



SnowSentry™

DETECT AND MITIGATE ROOFTOP RISKS EARLY AND PREVENT LOSS



ROOFTOP SNOW LOAD & DEPTH MONITORING

KNOWING WHEN AND WHERE TO REMOVE SNOW = SAFETY AND SAVINGS

If your roof snow removal budget seems unmanageable, unpredictable and expensive, the SnowSentry™ system is a simple and powerful solution that will monitor snow loads and depths across large roofs. SnowSentry™ systems report the data in real-time with triggers that can be configured to alert multiple personnel when critical levels are reached.

Don't just guess - **knowing when and where to remove snow** will not only save you money, it will give you peace of mind in having made an informed decision to keep your people and property safe.

BEST CASE SCENARIO: SAVE MONEY

Use your own staff to install and monitor the SnowSentry™ network - it's easy. Schedule targeted snow removal from your rooftops when it becomes truly necessary, rather than as an estimated precaution after a storm.



DROP AND GO INSTALLATION

Each station can be installed in minutes without the need for experts or customer supplied tools.



WIRELESS COMMUNICATIONS

No extra cables to manage and secure data transfer using robust point to point networking.



SOLAR-POWERED STATIONS

SnowSentry™ stations run off long-life batteries, charged by the sun, that run through the night and 60+ cloudy days.



HIGHLY PORTABLE UNITS

These lightweight stations can be relocated easily and use GPS for automatic positioning.

SNOWSENTRY™ HAS YOUR BACK

The SnowSentry™ system monitors rooftop snow load (pressure) and depth conditions 24/7, wirelessly reporting information to your assigned staff through an intuitive web interface and sending alerts directly to e-mail and mobile devices when critical levels are reached.



WORSE CASE SCENARIO: PREVENT ROOF COLLAPSE

According to a survey by Paramount Disaster Recovery, a leading nationwide disaster response and recovery contracting company, "There are over 3,000 roof collapses each year in the U.S., resulting in over 20 deaths and a widespread disruption of many

business operations".

Facility managers and their service providers need to know real-time rooftop conditions to make operational decisions about snow removal and building safety.

The most common unknowns:

1. When and how much snow should be removed?
2. Where are the most critical areas on the roof?



PRODUCT AND ACCESSORY FEATURES

Each SnowSentry™ SSR-90 station is designed for quick and easy installation.



✓ PORTABLE & DURABLE

Weight: 55 lbs (25kg)
Base: 41"x41"x1.8" (1052mm x 1052mm x 45mm)
Controller & Mast: 58.3" (1481mm)
Measurement Capacity is 90 PSF (439 kg/m²)
Wind Tolerant to over 90 MPH (145 km/h)

✓ CONNECTIVITY

A 900 MHz wireless network connects stations to the Internet Gateway which in turn connects to the Internet using a cellular modem or the building's LAN.

GPS gives each station an accurate, known position on the roof.

✓ COMMUNICATIONS

Long-range wireless protocols allows seamless data transfer using the building's internet access.

Customized alerts can be sent to owners, managers, roof services personnel, etc.

Overloaded stations are identified on a roof map directing snow removal teams to key areas.

✓ OPTIONAL

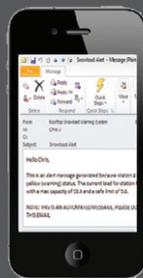
* **ROOF DRAIN TEMPERATURE SENSING** Identifies freezing conditions around roof drains.

* **CELLULAR CONNECTIVITY** Used when wire-based internet access is unavailable.

* **MAST EXTENSION KIT** Used where the sun is blocked or in extremely deep snow areas.

