trilogy
A CLEAR-COM COMPANY

Mercury Communicator Unit (MCU)

Mercury Intercom Solutions

Key Features

- Multi-operator Station - Fully independent operation
- True Peer-to-Peer Architecture – No single point of failure
- Capable of running the latest versions of the Trilogy ES, DS and Core Software suites
- Standards-based VoIP Connectivity
- Ethernet connected using either Fiber SFP transceiver or RJ45 PoE
- Point-to-Point calling
- Multi-point conferencing
- User configurable priority based routing of audio
- SIP calling
- Safety of flight sidetone suppression
- Offline Configuration
- Two additional AUX ports for RIB(radio) or AEB(panel) connections
- Small compact form factor with two different mounting options
- Compatible with other Mercury products (MCU, MMU and MIU)
- Integrate any Clear-Com system over IP with LQ Series devices
- Binaural headset operation
- Independent LEMO connections for headset+PTT and additional PTT
- Support for both Dynamic and Electret Microphones

The Mercury Communicator Unit is a high performance peer-to-peer multi-operator station designed for critical communication in small to large-scale operations. The matrix-less architecture facilitates virtually unlimited scalability with each unit being able to simultaneously communicate with up to 64 endpoints and host up to 32 virtual panel applications.

Description

The MCU (Mercury Communicator Unit) is a small form-factor device that can simultaneously function as a mission critical operator station, a host to numerous virtual panels and interact with a variety of SIP endpoints.

Operator Station Component

The MCU's primary function is to provide support for single operator connectivity. With three variants of interface options, the MCU facilitates various connection options for headset + PTT, along with an additional 4-pin LEMO connector. The virtual control surface can be accessible through either the connection of a touch-screen (or non-touch) monitor directly to the MCU's HDMI and USB ports on the rear of the unit or alternatively with the navigation of a browser to the IP address or hostname of the MCU.

Peer-to-Peer Architecture

The MCU is able to operate peer-to-peer, allowing each device to function in a fully independent manner, relying on no other resource to perform any of its functions. It also can seamlessly interface with other Mercury products (MCU, MMU and MIU), along with any SIP capable endpoints. As a result, the resilience of the Mercury system coupled with the ability to seamlessly integrate with the certified Mercury Cross Domain Solution enables the MCU to operate in any mission critical environment where security is paramount.

Hosting of Virtual Panels

Up to 32 virtual panels can be hosted on a single MCU. The IP connected clients can run on either Windows, iOS or Android devices and have the ability to communicate with any resource that is available to the MCU, including other MCUs, MMUs or MIUs.

SIP Interfacing

Each MCU can use up to 64 of the shared DSP resources to intercommunicate with any SIP enabled endpoint, either through a SIP server, PBX or directly point-to-point using a SIP URI.

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Technical Specifications

AUX 1 & 2

RJ45 connectors for RIB (Radio) or AEB (panel) connections

Interface Option 1

LEMO 12-pin connector compatible with plug FGG3B.312.CLAD10 used for dynamic or electret headsets, PTT & GPIO operation

Interface Option 2

XLR 7 Female

7 Pin Female XLR connector used for dynamic or electret headsets, PTT & GPIO operation

Interface Option 3

XLR 7 Male

7 Pin Male XLR connector used for dynamic or electret headsets, PTT & GPIO operation

AUX PTT Connector

4-pin Lemo socket of type 1B used for AUX PTT

AUX Mic Inputs

Two 3.5mm jacks used for electret headset in conjunction with AUX PTT

Networking

Power-over-Ethernet (PoE) enabled 10/100/1000BaseTX Ethernet Port and pluggable SFP supporting an optional Gigabit Ethernet 1000Base-SX multimode or single mode transceiver

USB

3 USB type A ports (two 2.0 & one 3.0) used for connection of a mouse, keyboard or external storage device.

Tone Generation

Up to 4 tones can be injected into any audio mix

Power

2.5mm DC JACK socket with screw lock retention with wall wart capable of supplying +12V DC ±0.5V DC, 1A with momentary pushbutton switch to cycle power

Status LEDs

4 LEDs providing status of DC power, network link, application and overall system

Mounting Options

Vertical desktop mounting base or an under desktop mounting bracket kit

Sidetone

-39dB to -19dB

Environmental

Operating Temperature: 32° to +104° F (0° to +40° C)

Storage Temperature: -4° to +140° F (-20° to +60° C)

Storage Altitude: 10,000 meters in an un-pressurized environment

Humidity: 20% - 90% (non-condensing when operating at 104° F/ 40° C)

