



Tempcon Instrumentation Ford Lane Business Park Ford West Sussex BN18 0UZ, UK www.tempcon.co.uk



# HOBO Cellular Weather Station Kit - Advanced (includes Barometric Pressure & Solar Radiation Sensors)

# **Product Images**









## **Short Description**

The HOBO RX3000 Weather Station Advanced Kit provides instant access to site-specific air temperature, relative humidity, barometric pressure, solar radiation, rainfall and wind speed/direction data anywhere, anytime on your desktop or mobile device.

### **Buying in Volume, or Want Same Helpful Advice?**

Call +44 (0)1243 558270, click on the webchat box below, or fill out our contact form.

## **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
- Barometric Pressure Smart Sensor S-BPB-CM50
- Solar Radiation (Silicon Pyranometer) Smart Sensor S-LIB-M003
- 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
- Solar Radiation Sensor Bracket M-LBB

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	United States	
Part		RX3000 Range Specific	ations	
		Operating Range	-40° to 60°C (-40° to 140°F); no remote communications for battery voltage less than 3.9 V DC	
Comment   Comm		Smart Sensor Connectors	10	
Maria   Mari			100 m (328 ft) maximum	
		Smart Sensor Data Channels		
Secretary personal part and CV 2017 to 10 FT company of the comp		Module Slots	2	
		Logging Rate	1 second (RX3001 and RX3002) or 1 minute (RX3003 and RX3004) to 18 hours	
Ration   Professional Content		Time Accuracy	$\pm 8$ seconds per month in 0° to 40°C (32°F to 104°F) range; $\pm 30$ seconds per month in -40° to 60°C (-40° to 140°F) range	
Service 13 Money 10 M		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)	
Trigues door accord by two lambas with quietes for use with some supplied policios.  LO  LO  LO  LO  LO  LO  LO  LO  LO  L		Memory	32 MB, 2 million measurements, continuous logging	
Light   Ligh		Alarm Notification Latency	Logging interval plus 2–4 minutes, typical	
Marketins   Marketins   Marketins   Content of Physical Content Physical death State plant a cell broad pairs and broad state state plant pairs and broad plant pai		Enclosure Access	Hinged door secured by two latches with eyelets for use with user-supplied padlocks	
Materiah evolution of Polymerian Carbon Statemen (Statemen Activated Horist Amena PROSE (activated Carbon Statemen Activated Horist Amena Prose Pros		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	
Mounting 2.3 to (1.5 to 10 mount)  Note Thankers, MINDA AC (requires proper installation of cable channel system)  □ The CM Markers (Retailed this product as complying with all reviewer directives in the Furngeise United (Part 11 Minos)  □ The CM Markers (Retailed this product as complying with all reviewer directives in the Furngeise United (Part 11 Minos)  □ The CM Markers (Retailed this product as complying with all reviewer directives in the Furngeise United (Part 11 Minos)  □ The CM Markers (Retailed this product as complying with all reviewer directives in the Furngeise United (Part 11 Minos)  □ The CM Markers (Retailed this product as complying with all reviewer directives in the Furngeise United (Part 11 Minos)  ■ The CM Markers (Retailed this product as complying with all reviewer directives in the Furngeise United (Part 11 Minos)  ■ The CM Markers (Retailed this product as complying with all reviewer directives)  ■ The CM Markers (RETAILED (Part 11 Minos)  ■ The CM		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	