REMOTELY MONITOR ROOFS/CUSTOMIZE ALERT LEVELS

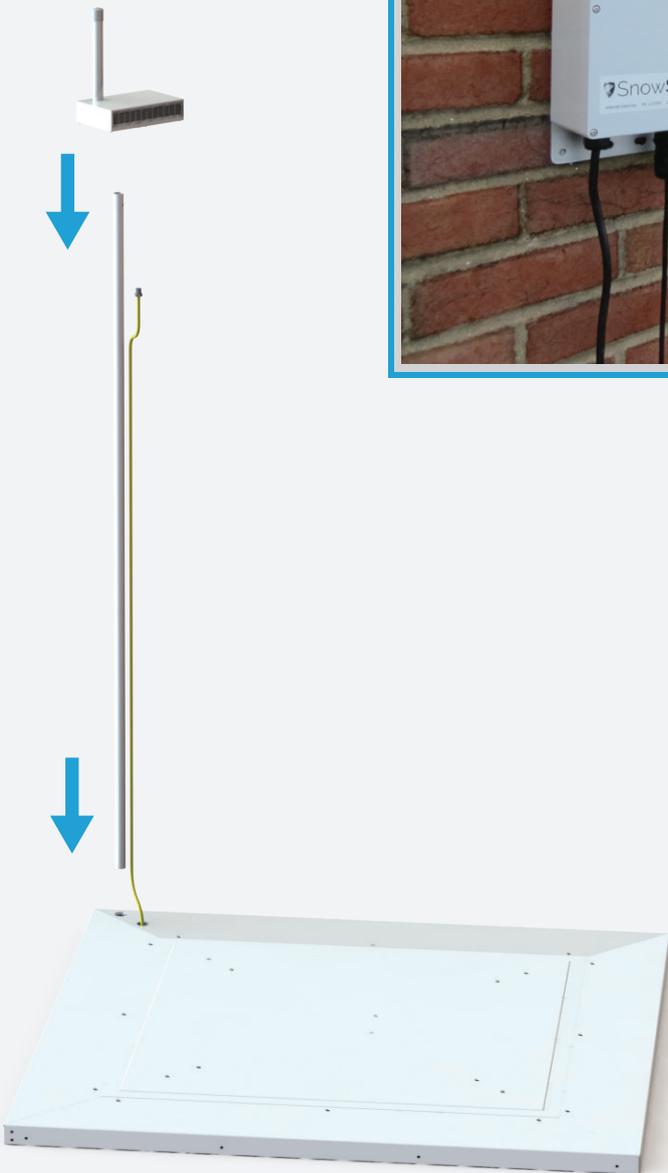
1. The SnowSentry™ system will help you understand where snow has accumulated on your roof through the winter.
2. Intuitively displayed real-time data from every station help to visualize loading across roofs and identify the important regions to get cleared.
3. Set automatic alerts to be sent out to key personal via phone & e-mail at critical snow load levels.



