CONVERGE® Pro 2 48VT
Professional Audio DSP Mixer

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 48VT model mixer has 4 inputs with AEC, 8 outputs, built-in VoIP/Skype for Business interface, Telco, 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 VoIP: 5 lines
+ Built-in Skype for Business Client
+ Built-in Telco with ClearEffect™ processing
+ Separate ports for VoIP/Skype for Business and Ethernet
+ Built-in USB for PC-based conferencing
+ Reduced footprint and power consumption

**Audio Signal Processing**
+ ClearPath™ architecture for guided work-flow and processing
+ N ext-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

**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

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

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

**Flexible Control Options**
+ Dialer app for Windows, Mac, iOS, Android
+ Touch Panel Controller with tabletop and wall mount options
+ 3rd-party control modules

**APPLICATIONS**
- Boardrooms
- Conference Rooms
- Huddle Rooms
- Training Rooms
- Lecture Halls
- Courtrooms
- Auditoriums
- Telemedicine Facilities
## CONVERGE Pro 2 48VT

**Front Panel**
- Capacitive Touch Button
- USB-B for connecting to CONSOLE software
- LEDs: Status, Location, Power

**Back Panel**
- 100-240V AC, 50/60Hz Power
- 3.81mm Mic / Line Outputs
- 3.81mm Mic / Line Inputs
- RJ-45 P-Link In / PoE
- RJ-45 C-Link In
- RJ-45 C-Link Out
- C-Link In
- 4 GPIO Ports for Control
- 2 Inputs and 2 Outputs
- RJ-45 P-Link Out
- Network Port
- RS232 for Serial Commands
- USB-B for Audio
- VOP / Skype for Business
- Sound Reinforcement
- Built-in Dante for audio networking
- Ethernet, RS-232, GPIO interface
- Applications
- Built-in USB for PC-based conferencing
- Built-in Telco for teleconferencing
- Built-in VoIP for VoIP conferencing
- Microsoft Skype for Business audio conferencing

### System
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<th>Mic/Line inputs</th>
<th>128</th>
<th>128D</th>
<th>128T</th>
<th>128TD</th>
<th>128V</th>
<th>128VD</th>
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<td>Ethernet, RS-232, GPIO interface</td>
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</table>

### Applications
- Built-in USB for PC-based conferencing
- Built-in Telco for teleconferencing
- Built-in VoIP for VoIP conferencing
- Microsoft Skype for Business audio conferencing
- Sound Reinforcement applications
- Built-in Dante for audio networking

### Peripheral Devices
- Beamforming Mic Array 2
- DIALOG® 20 - Wireless Mic System
- GPIO Expander
- USB Expander

### Configuration, Management & Control
- New CONSOLE® software
- Dialer app - Win, Mac, iOS, Android
- Touch Panel Controller
- Third-party control modules
CONVERGE Pro 2 48VT

UNLESS OTHERWISE SPECIFIED, ALL MEASUREMENTS ARE PERFORMED WITH A 20Hz TO 22kHz BW (NO-WEIGHTING).

MICLINE 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 @ +4dB, +/- 0.5dB

EIN (Equivalent Input Noise): 20kHz BW, max gain, Rs = 150Ω, -126dBu

THD + N (Total Harmonic Distortion + Noise):
- 20Hz – 22kHz @ +4dB, level line, 0.006%
- 20Hz – 22kHz @ -56dBu, mic. level, <0.04%

Dynamic Range:
- 20Hz – 22kHz @ 0dB, >105dB

Crossstalk (Mic/Line):
- Channel to Channel, stimulus at 20dBu to receiver at -56dBu, 1kHz, <48dB

Input Impedance:
- Balanced (line to ground), 2.2kΩ, 1%

Nominal Input Level:
- Adjustable -56dB to 0dB, 7dB step coarse gain

Maximum Input Level:
- -56dB to 20dBu

Phantom Power:
- 48V, Impedance 6.81kΩ

Output Impedance:
- Balanced (line to ground), 95Ω, 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: RJ-11
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: >97dBu

REN: Ringer Equivalent Number 0.2

LEDs:
- Blue - Solid: Configured unit
- Blue - Slow Blinking: Unit not configured
- 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

USB CONTROL
Port Type: USB-B connector
Location: Front Panel
Compatible:
- USB 2.0
- USB 3.0

Number of Lines: 5
Maximum Number of Calls/Line: 1

Number of Lines: 3
Maximum Number of Calls/Line: 4

Number of Lines: 5
Maximum Number of Calls/Line: 2

EIN: 48V, Impedance 6.81kΩ

Output Power:
- 20kHz – 22kHz @ 20dB, >102dB, with 20kHz digital low pass filter

Crosstalk:
- Channel to Channel, stimulus at 20dBu, 10W output to receptor 8Ω load, 20Hz – 22kHz, < -70dB

C-LINK BUS
Ports Type: RJ-45 (Cat5e or Cat6)
Port In & Out: Proprietary Expansion Bus
PoE In:
- RJ-45 Port
- PoE 802.3af Mode B, Midspan
- Power on “spare pairs” 4,5 and 7,8

Long Distance P-Link:
- Distance: Up to 200’ (60M)

C-LINK BUS
Ports Type: RJ-45 (Cat5e or Cat6)
P-Link In Port:
- Proprietary Expansion Bus
- 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:
- Channel to Channel, stimulus at 20dBu, 20Hz – 22kHz @ +10dBu, 1W, <0.3%

USB-C
Ports Type: USB-C (Cat5e or Cat6)
C-LINK In & Out:
- Proprietary Expansion Bus
- Solid core, factory terminated Cat 5e or 6 cable

Distance:
- Channel to Channel, stimulus at 20dBu, 20Hz – 22kHz @ +10dBu, 1W, <0.3%

RS232
Port Type: DB9 Female
Settings: 9600/19200/38400/57600/115200 Baud; Serial Echo, Flow Control

Support: Serial commands

GPIO
Port Type:
- Port Type: 5.0mm 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: -40kHz pull up
- Variable Voltage Control Inputs: 5VDC max

Ground Pin:
- GND

USB 3.0:
- 650 FT (200M) maximum cable distance between any two units
- 9V DC @ 350mA Power Source

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

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

COMBO PORTS
Port Type:
- RJ-45, 10/100Mbps Ethernet Network, Auto Negotiation

Audio:
- 5 Lines

Number of Lines: 1
Maximum Number of Calls/Line: 5

Number of Lines: 4
Maximum Number of Calls/Line: 3

Number of Lines: 2
Maximum Number of Calls/Line: 2

CODEC:
- G.711 uLaw
- G.711 A-law
- G.722

Skype for Business (S4B):
- Microsoft Skype for Business support (1 client)

Choose either regular VoIP or S4B through configuration

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