

CONVERGE™ PRO | 840T

Professional Conferencing System

The successor to the industry-leading XAP 400. Leveraging the rich functionality, audio performance, and flexibility offered by the flagship Converge™ Pro 880, the new 840T includes a built-in telephone interface and power amplifier for standalone conferencing capabilities. It also provides expansion capability with other Converge Pro mixers for complex installations.

ClearOne®



LEADING AUDIO
CONFERRING
SOLUTION FOR
PROFESSIONAL
INSTALLATIONS

APPLICATIONS

Convention Centers and Hotels
Auditoriums
Stadiums
Conference Rooms
Houses of Worship
Theaters

ADVANTAGES

Advanced Conferencing Feature Set

- + Next-generation Acoustical Echo Cancellation
 - > Improved duplex performance
 - > Push-to-talk microphone compatibility
- + Next-generation Noise Cancellation
 - > Adaptive modeling to room ambient noise condition
- + Increased resolution on Microphone Preamp stage
 - > 0-56 dB in 7 dB increments
- + Pre-AEC routing for Sound Reinforcement Applications
 - > Maximum of 4 millisecond processing delay
- + Management Improvements
 - > Integrated Ethernet and USB connections
 - > SNMP and HTML remote management agents
 - > Event scheduler
 - > Diagnostic console
- + Simplified Configuration Software
 - > Drag & drop A/V and channel objects
 - > Selectable views—unit, matrix, channel
- + Expanded Serial Command List

Superior Audio Performance

- + Next-generation Distributed Echo Cancellation® on every mic input
- + First-mic priority delivers clear audio to the far end
- + 20 Hz-22 kHz bandwidth for full-range audio response
- + ALC & AGC keep participants' audio balanced and consistent

Configuration Flexibility

- + Scalable – link multiple Converge Pro units for extensive microphone coverage and up to 16 phone lines
- + Enhanced expansion bus, featuring 18 mix-minus audio buses for routing between units
- + Ten mic gating groups (four internal & six global) allow separation of mics into individual mixer gating groups for greater configuration flexibility
- + 32 presets can be executed on-the-fly without disturbing other ongoing preset operations
- + 255 Macros for customized audio control/configuration with single command execution

Conferencing Capability

- + Built-in telephone interface and power amplifier
- + Link with multiple Converge Pro TH20s for up to 16-line capability
- + Also link to Converge Pro 880 or 8i for additional inputs and outputs

HDCConference™

> CONVERGE PRO 840T BACK PANEL



> SPECIFICATIONS



Audio Performance

Conditions: Unless otherwise specified, all measurements are performed with a 20 Hz to 22 kHz BW limit (no weighting)
 Frequency Response: 20 Hz to 22 kHz \pm 1 dB
 Noise (EIN): -126 dBu, 20 kHz BW, max gain, $R_s=150 \Omega$
 THD+N: < 0.02%
 Dynamic Range: 100 dB (non A-weighted)
 Crosstalk < -91 dB re 20 dBu @ 20 kHz channel to channel

Auto Mixer Parameters

Number of Open Microphones (NOM)
 PA Adaptive Mode
 First Mic Priority Mode
 Last Mic Mode
 Maximum # of Mics Mode
 Ambient Level
 Gate Threshold Adjust
 Off Attenuation Adjust
 Hold Time
 Decay Rate

Matrix Mixing Parameters

29x30 matrix
 8 analog in/out
 1 speaker out (amplified)
 12 expansion bus in/out
 4 assignable processing blocks in/out
 4 assignable fader blocks in/out
 1 telco in/out

Assignable Processing Blocks

Filters:
 All pass
 Low pass
 High pass
 Low shelving
 High shelving
 Parametric EQ
 Notch
 CD Horn

Crossovers:
 Bessel
 Butterworth
 Linkwitz-Riley

Compressor
 Delay; adjustable up to 250 ms

Assignable Fader Blocks

Gain/Mute

Microphone Input Configuration

Input Gain Adjust
 Mic or Line Level
 Phantom Power on/off
 Echo Cancellation on/off
 Noise Cancellation on/off
 Filters:

All Pass
 Low Pass
 High Pass
 Notch
 PEQ



Mute on/off
 Chairman Override on/off
 AGC on/off
 Automatic Level Control on/off
 Auto Gate/Manual gate
 Adaptive Ambient on/off
 Pre AEC channel

