|
| Settings  | 9600/19200/38400/57600/115200 Baud; Serial Echo;<br>Flow Control |
| Support   | Serial Commands  |

## GPIO

| Port Type            | 0.2" / 0.5 cm Green Color Phoenix/Euroblock Type<br>Male Header   |
|----------------------|---|
| Support              | Control, Status, Variable Voltage Control   |
| Power Pin Assignment | 5 VDC at 350 mA Power Source  |
| Pin Assignments      | Pin 1 to 4: Open Collector Outputs: 40 VDC at 250 mA Active Outputs (Source/Sink): 5 VDC at 25 mA Logic Inputs: 40.2 Kilohms Pull Up Variable Voltage Control Inputs: 5 VDC Max Ground Pin: GND |

## **USB** Control

| Port Type  | USB-B Connector  |
|------------|------------------|
| Location   | Front Panel      |
| Compatible | USB 2.0, USB 3.0 |

## LEDs

| Location    | Front Panel  |
|-------------|--|
| Status LEDs | Off: Unit Still Initializing Blue - Fast Blinking: Stack Syncing in Progress Blue - Slow Blinking: Unit Not Configured Blue - Solid: Configured Unit Red - Fast Blinking: Stack Sync Error |
| LED         | Locate LED: Blue - Blinking: Unit "Locate" Command<br>Received<br>Power LED: Blue - Solid: Unit Is Powered On  |

## Touch Sensor

| Sensor Type | Capacitive Touch Button |
|-------------|-------------------------|
| Location    | Front Panel             |

## Power

| Port Type             | AC Inlet                  |
|-----------------------|---------------------------|
| Mains Voltage         | 100 to 240 VAC, 50/60 Hz  |
| Power Consumption     | 50 W Typical              |
| Thermal               | 170 BTU/Hr Typical        |
| Operating Temperature | 14 to 104°F / -10 to 40°C |

# Dimensions & Weight

| Rack Units             | 1 RU   |
|------------------------|--|
| Dimensions (W x D x H) | Without Rack Ears: 17 x 10.7 x 1.7" / 43.2 x 27.3 x 4.4 cm With Rack Ears: 19 x 10.7 x 1.7" / 48.3 x 27.3 x 4.4 cm |
| Weight                 | 9.3 lb / 4.2 kg  |