



# Matrix and Keyboard



## MATRIX & KEY

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





PIH-931D/932T, multi-function 3D/2D keyboard controller, is designed to control PTZ, DVR, Matrix and Receiver. The new 3D keyboard controller provides powerful functions and flexible features. Install via RJ-45 Connector and LCD Display design allow easy installation and provides a simple operator interface. When matrix is present in the system, up to 8 keyboards can be used. Total 54 Keys include 4 hot keys for major function of Camera, DVR, Monitor and Matrix, allowing user to switch functions without complicated operation.

Model No.	PIH-931D	PIH-932T
Joystick	3 Axis (Pan/Tilt/Zoom)	2 Axis (Pan/Tilt)
Data Communication	RS-485 Standard (N, 8, 1, Baud rate 9600bps)	
Connector	RJ-45/8Pin	
Control Mode	PTZ, MATRIX, DVR	
LCD Display	20 Characters x 4 Lines	
Input Voltage	DC 12V°"10% / 250mA	
Operating Temperature	-5°C~+60°C (23°F~140°F)	
Dimension	340(W) x 194(D) X 103(H) mm	
Weight	1350g	1300g

## 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-804 Data Distributor

Input Voltage: 12Vdc

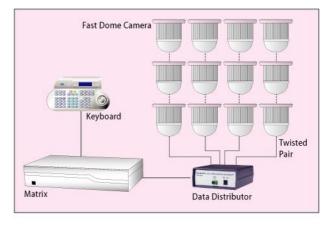
· Telemetry Output: 4 x RS-485

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 on in daisy chain if required. Multiple Data Distributors can be used to create as many data lines as required.



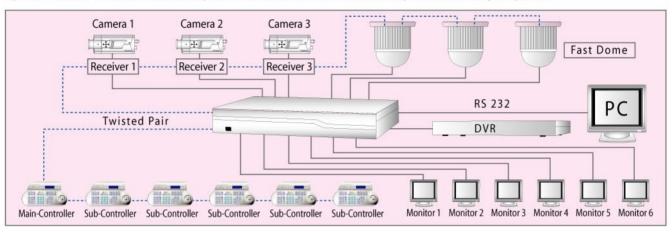


## Matrix (PIH-816II/PIH-832II/PIH-864II)

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 an intelligent way, enabling straightforward control an 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 provide 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-816II, PIH-832II, PIH-864II
- 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 Requied)
- · Alarm Contact: NO / NC (D-SUB 37 PIN Female Connector)
- Weight: 5.7 Kg (PIH-816II / PIH-832II) 8.0 Kg (PIH-864II)
- Dimension (W x H x D mm): 434 x 90 x 290 (PIH-816II/ PIH-832II) 434 x 135 x 290 (PIH-864II)

## PSH-100 SATA RAID



PSH-100 is a high performance stand-alone SATA RAID hard disk storage system. PSH-100's RAID controller has RAID-0, RAID-1, RAID-0+1, and NRAID modes which can provide up to 2TB at RAID-0 and 1TB at RAID-1 hard disk space. PSH-100 is very easy-to-use without complicate system setting. Plug-and-play design allows interfacing with a DVR or a PC via SATA cable. With versatile RAID setting, reliable system performance, large hard disk space, low maintenance cost, and plug-and-play interface, PSH-100 is the best solution for DVR and many other applications.

Host Interface	SATA	
Host Transfer Rate	150 MB/Sec	
Hard Drive	4 x 3.5" SATA Drive	
Largest Capacity	RAID 0 up to 2 TB, RAID 1 up to 1 TE	
Support Big Drive	Yes	
RAID Level	RAID-0, RAID-1, RAID-0+1, NRAID	
Support Hot-Swap	Yes	
LCD Display	Yes	
O.S. Independent	Mac 10.2, Windows 2000/2003/XP,	
	OS Independent (SATA)	
Power Supply	AC 90V~260V Max., 85W	
Dimension	470(L)x434(W)x45(H)mm	
Weight	5Kg (HDD not included)	



## MATRIX & KEYBOARD



## PIH-7000SP Protocol Converter

When user adopted different brand keyboard controller to operate LILIN's Fast Dome Camera, PIH-7000SP Protocol Converter must be used to convert the protocol, so the LILIN's Fast Dome Camera can recognize control signals from other brand's keyboard and be controlled. Use the dip switch to select different brand's protocol.

Input Voltage: DC12V±10%

· RS-485 interface

## PIH-800EK Keyboard Expander

The Keyboard Expander (PIH-800EK) is to connect more than one Keyboard Controller (PIH-800II) when Matrix Switcher is not required. Up to 4 Keyboard Controllers expanding capacity.

Input Voltage: DC12V±10%

RS-485 interface

## PIH-820 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

This telemetry receiver allows for 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.



· 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 where sometimes more than 6 alarm inputs is required.





