






Keyboard Expander

PIH-800EK

INSTRUCTION MANUAL

IMPORTANT SAFEGUARDS

	<p style="text-align: center;">CAUTION</p> <p style="text-align: center;">RISK OF ELECTRIC SHOCK DO NOT OPEN</p>	
<p>CAUTION : TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK) NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.</p>		

GRAPHIC SYMBOL EXPLANATION

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the Literature accompanying the unit.



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Preface

The Keyboard Expander (PIH-800EK) is to connect more than one Keyboard Controllers (PIH-800II) when matrix switcher is not required.

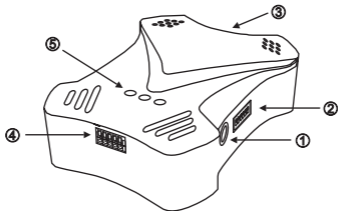
Features

- Up to 4 keyboard controllers expanding capacity.
- Controlling all features of Fast Dome Camera except for alarm trigger.
- The first Keyboard Controller has the priority to call any connected Fast Dome Camera at any time.
- Fast Dome Camera will be off-line 1 minute 20 seconds after last operation.
- RS-485 interface.
- Input Voltage : DC12V

Precaution

- Please read this operation manual thoroughly before operating.
- Put in dry place only. Humidity or splash may cause the internal components damage.
- In order to operate properly, please connect all cables correctly and avoid short-circuit.

Illustration



- ① Power Input Jack
- ② DIP Switch
- ③ RS-485 Input Connector :
To Keyboard Controller
- ④ RS-485 Output Connector :
To Fast Dome Camera
- ⑤ Signal Indicator

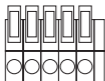
Note : DIP Switch function is reserved, please do not change factory default value.



(Factory Default Value)

RS-485 Connectors Illustration

Signal Controlling Connector is on the bottom of the Keyboard Expander.



IN

GRRTT
NIIII
D - + - +

IN : Signal Input

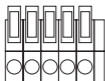
TI + : RS-485 + Input (Red)

TI - : RS-485 - Input (White)

RI + : Reserved

RI - : Reserved

GND : Ground



OUT

GRRTT
NOOOO
D - + - +

OUT : Signal Output

TO + : RS-485 + Output (Red)

TO - : RS-485 - Output (White)

RO + : Reserved

RO - : Reserved

GND : Ground

LED Indicator

➤ Green : Power Indicator.

➤ Red : Data Transmission Indicator.

Flashing on and off when data transferring to Fast Dome Camera and Keyboard Controller.

➤ Yellow : Data Receiving Indicator.

Flashing on and off when Keyboard Expender receiving data.

Under normal operation, Red and Yellow LED will continuously flash on and off till power off.

System Setup

Keyboard Expander connects up to 4 keyboard Controllers and manages up to 64 Fast Dome Cameras. The number of each keyboard can be set by switching the Dip Switch on the bottom of the keyboard Controller.

Illustration :



1st Keyboard Controller



2nd Keyboard Controller

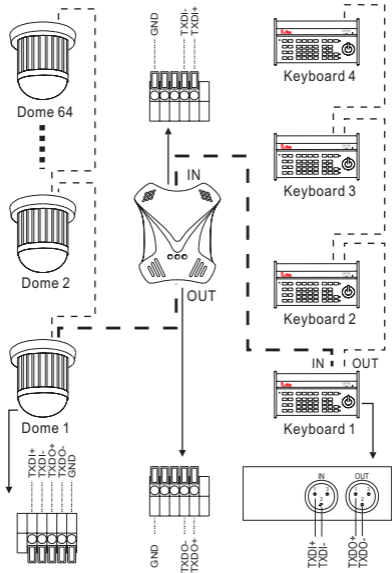


3rd Keyboard Controller



4th Keyboard Controller

System Layout



RS-485 Connection

- Keyboard Expander and Fast Dome:
Connect Keyboard Expander RS-485 OUT TO+ to 1st Fast Dome RS-485 TXDI+.
Connect Keyboard Expander RS-485 OUT TO- to 1st Fast Dome RS-485 TXDI-.
- Keyboard Expander and Keyboard Controller:
Connect Keyboard Expander RS-485 IN TI+ to 1st Keyboard Controller RS-485 IN TXDI+.
Connect Keyboard Expander RS-485 IN TI- to 1st Keyboard Controller RS-485 IN TXDI-.
- For connection between Fast Domes, please refer to Fast Dome Camera operation manual.
- For connection between Keyboard Controllers, please refer to Keyboard Controller operation manual.

Operation

The 1st Keyboard Controller has the priority to call any Fast Dome at any time.

1. Fast Dome will be controlled by the Keyboard Controller calls first.
2. Once a Fast Dome is controlled by one Keyboard Controller, the Fast Dome Camera cannot be controlled by any other Keyboard Controller, except for the 1st Keyboard Controller.
3. To escape from controlling Fast Dome Camera, press [ESC] on the Keyboard Controller.
4. Once a Fast Dome Camera is controlled, it cannot be controlled by any other Keyboard Controller until it is off-line either manually or automatically.
(1 minute 20 seconds after last operation, Fast Dome Camera will be off-line automatically.

Note : If Keyboard Controller is switched off and switched back on, press [CAM] on the Keyboard Controller once to notify the Keyboard Expander to regain the control of the Keyboard Controller.

Specification

Model	PIH-800EK
Input Voltage	DC12V
Power Consumption	250mA
Control Interface	RS-485 (1 Input / 1 Output)
Baud Rate	9600 , N , 8 , 1
LED Indicator	Green : Power Red : Transmission Yellow : Receiving
Connection Capacity	Keyboard Controller : 4 Fast Dome Camera : 64
Control Features	<ol style="list-style-type: none">1. P/T/Z control2. 128 presets3. Auto Touring4. Preset Group5. Privacy Mask feature with 25X Fast Dome Camera6. The 1st Keyboard Controller has controlling priority7. Fast Dome auto off line time : 1 : 20
Diameter (mm)	92(L) x 73(W) x 27(H)
Weight	60 g



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66-800EKCS