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Caution: This product contains sensitive electrical components that may be damaged by electrical spikes, surges, electric shock, or lightning strikes. Use of surge protection systems is highly recommended.

1. Introduction

The KanexPro CR-KEY10R is a standalone programmable wall keypad designed to replace expensive proprietary control processors in conference rooms, classrooms, training centers, and exhibition spaces. Built on a Linux-based ARM Cortex-A7 platform with 256MB RAM, it delivers multi-protocol room automation — RS232, RS485, IR, relay, and TCP/IP — from a single flush-mount US 2-Gang wall panel, eliminating the need for a separate control processor or proprietary software.

Featuring 10 programmable buttons and a precision knob with LED feedback for real-time volume or level control, the CR-KEY10R integrates 4× RS232, 1× RS485, 2× IR output, 2× relay, and 2× configurable I/O ports. Powered via PoE or DC 5V, it supports TCP/IP, UDP, HTTP, and WebSocket protocols over its 100Mbps Ethernet port. The magnetic aluminum front panel is field-swappable in black or white, and button labels are customizable for any room configuration. Programming is handled through EASYAccomplish software with web GUI access for network configuration.

2. Features

- ARM Cortex-A7 architecture, 1.2GHz main frequency
- Linux system, 256MB RAM, 256MB ROM
- Installation specifications: US 2-Gang / CN 120 standard cassette boxes
- Magnetic aluminum panel design, easy to replace
- 10 programmable buttons and 1 programmable knob, supporting light status feedback (with LED indicators)
- 4-channel RS232 two-way serial communication ports, with configurable baud rate
- 1-channel RS485 serial communication port, with configurable baud rate
- 2-channel isolated low-voltage relay ports
- 2-channel I/O ports, with configurable input/output mode
- 2-channel IR output ports, supporting 20KHz–60KHz wideband output
- 1-channel 100Mbps network port, integrated with TCP/IP, UDP, HTTP, and WebSocket protocols
- Dual power supply mode, supporting PoE or DC power supply
- Programmable via EASYAccomplish software; web GUI for network configuration

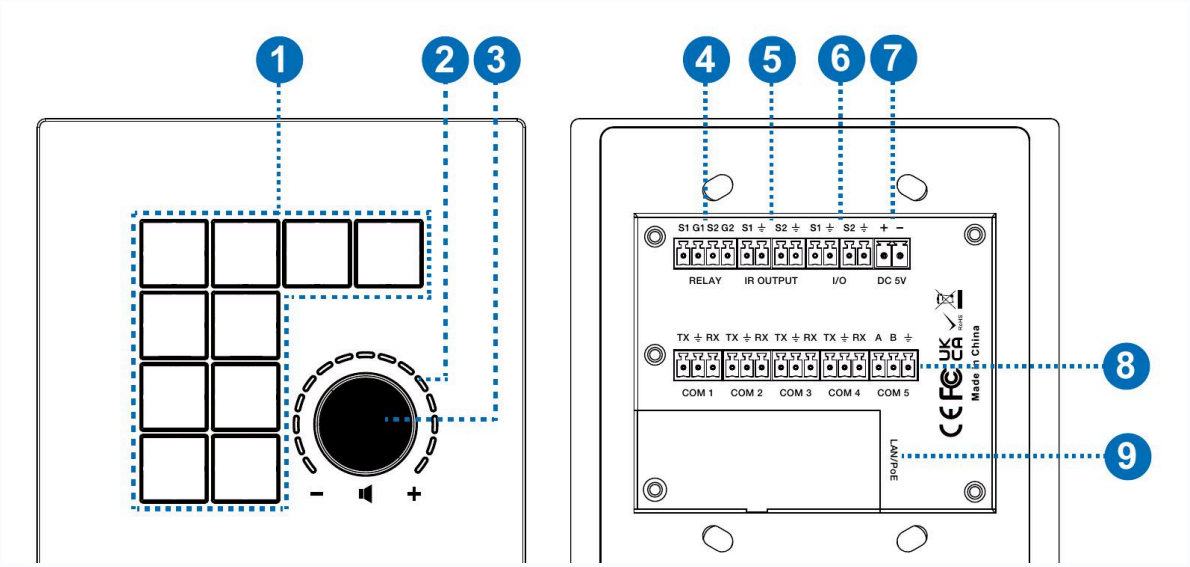
3. Package Contents

- 1× Programmable Control Keypad
- 5× 3-pin 3.5mm Phoenix Connector (male)
- 1× 4-pin 3.5mm Phoenix Connector (male)
- 4× 2-pin 3.5mm Phoenix Connector (male)
- 1× 2-pin 3.81mm Phoenix Connector (male)
- 4× Wall Mounting Screws
- 1× User Manual

