

## HOBOnet Rainfall (metric) Sensor

A wireless sensor that records rainfall in 0.2 millimeter increments; communicates data to the HOBOnet RX3000 or the HOBOnet MicroRX station; preconfigured and ready to deploy.

### Important Information

A complete system requires at least one HOBOnet RX3000 Remote Monitoring Station, a HOBOnet Wireless Manager, and a HOBOnet Wireless Sensor OR one HOBOnet MicroRX Station (which has an integrated HOBOnet Wireless Manager) and a HOBOnet Wireless Sensor. HOBOnet Wireless Repeaters (RXW-RPTR-xxx or RXW-RPTR-B-xxx) can be added to extend the range.



### Supported Measurements

Rainfall

### Features

#### Sensor Features

- Resolution of 0.2 millimeters
- Bird spikes
- Debris screen that locks in place
- Designed to meet World Meteorological Organization (WMO) guidelines

#### Wireless Features

- 900 MHz wireless mesh self-healing technology
- 450 to 600 meter (1,500 to 2,000 feet) wireless range and up to five hops
- Up to 50 wireless sensors or 336 data channels per HOBOnet RX station
- Simple button-push to join the HOBOnet wireless network
- Onboard memory to ensure no data loss
- Powered by rechargeable AA batteries and built-in solar panel

### Contact Us

Sales (8am to 5pm ET, Monday through Friday)

- Email [sales@onsetcomp.com](mailto:sales@onsetcomp.com)
- Call 1-508-759-9500
- In U.S. toll free 1-800-564-4377
- Fax 1-508-759-9100

Onset Computer Corporation  
470 MacArthur Boulevard  
Bourne, MA 02532

Technical Support (8am to 5pm ET, Monday through Friday)

- Contact Product Support [www.onsetcomp.com/support/contact](http://www.onsetcomp.com/support/contact)
- Call 1-508-759-9500
- In U.S. toll free 1-877-564-4377

## HOBOnet Rainfall (metric) Sensor (RXW-RGF-xxx) Specifications

<b>Measurement Range</b>	0 to 10.2 cm (0 to 4 in.) per hour, maximum 4,000 tips per logging interval
<b>Accuracy</b>	±4.0%, ±1 rainfall count between 0.2 and 50.0 mm (0.01 and 2.0 in.) per hour; ±5.0%, ±1 rainfall count between 50.0 and 100.0 mm (2.0 and 4.0 in.) per hour
<b>Resolution</b>	0.01 in.
<b>Operating Temperature Range</b>	-25° to 60°C (-13° to 140°F) with rechargeable batteries -40 to 70°C (-40 to 158°F) with lithium batteries
<b>Radio Power</b>	12.6 mW (+11 dBm) non-adjustable
<b>Transmission Range</b>	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
<b>Wireless Data Standard</b>	IEEE 802.15.4
<b>Radio Operating Frequencies</b>	RXW-RGF-900: 904-924 MHz RXW-RGF-868: 866.5 MHz RXW-RGF-922: 916-924 MHz RXW-RGF-921: 921 MHz
<b>Modulation Employed</b>	OQPSK (Offset Quadrature Phase Shift Keying)
<b>Data Rate</b>	Up to 250 kbps, non-adjustable
<b>Duty Cycle</b>	<1%
<b>Maximum Number of Motes</b>	Up to 50 wireless sensors or 336 data channels per one HOBOnet RX station
<b>Logging Rate</b>	1 minute to 18 hours
<b>Number of Data Channels</b>	2
<b>Battery Type/ Power Source</b>	Two AA 1.2V rechargeable NiMH batteries, powered by built-in solar panel or two AA 1.5 V lithium batteries for operating conditions of -40 to 70°C (-40 to 158°F)
<b>Battery Life</b>	With NiMH batteries: Typical 3-5 years when operated in the temperature range -20° to 40°C (-4°F to 104°F) and positioned toward the sun (see Deployment and Mounting), operation outside this range will reduce the battery service life With lithium batteries: 1 year, typical use
<b>Memory</b>	16 MB
<b>Dimensions</b>	Sensor: 16.5 cm opening diameter (6.5 in.) x 24 cm (9.5 in.) high; 214 cm <sup>2</sup> (33.2 in. <sup>2</sup> ) collection area Cable length: 2 m (6.6 ft) Mote: 16.2 x 8.59 x 4.14 cm (6.38 x 3.38 x 1.63 inches)
<b>Weight</b>	Sensor and cable: 1.2 kg (2.7 lbs) Mote: 223 g (7.87 oz)
<b>Materials</b>	Sensor: UV-stabilized ABS plastic housing; tipping spoon mechanism with magnetic reed switch pivots on metal shaft Mote: PCPBT, silicone rubber seal
<b>Environmental Rating</b>	Sensor: Weatherproof Mote: IP67, NEMA 6

