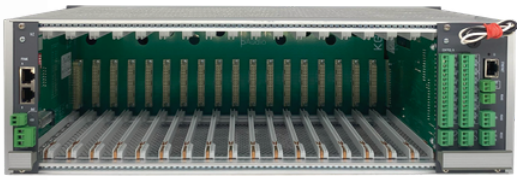
KG-ETH – SYSTEM CONTROLLER



KG-ETH-MAR main controller with handheld microphone (front)



KG-ETH main controller without handheld microphone (front)



Main controller (back)

Certificate of constancy of performance 1438-CPR-1077
Certificate of admittance 5641/2025

FEATURES

- Mainprocessor with bypass redundancy
- Manage audio and control data
- Real-time system monitoring
- 32-bit DSP audio processor
- Up to 4 alarm audio channels per main controller
- Up to 64 non-alarm audio channels per main controller
- Up to 32 main controllers per system
- Wide frequency response
- Audio CD quality
- Ultra-low quiescent mode
- Modular structure
- Hot-swap functionality
- BMS Modbus communication
- 17 monitored control inputs
- 2 output relays (fault and freely programmable)
- Built-in LCD screen
- Built-in KG-UI user interface, KG controller, BP backplane and WZ digital bus modules
- 68HP expansion slots for system cards
- Diagnostic USB port on the front
- KG-ETH-MAR version with alarm microphone MR
- KG-ETH - version without alarm microphone
- Audio message storage up to 1 GB
- Supports real-time setting adjustment without system interruption or system restart
- Internal monitoring with output suppression

OVERVIEW

The KG-ETH is the main control unit required in every IVO system. Most system events are processed by its internal processor. The unit consists of:

- KG main controller
- KG-UI user interface
- KAS frame (including BP backplane module and WZ digital bus card)

The KG-ETH features a modular architecture, providing 17 card slots for system expansion. Unused slots can be protected with MAS blank covers. Each unit can process up to four independent audio signals simultaneously via the main digital bus, broadcasting them to any individual loudspeaker line or group of lines.

The integrated KG controller module manages all system events, including receiving and processing control signals from the fire alarm system, handling audio distribution, and coordinating the operation of installed system cards. A built-in monitoring loudspeaker allows verification of any selected audio signal without broadcasting it to the zones, thanks to a disable mode that isolates monitoring from live output.

KG Controller Module

- 17 potential-free NO/NC control inputs for direct connection to fire alarm system relay outputs, with fault detection for short circuits and open lines.
- Built-in bypass controller enabling automatic or manual limited operation in case of main processor failure.
- SD card slot for storing pre-recorded messages, chimes, and other audio files.
- RS232 and RS485 ports for integration with external systems such as fire alarm or building management, supporting Modbus protocol or ASCII mode (registry lists available on request).
- LAN/WAN port for remote maintenance, monitoring, and diagnostics over the internet.

KG-UI User Interface

Located on the front panel, the KG-UI includes an LCD display, LED status indicators, a monitoring loudspeaker for audio and intercom functions, and manual control buttons. The LCD main screen displays:

- Current date and time
- Number of system faults
- Number of active alarms
- Number of disablements
- Status of the uploaded program

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TECHNICAL SPECIFICATION

GENERAL	
Power supply	24 V DC ± 20 % 48 V DC ± 15 %
Power consumption	Standby / Idle / Alarm < 3 W
Standards	EN54, CE
Mechanical	3 U, 19"
Operating temperature	-5 : +50 °C
Relative humidity	25 % - 90 %
Indicators	Power, alarm, fault, bypass, CPU fault, disablement, ID
Connectors	17x control inputs, 2x relay outputs, 1x RS232, 2x RS485, Ethernet, USB Type B, PSU fault, power

AUDIO SPECIFICATION	
Frequency response	10 Hz - 30 kHz (- 3 dB)
Distortion (THD + N) (1 kHz)	< 0,1 %
Signal-to-noise ratio	> 86 dB

OTHERS	
Digital audio format	PCM 16-bit / 48 kHz
3rd party integration	1x RS232, 2x RS485 (Modbus)
Control and supervision	1 x USB, 1x Ethernet (TCP/IP)
Log event buffer	2048

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