



CONVERGE Pro 2 is the industry's most advanced professional audio DSP platform for conferencing and sound reinforcement applications. It outperforms in any size room, audio environment, and application.

The 128V model mixer has 12 inputs with AEC, 8 outputs, built-in VoIP/Skype for Business interface, USB audio; GPIO, RS232, IP control interfaces; and P-Link and C-Link expansion buses.

CONVERGE Pro 2 is optimized to work with the new Beamforming Mic Array 2 and DIALOG® 20 2-Channel Wireless Microphone System through its native connection.

### Powerful Architecture

- + 12 Mic/Line inputs with AEC
- + Built-in VoIP: 5 lines
- + Built-in Skype for Business Client
- + Separate ports for VoIP/Skype for Business and Ethernet
- + Built-in USB for PC-based conferencing
- + Reduced footprint and power consumption

### Scalable Connectivity

- + Standalone and daisy-chained system
- + Stack up units up to 144 Mic/Line inputs
- + Expansion bus "C-Link" with 64 channels
- + "P-Link" bus to connect peripheral devices

### Configuration & Management

- + New CONSOLE® software
- + Auto-discovery of devices
- + MatrixView™ for entire system
- + FlowView™ for visualized audio signal paths
- + System monitoring and troubleshooting

### Audio Signal Processing

- + Next-gen Acoustic Echo Cancellation processing
- + Distributed Echo Cancellation® on every mic input
- + Noise Cancellation with Adaptive-Ambience
- + Acoustic Intelligence with faster convergence
- + DARE™ feedback elimination
- + Advanced microphone gating

### Applications

- + VoIP conferencing
- + PC-based conferencing & Unified Communications
- + Microsoft Skype for Business audio conferencing

### Flexible Control Options

- + Dialer app for Windows, Mac, iOS, Android
- + Touch Panel Controller with tabletop and wall mount options
- + 3<sup>rd</sup>-party control modules



#### APPLICATIONS

Boardrooms

Conference Rooms

Huddle Rooms

Training Rooms

Lecture Halls

Courtrooms

Auditoriums

Telemedicine Facilities



## PRODUCT SPECIFICATIONS

Unless otherwise specified, all measurements are performed with a 20Hz to 22kHz BW (no-weighting).

### MIC/LINE INPUTS & OUTPUTS

**Inputs:** Balanced audio inputs, 3.81mm Orange color Phoenix/Euroblock type male header, Push-on mini-terminal block

**Outputs:** Balanced audio outputs, 3.81mm Black color Phoenix/Euroblock type male header, Push-on mini-terminal block

**Frequency Response:**

20Hz – 22kHz @ +4dBu, +/- 0.5dBu

**EIN (Equivalent Input Noise):**

20kHz BW, max gain,  $R_s = 150\Omega$ , -126dBu

**THD + N (Total Harmonic Distortion + Noise):**

- 20Hz – 22kHz @ +4dBu, line level, 0.006%
- 20Hz – 22kHz @ -56dBu, mic level, <0.04%

**Dynamic Range:**

20Hz – 20kHz @ 0dB, >105dB

**Crosstalk (Mic/Line):**

Channel to Channel, stimulus at 20dBu to receptor at -56dBu, 1kHz, < -98dB

**Input Impedance:**

Balanced (line to ground), 2.2k $\Omega$ , 1%

**Nominal Input Level:**

Adjustable -56dB to 0dB, 7dB step coarse gain

**Maximum Input Level:** -65dBu to 20dBu

**Phantom Power:** 48V, Impedance 6.81k $\Omega$

**Output Impedance:**

Available (line to ground), 95 $\Omega$ , 1%

**Output Level:**

0dBu (Nominal), 20dBu (Max), -40dBu (Selectable)

### USB AUDIO

**Port Type:** USB-B connector

**Audio:** Digital Audio, 2 x 2 bidirectional channels

**Sample Rate:** 48kHz

**Sample Bit Depth:** 24-Bit

**Compatible:**

- USB 2.0
- USB 3.0

### VOIP

**Port Type:**

RJ-45, 10/100Mbps Ethernet Network, Auto Negotiation

**Audio:**

5 Lines

Number of Lines	Maximum Number of Calls per Line
1	5
2	5
3	4
4	3
5	2

**Codec:**

- G.711 uLaw
- G.711 ALaw
- G.722

**Skype for Business (S4B):**

- Microsoft Skype for Business support (1 client)
- Choose either regular VoIP or S4B through configuration

