ONSET®

MyJ Sensores

HOBO®
Data Loggers

CATALOG

The proof is in the data

www.myj-sensores.com

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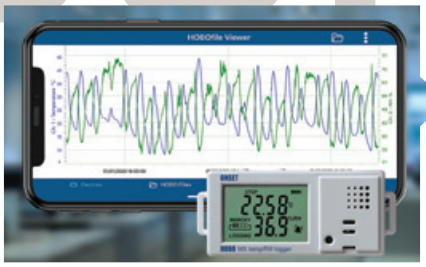
contents

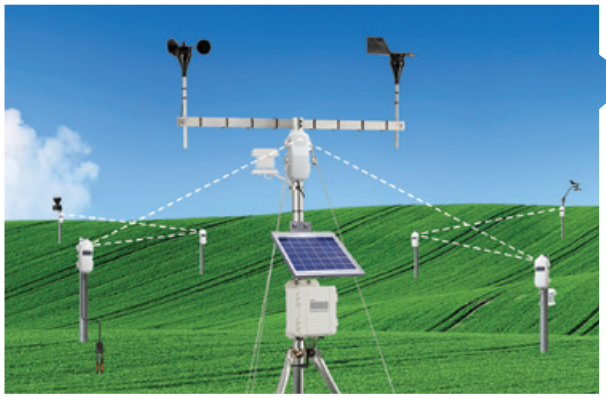


3 **HOBO MX1101 Temperature Data Logger**

Transmit temp/RH data to mobile devices wirelessly, via Bluetooth.

15 **HOBO MX2300 Series Temp/ RH & Soil Moisture Loggers**

Set up and offload loggers wirelessly from your mobile device or Windows computer - so field data collection is easier than ever!.



21 **HOBOnet Field Monitoring System**

A cost-effective and scalable solution for web-enabled monitoring of field conditions for applications such as crop management, research, and greenhouse operations.

29 **HOBO RX2100 MicroRX Water Level Station**

A cellular, web-enabled HOBO MicroRX station works with Onset's own water level sensor to deliver water level and flow monitoring data to HOBOlink cloud software.

33 **HOBO MX2200 Series Waterproof Temp Loggers**

Bluetooth loggers for monitoring streams, lakes, oceans, wetlands, and soil.

Visit us at onsetcomp.com to shop our online store, and download material from our Resources Library.

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HOBO MX1104 Temp/ RH/Light Analog Logger

Bluetooth Temp/RH/Light data logger

The HOBO MX1104 is a multi-channel data logger that measures and transmits temperature, relative humidity, and light intensity data wirelessly. It also includes an external analog input to attach a variety of additional sensors.

This self-contained wireless data logger lets you use your mobile device or Windows laptop and Onset's free HOBOconnect app to access data, at any time, over a 100-foot range via Bluetooth technology.

Supported Measurements:

4-20mA, AC Current, AC Voltage, Air Velocity, Carbon Dioxide, Compressed Air Flow, DC Current, DC Voltage, Dew Point, Differential Pressure, Gauge Pressure, Kilowatts, Light Intensity, Relative Humidity, Temperature and Dew Point

Key Advantages:

- Bluetooth communications for wireless data offload
- 16-bit resolution for highly accurate measurements
- Stores 1.9 million measurements for longer deployments between offloads
- New Self-Describing sensors with intelligent configuration for fast deployment
- Compatible with existing sensors for a wide range of indoor monitoring
- Audible and visual LCD-screen alarms notify you if a sensor becomes unplugged or a reading exceeds set thresholds

Minimum System Requirements:

HOBOconnect See pg 43

Mobile device

For complete information and accessories, please visit: **www.onsetcomp.com**

Part number	MX1104		
	Temperature Sensor	**RH Sensor**	**Light Sensor**
Range	-20° to 70°C (-4° to 158°F)	0% to 100% at -20° to 70°C (-4° to 158°F)	0 to 167,731 lux (15,582 lum/ft2)
Accuracy	±0.20°C from 0° to 50°C (±0.36°F from 32° to 122°F)	±2.5% from 10% to 90% (typical)	±10% typical for direct sunlight
Resolution	0.002°C at 25°C (0.004°F at 77°F)	0.01%	
Drift	<0.1°C (0.18°F) per year	<1% per year typical	

Logger with Cable Type	SD-MA-420 or CABLE-4-20mA	SD-VOLT-2.5 or CABLE-2.5-STEREO	SD-VOLT-05 or CABLE-ADAP5	SD-VOLT-10 or CABLE-ADAP10	SD-VOLT-24 or CABLE-ADAP24
Measurement Range	0 to 20.1 mA	0 to 2.5 V	0 to 5.0 V	0 to 10 V	0 to 24 V
Accuracy	±0.001 mA ±0.2% of reading	±0.1 mV ±0.1% of reading	±0.2 mV ±0.3% of reading	±0.4 mV ±0.3% of reading	±1.0 mV ±0.3% of reading
Resolution	0.3 µA	40 µV	80 µV	160 µV	384 µV