SYSTEM INSTALLATION

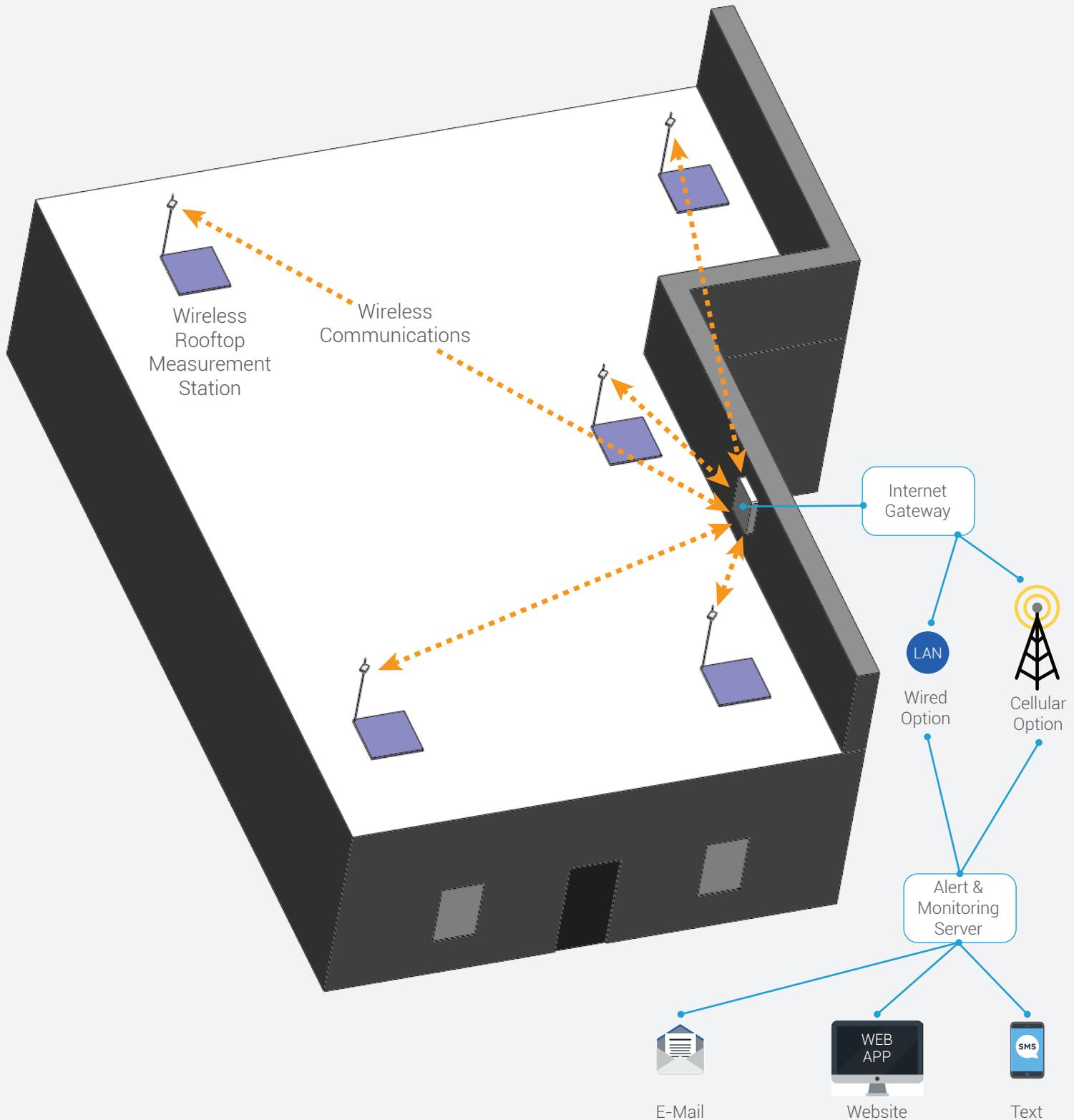
Setting up the wireless SnowSentry™ System is quick and easy.

- ✔ Place stations on roof (assembly takes minutes) and push power button.
- ✔ Place the Internet Gateway (IG) and connect to AC power and LAN.
- ✔ Launch SnowSentry™ web app and view data.



