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

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
+ Built-in Telco with ClearEffect™ processing
+ Built-in USB for PC-based conferencing
+ Built-in Dante™ for networked audio
+ Reduced footprint and power consumption

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

Scalable Connectivity

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

Any Application

+ VoIP/POTS conferencing
+ PC-based conferencing & Unified Communications
+ Microsoft Skype for Business audio conferencing
+ Sound Reinforcement applications
+ Dante™ for audio networking

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, and 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 128TD Front Panel

CONVERGE Pro 2 128TD Back Panel

3.81mm Mic/Line Audio Inputs

4 GPIO Ports for Control, Status, Variable Voltage Control

Primary RJ-45 for Dante™ Audio

RJ-45 Ethernet

RS-232 for serial commands

RJ-45 P-Link In

RJ-45 C-Link In

100-240V AC, 50/60Hz Power

3.81mm Mic/Line Audio Outputs

USB-B for Audio

Secondary RJ-45 for Dante™ Audio

RJ-45 P-Link Out

RJ-45 C-Link Out

RJ-11 Telco

CONVERGE Pro 2	Conferencing										Sound Reinforcement	
	128	128D	128T	128TD	128V	128VD	48T	48V	120	012	128SR	128SRD
System												
Mic/Line inputs	12	12	12	12	12	12	4	4	12	✗	12	12
Mic/Line outputs	8	8	8	8	8	8	8	8	✗	12	8	8
AEC	✓	✓	✓	✓	✓	✓	✓	✓	✓	✗	✗	✗
C-link expansion bus	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
P-link peripheral bus	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
USB audio interface	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
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	✗	✗	✗	✗	✓	✓	✗	✓	✗	✗	✗	✗
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	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Unless otherwise specified, all measurements are performed with a 20Hz to 22kHz BW (no-weighting).
Specifications are applicable based on the SKU types.

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, Rs = 150Ω, -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), 2.2kΩ, 1%

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

Maximum Input Level: -65dBu 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: 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)

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)

Dante™ Audio

Port Type: RJ-45 Gigabit Ethernet connectors for Primary and Secondary Ports

Audio: Digital Audio, 16 x 16 bidirectional channels

Sample Rate: 48kHz / 96kHz

Sample Bit Depth: 24-Bit

Amplifier Output (Applicable to 48T SKU)

Speaker Output Port: Dual binding posts

Audio: 2 Channels

Output Power: 10W Max, 8Ω 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 8Ω 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 Ft (200M)

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 (BFM2) 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 Ft (45M)

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: 40.2kΩ pull up
Variable Voltage Control Inputs: 5VDC max

Ground Pin: GND

PRODUCT SPECIFICATIONS

Unless otherwise specified, all measurements are performed with a 20Hz to 22kHz BW (no-weighting).
Specifications are applicable based on the SKU types.

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 x 10.73 x 1.72in or 43.2 x 27.3 x 4.4cm
  2. With rack-ears:
     19 x 10.73 x 1.72" or 48.3 x 27.3 x 4.4cm

Unit Weight: 9.3 lbs (Approximately)

Shipping Weight: 13.8 lbs (Approximately)

Package (as applicable based on SKUs)

Power Cord: 6 Ft (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 Inches (0.45M), Qty 1

Telephone cable: 12 Ft (3.6M), Qty 1

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

USB Cable: USB Type A to Type B, 6 Ft (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
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