



# Matrix and Keyboard

## PIH-931D/932T Multifunction 3D/2D Keyboard Controller



PIH-931D

PIH-932T

The PIH-931D/932T, multifunction keyboard controller is designed to control high speed domes, the digital video recorder and matrices. Providing powerful functionality and flexible features, the new design keyboard controller can be installed using a RJ-45 connector, the LCD display providing a simple user interface. When a matrix is present in the system, up to 8 keyboards can be used. Cameras, digital video recorders, monitors and matrices can be controlled using the 4 hot key functions.

Model No.	<b>PIH-931D</b>	<b>PIH-932T</b>
Joystick	3 Axis (Pan/Tilt/Zoom)	2 Axis (Pan/Tilt)
Movement Speed Control	Pan 8 Steps Tilt 8 Steps Zoom 16 Steps	Pan 8 Steps Tilt 8 Steps
Data Communication	RS-485 Standard(Format N, 8, 1, Baud rate 9600bps)	
Connector	RJ-45 / 8Pin	
Control Mode	PTZ / MATRIX / DVR	
LCD Display	20 Characters x 4 Lines	
Keyboard Keypad	Total 54 keys 0~9 Numeric Keys	
Input Voltage	DC 12V 10% / 250mA	
Power Consumption	3W	
Operating Temperature	-5 ~ +60 (23 ~ 140 )	
Dimension	340(W) x 194(D) x 103(H) mm	
Weight	1350 g	1300 g

## PIH-800II Keyboard Controller

- Input Voltage: 12Vdc
- DIP Switch Setting: Direct to Dome / Master / Slave
- Telemetry Output: 1 x RS-485
- Telemetry Input: 1 x RS-485
- RS-485 Max Distance: 1000m



This keyboard can be used to control domes directly, a matrix switcher or an entire system, via our standard RS-485 telemetry protocol. There are control keys for every major function of the matrix switchers, high-speed domes and telemetry receivers including proportional joystick, one-touch preset buttons, autopan and lens controls. LED lamps indicate whether focus and iris are set to manual or auto for the current dome and whether it is set in autopan mode. A dip-switch configures each keyboard for either direct connection to a dome, connection to a matrix as a master or connection to a master keyboard as one of seven slaves.

## PIH-800EK Keyboard Expander



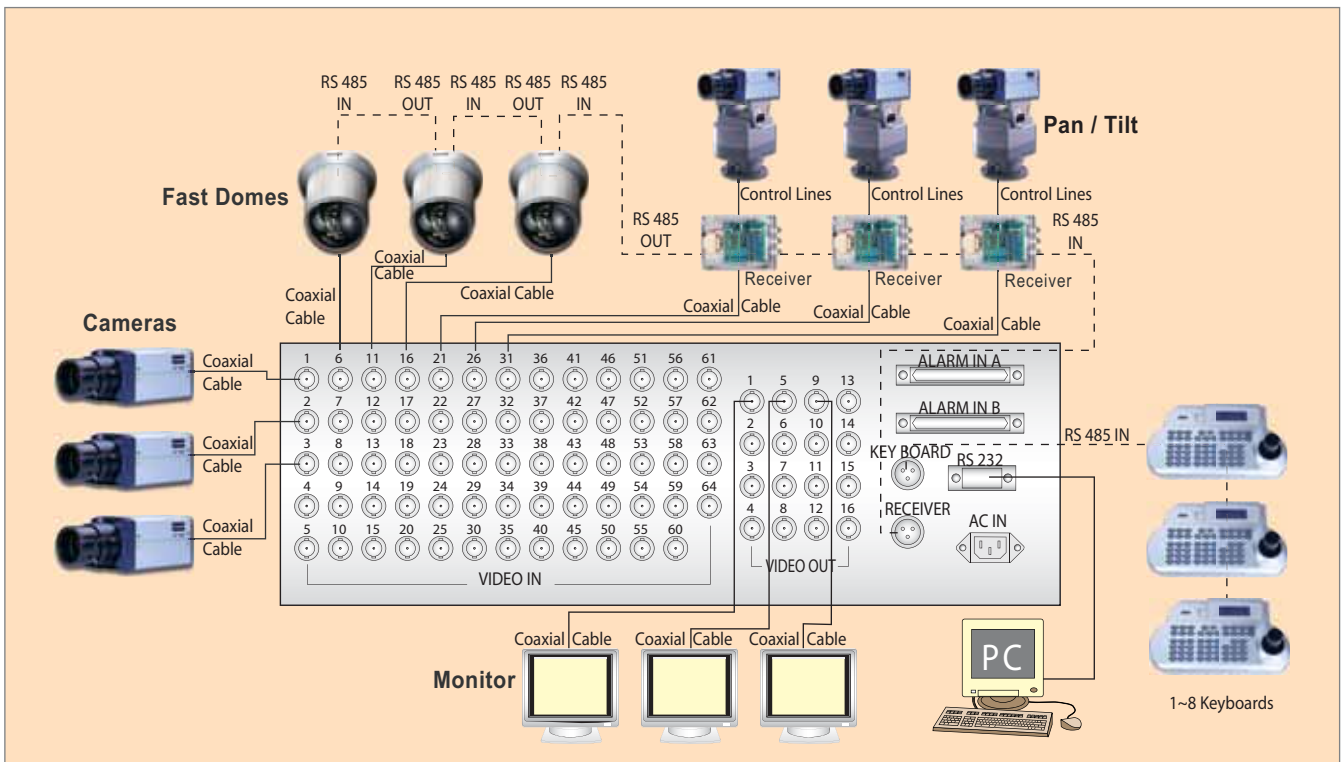
- Input Voltage : DC12V ± 10%
- RS-485 interface

The Keyboard Expander (PIH-800EK) is used to connect up to 4 Keyboard Controllers (PIH-800II) when the matrix switcher is not required.