### ETHERNET

**Port Type:**

RJ-45, 10/100Mbps Ethernet Network, Auto Negotiation

**IP address:** IPv4 (IPv6 upgradeable through future s/w, f/w upgrade)

### C-LINK EXPANSION BUS

**Ports Type:** RJ-45 (Cat5e or Cat6)

**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' (45M)

### P-LINK PERIPHERAL BUS

**Ports Type:** RJ-45 (Cat5e or Cat6)

**P-Link In & Out:** Proprietary Peripheral Bus

**PoE In:**

- P-Link In Port
- PoE 802.3af Mode B, Midspan
- Power on "spare pairs" 4, 5 and 7, 8
- Input voltage range: 48V to 56V

**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' (60M)

**Long Distance P-Link:**

- Increases P-Link distance from 200 Ft to 650 Ft
- 650 Ft (200M) maximum cable distance between any two units
- Cat6, 550 MHz, 23 AWG, solid conductor cable
- Do not use Copper Clad Aluminum (CCA) cable
- Available only for BFM2 peripheral units
- 48V PoE Midspan Mode B power injector for 1 BFM2 unit
- 56V PoE Midspan Mode B power injector for 3 BFM2 units

### RS232

**Port Type:** DB9 Female

**Settings:** 9600/19200/38400/57600/115200 Baud;

Serial Echo; Flow Control

**Support:** Serial commands

### GPIO

**Port Type:**

5.08mm Green color Phoenix/Euroblock type male header

**Support:** Control, Status, Variable Voltage Control

**Power Pin:** 5V DC @ 350mA Power Source

**Pin 1 to 4:**

- Open Collector Outputs: 40VDC @ 250mA
- Active Outputs (Source/Sink): 5VDC @25mA
- Logic Inputs: 40.2k $\Omega$  pull up
- Variable Voltage Control Inputs: 5VDC 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 LED:**

- 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

**Locate LED:**

Blue - Blinking: Unit "Locate" command received

**Power LED:**

Blue - Solid: Unit is powered on

### TOUCH SENSOR

**Sensor Type:** Capacitive Touch Button

**Location:** Front Panel

### POWER & THERMAL

**Port Type:** AC Inlet

**Mains Voltage:** 100-240V AC, 50/60Hz

**Power Consumption:** 50 Watts Typical

**Thermal:** 170 BTU/Hr Typical

**Operating Temperature:**

14°F (-10°C) to 104°F (40°C) Ambient Temperature

### DIMENSION & WEIGHT

**RU size:** 1 RU

**Width x Depth x Height:**

1. Without rack-ears:  
17"W x 10.73"D x 1.72"H (43.2cmW x 27.3cmD x 4.4cmH)
2. With rack-ears:  
19"W x 10.73"D x 1.72"H (48.3cmW x 27.3cmD x 4.4cmH)

**Unit Weight:** 9.3 lbs (4.2 kg) (Approximately)

**Shipping Weight:** 13.8 lbs (6.3 kg) (Approximately)

### PACKAGE

**Power Cord:** 6' (1.8M), Grounded, Qty 1

**Input Connectors:**

Terminal Block Connector, 3 Position (Orange), Qty 12

**Output Connectors:**

Terminal Block Connector, 3 Position (Black), Qty 8

**GPIO Connector:**

Terminal Block Connector, 6 Position (Green), Qty 1

**C-Link Cable:**

RJ-45 To RJ-45 Cable, 18" (45.7cm), Qty 1

**VoIP Cable:** RJ-45 To RJ-45, 7' (2M), Qty 1

**USB Cable:** USB Type A to Type B, 6' (1.8M), Qty 1

**Rack Ears:** Pre-installed, Qty 2

**Screw/Washer Kit:** Rack Decor, Qty 4

### PART NUMBERS

Part Number	Product
910-3200-001	CONVERGE Pro 2 128
910-3200-001-D	CONVERGE Pro 2 128D
910-3200-002	CONVERGE Pro 2 128T
910-3200-002-D	CONVERGE Pro 2 128TD
<b>910-3200-003</b>	<b>CONVERGE Pro 2 128V</b>
910-3200-003-D	CONVERGE Pro 2 128VD
910-3200-005	CONVERGE Pro 2 48T
910-3200-006	CONVERGE Pro 2 48V
910-3200-004	CONVERGE Pro 2 120
910-3200-007	CONVERGE Pro 2 012
910-3200-101	CONVERGE Pro 2 128SR
910-3200-101-D	CONVERGE Pro 2 128SRD

## SALES AND INQUIRIES

### Headquarters

5225 Wiley Post Way,  
Suite 500  
Salt Lake City, UT 84116

### US & Canada

Tel: 801.975.7200  
TollFree: 800.945.7730  
Fax: 801.303.5711

### International

Tel: +1.801.975.7200  
global@clearone.com

### Sales

Tel: 801.975.7200  
sales@clearone.com

### TechSupport

Tel: 801.974.3760  
tech.support@clearone.com