Mountain		Size	18.6 x 18.1 x 11.8 cm (7.3 x 7.1 x 4.7 in.); see diagrams on next page	
Environmental Ration  The CEM Antig denotine the product or complying with all relevant directives in the European University of Cember 1 (1997) and Cember 1 (1997) a		Weight	2.2 kg (4.85 lb)	
Part   Transport   Transpor		Mounting	3.8 cm (1.5 inch) mast or wall mount	
Direct		Environmental Rating	Weatherproof enclosure, NEMA 4X (requires proper installation of cable channel system)	
Spinaration    Part   P		×	The CE Marking identifies this product as complying with all relevant directives in the European Union (EU)	
Number of Solecable Mainum Receive Level  Ma	vyplanation	XXX	RX3003: FCC ID QIPEHS6, IC ID 7830A-EHS6; approved for use in Taiwan and Japan	
Recent LEXTORE   RECENT   RE		Wireless Radio	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	
Connector   One RIJAS*/1008aseT		Antenna	<b>RX3003</b> : Penta band <b>RX3004</b> : 4G LTE	
Connector   One RIJAS*/1008aseT		Ethernet (RX3001)		
Network Standards   EEE 802.11b/g/n			One PI/5/100RaceT	
Network Standards IEEE 802.11b/g/n Frequency Range 2.412-2.484 GHz Antenna Connector 1, no diversity supported In odd versity supported 1, 2, 5, 5, 1 x l/bps (802.11b; 6.9, 12, 18, 24, 36, 48, 54 M/bps (802.11p; 802.11n, HT20 MCS0 (6.5) Number of Selectable Radio Whips 10 HT20 MCS7 (65 M/bps) (802.11p; 802.11n, HT20 MCS0 (6.5) Number of Selectable Radio Up to 14 channels; profiles available will include USA, France, Japan, Spain, Canada, and "Other" (multiple countries) Radio Modulations OFDM, DSSS, DBPSK, DCPSK, CCK, 16QAM, 64QAM (64QAM 64QAM 64			one nyasi noobasei	
Frequency Range 2.412-2.484 GHz  Antenna Connector 1, no diversity supported  1, 2, 55, 11 Mbps (802.11 b): 6, 9, 12, 18, 24, 36, 48, 54 Mbps (802.11 gb 802.11 n, HT20 MCS9 (6.5 Mbps) to HT20 MCS9 (65 Mbps)			IEFE 802 11h/a/n	
Antenna Connector 1, no diversity supported    1, 2, 5, 5, 11 Mbps (802.11 b); 6, 9, 12, 18, 24, 36, 48, 54 Mbps (802.11 g); 802.11 n, HT20 MCS0 (6.5 Mbps) to HT20 MCS7 (6.5 Mbps)   2, 5, 5, 11 Mbps (802.11 b); 6, 9, 12, 18, 24, 36, 48, 54 Mbps (802.11 g); 802.11 n, HT20 MCS0 (6.5 Mbps) to HT20 MCS7 (6.5 Mbps)   2, 5, 5, 11 Mbps (802.11 b); 6, 9, 12, 18, 24, 36, 48, 54 Mbps (802.11 g); 802.11 n, HT20 MCS0 (6.5 Mbps) to HT20 MCS7 (6.5 Mbps)   2, 5, 5, 11 Mbps (802.11 b); 6, 9, 12, 18, 24, 36, 48, 54 Mbps (802.11 g); 802.11 n, HT20 MCS0 (6.5 Mbps) to HT20 MCS7 (6.5 Mbps) to HT20 MCS7 (6.5 Mbps)   2, 5, 5, 11 Mbps (802.11 b); 6, 9, 12, 18, 24, 36, 48, 54 Mbps (802.11 g); 802.11 n, HT20 MCS0 (6.5 Mbps) to HT20 MCS7 (6.5 Mbps) to HT20 MCS7 (6.5 Mbps)   2, 5, 5, 11 Mbps (802.11 b); 6, 9, 12, 18, 24, 36, 48, 54 Mbps (802.11 g); 802.11 n, HT20 MCS0 (6.5 Mbps) to HT20 MCS7 (6.5 Mbps) to HT20 MCS7 (6.5 Mbps)   3, 6, 6, 11 Mbps (802.11 b); 6, 9, 12, 18, 24, 36, 48, 54 Mbps (802.11 g); 802.11 n, HT20 MCS0 (6.5 Mbps) to HT20 MCS7 (6.5 Mbps) to HT20 MCS7 (6.5 Mbps)   4, 6, 11 Mbps (802.11 b); 6, 9, 12, 18, 24, 36, 48, 54 Mbps (802.11 g); 802.11 n, HT20 MCS0 (6.5 Mbps) to HT20 MCS7 (6.5 Mbps) to HT20 M				
Data Rates    1, 2, 5, 5, 11 Mbps (802.11b); 6, 9, 12, 18, 24, 36, 48, 54 Mbps (802.11g); 802.11n, HT20 MC50 (6.5 Mbps) to HT20 MC57 (65				