Mic/Line Inputs 1-4

Push-on mini-terminal block, balanced, bridging
 Impedance: < 10 K Ω
 Nominal Level: adjustable -56 dBu to 0 dBu (7 dB step coarse gain adjustment)
 Maximum Level: -65 dBu to +20 dBu
 Echo Cancellation: 130 ms tail time (works with 12 dB of room gain)
 Noise Cancellation: 6-15 dB attenuation
 Phantom Power: 24 V, selectable

Line Inputs 5-8

Push-on mini-terminal block, balanced, bridging
 Impedance: > 5 K Ω
 Nominal Level: 0 dBu
 Maximum Level: 20 dBu

Outputs 1-8

Push-on mini-terminal block, balanced
 Impedance: < 50 Ω
 Nominal Level: 0 dBu
 Maximum Level: 20 dBu

Amplifier Output

Binding post connection
 10 Watts @ 4 Ω Impedance
 THD + Noise: < 0.5%

Telco Line

RJ-11
 POTS (plain old telephone service) or analog extension from a PBX
 A-lead supervision provided

Telco Set

RJ-11
 POTS (plain old telephone service) or analog extension from a PBX
 A-lead supervision provided

Telephone Audio Performance

Conditions: Unless otherwise specified, all measurements are performed with Transmit Limiter and Receive ALC disabled
 Frequency Response: 250 Hz to 3.3 kHz \pm 1 dB
 THD+N: < 0.3%, re-max level 250 Hz to 3.3 kHz
 SNR: > 62 dB re max level

Telephone Echo Cancellation

Tail Time: 31 ms
 Null: 55 dB nominal

Telephone Noise Cancellation

Noise Cancellation: 6-15 dB attenuation

Expansion Bus In/Out

Proprietary Network
 RJ-45 (2), 1.9 Mbps
 Category 5 twisted-pair cable, 200' maximum cable length between any two Converge Pro devices

Ethernet

Autoswitching with Quality of Connection (QoC)
 10/100 Ethernet Network Port
 10/100 Ethernet PC Port
 RJ-45 Connectors

RS-232

Serial Command Protocol Only (Console software not supported on RS-232 port)
 DB-9 female
 9,600/19,200/38,400/57,600/115,200 baud rate;
 8 bits, 1 stop, no parity
 Hardware flow control on (default)/off

USB

Version 2.0 Compatible
 Type: B-connector

Control/Status

DB-25 female A/B (2)
 Inputs A/B: active low (pull to ground)
 Outputs A/B: open collector, 40 VDC max, 40 mA each
 +3.3 VDC pins (2) (300 mA over-current protected)

Configuration & Administration Software

Convergetm Console

Power Input Range

Auto-adjusting
 100-240 VAC; 50/60 Hz

Power Consumption

30W Typical

Dimensions (L x D x H)

17.25" x 10.25" x 1.75"
 43.8 x 26 x 4.5 cm

Weight

7.5 lbs/3.3375 kg unit weight
 12 lbs/5.4kg shipping weight

Operating Temperature

14° F/-10° C to 122° F/50° C ambient room temperature

Approvals & Compliance

AES48-2005: AES standard on interconnections — Grounding and EMC practices — Shields of connectors in audio equipment containing active circuitry (self certified)
 U.S.A. & Canada
 CSA safety listed
 EU Countries
 RoHS compliant
 WEEE compliant
 See product manual for additional details

Optional Accessories

Converge Pro 880
 Converge Pro 880T
 Converge Pro 8i
 Converge SR 1212
 Converge SR 1212A
 Converge Pro 840T
 Converge Pro TH20
 Tabletop Controller

Part Number

910-151-840 Converge Pro 840T – 4-channel AEC Microphone Mixer with built-in telephone hybrid amplifier

> CLEARONE LOCATIONS

Headquarters:
Salt Lake City, UT USA
 5225 Wiley Post Way
 Suite 500
 Salt Lake City, UT 84116
 Tel: 801-975-7200
 Toll Free: 800-945-7730
 Fax: 801-977-0087
 sales@clearone.com

Latin America
 Tel: 801-974-3621
 global@clearone.com

EMEA
 Tel: 44 (0) 1189 036 053
 global@clearone.com

APAC
 Tel: 801-303-3388
 global@clearone.com



Planet Communications Asia Co., Ltd.
 157 Ramindra 34, Ramindra Rd., Tarang, Bangkok
 Bangkok 10230 Thailand
 Tel : (66) 792 2400 Fax : (66) 792 2499, 02 943 5771
 Email : sales@planetcomm.com
 www.planetcomm.com
 BRO-C026-0015-130412-Converge Pro 840T.pdf