

# CONVERGE™ PRO | TH20

## Professional Conferencing Telephone Interface

**ClearOne**

The successor to the industry-leading XAP TH2. The TH20 enables conference call functionality for Converge™ Pro installations with its single telephone line connection. Up to 16 units can be linked for greatly expanded conferencing capability. It also adds two line-level inputs and outputs for increased system capacity.



ADVANCED  
TELEPHONE  
INTERFACE FOR  
CONVERGE PRO  
PLATFORM

### APPLICATIONS

Conference Rooms  
Boardrooms  
Courtrooms  
Distance Learning Facilities  
Convention Centers and Hotels  
Training Rooms  
Telemedicine Facilities  
Houses of Worship

### ADVANTAGES

#### Advanced Telephone Feature Set

- + Signal Processing Improvements
  - > Telephone noise cancellation on RX channel
  - > ClearEffect™ speech enhancement
  - > Automatic level control on RX channel
  - > Caller ID
  - > Selectable ringers
- + Increased I/O capabilities
  - > 2-line level input/output
  - > Audio expansion bus
- + 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

#### Superior Audio Performance

- + Digital signal processing technology ensures crystal clear audio
- + Echo cancellation eliminates telephone line echo
- + Automatic level control
- + Digital anti-alias filter minimizes hum and Central Office switching noise

#### Configuration Flexibility & Scalability

- + Connects to ClearOne's Converge Pro products through expansion bus port
- + Conference up to 16 callers in a Converge Pro installation with multiple TH20s
- + Configure through included Console™ software

#### Ease of Use & Control

- + Speed dial stores 10 frequently dialed numbers
- + Incoming call ringing is heard through the loudspeaker
- + Selectable auto-answer and auto-disconnect
- + Users can dial telephone numbers, access voice mail, pagers, etc. without the use of a separate telephone device through integrated DTMF (touch-tone) dialing
- + Software-selectable country configurations

HDCConference™

## > CONVERGE PRO TH20 BACK PANEL



## > SPECIFICATIONS



### Telephone Audio Performance

Conditions: Unless otherwise specified, all measurements are performed with Transmit Limiter and Receive ALC disabled  
Frequency Response: 250Hz 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 Noise Cancellation

Noise Cancellation 6-15 dB attenuation

### Telco Line Echo Cancellation

Tail Time: 31 ms  
Null: 55 dB nominal

### 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

### 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 Rs=150  $\Omega$   
THD+N: < 0.02%  
Dynamic Range: 100 dB (non A-weighted)  
Crosstalk < -91 dB re 20 dBu @ 20 kHz channel to channel

### Line Inputs 1, 2

Push-on mini-terminal block, balanced, bridging  
Impedance: < 10 K $\Omega$   
Nominal Level: 0 dBu  
Maximum Level: 20 dBu

### Line Outputs 1, 2

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

### Expansion Bus In/Out

Proprietary Network  
RJ-45 (2), 1.9 Mbps, 110 K $\Omega$   
Impedance  
Category 5 twisted-pair cable, 200' maximum cable length between any two Converge Pro devices

### Ethernet

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

### RS-232

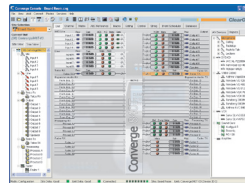
Serial Command Protocol Only (Console software not supported on RS-232 port)  
DB-9 female  
9,600/19,200/38,400/57,600/115,200 baud rate; 8 bits, 1 stop bit, no parity  
Hardware flow control on (default)/off

### USB

Version 2.0 compatible  
Type: B-connector

### Control/Status Ports

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  
Converge™ Console

### Power Input Range

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

### Power Consumption

30 W 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 unit 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

910-151-820 Converge Pro TH20  
Telephone Interface for Converge/  
Converge Pro Platform

## > 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