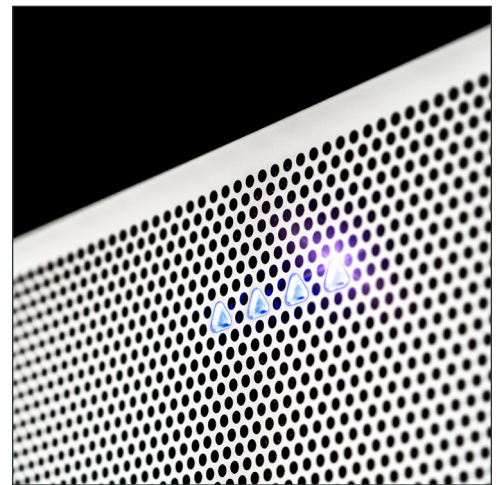# CONVERGE® Pro 2 48VT

A 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.

> Built-in Native Camera Tracking for ClearOne Unite cameras and many 3rd party cameras using RS-232 and Ethernet VISCA over IP.

> 4 Mic/line inputs and 8 mic/line outputs.

> Support for SIP-based conferencing up to 5 lines and 5 calls based on line configuration.

> Analog Telco interface.

> Built-in USB audio.

> Built-in DARE™ algorithm for dynamic feefeedback elimination.

> Reduced foot-print and power consumption.

> C-Link and P-Link enable easy addition of DSPs and peripherals.

> Configure an entire system of C-linked DSPs with CONVERGE CONSOLE® AI software.

> Flexible control options include Conference Controller, BYOD dialer apps or 3rd party control modules.

Everything you need
Supports SIP, 12 configurable mic/line audio inputs, 8 configurable mic/line audio outputs, built-in USB audio, and a Telco interface for POTS calls.

Easy Integration
Daisy-chain the CONVERGE Pro 2 with the BMA 360, DIALOG® 20 USB 2-Channel Wireless Microphone System, and other peripheral devices through P-Link.

APPLICATIONS

• SIP Conferencing
• POTS Conferencing
• Audio Recording
• Pre-recorded Digital Audio
• Audio Networking over a LAN
• Web Conferencing
• UC Audio Conferencing
• Sound Reinforcement
• Bridge Web Conferences

WORKSPACES

• Conference Rooms
• Training Rooms
• Lecture Halls
• Courtrooms
• Telemedicine Theaters
• Houses of Worship

It's All About the Architecture!®

CONVERGE® Pro 2 48VT

PART NUMBER .... • 910-3200-008

CAMERA TRACKING .... • Supported Cameras: Unite 150, Unite 200, Unite 160, Unite 260 (One Camera per DSP)
• Communication Protocol: VISCA
• Communication options: Serial (RS-232) or Ethernet (VISCA over IP)

MIC/LINE INPUTS & OUTPUTS .... • Inputs: Balanced audio inputs, 3.81 mm Orange color Phoenix/Euroblock type male header,
Push-on miniterminal block
• Outputs: Balanced audio outputs, 3.81 mm Black color Phoenix/Euroblock type male header,
Push-on miniterminal block
• Frequency Response: 20 Hz – 22 kHz @ +4 dBu, +/- 0.5 dBu
• EIN (Equivalent Input Noise): 20 kHz BW, max gain, Rs = 150 Ω, -126 dBu
• THD + N (Total Harmonic Distortion + Noise):
    - 20 Hz – 22 kHz @ +4 dBu, line level, 0.006 %
    - 20 Hz – 22 kHz @ -56 dBu, mic level, <0.04 %
• Dynamic Range: 20 Hz – 20 kHz @ 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 kΩ, 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, Impedance 6.81 kΩ
• Output Impedance: Balanced (line to ground), 95 Ω, 1 %
• Output Level: 0 dBu (Nominal), 20 dBu (Max), -40 dBu (Selectable)

USB AUDIO .... • Port Type: USB-B connector
• Audio: Digital Audio, 2 x 2 bi-directional channels
• Sample Rate: 48 kHz
• Sample Bit Depth: 24-Bit
• Compatible: USB 2.0, USB 3.0

