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HOBO RX2106 MicroRX Cellular Web-enabled Outdoor Monitoring Station (Wireless Sensors)

Product Images

Short Description

The compact and rugged HOBO RX2106 MicroRX Station is an easy-to-deploy, low-cost cellular solution for long-term, reliable field monitoring.

Description

The integrated HOBOnet Manager (UK & Europe model) receives data from wireless HOBOnet sensors. The station also features inputs for up to five of Onset's research-grade plug-and-play sensors. Configurable station-side alarms trigger immediate notifications of critical conditions, and Onset's cloud-based HOBOlink platform makes it easy to view, access, and share data.

Key Features

- Scalable to monitor multiple parameters: connect up to 50 wireless sensors (600 m line-of-sight range) and up to five plug-and-play smart sensors (see Measurements below)
- Powerful web-based access to your data with HOBOlink cloud-based software: configure alarms, create custom dashboards, and view your data on any device with an internet connection.
- Station-side alarms triggered at time of measurement
- Real-time monitoring with up to 10-minute connection rates via 4G cellular data plans.
- Integrated 1.7W solar panel with rechargeable battery pack (optional 5W and 15W external solar panels can also be added)
- Built-in LCD confirms proper setup and operation
- Integrated mounting tabs for use with screws, zip ties, or U-bolts.

Additional Information

Country of Manufacture	United States

	To see the full specifications for this product, please see the User Manual under the Resources tab.	
	HOBO RX2106 Station	
	Operating Range	-20° to 60°C (-4° to 140°F)
	Smart Sensor Connectors	5
	Smart Sensor Network Cable Length	100 m (328 ft) maximum
	Smart Sensor Data Channels	Maximum of 15 (some smart sensors use more than one data channel; see sensor manual for details)
	Logging Rate	1 minute to 18 hours
	Time Accuracy	±8 seconds per month in 0° to 40°C (32°F to 104°F) range; ±30 seconds per month in -40° to 60°C (-40° to 140°F) range
	Power Source	Integrated 1.7 watt solar panel and NiMH rechargeable battery pack; optional AC power adapter (P-AC-1) or external solar panel (SOLAR-xW) can be used in place of integrated solar panel
	Battery Life	Typical 3–5 years when operated in the temperature range -20° to 40°C (-4° to 104°F); operation outside this range will reduce the battery service life. Maximum connection rates with built-in solar panel, in full sun: 10 minute connections year round for latitudes less than ±40° 10 minute connections through three seasons in other regions, reduced to 30 minute connections in winter Maximum connection rates with external 5W or 15W solar panels: 10 minute connections year round, in full sun Connection rate with external solar panels may be less if deployed in partial sun Battery life of 1 month without solar recharging, with hourly connections, 1 minute logging, and approximately 10 motes.
Explanation	Memory	16 MB, 1 million measurements, continuous logging
	Alarm Notification Latency	Logging interval plus 2–4 minutes, typical
	Enclosure Access	Hinged door secured by two latches with eyelets for use with user-supplied padlocks
	LCD	LCD is visible from 0° to 50°C (32° to 122°F); the LCD may react slowly or go blank in temperatures outside this range
	Materials	Outer enclosure: Polycarbonate/PBT blend with brass inserts; Interior: Polycarbonate/PBT; Gasket: Silicone foam; Cable channel: Santoprene™ TPE; U-Bolts (not included): Steel with zinc dichromate finish
	Dimensions	19.95 x 13.68 x 7.49 cm (7.85 x 5.39 x 2.95 in.)
	Weight	678 g (23.9 oz)
	Mounting	Optional U-bolts are compatible with masts up to 4.14 cm (1.63 in.) mast diameter; can also be mounted with zip ties or mounted to a flat surface with screws
	Environmental Rating	Weatherproof enclosure, NEMA 4X and IP66 (requires proper installation of cable channel system)
	Wireless Radio	GSM/GPRS/EDGE: Quad band 850/900/1800/1900 MHz UMTS/HSPA+: Seven band 800/850/900/1800/1900/2100 MHz LTE: Twelve Band 700/800/850/900/1800/1900/2100/2600 MHz
	Antenna	4G LTE
	☒	The CE Marking identifies this product as complying with all relevant directives in the European Union (EU)
	☒ ☒	
	Integrated HOBOnet Manager	
	Operating Range	-25° to 60°C (-13° to 140°F)
	Radio Power	12.6 mW (+11 dBm) non-adjustable
	Transmission Range	Reliable connection to 457.2 m (1,500 ft) line of sight at 1.8 m (6 ft) high Reliable connection to 609.6 m (2,000 ft) line of sight at 3 m (10 ft) high
	Wireless Data Standard	IEEE 802.15.4
	Radio Operating Frequencies	RX210x-900: 904–924 MHz RX210x-868: 866.5 MHz RX210x-922: 916–924 MHz
	Modulation Employed	OQPSK (Offset Quadrature Phase Shift Keying)
	Data Rate	Up to 250 kbps, non-adjustable
	Duty Cycle	<1%
	Maximum Number of Motes	50 motes per one HOBOnet wireless sensor network
	Power Source	Powered by the station
	Dimensions	Mote: 16.2 x 8.59 x 4.14 cm (6.38 x 3.38 x 1.63 inches) Cable length: 2 m (6.56 ft)
	Weight	159 g (5.62 oz)
	Materials	PCPBT, silicone rubber seal
	Environmental Rating	IP67, NEMA 6

Contents	HOBO RX2106-868 MicroRX Station (UK & Europe Model) HOBOnet Manager Cable Grease packet Cable ties Screws and washers Rechargeable battery pack
Brand	Onset HOBO
Typical applications	Environmental (Outdoor), Field Research, Weather Monitoring
Measurements	4-20mA, Amp Hour (Ah), Barometric Pressure, Current AC, Event, Flow, Humidity, Kilowatts (kW), kWh, Leaf Wetness, Light Intensity, Light On/Off, Motor On/Off, PAR/Quantum Light, Power Factor (PF), Pressure, Pulse, Rainfall, Soil Moisture, Temperature, Volt-Amp Reactive hour, Voltage AC, Voltage DC, Water Level, Water Temperature, Watt Hours (Wh), Watts (W), Wind Direction, Wind Speed

Additional Options

Data Plan	Basic 4G Plan - 60 minutes interval - up to 22 sensors (SP-811)
	Standard 4G Plan - 10 minutes interval - up to 25 sensors (SP-813)
	Premium 4G Plan - 10 minutes interval - up to 65 sensors (SP-815)
Mounting Options	HOBO 2-Metre Tripod Kit (M-TPB-KIT)
	HOBO 3-Metre Tripod Kit (M-TPA-KIT)
Select Sensors (if the sensor you require isn't listed; please contact us, as there are many more options available).	Wireless Temperature & Relative Humidity Sensor (RXW-THC-868)
	Wireless Temperature Sensor (RXW-TMB-868)
	Wireless Repeater (for when there is an obstruction between wireless sensors and the station or for extending the transmission range of wireless sensors) (RXW-RPTR-868)