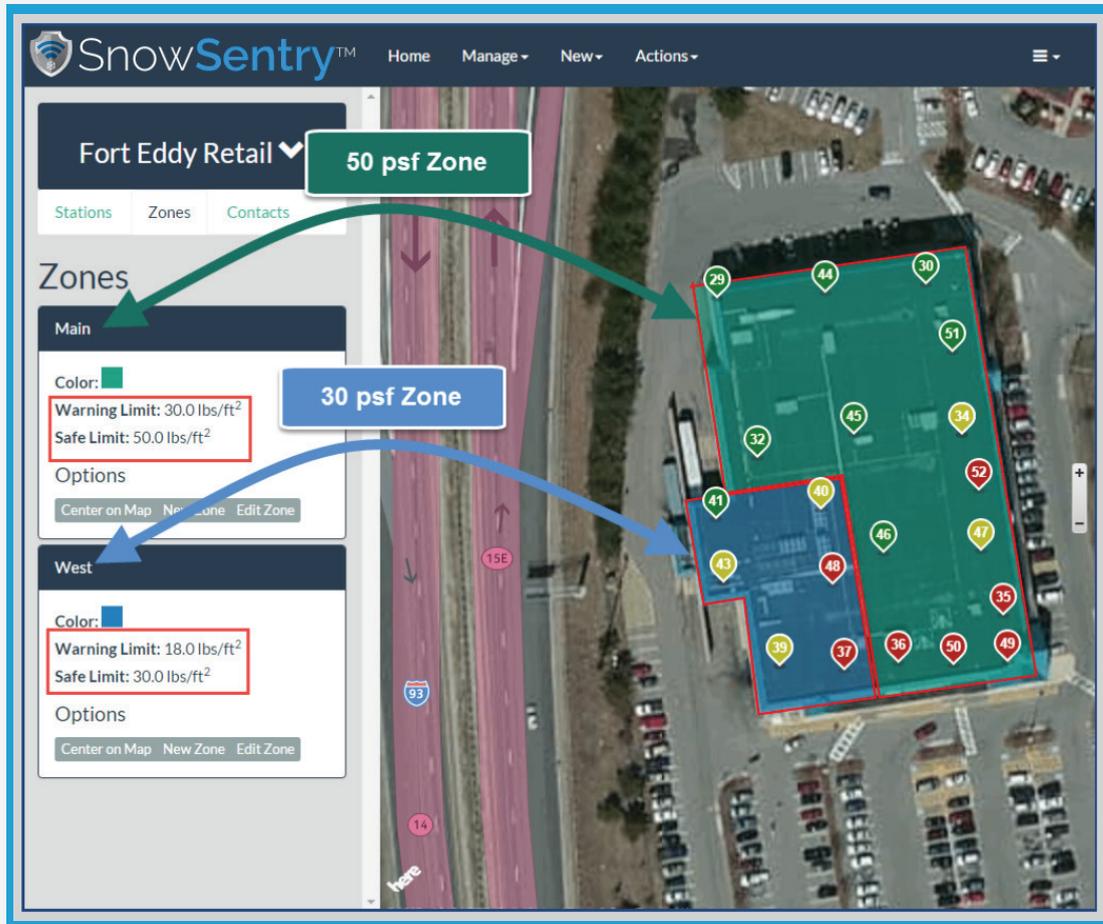
SNOWSENTRY™ SYSTEM DIAGRAM

Wireless SnowSentry™ stations are placed across the entire roof, though more closely where snow tends to build up near parapets, walls and equipment causing overload conditions. Stations are geo-located in user-defined roof zones configured with a specific alert threshold based upon a roof's structural capacity. Snow load data is displayed in real-time through the web app and personal are notified by their mobile device or the web app when conditions reach warning and unsafe levels.



SNOWSENTRY™ WEB APP VIEW

Using the SnowSentry™ web app, the administrator or manager identifies the building(s) to be monitored and adds users to be notified when rooftop snow loads trigger an alert. Since buildings often have multiple roofs with different loads, individual roof zones are identified within the web app and assigned a snow load limit value based upon the capacity of the specific roof section.

