HOBO® RX3000 Data Logger

RX3000 Remote Monitoring Station Data Logger



The HOBO RX3000, Onset's most flexible remote data logging station, provides instant access to site-specific environmental data anywhere, anytime via the internet. The station combines the versatility and sensor quality of more expensive systems, an onboard LCD display, and the convenience of plug-and-play operation. The RX3000 is a configurable system (see "Configure System" tab below).

The RX3000 station is the basic component of the cost-effective and scalable HOBOnet Field Monitoring System for crop management, environmental research, and greenhouse operations.

Supported Measurements:

4-20mA, AC Current, AC Voltage, Air Velocity, Amp Hour (Ah), Amps (A), Barometric Pressure, Carbon Dioxide, Compressed Air Flow, DC Current, DC Voltage, Dew Point, Differential Pressure, Evapotranspiration, Event, Gauge Pressure, Kilowatt Hours (kWh), Kilowatts (kW), Leaf Wetness, Light Intensity, PAR, Power Factor (PF), Pulse Input, Rainfall, Relative Humidity, Remote Water Level Monitoring, Soil Moisture, Solar Radiation, Temperature, Volt-Amp Reactive, Volt-Amp Reactive hour, Volt-Amps (VA), Volts (V), Water Flow, Water Level, Watt Hours (Wh), Watts (W) and Wind

Key Advantages:

- Flexible support for a broad range of sensors
- LCD display for easy field deployment
- Cloud-based data access through HOBOlink
    - Get 24/7 web access to your data via web browser
    - Verify RX3000 system status remotely
    - Set up and manage alarm notifications over the web
    - Schedule automated delivery of data
- Plug-and-play operation
- Alarm notifications via text, email
- Rugged double-weatherproof enclosure
- Cellular, Wi-Fi, and Ethernet options are available
- Configurable from your mobile device
- Optional Analog Input, Relay, and Water Level Sensor Modules
- Remote water level and water flow monitoring with Onset's water level module (RXMOD-W1)
- Access to NEWA plant disease risk and insect pest models

HOBO RX3000 Data Logger Specifications

Operating Range	-40° to 60°C (-40° to 140°F); no remote communications for battery voltage less than 3.9 V DC
Smart Sensor Connectors	10
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)
Module Slots	2
Logging Rate	1 second (RX3001 and RX3002) or 1 minute (RX3003 and RX3004) 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
Battery Type/Power Source	4 Volt, 10 AHr, rechargeable sealed lead-acid; external power required using one of these options: AC power adapter (AC-U30), solar panel (SOLAR-xW), or external power source 5 V DC to 17 V DC with external DC power cable (CABLE-RX-PWR)
Rechargeable Battery Service Life	Typical 3–5 years when operated in the temperature range -20° to 40°C (-4°F to 104°F); operation outside this range will reduce the battery service life
Memory	32 MB, 2 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 stainless steel hinge pins and brass inserts; Inner enclosure: Polycarbonate; Gaskets: Silicone rubber; Cable channel: EPDM rubber; Cable opening cover: Aluminum with ABS plastic thumb screws; U-Bolts: Steel with zinc dichromate finish
Size	18.6 x 18.1 x 11.8 cm (7.3 x 7.1 x 4.7 in.); see diagrams on next page
Weight	2.2 kg (4.85 lb)
Mounting	3.8 cm (1.5 inch) mast or wall mount
Environmental Rating	Weatherproof enclosure, NEMA 4X (requires proper installation of cable channel system)
CE	The CE Marking identifies this product as complying with all relevant directives in the European Union (EU)
FC	**RX3002:** FCC ID R68XPICOW, IC ID 3867A-XPICOW **RX3003:** FCC ID QIPEHS6, IC ID 7830A-EHS6; approved for use in Taiwan and Japan **RX3004:** FCC ID QIPPLS62-W, IC ID:7830A-PLS62W
Wireless Radio	**RX3003:** GSM/GPRS/EDGE: Quad band 850/900/1800/1900 MHz, UMTS/HSPA+: Five band 800/850/900/1900/2100 MHz **RX3004:** 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	**RX3003:** Penta band **RX3004:** 4G LTE

Ethernet (RX3001)	
Connector	One RJ45/100BaseT
Wi-Fi (RX3002)	
Network Standards	IEEE 802.11b/g/n

Frequency Range	2.412–2.484 GHz
Antenna Connector	1, no diversity supported
Data Rates	1, 2, 5.5, 11 Mbps (802.11b); 6, 9, 12, 18, 24, 36, 48, 54 Mbps (802.11g); 802.11n, HT20 MCS0 (6.5 Mbps) to HT20 MC87 (65 Mbps)
Number of Selectable Radio Subchannels	Up to 14 channels; profiles available will include USA, France, Japan, Spain, Canada, and “Other” (multiple countries)
Radio Modulations	OFDM, DSSS, DBPSK, DQPSK, CCK, 16QAM, 64QAM
Security	WEP 64/128, WPA-PSK, AES end-to-end encryption, WPA2, protocols not listed are not supported
Maximum Receive Level	-10 dBm (with PER <8%)
Receiver Sensitivity	-72 dBM for 54 Mbps, -87 dBm for 11 Mbps, -89 dBm for 5.5 Mbps, -90 dBm for 2.0 Mbps, -92 dBm for 1.0 Mbps
Cellular (RX3003 and RX3004)	
Wireless Radio	**RX3003:** GSM/GPRS/EDGE: Quad band 850/900/1800/1900 MHz, UMTS/HSPA+: Five band 800/850/900/1900/2100 MHz **RX3004:** 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	**RX3003:** Penta band **RX3004:** 4G LTE

Contact Us

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Technical Support (8am to 6pm ET, Monday through Friday)

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