

# HARMONY IP I/O8

## Ethernet I/O Gateway Controller

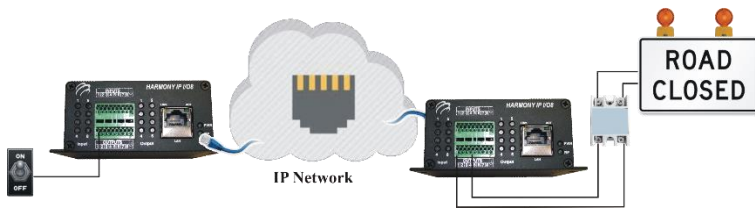
### OVERVIEW

The HARMONY IP I/O 8 device is a self-contained digital I/O gateway that supports 8 inputs and 8 outputs. The device allows you to monitor and control remote HARMONY devices with simple ON/OFF switch connections over an IP network.

A simple web-based interface lets you configure, control and check the status of the device. No extra software is required.

With Encom's proprietary "I/O Mapping" technology, any input from any device within the system can be used to control one or a group of outputs within the entire system, whether through the IP network or the optional 900 MHz radio.

The following example shows two HARMONY IP I/O 8 devices linked together using an Ethernet connection. A switch on the IP I/O 8 device on the left is used to remotely turn the ROAD CLOSED flashers on or off via the IP I/O 8 device on the right.



### OPERATION

- **Provisioning:** Internal web server (no software required)
- **Connectivity:** Always connected, report-by-exception & email alerts
- **Remote Access:** Cell modem or private network

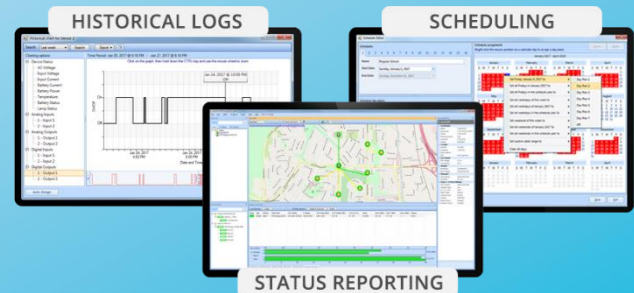
The **Harmony IP I/O8** is also fully compatible with Encom's **ControlPAK & STRATOS I/O** software. You can use Stratos I/O to configure, manage and monitor the **IP I/O8** devices along with all other **Harmony** devices.



### KEY FEATURES

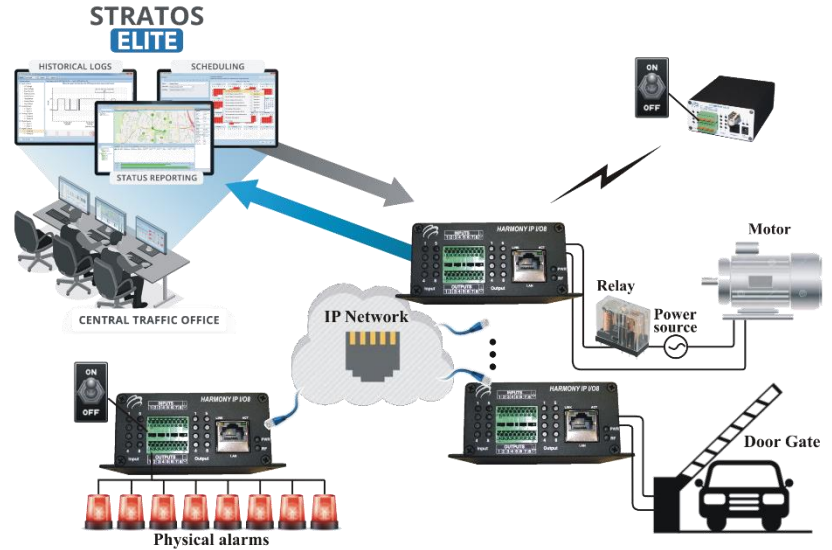
- Build-in 8 digital inputs and 8 digital outputs
- Flexible IO mapping via LAN or built-in 900 MHz high-performance Frequency Hopping radio
- Extensive delay timing functions available in each input and output
- Removable I/O connector for easy installation
- Event logging capabilities
- Cellular modem ready
- SNMP protocol or **STRATOS I/O** for real time email alerts and monitoring
- Optional 900 MHz integrated radio for wireless connectivity to remote devices e.g. I/O8 and/or SBX Remote
- Additional functions are available using **STRATOS ELITE** software
  - ✓ 365 days calendar scheduling
  - ✓ Integrated real-time clock with maintenance-free super cap backup
  - ✓ Automatic daylight savings time and leap year adjustment
  - ✓ Clock synchronization using NTP servers for precise timekeeping
  - ✓ Remote schedule changes and temporary overrides under exceptional situations
  - ✓ Historical I/O changes data in any input or output

## STRATOS ELITE



## APPLICATIONS

- Manual or scheduled control of:
  - ✓ Lighting or luminaires
  - ✓ Traffic warning signs
  - ✓ Electric door locks or gate openers
  - ✓ Wide area irrigation systems
  - ✓ Electric pumps, motors, fans, etc.
  - ✓ Electrical outlets or power supplies
- Monitoring doors, windows or cabinets for intrusion detection
- Extend I/O from traffic controllers to other devices via your existing IP network
- 4-corner pedestrian push buttons with remote monitoring and override capability
- Advance warning for high-water or over-height trucks detection under a bridge



GENERAL SPECIFICATIONS	
Input Power:	6-30 VDC
Power Consumption:	150 mA @ 12VDC
LED indicators:	PWR, RF Link, Input 1 to 8, LAN-ACT and LAN LINK
Operating Temperature:	-40°F to 176°F (-40°C to 80°C), up to 95% humidity RHNC

RADIO SPECIFICATIONS (Optional)	
Technology:	Frequency-hopping spread spectrum (FHSS) with repeater capability
Frequency Range:	902-928 MHz, ISM Band
Output Power:	1mW, 10mW, 100mW, 1000mW
Receiver Sensitivity:	-110dBm @ 10-6BER
Error Checking:	32-bit CRC
Encryption:	32-bit
Antenna Port:	RP TNC-F
Certification:	FCC, Industry Canada

ORDERING OPTIONS	
• <b>IP I/O8:</b>	8 IN, 8 OUT Ethernet I/O Gateway Controller with 900MHz FHSS radio
• <b>IP I/O8 NR:</b>	8 IN, 8 OUT Ethernet I/O Gateway Controller

CONNECTIVITY	
Ethernet Port (10/100Base-T)	1
Configuration, Monitoring & Control	Stratos IO, ControlPAK, SNMP or WEBUI
Protocol	HTTP, SNMP V1, V2 & V3, SMTP
INDUSTRIAL I/O:	
Digital Inputs:	8
Digital Input Range:	0 to 24V (Ground activated)
Digital Outputs:	8
Digital Output Range:	Open Collector (3 to 30VDC, max. 500mA)
I/O Connectors:	3.81mm Quick-release Terminal Block x2 (cable max. 14 AWG)
I/O Logging	YES

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