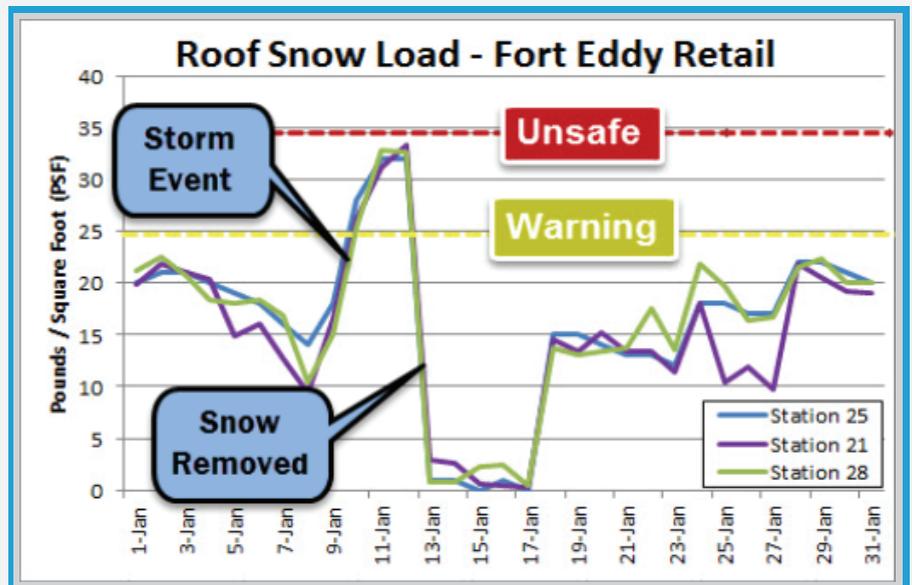


EXPORTABLE DATA

The graph depicts snow load over time as reported by 3 rooftop stations.

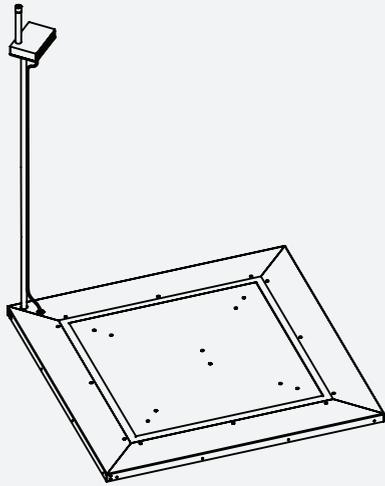
This data can be analyzed to better visualize the rooftop snow load throughout the winter.

Note the result of the major storm event which triggered an alert warning after which snow was cleared from the roof in the high load areas.

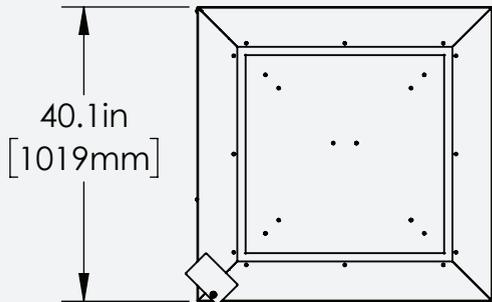
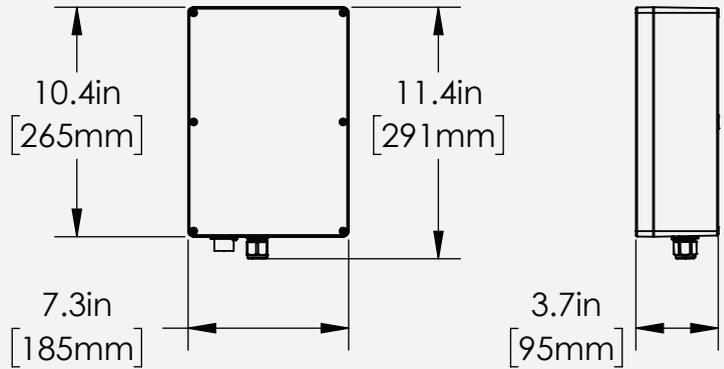


