

# R829-G-HUB

## StreetHub™ Connected School Zone Beacon System



Beacons decrease vehicle speeds by 5 to 7 mph in school zones.

- ✓ Highest intensity output in the industry
- ✓ MUTCD and Buy America compliant
- ✓ Energy Balance Report™ (EBR) prepared for every location

Built-in wireless connectivity allows for remote scheduling, data collection and beacon health monitoring, ensuring optimal safety, minimal downtime and fewer service calls and site visits.

- ✓ Monitoring unit upgrades and over-the-air software and security updates included
- ✓ Extended battery warranty matched to connectivity and support plan
- ✓ Backup battery ensures uninterrupted data collection and connectivity

Powered by  **ai** applied  
INFORMATION

### SAFETY + CONTROL + INSIGHT

#### All-in-one System

The R829-G-HUB combines Carmanah's reliable safety beacons with Applied Information's industry-leading intelligent transportation systems (ITS) solutions. An out-of-the-box system, the R829-G-HUB ships ready to install with instant connectivity.

#### Remote Scheduling and Calendar Control

Every R829-G-HUB includes its own monitoring unit allowing for two-way remote communication and control. Schedule and program adjustments can be made with the cloud-based Glance platform powered by AI, reducing site visits and saving departments time and money.

#### Timely Alerts

The R829-G-HUB issues system status alerts 24/7 via text or email to reduce service calls, speed response times and improve safety by ensuring systems are working properly.

#### Automated and On-demand Reports

Connecting to Glance means users can quickly and easily access data and insights that enable accurate treatment analysis and proactive maintenance plans.

#### TravelSafely Mobile Safety App

TravelSafely is a pioneering smartphone app developed by AI that boosts safety by providing alerts and facilitating better communication between motorists, pedestrians, cyclists and infrastructure.

#### Trusted for 20+ Years

With thousands of installations, Carmanah's systems are the benchmark in traffic installations and other transportation applications worldwide.



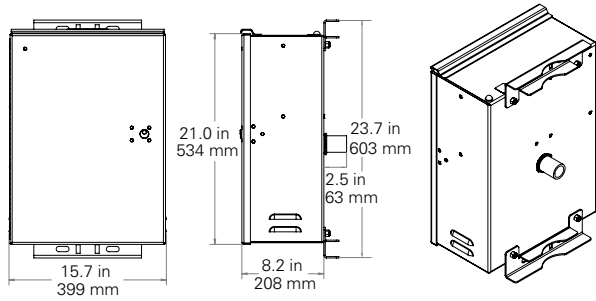
# R829-G-HUB

StreetHub™ Connected School Zone Beacon System

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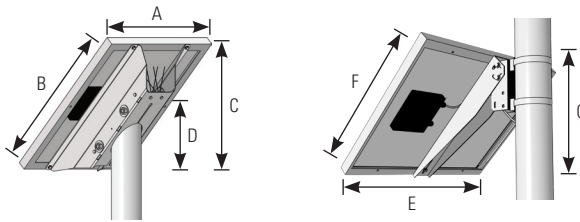
## SOLAR ENGINE DIMENSIONS



## SOLAR ENGINE MOUNTING

4.5" Diameter Round Top of Pole Mount

Side of Pole Mount

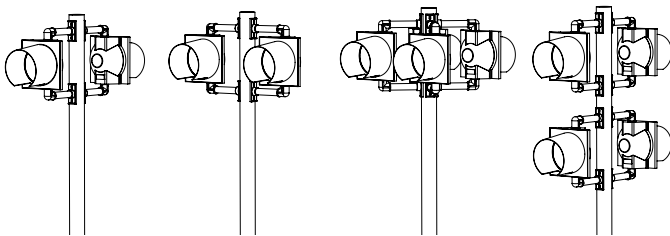


PANELS	A	B	C	D	E	F	G
20 W	-	-	-	-	13.6" (345 mm)	18.5" (470 mm)	13.8" (350 mm)
50 W	21.2" (538 mm)	26.3" (668 mm)	19.6" (497 mm)	10.0" (254 mm)	26.3" (668 mm)	21.2" (538 mm)	16.0" (405 mm)
80 W	30.7" (780 mm)	26.5" (672 mm)	19.7" (500 mm)	10.0" (254 mm)	30.7" (780 mm)	26.5" (672 mm)	19.7" (500 mm)