Logger	
Memory	4 MB (1.9 million measurements, maximum)
Logging Rate	1 second to 18 hours
Logging Modes	Fixed interval (normal, statistics) or burst
Operating Range	-20° to 70°C (-4° to 158°F)
Time Accuracy	±1 minute per month at 25°C (77°F)
Battery Type	Two AAA 1.5 V alkaline batteries, user replaceable
Battery Life	1 year, typical with logging interval of 1 minute and Bluetooth Always On enabled; 2 years, typical with logging interval of 1 minute and Bluetooth Always On disabled.
Dimensions	11.28 x 5.41 x 2.92 cm (4.44 x 2.13 x 1.15 in.)
Environmental Rating	IP54
CE compliant	Yes

HOBO MX1105 4-Channel Analog Logger

Bluetooth 4-Channel Analog data logger

The HOBO MX1105 multi-channel data logger, with four-channel inputs, measures and transmits data wirelessly from a variety of sensors.

This self-contained wireless data logger lets you use your mobile device or Windows laptop and Onset's free HOBOconnect app to access data, at any time, over a 100-foot range via Bluetooth technology.

The MX1105 is ideal for energy audits, building commissioning studies, equipment scheduling, and more.

Key Advantages:

- Bluetooth communications for wireless data offload
- 16-bit resolution for highly accurate measurements
- Stores 1.9 million measurements for longer deployments between offloads
- New Self-Describing sensors with intelligent configuration for fast deployment
- Compatible with existing sensors for a wide range of indoor monitoring
- Audible and visual LCD-screen alarms notify you if a sensor becomes unplugged or a reading exceeds set thresholds

Minimum System Requirements:

HOBOconnect See pg 43 | Mobile device | Sensor See pg 49

Supported Measurements:

4-20mA, AC Current, AC Voltage, Air Velocity, Carbon Dioxide, Compressed Air Flow, DC Current, DC Voltage, Differential Pressure, Gauge Pressure, Kilowatts, Temperature

For complete information and accessories, please visit: **www.onsetcomp.com**

Part number	MX1105				
Logger with Cable Type	SD-MA-420 or CABLE-4-20mA	SD-VOLT-2.5 or CABLE-2.5-STEREO	SD-VOLT-05 or CABLE-ADAP5	SD-VOLT-10 or CABLE-ADAP10	SD-VOLT-24 or CABLE-ADAP24
Measurement Range	0 to 20.1 mA	0 to 2.5 V	0 to 5.0 V	0 to 10 V	0 to 24 V
Accuracy	±0.001 mA ±0.2% of reading	±0.1 mV ±0.1% of reading	±0.2 mV ±0.3% of reading	±0.4 mV ±0.3% of reading	±1.0 mV ±0.3% of reading
Resolution	0.3 µA	40 µV	80 µV	160 µV	384 µV
Logger					
Memory	4 MB (1.9 million measurements, maximum)				
Logging Rate	1 second to 18 hours				
Logging Modes	Fixed interval (normal, statistics) or burst				
Operating Range	-20° to 70°C (-4° to 158°F)				
Time Accuracy	±1 minute per month at 25°C (77°F)				
Battery Type	Two AAA 1.5 V alkaline batteries, user replaceable				
Battery Life	1 year, typical with logging interval of 1 minute and Bluetooth Always On enabled; 2 years, typical with logging interval of 1 minute and Bluetooth Always On disabled.				
Dimensions	11.28 x 5.41 x 2.92 cm (4.44 x 2.13 x 1.15 in.)				
Environmental Rating	IP54				
CE compliant	Yes				

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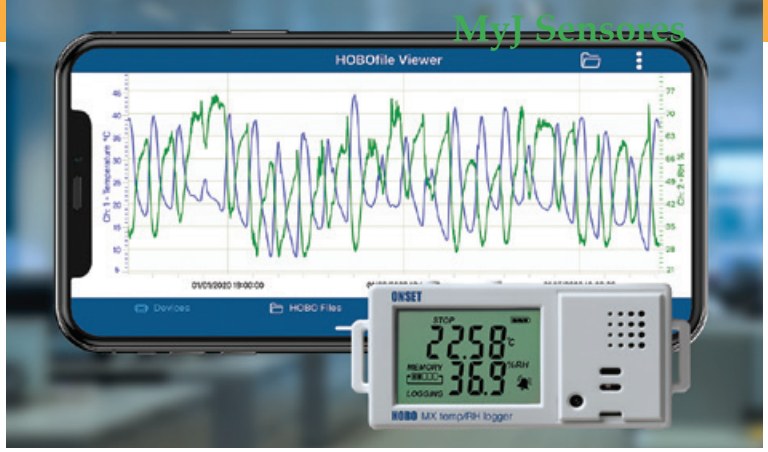
HOBO MX1101 Temp/RH Logger

Bluetooth temperature and relative humidity data logger



The HOBO MX1101 is a Bluetooth data logger that measures and transmits temperature and relative humidity data wirelessly to a mobile device or Windows laptop.