Model	<b>PIH-800EK</b>
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
Diameter (mm)	92(L) x 73(W) x 27(H)
Weight	60 g

## Matrix (PIH-816III/PIH-832III/PIH-864III)

LILIN matrix switchers can be used as comprehensive video switching units as well as Central Processing Units for the high speed dome system. They provide complex alarm management and system control in a simple and intelligent way, enabling straightforward control and operation. Each unit indicates time and date, camera title and alarm activation on any of the required outputs, with on-screen menus making light work of system programming. An event log records any alarm or video loss and access to programming can be restricted by password. Sequence tables determine which cameras can be selected on each monitor, with individual dwell times for each camera. Monitors are programmed to operate 1 of the 16 sequence tables, limiting access to certain cameras where required. Up to 8 keyboards can be connected to the matrix, wired in a daisy chain with the one nearest the matrix having priority. This provides independent control of monitor outputs and domes but prevents conflict, where an keyboard is controlling a dome no other operator can take-over until the current operator releases control or a four-minutes period of inactivity has passed.



### SPECIFICATIONS

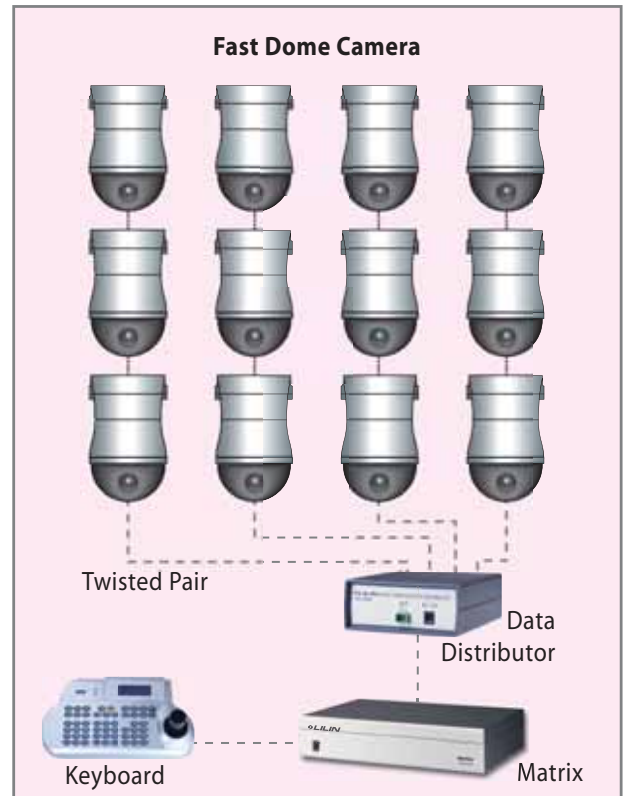
- Model: PIH-816III, PIH-832III, PIH-864III
- Input Voltage: AC117V / AC230V
- Camera Inputs: 16 / 32 / 64
- Monitor Outputs: 8 / 8 / 16
- Alarm Inputs: 16 / 32 / 64
- Alarm Output: 1
- Frequency Response: 10Hz to 60 MHz
- S / N Ratio: Better Than 60 dB
- Video Output: CVBS 1.0Vp-p 75Ω
- Keyboard Control: Max. 8 RS-485
- PC Control: Max 1 RS-232 (External Interface Required)
- Alarm Contact: NO / NC (D-SUB 37 PIN Female Connector)
- Weight: 5.7 Kg (PIH-816III / PIH-832III) 8.0 Kg (PIH-864III)
- Dimension (W x H x D mm): 434 x 90 x 290 (PIH-816III / PIH-832III)  
434 x 135 x 290 (PIH-864III)

## PIH-804III Data Distributor

- Input Voltage: 12Vdc
- Telemetry Output: 4 x RS-485
- Telemetry Input: 1 x RS-485
- RS-485 Max Distance: 1000m



Where it is more convenient to wire a telemetry system in star configuration rather than daisy chain it will be necessary to use this Data Distributor. It takes an output from a keyboard or matrix and splits the single data line into 4 separate data lines. Domes or receivers can be connected to each data line and continued in a daisy chain if required. Multiple Data Distributors can be used to create as many data lines as required.



## PIH-820III Telemetry Receiver

- Input Voltage: 117 / 230Vac
- Pan & Tilt Output: 24 / 117 / 230Vac
- Camera Output: 12Vdc / 24 / 117 / 230Vac
- Lens Output: 6 / 12Vdc
- DIP Switch Setting: 1 ~ 64
- RS-485 Max Distance: 1000m



The telemetry receiver allows the control of Pan Tilt & Zoom cameras from the keyboard or matrix system. It can be used on the same system as dome cameras making it ideal for upgrades and additions to existing installations. The unit is connected to a main supply and power is switched to the relevant outputs as required to control ancillary equipment. An internal transformer reduces the voltage down to 24Vac, 12Vdc and 6Vdc for low voltage equipment such as cameras. The dip switch sets the unique address for each receiver, so that they can be selected from the control keyboard, there is an RS-485 input and output for telemetry connection.

## PIH-810III Alarm Extender

- Input Voltage: 90 ~ 250Vac
- Alarm Inputs: 1 ~ 64
- Telemetry Input: 1 x RS-485
- Telemetry Output: 1 x RS-485
- DIP Switch Setting: 1 ~ 64

This unit can be used to expand Fast Dome's alarm inputs from 6 to 64 when more than 6 alarm inputs are required.