4. Specifications

SPECIFICATION	VALUE
Technical	
CPU	ARM Cortex-A7, 1.2GHz
Operating System	Linux
RAM	256MB
Flash Memory	256MB
ESD Protection	IEC 61000-4-2: ±8kV (air-gap discharge) / ±4kV (contact discharge)
Control	
Programmable Buttons	10 buttons with light status feedback
Programmable Knob	1 knob with blue LED progress indicator
Programming Software	EASYAccomplish (downloadable from product page)
Connection	
COM 1/2/3/4 (RS232)	4× 3-pin phoenix connector, bidirectional serial, 2400–115200 bps
COM 5 (RS485)	1× 3-pin phoenix connector, bidirectional serial, 2400–115200 bps
IR Output	2× 2-pin phoenix connector, 20KHz–60KHz carrier
Relay	2× 2-pin phoenix connector, normally open, 2A 30VDC / 0.3A 125VAC
I/O	2× 2-pin phoenix connector, configurable input (24V) / output (5V, 50mA max)
LAN/PoE	1× 10/100M Ethernet RJ45, PoE supported
DC 5V	1× 2-pin phoenix connector, power supply input
USB	1× USB Type-C (system debug, behind front panel)
Mechanical	
Dimensions	4.57″ × 4.57″ × 1.42″ (116 × 116 × 36mm)
Weight	0.86 lbs (391g)
Housing	Front panel: Aluminum alloy; Rear case: Metal enclosure
Color	Front panel: Black / White (optional); Rear case: Black
Installation	US 2-Gang / CN 120 standard cassette box
Front Panel	Magnetic aluminum, field-swappable
Power	
Power Supply	DC 5V/1A or PoE
Power Consumption	<5W
Environmental	
Operating Temperature	32°F–104°F (0°C–40°C)
Operating Humidity	20%–80% RH, non-condensing
Storage Temperature	-4°F–140°F (-20°C–60°C)
Storage Humidity	10%–90% RH, non-condensing
Certifications	CE, FCC, UKCA

5. Operation Controls and Functions



Front Panel

#	NAME	DESCRIPTION
1	**Buttons 1–10**	10 programmable buttons. Each can be configured to send RS232, RS485, IR, TCP/IP, relay, or I/O commands simultaneously. Button icons are printed on removable film and can be customized. LED indicators provide light status feedback.
2	**Knob**	1 programmable knob (with button function). Fully configurable via EASYAccomplish software. Typically used for volume control, dimming, or level adjustment.
3	**Knob LED**	Blue progress LED ring indicating real-time changes of the knob value.

Rear Panel

#	NAME	DESCRIPTION
4	**RELAY**	2 sets of isolated low-voltage relay ports. Normally open, max load 2A 30VDC / 0.3A 125VAC. No internal output voltage. PIN1 = signal input, PIN2 = signal output.
5	**IR OUTPUT**	2-channel programmable IR ports. Carrier range: 20KHz–60KHz. PIN1 = IR output, PIN2 = GND.
6	**I/O**	2-channel programmable I/O. Input mode: digital level signal (low level effective, 24V withstand). Output mode: 5V, max 50mA, default low. PIN1 = I/O, PIN2 = GND.
7	**DC 5V**	Power input port (2-pin phoenix). Connect external 5V DC power supply.
8	**COM 1–4**	4-channel RS232 serial ports (3-pin phoenix). Baud rate: 2400–115200 bps. PIN1 = TXD, PIN2 = GND, PIN3 = RXD.
8	**COM 5**	1-channel RS485 serial port (3-pin phoenix). Baud rate: 2400–115200 bps. PIN1 = A, PIN2 = B, PIN3 = GND.
9	**LAN/PoE**	10/100M Ethernet RJ45 with PoE. Auto rate negotiation. Default: DHCP disabled, IP 192.168.0.101, subnet 255.255.0.0.

Hidden Controls (behind front panel):
RESET button: Press >1s <5s → reboot (user projects not loaded). Press >5s → factory reset (IP restored to 192.168.0.101, password reset to “admin”, time set to auto; user projects retained).
USB-C port: Reserved for system debugging.

6. Mounting Instruction

This wall-in control panel can be mounted in a US 2-Gang or CN 120 standard cassette box. Follow these steps:

Step 1

Remove the control panel from the packaging. Remove the magnetic front panel by pulling it horizontally away from the unit.

Step 2

Install the control panel onto the US 2-Gang wall box and fasten it with the 4 included mounting screws.

Step 3

Connect all required cables to the rear panel connectors (RS232, RS485, IR, Relay, I/O, LAN/PoE, DC 5V) before attaching the front panel.

Step 4

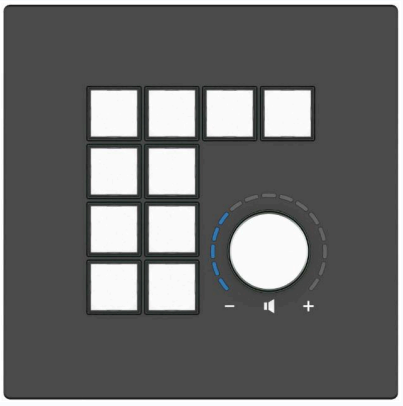
Place the magnetic front panel back onto the control panel to complete the installation. The magnetic attachment ensures secure fit while allowing easy removal for label customization or maintenance.

