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# HOBO Cellular Weather Station Kit - Intermediate

## **Product Images**









## **Short Description**

The HOBO RX3000 Weather Station Intermediate Kit provides instant access to site-specific air temperature,

relative humidity, rainfall and wind speed/direction data anywhere, anytime on your desktop or mobile device.

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## **Description**

#### **Key Features**

- Cloud-based 24/7 data access via HOBOlink web-enabled software platform
- 4G cellular communication (also works with 3G/2G)
- Solar powered
- Plug-and-play operation
- Alert notifications via text/email
- Rugged double-weatherproof enclosure.

#### **Kit Components**

- HOBO RX3000 Cellular Remote Monitoring Station Data Logger RX3004-00-01
- 15W Solar Panel SOLAR-15W
- Temperature/RH Smart Sensor with 2 metre cable S-THC-M002
- Wind Speed and Direction Smart Sensor Set S-WSET-B
- 0.2 mm Resolution Rain Gauge Smart Sensor with 2 metre cable S-RGB-M002
- Full Cross-Arm for wind speed/direction sensors M-CAA
- Solar Radiation Shield for temperature & RH sensor RS3-B

The RX3000 accepts up to 10 plug-and-play Smart Sensors, or up to 50 HOBOnet wireless sensors. Just plug in your sensor and it's automatically recognised – no programming, wiring, or calibration necessary.

Note: If your needs are different, you can create your own customised RX3000 weather station with the wide range of sensors available.

# **Additional Information**

Brand	Onset HOBO	
Country of Manufacture	United States	
	RX3000 Range Specific Operating Range	ations  -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 $0^\circ$ to $50^\circ$ C (32° to $122^\circ$ 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)
	×	The CE Marking identifies this product as complying with all relevant directives in the European Union (EU)
	×××	RX3002: FCC ID R68XPICOW, IC ID 3867A-XPICOW RX3003: FCC ID QIPEH56, IC ID 7830A-EH56; approved for use in Taiwan and Japan RX3004: FCC ID QIPPL562-W, IC ID:7830A-PL562W
Explanation	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/Hz
	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
		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
	Data Rates  Number of Selectable Radio	Mbps) to HT20 MC87 (65 Mbps)  List to 14 channels: profiles available will include USA. France Japan Spain Capada, and "Other"
	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,
	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
	Receiver Sensitivity  Cellular (RX3003 and RX3004)	-90 dBm for 2.0 Mbps, -92 dBm for 1.0 Mbps
	-	-90 dBm for 2.0 Mbps, -92 dBm for 1.0 Mbps  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
	Cellular (RX3003 and RX3004)	-90 dBm for 2.0 Mbps, -92 dBm for 1.0 Mbps  RX3003: GSM/GPR3/EDGE: Quad band 850/900/1800/1900 MHz, UMTS/HSPA+: Five band 800/850/900/1900/2100 MHz RX3004: GSM/GPR3/EDGE: Quad band 850/900/1800/1900 MHz UMTS/HSPA+: Seven band 800/850/900/1800/1900/2100 MHz
ldeal For	Cellular (RX3003 and RX3004) Wireless Radio	-90 dBm for 2.0 Mbps, -92 dBm for 1.0 Mbps  RX3003: GSM/GPRS/EDGE: Quad band 850/900/1800/1900 MHz, UMTS/HSPA+: Five band 800/850/900/1900/2 100 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 MHz RX3003: Penta band
	Cellular (RX3003 and RX3004) Wireless Radio Antenna	-90 dBm for 2.0 Mbps, -92 dBm for 1.0 Mbps  RX3003: GSM/GPRS/EDGE: Quad band 850/900/1800/1900 MHz, UMTS/HSPA+: Five band 800/850/900/1900/2 100 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  RX3003: Penta band
Onset Product Series	Cellular (RX3003 and RX3004) Wireless Radio Antenna Professional RX	-90 dBm for 2.0 Mbps, -92 dBm for 1.0 Mbps  RX3003: GSM/GPRS/EDGE: Quad band 850/900/1800/1900 MHz, UMTS/HSPA+: Five band 800/850/900/1900/2 100 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 MHz RX3003: Penta band
ldeal For Onset Product Series Measurements Typical applications	Cellular (RX3003 and RX3004) Wireless Radio Antenna Professional RX	-90 dBm for 2.0 Mbps, -92 dBm for 1.0 Mbps  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 700/850/850/900/1800/1900/2100/2600 MHz RX3003: Penta band RX3004: 4G LTE

#### **Station Model**



# **HOBO RX3000 Remote Monitoring Weather Data Logger** (add sensors as required)

The HOBO RX3000 is Onset's next-generation remote data logging station that provides instant access to site-specific environmental data anywhere, anytime via the internet.

#### **Solar Panel**



#### **HOBO SOLAR-15W - 15 Watt Solar Panel**

This solar panel is ideal for very cloudy locations, higher latitudes, and/or when connecting analog sensors with high excitation power requirements.

#### **Temperature & Humidity Smart Sensor**



# HOBO S-THC-M002 12-bit Temperature/Relative Humidity Smart Sensor (2m cable)

The HOBO 12-bit Temperature/Relative Humidity Smart Sensor is designed to work with all HOBO data loggers that accept Smart Sensors. All sensor parameters are stored inside the Smart Sensor, which automatically communicates configuration data information to the logger without any programming, calibration, or extensive user setup.

#### **Wind Speed and Direction Smart Sensor Set**



#### **HOBO S-WSET-B Wind Smart Sensor Set**

The Wind Sensor Set includes Onset's research-grade plugand-play Wind Speed Smart Sensor and the Wind Direction Smart Sensor. This combination provides average wind speed, highest three-second wind gust and average wind direction for the measurement interval. These durable sensors will provide many years of accurate and reliable performance.

#### Rain Gauge Smart Sensor with 2 metre cable



#### **HOBO S-RGB-M002 Rain Gauge Smart Sensor**

The S-RGB-M002 Rain Gauge is scaled for metric measurements and is suitable for use with HOBO Weather Stations and compatible loggers.

The S-RGB-M002 measures up to 10 cm of rain per hour with a resolution of 0.2 mm and a maximum of 4000 tips per interval.

#### Full Cross-Arm for wind speed/direction sensors



#### M-CAA -Weather Station Full Cross Arm

For use with Onset tripods or masts, the full cross arm assures unobstructed wind measurement. Full cross arm (91.2cm/36in) provides mounting for two wind sensors.

#### **Solar Radiation Shield**



#### **HOBO RS3-B Solar Radiation Shield**

The RS3-B Solar Radiation Shield protects external sensors from the effects of sunlight and rain to ensure high accuracy measurements and is designed to allow maximum air flow around the sensor.

Part No: RS3-B

# **Additional Options**

Mounting Options	HOBO 2-Metre Tripod Kit (M-TPB-KIT)
	HOBO 3-Metre Tripod Kit (M-TPA-KIT)
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)
Handheld Anemometer (to help you position weather station wind sensor in optimum location for maximum wind)	Kestrel 1000 (Pro-quality, made in USA)