The self-contained wireless data logger, which works with Onset's free HOBOconnect app for logger setup and data management, enables users to access data anytime from their mobile device over a 100-foot range. It communicates instantly and enables you to "cut the cord" by requiring no dedicated equipment beyond a mobile device for configuring the logger or reading out data. This saves considerable time and money.

Remotely access your data in Onset's HOBOlink cloud software with the new MX Gateway (see page 14).

Key Advantages:

- Bluetooth technology for use with mobile devices
- No internet access, cables, or computer required
- Download data any time from 100 ft. away
- Audible and visual alarms keep you notified of problems
- Easily share data and graph images for analysis

Minimum System Requirements:

HOBOconnect
See pg 43

Mobile device

Supported Measurements:

Temperature, Relative Humidity, Dew Point

For complete information and accessories, please visit: **www.onsetcomp.com**

Part number	MX1101
Memory	84,650 Measurements
Sampling Rate	1 second to 18 hours, user selectable
Battery Life	1 year, typical with logging rate of 1 minute and sampling interval of 15 seconds or greater, user replaceable, 2AAA
Dimensions	3.66 x 8.48 x 2.29 cm (1.44 x 3.34 x 0.9 in.)
Temperature	
Range	-20° to 70°C (-4° to 158°F)
Accuracy	±0.21°C from 0° to 50°C (±0.38°F from 32° to 122°F)
Resolution	0.024°C at 25°C (0.04°F at 77°F)
Response Time	7.30 minutes in air moving 1 m/s (2.2 mph)
Relative Humidity	
Range	1% - 90%RH, non-condensing
Accuracy	±2.0% from 20%RH to 80%RH typical to a maximum of ±4.5% including hysteresis at 25˚C (77˚F); below 20%RH and above 80%RH ±6% typical
Hysteresis	±2% RH
Resolution	0.01%RH
Response Time	20 seconds to 90% in air moving of 1 m/s (2.2 mph)
CE compliant	Yes

Note: Temp & RH NIST certification services available for this product. Please visit onsetcomp.com, or call us at 1-800-564-4377.

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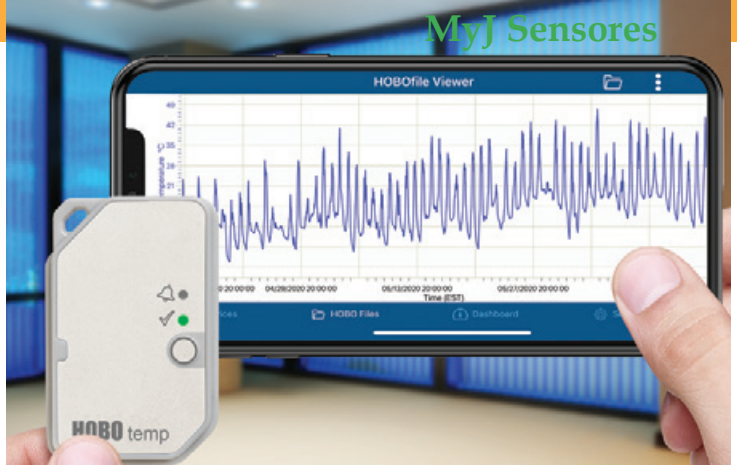
HOBO MX100 Temperature Logger

Splash-proof Bluetooth temperature logger for indoor environments



The HOBO MX100 is a low-cost, splash-proof data logger that measures and transmits temperature data wirelessly to a mobile device or Windows laptop via Bluetooth technology.

Ideal for a range of indoor monitoring applications, this self-contained wireless data logger lets you access temperature data over a 100-foot range. And, it requires no dedicated equipment beyond a mobile device for configuring the logger or reading out data.

Supported Measurements:

Temperature

Key Advantages:

- Set up and offload loggers wirelessly from your mobile device – no internet, cables, or computer required
- Exceptional value for the convenience of a Bluetooth communication logger
- Splash-proof design enables use in damp environments and spray-down applications
- Easy to deploy, offload, and share temperature data using free HOBOconnect app
- Visual alarms on the logger display and mobile app keep you notified of problems
- Set up and start monitoring in minutes!

Minimum System Requirements:

HOBOconnect
See pg 43

Mobile device

For complete information and accessories, please visit: **www.onsetcomp.com**

Part number	MX100
	Temperature Sensor
Range	-30° to 70°C (-22° to 158°F)
Accuracy	±1.0°C from -30° to -5°C (±1.8°F from -22° to 23°F) ±0.5°C from -5° to 50°C (±0.9°F from 23° to 122°F) ±1.0°C from 50° to 70°C (±1.8°F from 122° to 158°F)
Resolution	0.04°C (0.072°F)
Drift	<0.01°C (0.018°F) per year
Response Time	6 minutes typical to 90% in open air moving 1 m/s, unmounted
	Logger
Logger Operating Range	-30° to 70°C (-22° to 158°F)
Transmission Range	Approximately 30.5 m (100 ft) line-of-sight
Logging Rate	1 second to 18 hours
Time Accuracy	± 1 minute per month at 25°C (77°F)
Battery	CR2450 3V lithium, not replaceable
Battery Life	1 year, typical with logging interval of 1 minute and Power Saving Mode disabled; 2 years, typical with logging interval of 1 minute and Power Saving Mode enabled.
Memory	30,000 Measurements
Dimensions	6.9 x 4.5 x 1.1 cm (2.71 x 1.76 x 0.42 inches)
CE compliant	Yes