Shock: In compliance with IAW DEF STAN 00-35 (pt 3) Ch 2-03 Para 5.2 (tbl 1)

Vibration: In compliance with IAW DEF STAN 00-35(pt 3) Ch 2-01 Sec 5.2 (Annex B)

Emissions: In compliance with FCC CFR47 Part 15.107, 15.109 & BS EN 55032:2015

Immunity: In compliance with BS EN 55024:2010

Safety: In compliance with IEC62368-1:2018

Dimensions

1.69 x 8.19 x 6.77in (HxWxD)
(43 x 208 x 172mm)

Weight

1.9lbs (0.9kg)

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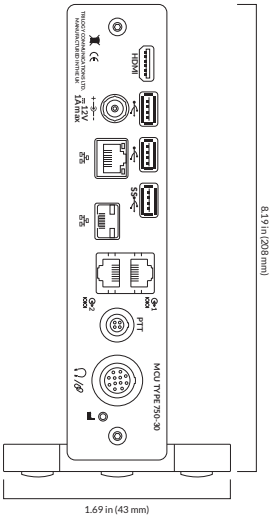
Interface Option 1

Back



Interface Option 2

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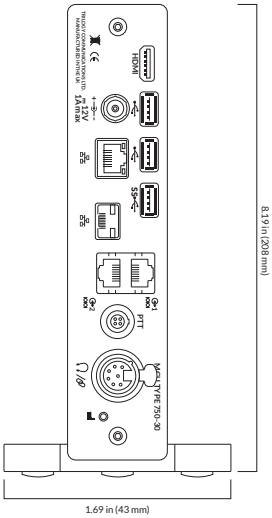

Interface Option 3

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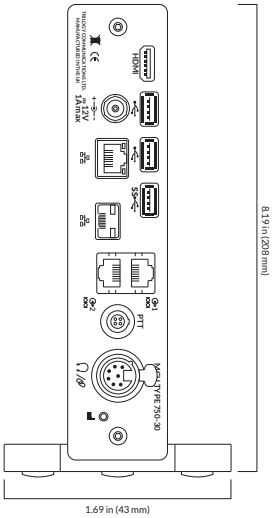

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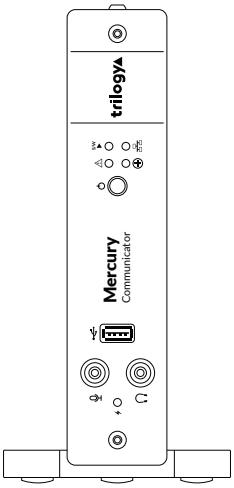
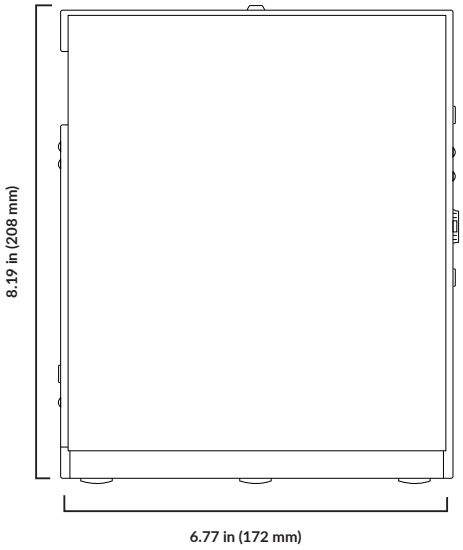


Side



Order Code

Interface Option 1

750-30-01-17: MCU with 12-pin LEMO CIA link, Port 1 AEB, Port 2 RIB

750-30-01-11: MCU with 12-pin LEMO CIA link, Port 1 AEB, Port 2 AEB

750-30-01-77: MCU with 12-pin LEMO CIA link, Port 1 RIB, Port 2 RIB

Interface Option 2

750-30-02-17: MCU with XLR7-F CIA link, Port 1 AEB, Port 2 RIB

750-30-02-11: MCU with XLR7-F CIA link, Port 1 AEB, Port 2 AEB

750-30-02-77: MCU with XLR7-F CIA link, Port 1 RIB, Port 2 RIB

Interface Option 3

750-30-03-17: MCU with XLR7-M CIA link, Port 1 AEB, Port 2 RIB

750-30-03-11: MCU with XLR7-M CIA link, Port 1 AEB, Port 2 AEB

750-30-03-77: MCU with XLR7-M CIA link, Port 1 RIB, Port 2 RIB

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