Number of Salectable Radio Subchannels  Number of Salectable Radio Subchannels  Radio Modulations  OFDM, DSSS, DBPSK, CQPSK, CCK, 16QAM, 64QAM  Security WEP 64/128, WPA-PSK, AES end-to-end encryption, WPA2, protocols not listed are not supported Maximum Receive Level 1-0 dBm (with PER -8%) Receiver Sensitivity -7-2 dBm for 54 Mbps, -87 dBm for 1.1 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 Wireless Radio Wireless Radio Wireless Radio  Wireless Radio  Antenna RX3003: GSM/GPRS/EDGE: Quad band 850/900/1800/1900/2100 MHz LTE: Twelve Band 700/800/850/900/1800/1900/2100 MHz LTE: Twelve Band 700/800/850/900/1800/1900/2100/2600 MHz RX3004: 4G LTE  RX  Barometric Pressure, Dew Point, Humidity, Rainfall, Solar Radiation, Temperature, Wind Direction, Wind Speed Environmental (Outdoor), Field Research, Weather Monitoring			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	
Radio Modulations  OFDM, DSSS, DBPSK, DQPSK, CCK, 16QAM, 64QAM  Security  WFP 64/128, WPA-PSK, AES end-to-end encryption, WPA2, protocols not listed are not supported haximum Receive Level  10 dBm (with PER <8%)  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  Wireless Radio  Wireless Radio  Antenna  RX3003: GSM/GPRS/EDGE: Quad band 850/990/1800/1900 MHz, UMTS/HSPA+: Five band 800/850/990/1800/1900/2100 MHz UMTS/HSPA+: Seven band 800/850/990/1800/1900/2100/2600 MHz  RX3004: 46 LTE  RX3005: 40 LTE  RX3005: 40 LTE  RX3006: 40 LTE  RX3006: 40 LTE  RX3006: 40 LTE  RX3007: 40 LTE  RX3008: 40 LTE  RX3008		Number of Selectable Radio	Up to 14 channels; profiles available will include USA, France, Japan, Spain, Canada, and "Other"	
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%) -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)  RX3003: CSM/GPRS/EDGE: Quad band 850/900/1800/1900 MHz, UMTS/HSPA+: Five band 800/850/900/1800/1900 MHz, UMTS/HSPA+: Five band 800/850/900/1800/1900 MHz UMTS/HSPA+: Seven band 850/950/1800/1900 MHz UMTS/HSPA+: Seven band 850/950/1800/1900/1800/1900 MHz UMTS/HSPA+: Seven band 850/950/1800/1900/1800/1900/1800/1900 MHz UMTS/HSPA+: Seven band 850/950/1800/190				
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 800/850/9500/1900/2100 MHz RX3004: GSM/GPRS/EDGE: Quad band 850/900/1800/1900 MHz UMTS/HSPA+: Seven band 800/850/9500/1800/1900 MHz LTE: Twelve Band 700/800/850/900/1800/1900/2100 MHz LTE: Twelve Band 700/800/850/900/1800/1900/2100 MHz LTE: Twelve Band 700/800/850/900/1800/1900/2100 MHz RX3003: Penta band RX3003: Penta band RX3004: 4G LTE  Inset Product Series  RX  Resurements  Barometric Pressure, Dew Point, Humidity, Rainfall, Solar Radiation, Temperature, Wind Direction, Wind Speed  Environmental (Outdoor), Field Research, Weather Monitoring				
Receiver Sensitivity -72 dBM for 54 Mbps, -87 dBm for 11 Mbps, -89 dBm for 5.5 Mbps, -90 dBm for 1.0 Mbps -90 dBm for 2.0 Mbps, -92 dBm for 1.0 Mbps -90 dBm		-		
Received Serials (New York)   -90 dBm for 2.0 Mbps, -92 dBm for 1.0 Mbps			-72 dBM for 54 Mbps, -87 dBm for 11 Mbps, -89 dBm for 5.5 Mbps,	