HOBO MX1102A CO_2/Temp/RH Logger

Bluetooth CO_2, temperature, and relative humidity data logger

Onset's HOBO MX1102 CO_2 logger makes it more convenient than ever to measure and record CO_2 in buildings and other non-condensing environments. It measures CO_2 from 0 – 5,000 parts per million (ppm) – and our free HOBOconnect app allows you to access data right from your mobile device or Windows laptop within a 100-foot range.

The MX1102 also features a USB port so it can be used with a computer running HOBOware Pro graphing & analysis software.

Remotely access your data in Onset's HOBOlink cloud software with the new MX Gateway (see page 14).

Key Advantages:

- Wireless communication via Bluetooth technology
- Six-month battery life at 5-minute CO_2 logging rate
- Easy to deploy & offload using free HOBOconnect App
- Visual and audible high & low alarm thresholds
- Self-calibrating CO_2 sensor technology ensures optimal accuracy at lower maintenance costs

Minimum System Requirements:

HOBOconnect See pg 43

Mobile device

Supported Measurements:

CO_2, Temperature, Relative Humidity, Dew Point

For complete information and accessories, please visit: **www.onsetcomp.com**

Part number	MX1102A
Memory	84,650 Measurements
Logging Rate	1 second to 18 hours
Battery Life	6 months, typical with logging and sampling intervals of 5 minutes or slower; 6 months or less with logging and sampling intervals faster than 5 minutes while logging CO_2, user replaceable, 4AA
Dimensions	7.62 x 12.95 x 4.78 cm (3.0 x 5.1 x 1.88 inches)
	CO_2
Range	0 to 5,000 ppm
Accuracy	±50 ppm ±5% of reading at 25°C (77°F), less than 90% RH non-condensing and 1,013 mbar
Warm-up Time	15 seconds
Calibration	Auto or manual to 400 ppm
Non-linearity	<1% of FS
	Temperature
Range	0° to 50°C (32° to 122°F)
Accuracy	±0.21°C from 0° to 50°C (±0.38°F from 32° to 122°F)
Resolution	0.024°C at 25°C (0.04°F at 77°F)
Response Time	12 minutes to 90% in airflow of 1 m/s (2.2 mph)
	Relative Humidity
Range	1% - 90%RH, non-condensing
Accuracy	±2.0% from 20%RH to 80%RH typical to a maximum of ±4.5% including hysteresis at 25˚C (77˚F); below 20%RH and above 80%RH ±6% typical
Hysteresis	±2%RH
Resolution	0.01%RH
Drift	<1%RH per year typical
Response Time	**CO_2**: 1 minute to 90% in airflow of 1 m/s (2.2 mph), **Temp**: 12 minutes to 90% in airflow of 1 m/s (2.2 mph), **RH**: 1 minute to 90% in airflow of 1 m/s (2.2 mph)
CE compliant	Yes

Note: Temp & RH NIST certification services available for this product. Please visit onsetcomp.com, or call us at 1-800-564-4377.

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HOBO UX120
Plug Load Logger

Measures power and energy consumption of 120V office equipment plug loads

Onset's HOBO Plug Load Logger is a high-accuracy, easy-to-deploy data logger that measures and records the power and energy consumption of 120V plug loads from office equipment, vending machines, and other devices.

The logger provides 0.5% measurement accuracy with a measurement resolution of 1 watt, making it an ideal choice for building audits where detailed energy use data is required. The rugged housing is designed to withstand the rigors of real-world handling, providing reliable performance despite bumps, drops, and use under desks.

Supported Measurements:

AC Current, AC Voltage, Amps, Kilowatt Hours, Power Factor, Volt-Amps, Volts, Watt Hours, Watts

Key Advantages:

- 0.5% measurement accuracy enables more reliable plug load energy use data
- "Meter Mode" provides instant real-time plug load variables
- Large memory enables faster logging intervals for more comprehensive plug load profiles
- Battery back-up ensures logged data remains intact in the event of a power outage or load failure
- LCD display provides visual diagnostics for easy deployment
- Factory calibrated (see user's manual for details)

Minimum System Requirements:

