



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 48T model mixer has 4 inputs with AEC, 8 outputs, built-in Telephone 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

- + 4 Mic/Line inputs with AEC
- + Built-in Telco with ClearEffect™ processing
- + 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

- + POTS conferencing
- + PC-based conferencing & Unified Communications

### 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:

Balanced (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

### TELEPHONE

**Port Type:** RJ11

#### Frequency Response:

- Mic/Line Input to Telephone Out: 250Hz – 3.4kHz, +/- 2dB, 4dBu
- Telephone In to Mic/Line Out: 250Hz – 3.4kHz, +/- 2dB, -15dBu

#### THD + N:

- Mic/Line Input to Telephone Out: <0.1% @ 4dBu
- Telephone In to Mic/Line Out: <0.3% @ -15dBu

#### Dynamic Range:

- Mic/Line Input to Telephone Out: >67dBu
- Telephone In to Mic/Line Out: >87dBu

**REN:** Ringer Equivalent Number 0.2

**Transhybrid Balance:** 30dB (1kHz, all AC terminations)

### ETHERNET

#### Port Type:

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

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

### AMPLIFIER OUTPUT

**Speaker Output Port:** Dual binding posts

**Audio:** 2 Channels

**Output Power:** 10W Max, 8 $\Omega$  load

#### Frequency Response:

20Hz – 22kHz @ +10dBu, +/- 0.5dBu

**THD + N:** 20Hz – 22kHz @ +10dBu, 1W, <0.3%

#### Dynamic Range:

20Hz – 22kHz @ 20dB, >102dB, with 20kHz digital low pass filter

#### Crosstalk:

Channel to Channel, stimulus at 20dBu, 10W output to receptor 8 $\Omega$  load, 20Hz – 22kHz, < -70dB

### 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)

### 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 4

#### 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

**Telephone cable:** 12' (3.6M), 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
910-3200-003	CONVERGE Pro 2 128V
910-3200-003-D	CONVERGE Pro 2 128VD
<b>910-3200-005</b>	<b>CONVERGE Pro 2 48T</b>
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

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