R829-G-HUB

StreetHub™ Connected School Zone Beacon System

carmanah®

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 **a.i** 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.
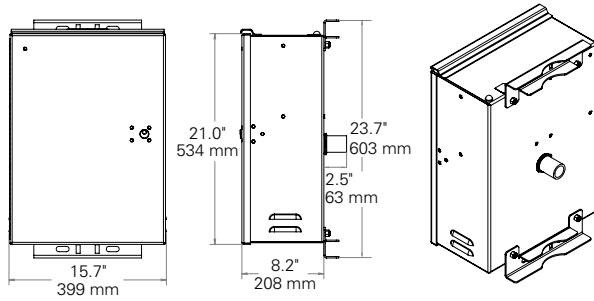
SCHOOL
SPEED LIMIT 20 WHEN FLASHING

R829-G-HUB

StreetHub™ Connected School Zone Beacon System

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SOLAR ENGINE DIMENSIONS
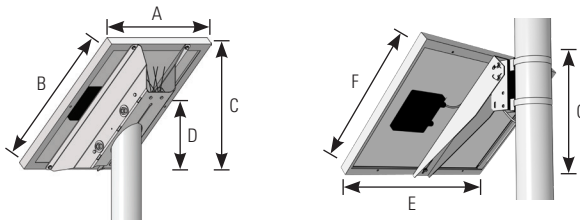

21.0" 534 mm
23.7" 603 mm
2.5" 63 mm
15.7" 399 mm
8.2" 208 mm

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
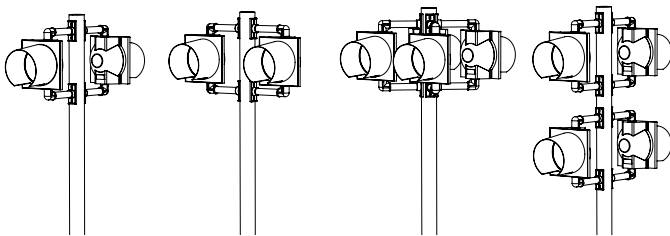
CELLULAR CONNECTIVITY AND SOFTWARE SPECIFICATIONS

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
	Meets NEMA TS 8 requirements for Cyber and Physical Security for Intelligent Transportation Systems
Scheduling and Monitoring Platform	**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
	Configurable smart alerts through email and/or text of system issues
	Custom reports available
Connectivity and Support	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
	High-power LEDs: +90% lumen maintenance (L90) based on IES LM-80
	Yellow, black or green signal heads in UV-resistant polycarbonate or aluminum
Beacon Communication (optional)	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 (OBUI)	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, RRFBs, 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
	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 OBUI or optional USB connection
Power System	Solar or AC-powered
	AC: 100-240 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: 35, 55, 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
	High-efficiency optics and EMS = the most compact, lightweight system
Environmental	-35 to 165° F (-37 to 74° C) system operating temperature
	-40 to 140° F (-40 to 60° C) battery operating temperature
	150 mph (241 kph) wind speed as per AASHTO LTS-6
Warranty	5-year limited warranty, excluding batteries
	Battery warranty matches selected connectivity and support plan