Software
See pg 44

USB cable*

For complete information and accessories, please visit: **www.onsetcomp.com**

Part number	UX120-018
RMS Voltage Accuracy, RMS Current Accuracy, Active Power Accuracy, Power Factor Accuracy	0.5% up to 14 Amp continuous; up to 1.0% over 14 Amp when equipment being monitored is at 100% duty cycle
Power Factor Accuracy	±0.02
Drift	Up to 0.5% typical within 1 year
Memory	4 MB (1.4 million measurements, maximum)
Logging rate	1 second to 18 hours, 12 minutes, 15 seconds
Sampling rate	60 Hz or 16.67 mS single-cycle
Battery life	2 years with line power; 6 months battery only (no line power) with logging rate of 1 minute or greater operating at 25°C (77°F)
Power source	Line-powered with 0.92 m (3 ft) AC power cord or two AAA 1.5 V alkaline batteries, user replaceable
Resolution	See manual for full details
Operating temperature range	Logging: 5° to 40°C (41° to 104°F); 0 to 95% RH (non-condensing)
Dimensions	13.97 x 7.62 x 4.75 cm (5.5 x 3 x 1.87 in.)
CE Compliant	Yes

*USB cable included with software part # BHW-PRO-CD

MyJ Sensores

HOBO UX100 Temp/RH Loggers

Temperature and humidity series data loggers

HOBO UX100 Series data loggers track temperature and relative humidity in indoor environments.

HOBO UX100 Series offers dramatic price/performance advantage over competitive products by delivering higher accuracy, larger measurement capacity, and more LCD display features to make environmental data collection faster and easier than ever. The loggers provide a variety of features to reduce deployment time, and offer new logging modes for recording and displaying more detailed data without extensive post-processing or memory use.

Supported Measurements:

Temperature, Relative Humidity, Dew Point

Key Advantages:

- Large memory capacity
- Flexible mounting options
- Visual high & low alarm thresholds
- Burst and Statistics logging modes
- User-replaceable RH sensors
- Temp, humidity, and thermocouple models available

Minimum System Requirements:

Software
See pg 44

USB cable[1]

For complete information and accessories, please visit: **www.onsetcomp.com**

Part number	**UX100-001** (Temp)	**UX100-003*** (Temp/RH)	**UX100-011A*** (Temp/RH)
Memory	84,650 measurements		
Sampling Rate	1 second to 18 hours, user-selectable		
Battery Life	1 year typical with logging rate of 1 minute and sampling interval of 15 seconds or greater, user-replaceable, CR2032		
Dimensions	3.66 x 5.94 x 1.52 cm (1.44 x 2.34 x 0.6 in.)	3.66 x 8.48 x 1.52 cm (1.44 x 3.34 x 0.6 in.)	
Temperature			
Range	-20° to 70°C (-4° to 158°F)		
Accuracy	±0.21°C from 0° to 50°C (±0.38°F from 32° to 122°F)		
Resolution	0.024°C at 25°C (0.04°F at 77°F)		
Response Time (airflow of 1 m/s (2.2mph))	8 minutes to 90%	4 minutes to 90%	
Relative Humidity			
Range	n/a	15% - 95%RH non-condensing	1% to 95%RH non-condensing
Accuracy	n/a	±3.5% from 25% to 85%	±2.5% from 10% to 90%
Resolution	n/a	0.07% at 25°C (77°F)	0.05%RH
Response Time (airflow of 1 m/s (2.2mph))	n/a	43 seconds to 90%	11 seconds to 90%
CE compliant	Yes		

Part number	**UX100-014M** (Thermocouple)		
Memory	208,076 measurements		
Sampling Rate	1 second to 18 hours, user-selectable		
Battery Life	1 year, typical with logging rate of 1 minute and sampling interval of 15 seconds or greater, user-replaceable, CR2032		
Dimensions	3.66 x 8.48 x 1.52 cm (1.44 x 3.34 x 0.6 in.)		
Operating Range	Logging: -20° to 70°C (-4° to 158°F); 0 to 95% RH (non-condensing)		
Thermocouple (probes sold separately)	**Range**	**Accuracy**	**Resolution**
Type J	-210° to 760°C (-346° to 1,400°F)	±0.6°C (±1.08°F) ± thermocouple probe accuracy	0.03°C (0.06°F)
Type K	-260° to 1,370°C (-436° to 2,498°F)	±0.7°C (±1.26°F) ± thermocouple probe accuracy	0.04°C (0.07°F)
Type T	-260° to 400°C (-436° to 752°F)	±0.6°C (±1.08°F) ± thermocouple probe accuracy	0.02°C (0.03°F)
Type E	-260° to 950°C (-436° to 1,742°F)	±0.6°C (±1.08°F) ± thermocouple probe accuracy	0.03°C at (0.05°F)
Type R	-50° to 1,550°C (-58° to 2,822°F)	±2.2°C (±3.96°F) ± thermocouple probe accuracy	0.08°C (0.15°F)
Type S	-50° to 1,720°C (-58° to 3,128°F)	±2.2°C (±3.96°F) ± thermocouple probe accuracy	0.08°C (0.15°F)
Type B	550° to 1,820°C (1,022° to 3,308°F)	±2.5°C (±4.5°F) ± thermocouple probe accuracy	0.1°C (0.18F)
Type N	-260° to 1,300°C (-436° to 2,372°F)	±1.0°C (±1.8°F) ± thermocouple probe accuracy	0.06°C (0.11°F)

*Note: Temp & RH NIST certification services available for this product.