## BEACON MOUNTING

Dual Beacon

Quad Beacon



## CELLULAR CONNECTIVITY AND SOFTWARE SPECIFICATIONS

Monitoring Unit	Applied Information AI-500-070B (AI-500-071 in Florida) monitoring unit includes cellular modem with GPS, fully integrated and configured from the factory
	LTE wireless broadband network
	Hardware is upgradeable if service provider changes network requirements
	Prewired inputs and outputs to monitor beacon, solar panel, battery and system status
	Unit connects to the network every 30 minutes to ensure uptime
	Over-the-air software and security updates
	Non-volatile memory storage and battery backup in case of system power loss
Scheduling and Monitoring Platform	Meets NEMA TS 8 requirements for Cyber and Physical Security for Intelligent Transportation Systems
	Glance™ cloud-based platform for remote beacon scheduling and monitoring
	Compatible with desktop and mobile devices
	Easy-to-use calendar with up to 20 unique schedules and unlimited holidays, program delays and overrides
	Stores detailed system data including battery status, solar panel voltage and more
Connectivity and Support	Configurable smart alerts through email and/or text of system issues
	Custom reports available
	1/2/3/4/5-year connectivity and support plans available

## BEACON SPECIFICATIONS

Optical	MUTCD compliant: 2009 MUTCD, Chapter 4L, Flashing Beacons, Manual on Uniform Traffic Control Devices (MUTCD)
	ITE VTCSH-LED Circular Signal Supplement compliant: meets ITE or 1.7x ITE intensity when used as recommended
	12 in (305 mm) or 8 in (203 mm) diameter LED modules, yellow or red
Beacon Communication (optional)	High-power LEDs: +90% lumen maintenance (L90) based on IES LM-80
	Yellow, black or green signal heads in UV-resistant polycarbonate or aluminum
	Available with 2.4 GHz radio for remote activation of additional systems
	Optional radio allows calendar program, manual override switch or input device from one system to remotely control other systems
	User-selectable multiple channels to group different beacons and ensure a robust wireless signal
Instantaneous wireless activation: <150 ms	
Wireless range: 1000 ft (305 m)	
Integrated, vandal-resistant antenna	

## SYSTEM SPECIFICATIONS

On-Board User Interface (OBU)	Adjustable system settings with auto-scrolling LED display on our latest EMS	
	System test, status and fault detection: battery, solar, button, beacon, radio, day/night	
	Flash patterns: RFB1 (WW+S), RFB2 (WSDOT), 0.5 sec. alternating (MUTCD), 0.5 sec. unison (MUTCD), 0.1 sec. unison, 0.25 sec. unison, 0.1 sec. x3 quick flashes unison, 0.1 sec. x3 quick flashes alternating	
	Input: momentary for push button activation, normally open switch, normally closed switch	
	Flash duration: 5 sec. to 1 hr.	
	Intensity setting: 20 to 1400 mA for multiple circular beacons, RFBs, or LED enhanced signs	
	Nighttime dimming: 10 to 100% of daytime intensity	
	Ambient Auto Adjust: increases intensity during bright daytime	
	Automatic Light Control: reduces intensity if the battery is extremely low	
	Temperature correction: yellow or red beacons	
Power System	Calendar: internal time clock function	
	Radio settings: enable/disable, selectable channel from 1 to 14	
	Output: enabled when beacons flashing daytime and nighttime, or nighttime only	
	E.g., for relay control of overhead lighting	
	Activation counts and data reporting via OBU or optional USB connection	
	Solar or AC-powered	
	AC: 90-264 VAC input, 6-14 AWG	
	Replaceable AC-DC power supply, circuit breaker, terminal block wiring	
	Energy Collection	20, 50 or 80 W high-efficiency photovoltaic solar panel
		45 deg tilt for optimal energy collection
Maximum Power Point Tracking with Temperature Compensation (MPPT-TC) battery charger for optimal energy collection in all solar and battery conditions		
Energy Storage	12 V battery system with multiple sizes: 33, 35, 75, 100 Ahr.	
	Replaceable, recyclable, sealed, maintenance-free, best-in-class AGM batteries offer the widest temperature range and longest life	
	Battery design life: +5 yrs.	
Cabinet Construction	Weatherproof, gasketed enclosure with vents for ambient air transfer (NEMA 3R)	
	Lockable, hinged door with #2 lock	
	Corrosion-resistant aluminum with stainless steel hardware	
	Raw aluminum finish or yellow, black or green powder coated	
	Prewired to minimize installation time	
Environmental	High-efficiency optics and EMS = the most compact, lightweight system	
	-35 to 165° F (-37 to 74° C) system operating temperature	
	-40 to 140° F (-40 to 60° C) battery operating temperature	
Warranty	150 mph (241 kph) wind speed as per AASHTO LTS-6	
	5-year limited warranty, excluding batteries	
	Battery warranty matches selected connectivity and support plan	



Specifications subject to local environmental conditions, and may be subject to change.

All Carmanah products are manufactured in facilities that are certified to ISO quality standards.

US Patent No 6,573,659, Other patents pending.

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