

GATEWAY ADVANCED I/O 4G LTE

4G LTE Cellular | Integrated I/O | 900 MHz Wireless Master

HARMONY from ENCOM Wireless *Connect Everything. Anywhere. Every time.*

The Harmony Gateway Advanced I/O 4G LTE radio is a cost-effective, easy-to-integrate means of adding smart wireless connectivity to your system. By collecting performance data and managing remote sites without site visits, Harmony optimizes operations through improved system performance and reduced maintenance costs. Harmony Series wireless devices combined with STRATOS ELITE Central Software enable agencies to 'connect everything' through a private Wide Area Network or the 4G LTE Cellular system. This system is not simply a wireless connection, it is an end-to-end wireless monitoring and control solution designed for both small- and large-scale deployments.

With Harmony you can:

- Easily obtain real time status updates from your remote sites and log data for future analysis to improve operations (power status, solar performance, battery charge, beacon flash status, and sensor data).
- Create and download schedules or manually control devices from anywhere you have an Internet connection.
- Receive customizable alerts and alarms directly to your inbox, enabling you to react to issues anywhere – every time.
- Leverage existing network infrastructure to connect your sites without on-going costs or use 4G LTE Cellular to connect anywhere your cellular phone works.

Harmony can connect with a wide variety of remote devices and is perfectly suited to these common applications:

- **School Zone Flashing Beacons** – track power status (AC or Solar), create/edit schedules, override individual or groups of beacons, confirm beacon flash status, log historical data
- **Solar Powered Sites** – monitor solar charge output, battery charge, load levels.
- **Intelligent Traffic Cabinets**- monitor doors, remote power cycling, environmental conditions (temp, humidity etc)
- **Collecting SCADA information**- water / wastewater, oil and gas, electrical utilities, agriculture



Harmony Gateway Advanced I/O 4G LTE Device Overview:

Harmony Gateway Advanced I/O 4G LTE is the connection point or 'ON Ramp' between the Internet and the Harmony SBX Remote I/O radio to provide central monitoring and control to AC and Solar powered school zone beacons. STRATOS ELITE Central Software communicates through a virtual private network (VPN) on the Internet using the 4G Cellular networks to reach the Gateway 4G LTE and the associated Harmony SBX remotes. The cellular connection enables connectivity everywhere your cell phone has a signal and enables you to create an end to end monitoring and control solution anywhere in your city or state. Install the Harmony Gateway Advanced 4G LTE at any beacon (solar or AC powered) or site near your school zone beacons and instantly establish communications to surrounding beacons.

The Harmony Gateway Advanced 4G LTE features the latest 4G LTE cellular technology along with a powerful and field proven 900MHz FHSS radio that creates a wireless network with up to 254 Harmony SBX Remote radios installed inside School Zone Beacons at ranges up to 20 Miles. Minimize cellular connection and airtime charges with this hybrid 4G/900Mhz solution.

Bring Harmony to your network with ENCOM Wireless and call today for a free consultation.



GENERAL SPECIFICATIONS:	
Input Power:	6-30 VDC or 100V-240VAC
Power Consumptions @ 12 VDC:	150M mA
LED Indicators:	PWR, RF Link, Schedule, Input 1 & 2 and Output 1 & 2
Operating Temperature:	-40 to 176F (-40 to 80C), up to 95% humidity
Enclosure:	Aluminum, Black Powder Coat (3.75"W x 1.75"H x 7.5"D)
Lamp Fail detection:	Yes- Direct Current Monitoring
Loss of A/C detection and reporting:	Yes – battery backup enables alarm reporting
Input voltage & current monitoring:	Yes
Solar Panel Voltage Monitoring:	Yes
Battery Charging Current monitoring:	Yes
Lamp ON Current Monitoring:	Yes- Output 1 & 2
Integrated Battery Back-up:	Yes
Calendar:	365 days
Scheduling:	Yes
Manual Overrides	2 Local / 2 Remote
RADIO SPECIFICATIONS:	
Technology:	(FHSS) with repeater capability
Frequency Range:	902-928 MHz, ISM Band
Output Power:	1mW, 10mW, 100mW, 1000mW
Receiver Sensitivity:	-110dBm @ 10-6 BER
Encryption:	32-bit
Certification:	FCC, Industry Canada
Antenna Port:	RP TNC-F
CONNECTIVITY:	
LAN Port	0/100 TCP/IP
900 MHz Radio:	Yes
GPS	Yes- Optional
Configuration, Monitoring & Control:	Stratos Elite, ControlPAK
I/O:	
Digital Input:	2 - 0 to 48V
Digital Output:	2 (SPDT 3 Amp)
Analog Input:	2- 0 to 50 VDC, 12 Bit Resolution
Analog Output:	2- 0 to 5 VDC, 12 Bit Resolution

Site Monitoring Functions:

- LED beacon on/off status – confirmed with current monitoring.
- Beacon lamps fail alarms
- Low battery voltage detection and alarms
- Solar panel voltage data logging
- Solar power charge output data logging
- Power fail reporting – integrated battery backup inside Harmony Device
- General purpose I/O enabling other applications.

Control Functions:

- Centralized schedule management for school zone beacons - make schedule changes or manually turn on/off individual or groups of beacons from anywhere with STRATOS Elite.
- Accurate time synchronization at all sites - never set a time clock in the field again.
- Remote power cycle function – reset power on field devices from anywhere.
- Two hardwired inputs for push buttons / detection switch connections.
- Two 0 to 5 V analog outputs for external device control.

Harmony Gateway Advanced I/O 4G LTE Connectivity Features:

- Onboard 4G LTE cellular modem creates a network anywhere your cell phone works.
- Simply connect Harmony Gateway Advanced I/O 4G LTE directly to solar power system and flashing beacon relays for instant wireless monitoring and control.
- Minimize cellular connection costs by communicating to surrounding beacons with the integrated 900 MHz radio.
- Optional GPS available for location tracking.

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