[1]USB cable included with software part # BHW-PRO-CD

HOBO UX90 Time-of-use Loggers

Time-of-use series loggers for fast, reliable monitoring

The award-winning HOBO UX90 Series is the industry's lowest-cost, most comprehensive family of "time-of-use" data loggers. The toolbox suite includes LCD-display data loggers for measuring motor on/off status, electronic pulses, state changes, and occupancy and light-use patterns.

Leveraging patented technology, HOBO UX90 data loggers streamline energy audits and make field deployment fast and reliable.

Supported Measurements:

Light On/Off, Motor On/Off, Occupancy, State

Key Advantages:

- LCD displays Time On or % On, providing instant feedback
- Auto-calibration & signal-strength indicator ensure proper deployment
- 84k or 346k measurement capacity enables longer deployments
- Flexible logger Start and Stop options
- HOBOware Pro allows for easy setup of hundreds of loggers

Minimum System Requirements:

Software
See pg 44

USB cable*

For complete information and accessories, please visit: **www.onsetcomp.com**

Part number	UX90-001 (State)	UX90-002 (Light On/Off)	UX90-004 (Motor On/Off)	UX90-006 (Occupancy/Light)
Memory	84,000 measurements			
	INTERNAL SENSOR			
Maximum state, event, runtime frequency	1 Hz	--	--	--
Light threshold	--	65 lux	--	
Light type	--	LED, CFL, fluorescent, HID, incandes-cent, natural	--	
AC magnetic field threshold	--	--	> 40 mGauss at 60 Hz	--
Maximum sensor detection range	--	--	--	12 m (39.4 ft)
	EXTERNAL INPUT			
External contact input	solid state closure or logic driven voltage output	--	solid state closure	--
Maximum state, event, runtime frequency	1 Hz	--	1 Hz	--
Maximum Pulse Frequency	50 Hz	--	--	--
Battery life	1 year typical, user replaceable, CR2032			
Operating range	-20° to 70°C (-4° to 158°F); 0-95% RH (non-condensing)			
Dimensions	3.66 x 5.94 x 1.52 cm (1.44 x 2.34 x 0.6 in)		3.66 x 8.48 x 1.52 cm (1.44 x 3.34 x 0.6 in)	3.66 x 8.48 x 2.87 cm (1.44 x 3.34 x 1.13 in)
CE compliant	Yes			

*USB cable included with software part # BHW-PRO-CD
For the most accurate readings, use of Light Pipe UX90-LIGHT-PIPE-1 is recommended to eliminate the effects of ambient light. See page 53 for more details.

HOBO UX120 4-Channel Analog Logger

Flexible, accurate, 4-channel analog logger

The HOBO UX120-006M Analog logger is a high-performance, LCD display data logger for building performance monitoring applications.

This high-accuracy data logger provides a deployment-friendly LCD, and flexible support for up to four external sensors for measuring temperature, current, CO_2, voltage, and more.

Supported Measurements:

Temperature, 4-20mA, AC Current, AC Voltage, Air Velocity, Carbon Dioxide, Compressed Air Flow, DC Current, DC Voltage, Gauge Pressure, Kilowatts, Volatile Organic Compound

Key Advantages:

- 16-bit resolution
- Flexible support for a wide range of external sensors
- LCD confirms logger operation and displays near real-time measurement data
- Provides minimum, maximum, average, and standard deviation logging options
- On-screen alarms notify you when a sensor reading exceeds set thresholds
- Stores 1.9 million measurements for longer deployments between offloads

Minimum System Requirements:

Software See pg 44

USB cable*

Sensor See pg 46

For complete information and accessories, please visit: **www.onsetcomp.com**

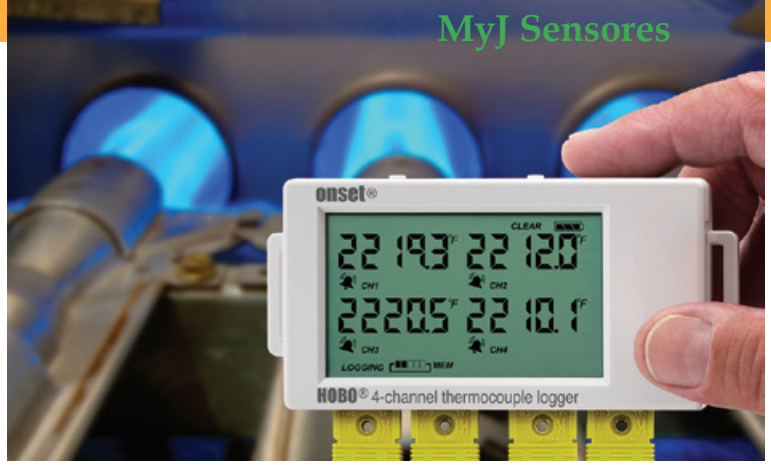
Part number	UX120-006M
Memory	1.9 Million
Logging Rate	1 second to 18 hours, user selectable
Logging Modes	Normal, Burst, Statistics
Memory Modes	Wrap when full or stop when full
Time Accuracy	±1 minute per month at 25°C (77°F)
Battery Life	1 year typical with logging rate of 1 minute and sampling interval of 15 seconds or greater, user replaceable, 2 AAA
Dimensions	10.8 x 5.41 x 2.54 cm (4.25 x 2.13 x 1 in.)
Operating Range	Logging: -20° to 70°C (-4° to 158°F); 0 to 95% RH (non-condensing)
Accuracy	±0.1 mV ±0.1% of reading
CE Compliant	Yes

