

RSTAR Affinity Gateway

Description

The RSTAR Affinity Gateway is easy to set up and connect to RSTAR 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. 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

RSTAR Affinity Gateway 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
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Power Specifications

Power Supply* *requires a Junction Box Option	12 VDC PoE Input
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Cellular Specifications

Frequency Bands for LTE-FDD	B1, B2, B3, B4, B5, B7, B8, B12, B13, B18, B19, B20,
Frequency Bands for LTE-TDD	B25, B26, B28 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

Internet Specifications

Standard Configuration	LTE/WiFi/Ethernet/Satellite
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Field Connectivity

Region	LoRaWAN EU868 LoRaWAN EU433 LoRaWAN US915 LoRaWAN AS923-1/2/3/4 LoRaWAN AU915Refer to RST for the best frequency for your region.
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RSTAR Radio Specifications

Operating Frequency (country dependent)	900 MHz, 868 MHz, 433 MHz, 2.4 GHz spread spectrum band
Outdoor Range	Up to 14 km (at 900 MHz) in open country, depending on frequency and antenna
Maximum Nodes	Dependant on measurement frequencies and instrument types

Junction Box Option

AC Power	Input: 120/240 V Output: 12VDC PoE External 100Ahr Batt.
Solar Power Specifications	Input: Up to 2x 90W Solar Output: 12VDC PoE External 100Ahr Batt.