PRODUCT DIMENSIONS

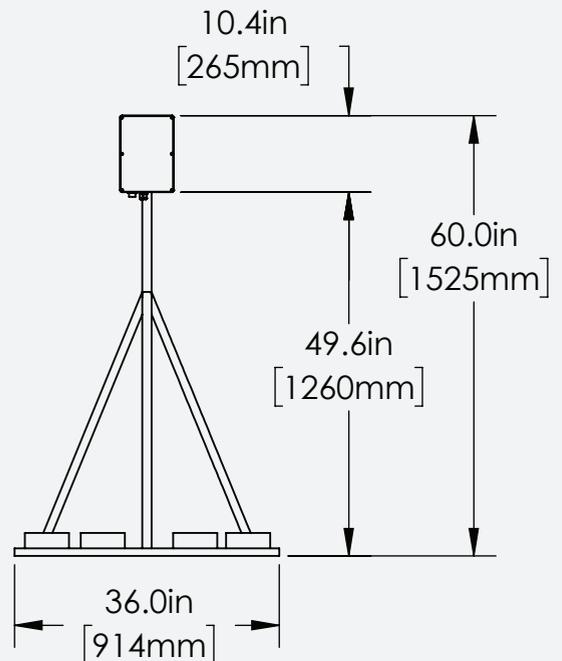
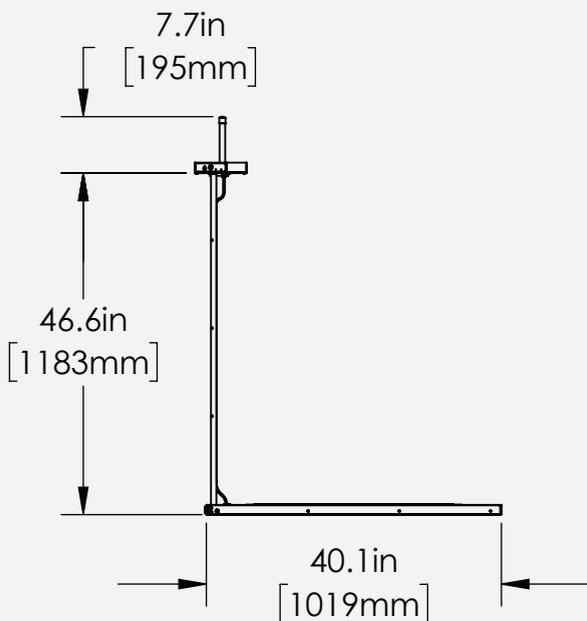
SNOWSENTRY™ STATION



INTERNET GATEWAY



INTERNET GATEWAY ON BALLASTED TRIPOD



TECHNICAL SPECIFICATIONS

SNOWSENTRY™ STATION P/N 110669

Snow Load Capacity	90 psf (439 kg/m ²)
Power Input	Solar powered
Days Between Full Charge	60+ Days
Weight	55 lbs (25 kg)
Dimensions	Base only: 41" x v 41" x 1.8" (1052mm x 1052mm x 45mm) w/ controller on mast: 58.3" (1481mm) height
Waterproof IP Rating	Base: IP68, antenna & controller: IP67
Operating Temperature	-22° F to +140° F (-30° C to +60° C)
Wind Tolerance	Over 90 MPH (145 km/h)
Data Connectivity	Wireless 900 MHz

INTERNET GATEWAY (IG) P/N 110710 (CELLULAR) | 110783 (LAN CABLE)

Power Input	100-240VAC, <5W
Power Connection	14ft. (4m) Cable with with standard power plug (Type B)
Weight	4.9 lbs (2.2 kg)
Dimensions	18.5" x 6.3" x 3.5" (470mm x 160mm x 89mm)
Waterproof IP Rating	IP67
Wireless Connectivity	Wireless, 900 MHz
Ethernet Data Rate	10/100 Mbps (auto-sensing)
Ethernet Connection	Cellular Modem IG (P/N 110710) Requires data plan Wired IG (P/N 110356) Requires building LAN. Supplied with 50 ft industrial CAT 5e cable
Operating Temperature	-22° F to +158° F (-30° C to +70° C)
Ethernet Isolation	1500 VAC min per IEEE802.3/ANSI X3.263
Emissions/Immunity	CE, FCC Part 15 (Class A)



ABOUT OUR COMPANY

Our Experience Is Just the Beginning

2KR Systems designs and manufactures commercial electromechanical and software products.



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