*USB cable included with software part # BHW-PRO-CD

MyJ Sensores

HOBO UX120 4-Channel Thermocouple Logger

Log type J, K, T, E, R, S, B, or N thermocouples



The HOBO UX120 Thermocouple logger is a 4-channel LCD data logger for measuring and recording temperature in a range of monitoring applications. The logger makes it easy and convenient to record temperatures over a broad range (-260 to 1820°C) and can accept up to four J, K, T, E, R, S, B, or N type probes.

In addition to accepting four thermocouple probes, the logger features an internal temperature sensor for logging ambient temperatures, further extending the application possibilities.

Supported Measurements:

Temperature

Key Advantages:

- LCD display confirms logger operation and battery status
- Near real-time readout of current temperatures as well as minimum, maximum, average, and standard deviation statistics
- On-screen alarms notify you if temperatures exceed high or low thresholds
- Large memory capacity stores 1.6 million measurements
- Start, Stop, and Restart push buttons
- User-upgradeable firmware

Minimum System Requirements:

Software See pg 44

USB cable*

Sensor See pg 49

For complete information and accessories, please visit: **www.onsetcomp.com**

Part number	**UX120-014M**		
	Internal Temperature		
Range	-20° to 70°C (-4° to 158°F)		
Accuracy	±0.21°C from 0° to 50°C (±0.38°F from 32° to 122°F)		
Resolution	0.024°C at 25°C (0.04°F at 77°F)		
Drift	<0.1°C (0.18°F) per year		
	Logger		
Logging Rate	1 second to 18 hours		
Logging Modes	Normal, Burst, Statistics		
Memory Modes	Wrap when full or stop when full		
Time Accuracy	±1 minute per month at 25°C (77°F)		
Battery Life	1 year typical with logging rate of 1 minute and sampling interval of 15 seconds or greater, user replaceable, 2 AAA		
Dimensions	10.8 x 5.41 x 2.54 cm (4.25 x 2.13 x 1 in.)		
Operating Range	Logging: -20° to 70°C (-4° to 158°F); 0 to 95% RH (non-condensing)		
CE Compliant	Yes		
Thermocouple (probes sold separately)	**Range**	**Accuracy**	**Resolution**
Type J	-210° to 760°C (-346° to 1,400°F)	±0.6°C (±1.08°F) ± thermocouple probe accuracy	0.03°C (0.06°F)
Type K	-260° to 1,370°C (-436° to 2,498°F)	±0.7°C (±1.26°F) ± thermocouple probe accuracy	0.04°C (0.07°F)
Type T	-260° to 400°C (-436° to 752°F)	±0.6°C (±1.08°F) ± thermocouple probe accuracy	0.02°C (0.03°F)
Type E	-260° to 950°C (-436° to 1,742°F)	±0.6°C (±1.08°F) ± thermocouple probe accuracy	0.03°C at (0.05°F)
Type R	-50° to 1,550°C (-58° to 2,822°F)	±2.2°C (±3.96°F) ± thermocouple probe accuracy	0.08°C (0.15°F)
Type S	-50° to 1,720°C (-58° to 3,128°F)	±2.2°C (±3.96°F) ± thermocouple probe accuracy	0.08°C (0.15°F)
Type B	550° to 1,820°C (1,022° to 3,308°F)	±2.5°C (±4.5°F) ± thermocouple probe accuracy	0.1°C (0.18F)
Type N	-260° to 1,300°C (-436° to 2,372°F)	±1.0°C (±1.8°F) ± thermocouple probe accuracy	0.06°C (0.11°F)

*USB cable included with software part # BHW-PRO-CD

Note: for a single thermocouple input logger, please see page 7

HOBO U12 Stainless Temp Loggers

High-accuracy temperature monitoring for challenging process conditions

HOBO U12 Stainless Temperature data loggers are ideal for food, pharmaceutical, autoclave, and other applications where high-accuracy temperature data is critical. They can withstand process conditions from pasteurization to flash freezing and washdown.

