Master Control Unit

RK-MCU

General

The Honeywell INTEVIO Public Address (PA) system is the ideal solution for single buildings. Its integrated design provides better stability and cost savings, along with an enhanced user experience for improved performance.

Description

The RK-MCU controller is the core unit of the INTEVIO PA system, providing audio storage, signal processing, routing, control, and supervision functions for the whole system. With a built-in 500 W Class-D amplifier, the single controller can operate as an 8-zone PA system. If more power and speaker zones are needed, it can be expanded by using the RK-AMP 500 external power amplifier and RK-ZONE8/RK-ZONE24 zone expanders.

RK-MCU

Functions

The RK-MCU controller integrates multiple functions, such as audio storage, playback, zone control, audio monitoring, scheduled broadcast, and fault diagnosis, etc.

Automatic fault diagnosis

The INTEVIO system is a fully monitored system with the ability to supervise and report faults related to the main power, backup power, CPU, microphone, amplifiers, speaker circuits, and dry contact inputs. Fault details are displayed on the LCD screen and fault logs are stored in the internal memory.

Allow all calls even when the CPU malfunctions

During an emergency, if the CPU of the RK-MCU fails, the INTEVIO system still allows paging announcements (All Call) using the PTT Microphone or the call stations.

Scheduled broadcast with built-in timer

The RK-MCU has a built-in timer and supports configurable scheduled broadcast without an additional timing device.

Record and play

The unit allows temporary message recording via the PTT microphone or call station. The messages are stored on the internal 1 GB memory and will broadcast without configuration. This allows the system to be used for promotional applications where a message may need to be updated frequently.

Cost-saving amplifier backup solution

The RK-MCU has a built-in amplifier automatic switch-over function and allows different amplifier backup configurations to address the needs of different applications. A minimum of one standby amplifier is required to backup all amplifiers on the system, which greatly reduces equipment cost.

FEATURES AND BENEFITS

- Integrated public address system controller with built-in 500 W amplifier.
- Maximum 8 loudspeaker zones can be connected with a maximum power rating of 500 W for each speaker line.
- 10 dry contact inputs with supervision and 8 dry contact outputs.
- Numerous user-friendly features to increase operational efficiency: plug and play, record and play, interaction between LCD and buttons, etc.
- Built-in 500 W Class-D power amplifier.
- Supports external power amplifiers.
- Equipment cost savings by implanting recorder, timer, audio monitor, and one-for-all backup amplifier solutions.
- Supports both single and dual channel mode
- 2 auxiliary inputs and 1 MIC/LINE input.
- Capable of integration with third-party systems, such as fire alarm systems, through the dry contact.
- Built-in standard configuration allows the system to be used directly following installation. System functions can also be set via the configuration software.
- Built-in 1 GB Flash memory and 4 GB SD card, which can be used to store audio files, recording files, configuration data, and log files, etc.
- Manages all public address and emergency broadcast devices on the system, providing device system status information and device parameter modification via the LCD screen.
- Flexible power amplifier redundancy. A single spare amplifier can back up all amplifiers in the system.

RK-MCU Technical Specifications

PARAMETERS	VALUES
MAIN POWER SUPPLY VOLTAGE	AC 100-240V 50/60 Hz
BACKUP POWER SUPPLY VOLTAGE	21.5 VDC-28.5 VDC
MAIN POWER SUPPLY FUSE	T10AH 250V
POWER CONSUMPTION	<740W
MICROPHONE INPUT	
INPUT SENSITIVITY	-59 ± 3 dBV
FREQUENCY RESPONSE	100-14 kHz, ± 3 dB
SNR	>50 dB (A-weighted)
AUXILIARY INPUT	
CHANNELS	2
INPUT SENSITIVITY	1V (0 dBV)
INPUT IMPEDANCE	10 KΩ
FREQUENCY RESPONSE	80 Hz-18 kHz, ±3 dBV
SNR	>80 dB (A-weighted)
MIC/LINE INPUT	
INPUT SENSITIVITY	5 MV/IV.selectable
INPUT IMPEDANCE	20 KO
FREQUENCY RESPONSE	80 Hz-18 kHz, ± 3 dBV
SNR	>80 dB (A-weighted)
PHANTOM POWER	-24 VDC, switchable
INTERNAL POWER AMPLIFIER	
MAX. POWER OUTPUT	500 W
OUTPUT SIGNAL	70V (CH1A)
THD	<0.1%
FREQUENCY RESPONSE	80 Hz-18 kHz, ± 3 dB
AUDIO OUTPUT	
OUTPUT CHANNELS	Channel 1, Channel 2, and recording output
OUTPUT SIGNAL	1V (0 dBV)
THD	<0.1%
AMPLIFIER CONTROL INTERFACE	
CHANNELS	3 (Channel 1, Channel 2, and backup amplifier)
OUTPUT SIGNAL	1.4V
THD	<0.1%
CONTROL SIGNAL	Self-test signal, amplifier fault signal, and power saving control signal
LOUDSPEAKER CIRCUITS	
OUTPUT CHANNELS	8 (with group A and group B)
MAXIMUM LOUDSPEAKER LOAD	500 W
AMPLIFIER CONTROL INTERFACE	
CHANNELS	3 (Channel 1, Channel 2, and backup amplifier)
OUTPUT SIGNAL	1.4V
THD	<0.1%
CONTROL SIGNAL	Self-test signal, amplifier fault signal, and power saving control signal

PARAMETERS	VALUES
LOUDSPEAKER CIRCUITS	
OUTPUT CHANNELS	8 (with group A and group B)
MAXIMUM LOUDSPEAKER LOAD	500 W
CONTACT INPUT/OUTPUT	
CONTACT INPUTS	10 contact input interfaces with supervision
CONTACT OUTPUTS	8 (NO, NC & COM), "fault" output, alarm output
MAX. WORKING VOLTAGE FOR OUTPUTS	AC 250 V/DC 30V
MAX. WORKING CURRENT FOR OUTPUTS	2.5 A
OTHERS	
DC POWER OUTPUT	24V/1 A
MONITORING LOUDSPEAKER	2 W/8Ω
ETHERNET PORT	10M/100M
MEMORY CAPACITY	1 GB
OPERATING CONDITIONS	
RELATIVITY HUMIDITY	< 95% without condensation
OPERATING TEMPERATURE	-10°C ~+50°C (14°F ~+122°F)
STORAGE TEMPERATURE	-40°C ~+70°C (-40°F ~+158°F)
WEIGHTS AND DIMENSIONS	
PRODUCT DIMENSION (W×H×D)	482 mm × 133.5 mm × 420 mm (18.98 in. × 5.26 in. × 16.53 in.)
PACKAGE DIMENSION (W×H×D)	580 mm × 279 mm × 552 mm (22.83 in. × 10.98 in. × 21.73 in.)
NET WEIGHT	24.25 lbs.
GROSS WEIGHT	31.08 lbs.

WARRANTY

1 Year

CERTIFICATIONS AND APPROVALS

CATEGORY	REGION	CERTIFICATION
SAFETY	Europe	CE Certified
SAFETY	Global	CB Certified
EMC	North America	FCC Part 15 Subpart B Certified
SAFETY	North America	UL60065 Certified

ORDERING

DESCRIPTION	MODEL#
MASTER CONTROL UNIT	RK-MCU

Note: *Honeywell reserves the right, without notification, to make changes in product design and/or specifications.*

Honeywell Security and Fire
12 Clintonville Road
Northford, CT 06472, USA
Tel:+1.800.323.4576
www.honeywell.com

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