TELEPHONE .... • Port Type: RJ-11
• Frequency Response:
    - Mic/Line Input to Telephone Out: 250 Hz – 3.4 kHz , +/- 2 dB, 4 dBu
    - Telephone In to Mic/Line Out: 250 Hz – 3.4 kHz, +/- 2 dB, -15 dBu
• THD + N:
    - Mic/Line Input to Telephone Out: < 0.1 % @ 4 dBu
    - Telephone In to Mic/Line Out: < 0.3 % @ -15 dBu
• Dynamic Range:
    - Mic/Line Input to Telephone Out: > 67 dBu
    - Telephone In to Mic/Line Out: > 87 dBu
    - REN: Ringer Equivalent Number 0.2
• Transhybrid Balance: 30 dB (1 kHz, all AC terminations)

SIP .... • Port Type: RJ-45, 10/100 Mbps Ethernet Network, Auto Negotiation
• Audio: 5 Lines
• Codec: G.711 uLaw, G.711 ALaw, G.722

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ETHERNET ....
- Port Type: RJ-45, 10/100 Mbps 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: 10 W Max, 8 Ω load
- Frequency Response: 20 Hz – 22 kHz @ +10 dBu, +/- 0.5 dBu
- THD + N: 20 Hz – 22 kHz @ +10dBu, 1W, < 0.3 %
- Dynamic Range: 20 Hz – 22 kHz @ 20 dB, > 102 dB, with 20 kHz digital low pass filter
- Crosstalk: Channel to Channel, stimulus at 20 dBu, 10 W output to receptor 8 Ω load, 20 Hz – 22 kHz, < -70 dB

C-LINK EXPANSION BUS ....
- Ports Type: RJ-45 (Cat 5e or Cat 6)
- C-Link In & Out: Proprietary Expansion Bus
- Audio: 150 Expansion channels
- Cable: Solid core, factory terminated Cat 5e or 6 cable
- Distance: Up to 150' (45 M)

P-LINK PERIPHERAL BUS ....
- Ports Type: RJ-45 (Cat 5e or Cat 6)
- P-Link Out: Proprietary Peripheral Bus
- PoE In:
    - PoE 802.3 af Mode B, Midspan
    - Power on "spare pairs" 4, 5 and 7, 8
    - Input voltage range: 48 V to 56 V
- Audio: Up to 3 Beamforming Microphone Array 2 units + up to 3 DIALOG 20 USB 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)

RS-232 ....
- Port Type: DB9 Female
- Settings: 9600/19200/38400/57600/115200 Baud; Serial Echo; Flow Control
- Support: Serial commands or VISCA camera control

GPIO ....
- Port Type: 5.08 mm Green color Phoenix/Euroblock type male header
- Support: Control, Status, Variable Voltage Control
- Power Pin: 5 VDC @ 350 mA Power Source
- Pin 1 to 4:
    - Open Collector Outputs: 40 VDC @ 250 mA
    - Active Outputs (Source/Sink): 5 VDC @25 mA
    - Logic Inputs: 40.2 kΩ 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

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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

LOCATE BUTTON ....
- Sensor Type: Capacitive Touch Button
- Location: Front Panel

POWER & THERMAL ....
- Port Type: AC Inlet
- Mains Voltage: 100-240 VAC, 50/60 Hz
- 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:
    - Without rack-ears: 17 x 10.7 x 1.7 " (431 x 273 x 44 mm)
    - With rack-ears: 19 x 10.7 x 1.7 " (483 x 273 x 44 mm)
- Unit Weight: 9.3 lbs (4.2 Kg) (Approximately)
- Shipping Weight: 13.8 lbs (6.3 Kg) (Approximately)

PACKAGE ....
- Power Cord: 6 ft (1.8 m), Grounded, Qty 1
- Input Connectors: Terminal Block Connector, 4 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 in (45.7 cm), Qty 1
- Network Cable: RJ-45 To RJ-45, 7 ' (2 m), Qty 1
- USB Cable: USB Type A to Type B, 6 ' (1.8 m), Qty 1
- Rack Ears: Pre-installed, Qty 2
- Screw/Washer Kit: Rack Decor, Qty 4