

# EST-CU-11LCD

## Control Unit with LCD (11 control slots)

### Overview

EST-CU-11LT Control Unit (CU) is a matrix mixer of input signals which routes to 4 100 V internal audio buses, a 45-channel digital system buses or directly to audio outputs in a unit. EST-CU-11LT is designed to work for small PA & VE systems or as an extension unit in more complex systems. It means that the CU can function independently as the central unit of a small system or be part of a large complex system for which it represents another level of either territorial extension (operation in a remote structure) or functional extension (operation of further fire zones and loudspeaker lines in such a structure).

The modular design of the CU and its flexibility enables optimization of equipment and cost efficiency regardless of size / number of structures, their location and connectivity.

In the event of losing connectivity with a networked master unit, EST-CU-11LT is able to perform fire alarm scenarios independently thanks to the configuration recorded locally. While attached to the main communication ring of the system, EST-CU-11LT can control amplifiers and power supply managers as well as receive alarm and digital signals; and send them to other system devices.

EST-CU-11LT Control Unit distributes audio signals to individual zones and ensures that individual zones function properly. It also controls the condition of loudspeaker lines and amplifiers. If a fault is detected, it sends the signal to the system and automatically switches to a backup amplifier.

The CU is equipped with an EST-cAudio-4/12 card offering 4 symmetrical line audio inputs and 12 symmetrical outputs to lead audio signals out to external devices or amplifiers of the EST ENT VES system.

Furthermore, EST-CU-11LT can be equipped with an LCD touch screen with a control module, which allows easy access to management functions and monitoring of the whole system – such extended configuration is included in EST-CU-11LCD Control Unit.



### Details

- Compliance with EN54-16
- Network-based system allowing configuration, diagnostics and management via Ethernet
- Managing up to 254 devices on the network
- 11 slots available for any configuration of loudspeaker control cards and control input / output cards
- Built-in audio card with 4 inputs and 12 audio outputs
- Up to 12 messages played simultaneously in different zones
- Up to 32 GB SD flash memory designated for playback and recording messages (48 kHz, 16 bit)
- 1x POE port
- Support of up to 12 secured amplifiers
- Built-in 2 control inputs and outputs
- 2x 1 GB ports available for system extension
- Integrated DSP with implemented 3 band parametric EQ on all inputs on control units, 8 band parametric EQ, delay lines, audio limiter and feedback eliminator on each of the audio outputs
- Comprehensive solution based on RS485 functionality enabling seamless integration of the EST ENT VES system with 3rd party systems thanks to implementation of standard and proprietary communication interfaces

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### Technical specifications

#### Electrical

Power consumption	Up to 100 W (depends on configuration)
Power supply	48 VDC (operating range 40-57 VDC) connector with screw terminals M2.5, the distance between the partitions of 5.08 mm

#### Input

Quantity and type	4, Differential
Connector type	1x RJ45
Input impedance	≥ 10 kΩ
Maximum input voltage	≥ 3 Vrms

#### Output

Quantity and type	12, Balanced
Connector type	3x RJ45
Frequency response	40 Hz... 20 kHz (at 1 dB) / 400 Hz... 8 kHz (at 0,1 dB)
Harmonic distortion (THD+IMD)	≤ 0,05%
Headroom	10 dB
SNR	≥ 90 dB
Channel separation	≥ 80 dB
Output impedance	600 Ω
Nominal output level	1 Vrms

#### Physical

Physical dimensions	482 x 85 x 325 mm (W x H x D)
Net weight	Up to 8.4 kg (depends on configuration)
Type of mount	19" rack
Number of control slots	11
Number of function slots	0
Messages	Supported SD card up to 32 GB. The set includes 512 MB SLC SDHC cards which provides more than 20 min of the messages
LCD display	272x480 resolution, 4.5" resistive LCD touchscreen
DSP	Implemented 3 band parametric EQ on all 4 inputs of the control units 8 band parametric EQ, audio limiter, feedback eliminator and delay line on all of the audio outputs
Fiber module - connector type / kind of fiber	Modules type SFP / Connector SC/LC / Multimode or single-mode / E 30 or E 90, OM lub OM2
Communication with PC	PC software: RJ45 connector twisted pair connection TIA / EIA568-B by the Ethernet protocol
Available communication protocols	Modbus, SMS
Finish case material	Steel / The front panel is made of metal plate painted black
Accessories	2 brackets and 4 screws for rack mounting, 9 caps for free slots, 48 VDC power and 100 V buses connectors

#### Environmental

Operating temperature	0°C to +60°C
Storage temperature	-20°C to +70°C
Operating humidity	15% to 80% non-condensing
Storage humidity	15% to 80% non-condensing

#### Standards & regulation

Standards	EN54-16
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#### Data communication

1000BASE-X on the fiber
2 SFP ports provide a redundant connection
1000BASE-TX / RJ45 CAT5E cables - 2 ports including 1 port with POE
100BASE-TX / RJ45 CAT5 cables - LAN/WAN for PC connection



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Last updated on 7 December 2021 - 16:05