Tip: For PoE installations, only the LAN/PoE RJ45 cable is needed — no separate power cable required. Ensure the PoE switch provides standard 802.3af power.

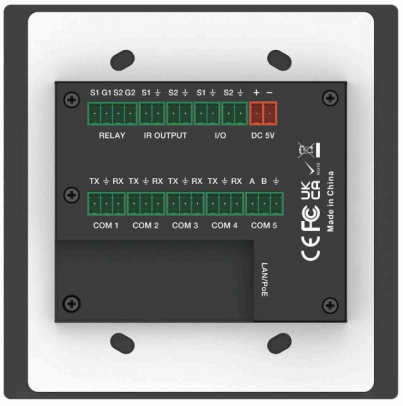
Network Cable: The connection method required for this product is direct connection. Please do not cross connect. Use straight-through (T568B) CAT5e/CAT6 cabling.

7. Product Dimensions

Width	4.57″ (116mm)
Height	4.57″ (116mm)
Depth	1.42″ (36mm)
Weight	0.86 lbs (391g)



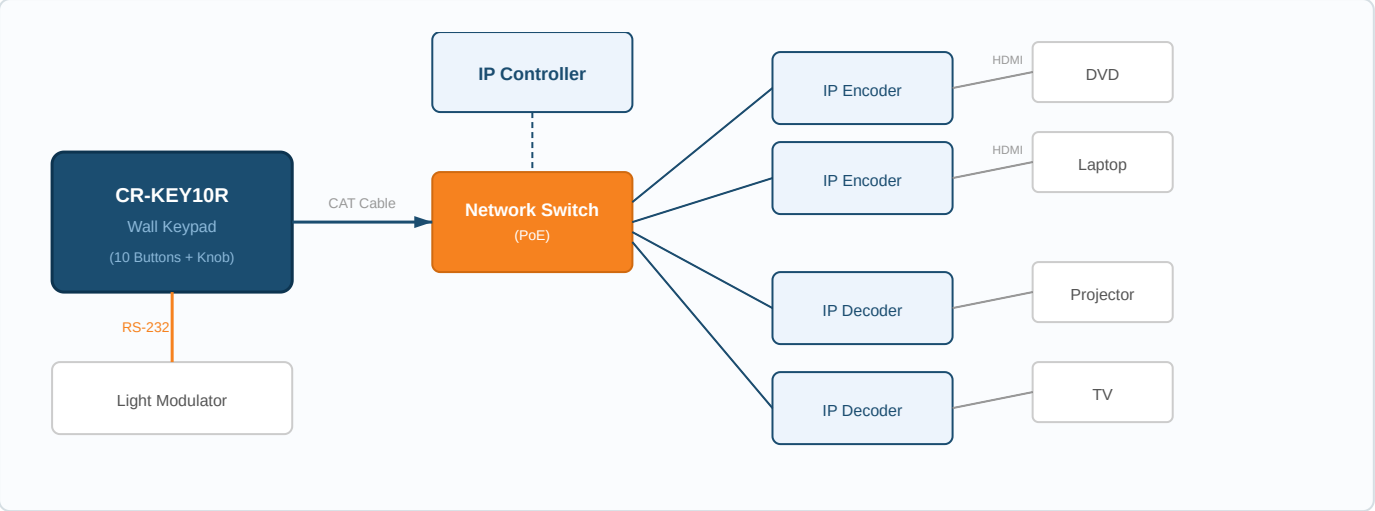
Front — 116 × 116mm



Rear — Depth 36mm

8. Application Example

The CR-KEY10R integrates with AV-over-IP systems, matrix switchers, projectors, lighting controllers, and display devices through its multi-protocol I/O:



The CR-KEY10R connects to the network switch via a single CAT cable (PoE). Buttons send TCP/IP commands to route IP encoders/decoders, RS232 commands to control projectors and light modulators, and relay closures for screen/curtain control. The knob adjusts volume via RS232 or TCP/IP.

9. Troubleshooting

Q: The keypad does not power on.

A: Verify the PoE switch is providing 802.3af power, or check the DC 5V connection. Ensure the CAT cable is a straight-through (not crossover) connection. Try a different port on the PoE switch.

Q: Buttons do not send commands to connected devices.

A: Confirm the button has been programmed in EASYAccomplish software. Verify the target device's IP address, RS232 baud rate, or IR code is correct. Check network connectivity.

Q: Cannot access the web GUI at 192.168.0.101.

A: Ensure your PC is on the same subnet (e.g., 192.168.0.x with mask 255.255.0.0). Connect directly to the LAN/PoE port. Disable Wi-Fi. If the IP was changed, hold RESET >5 seconds to restore factory defaults.

Q: The knob LED ring does not respond.

A: Verify the knob function is programmed in EASYAccomplish. The LED ring only activates when a knob action is configured.

Q: How do I reset to factory defaults?

A: Remove the magnetic front panel. Press and hold the RESET button for >5 seconds, then release. IP restores to 192.168.0.101, password resets to "admin." User projects are retained.