Wireless Radio  Wireless Radio  Wireless Radio  Wireless Radio  RX3003: GSM/GPRS/EDGE: Quad band 850/900/1800/1900 MHz, UMTS/HSPA+: Five band 800/850/900/1800/1900 MHz UTS/HSPA+: Seven band 800/850/900/1800/1900 MHz LTE: Twevbe Band 700/800/850/900/1800/1900/2100 MHz LTE: Twevbe Band 700/800/850/900/1800/1900/2100/2600 MHz  RX3003: Penta band RX3003: Penta band RX3004: 4G LTE  Professional  Rxsoud: 4G LTE  Reasurements  Barometric Pressure, Dew Point, Humidity, Rainfall, Solar Radiation, Temperature, Wind Direction, Wind Speed Environmental (Outdoor), Field Research, Weather Monitoring			-90 dBm tor 2.0 Mbps, -92 dBm for 1.0 Mbps	
Wireless Radio  Wireless Radio  Wireless Radio  Wireless Radio  Wireless Radio  Wireless Radio  Antenna  RX3004: SUMSTP/SIEDGE: Quad band 850/900/1800/1900 MHz UMTS/HSPA+: Seven band 800/850/900/1800/1900/2100 MHz UMTS/HSPA+: Seven band 800/850/900/1800/1900/2100 MHz LTE: Twevke Band 700/800/850/900/1800/1900/2100 MHz LTE: Twevke Band 700/800/850/900/1800/1900/2100 MHz LTE: Twevke Band 700/800/850/900/1800/1900/2100/2600 MHz  Wireless Radio  RX3003: Penta band RX3004: 4G LTE  Wireless Radio  RX  Measurements  Barometric Pressure, Dew Point, Humidity, Rainfall, Solar Radiation, Temperature, Wind Direction, Wind Speed Environmental (Outdoor), Field Research, Weather Monitoring		Cellular (RX3003 and RX3004)		
deal For Professional Inset Product Series RX Ideasurements Barometric Pressure, Dew Point, Humidity, Rainfall, Solar Radiation, Temperature, Wind Direction, Wind Speed Inset Applications Environmental (Outdoor), Field Research, Weather Monitoring		Wireless Radio	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	
RX  Measurements  Barometric Pressure, Dew Point, Humidity, Rainfall, Solar Radiation, Temperature, Wind Direction, Wind Speed  Environmental (Outdoor), Field Research, Weather Monitoring		Antenna		
Measurements Barometric Pressure, Dew Point, Humidity, Rainfall, Solar Radiation, Temperature, Wind Direction, Wind Speed Spical applications Environmental (Outdoor), Field Research, Weather Monitoring	deal For	Professional		
ypical applications Environmental (Outdoor), Field Research, Weather Monitoring	Onset Product Series			
ypical applications Environmental (Outdoor), Field Research, Weather Monitoring	Measurements			
	ypical applications			
	Power	Solar power with battery back-up		

#### **Station Model**



#### **HOBO RX3000 Remote Monitoring Data Logging Station**

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**



#### 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.

#### **Barometric Pressure Smart Sensor**



#### **HOBO S-BPB-CM50 Barometric Pressure Smart Sensor**

The Barometric Pressure Smart Sensor has a measurement range of 660 mb to 1070 mb (19.47 to 31.55 inHg), and can perform measurement averaging to obtain the highest accuracy. The operating temperature range for this sensor is -40° to 70°C (-40° to 158°F). This weatherproof smart sensor is mounted outside the logger enclosure.

#### **Full Cross-Arm for Wind Speed and 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

#### **Solar Radiation Smart Sensor**



# HOBO S-LIB-M003 Solar Radiation (Silicon Pyranometer) Smart Sensor with 3m Cable

Measures light levels; rapid deployment, with no complicated programming or setup required; compatible with H21, H22, U30 and RX family loggers.

#### **Solar Radiation Sensor Bracket**



#### **HOBO Light Sensor Bracket**

The light sensor bracket is designed for use with tripods, masts, or flat surfaces.

# **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)