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ISO 9001

PRODUCT CATEGORY:
DATA COLLECTION

RSTAR Affinity Gateway

The RSTAR Affinity Gateway is easy to set up and connect to RSTAR Affinity Data Loggers for seamless communication in a wide range of geotechnical applications.

The RSTAR Affinity Gateway receives telemetry from RSTAR Affinity Data Loggers through LoRa radio or legacy RSTAR Data Loggers. The data is forwarded to the RSTAR Affinity cloud server through wired internet, Wi-Fi, LTE, or to an on-premises server through local ISM radio.

The RSTAR Affinity Gateway enables secure wireless communication between data loggers and the RSTAR Affinity browser-based dashboard and mobile application so sensor data can be transmitted and analyzed.

> FEATURES

- Bi-directional connectivity between field devices and the RSTAR Affinity browser-based UI dashboard and mobile application.
- Flexible connectivity including Ethernet, cellular, Wi-Fi, local radio LAN.
- A pole mount is included with the gateway enclosure. An optional wall mount is also available.
- RSTAR Affinity is OpenAPI 3.0 compliant.

> BENEFITS

- ✓ **Integrated**
- ✓ **User-friendly**
- ✓ **Flexible**
- ✓ **Durable**
- ✓ **Secure**

PHYSICAL SPECIFICATIONS

Dimensions Excluding Antenna(s)	220 mm (L) x 220 mm (W) x 104 mm (H)
Dimensions Including Antenna(s)	1150 mm (L) x 220 mm (W) x 104 mm (H)
Housing Material	Die-cast aluminum
Ingress Protection Marking	IP67 rated
Mounting Options	Pole or wall mount
ISM Antenna Options	868 MHz: 3dBi antenna 900 MHz: 5.8dBi antenna 900 MHz: 8dBi antenna

GENERAL SPECIFICATIONS

Temperature Operating Range	Ambient temperatures from -40°C to 60°C *See Junction Box options for power supply temperature range*

POWER SPECIFICATIONS

Power Supply*	PoE Input: 12-48V 120V/240V: Requires AC Junction Box Solar Power: Requires Solar Junction Box

CELLULAR SPECIFICATIONS

Frequency Bands for LTE-FDD	B1, B2, B3,B4, B5, B7, B8, B12, B13, B18, B19, B20, B25, B26, B28
Frequency Bands for LTE-TDD	B38, B39, B40, B41
Frequency Bands for WCDMA	B1, B2, B4, B5, B6, B8, B19
Frequency Bands for GSM	B2, B3, B5, B8
Output Power	23~33dBm±2dB
Maximum Antenna Gain	3 dBi

RSTAR DATA LOGGER CONNECTIVITY

Region	LoRaWAN EU868 LoRaWAN EU433 LoRaWAN US915 LoRaWAN AS923-1/2/3/4 LoRaWAN AU915 Commonly used frequency plans by country Refer to RST for the best frequency for your region.

JUNCTION BOX OPTION

Standard Temperature AC Power (Option 1)	Input: 120/240 V Output: 12VDC PoE External 100AHr Batt. Temperature range: 120V input: -20°C to 60°C 240V input -30°C to 60°C
Extended Temperature AC Power (Option 2)	Input: 120/240VAC Output: 12VDC PoE External 100AHr Batt Temperature range: -40°C to 60°C
Solar Power	Input: Up to 2x 90W Solar Output: 12VDC PoE External 100AHr Batt.

RSTAR LEGACY RADIO SPECIFICATIONS

Operating Frequency (country dependent)	900 MHz, 868 MHz, 2.4 GHz spread spectrum band
Outdoor Range	Up to 15 km (at 900 MHz) in open country, depending on frequency and antenna
Maximum Nodes	Dependent on measurement frequencies and instrument types

INTERNET SPECIFICATIONS

Standard Configuration	LTE/WiFi/Ethernet/Satellite