Supported Measurements:

Temperature

Key Advantages:

- High-accuracy, extended temperature range
- Suitable for high pressure applications to 2200 psi
- Fast readout via direct USB interface

Minimum System Requirements:

Software
See pg 44

USB cable*

For complete information and accessories, please visit: **www.onsetcomp.com**

Part number	U12-015	U12-015-02
Memory	43,000 measurements	
Battery life	3 year typical, factory replaceable	
Response time	10 minutes (to 90% in airflow of 1 m/s) 3.5 minutes (to 90% in water)	2.25 minutes (to 90% in airflow of 1 m/s) 20 seconds (to 90% in water)
Operating range	Logging: -40° to 125°C (-40° to 257°F) Launch/readout: 0° to 50°C (32° to 122°F), per USB specification	
Range	-40° to 125°C (-40° to 257°F)	
Accuracy	± 0.25°C from 0° to 50°C (± 0.45°F from 32° to 122°F)	Accuracy: ± 0.25°C from 0° to 50°C (± 0.45°F from 32° to 122°F)
Resolution	0.03°C at 25°C (0.05°F at 77°F)	0.03°C at 25°C (0.05°F at 77°F)
Dimensions	17.5 x 101.6 mm (0.69 x 4.00 in)	Logger: 17.5 x 101.6 mm (0.69 x 4.00 in) Probe: 4 x 124 mm (0.16 x 4.90 in)
CE compliant	Yes	

*USB cable included with software part # BHW-PRO-CD

HOBO RX3000 Remote Monitoring Systems

Real-time access to data from any web browser

The HOBO RX3000 is a research-grade data logging station that combines greater measurement flexibility and an on-board LCD display in a rugged, easy-to-deploy package.

Supported Measurements:

Indoor Environmental: Temperature, Relative Humidity, Dew Point, CO_2, Air Velocity, Volatile Organic Compound

Energy/Power: 4-20mA, AC Current, AC Voltage, Amp Hour, Amps, Compressed Air Flow, DC Current, DC Voltage, Differential, Pressure, Gauge Pressure, kW, kWh, Power Factor, Pulse Input, Volt-Amp Reactive, Volt-Amp Reactive Hour, Volt-Amps, Volts, Water Flow, Watt Hours, Watts

Key Advantages:

- Data access via cloud
- Plug-and-play operation
- Flexible support for a broad range of sensors
- LCD display for easy field deployment
- Alarm notifications via text, email
- Rugged double-weatherproof enclosure

Minimum System Requirements:

Software
See pg 44

HOBOlink Data Plan*

Power source[1]

Sensor
See pg 46

For complete information and accessories, please visit: **www.onsetcomp.com**

Part number	RX3004-00-01 (4G)
Smart Sensor Connectors	10 (up to 15 data channels; some sensors use more than one data channel)
Maximum Number of Sensors	18 (when 2 Analog Modules are configured in the station)
Smart Sensor Cable Length	100 m (328 ft) maximum
Module Slots	2 (for optional Analog or Relay module; see manual for detailed module specification)
Logging Rate	1 minute to 18 hours
Memory	32 MB, 2 million measurements
Alarm Notification Latency	Logging interval plus 2-4 minutes, typical
Environmental Rating	Weatherproof enclosure, NEMA 4X
Operating Range	-40° to 60°C (-40° to 140°F)
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)
Battery 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
Size	18.6 x 18.1 x 11.8 cm (7.3 x 7.1 x 4.7 in.)
Weight	2.2 kg (4.85 lb)
Communications	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
CE Compliant	Yes

*Requires paid Data Plan. For more information, please visit www.onsetcomp.com/products/software/hobolink
[1]AC power adapter or solar panel required. See page 51. For more details, please visit onsetcomp.com, or call us at 1-800-564-4377.

HOBO H22 Energy Data Logger

Multi-channel energy data logging system

The HOBO Energy data logger is a modular, multi-channel, reconfigurable data logging system for energy and industrial monitoring applications.

The 15-channel system enables energy and facility management professionals to quickly and easily solve a broad range of monitoring applications without having to purchase a toolbox full of data loggers.

Key Advantages:

- Records up to 15 channels
- Provides 12v excitation for third-party sensors
- Pre-configured Smart Sensors for fast setup
- Signal conditioning modules retain configurations until you change them, providing plug-and-play convenience for commonly used sensors
- Power options include battery operation or AC power adapter

Supported Measurements:

4-20mA, AC Current, AC Voltage, Air Velocity, Amp Hour, Carbon Dioxide, Compressed Air Flow, DC Current, DC Voltage, Differential Pressure, Gauge Pressure, Kilowatt Hours, Kilowatts, Power Factor, Pulse Input, Volatile Organic Compound, Volt-Amp Reactive, Volt-Amp Reactive Hour, Volt-Amps, Water Flow, Watt Hours, Watts

Minimum System Requirements:

Software
See pg 44

USB cable*

Sensor
See pg 46

For complete information and accessories, please visit: **www.onsetcomp.com**

Part number	H22-001
Memory	512K nonvolatile flash data storage
Operating Range	-20° to 50°C (-4° to 122°F) with alkaline batteries -40° to 60°C (-40° to 140°F) with lithium batteries
Sensor Inputs	6 RJ-12 Smart Sensor jacks plus 3 FlexSmart module slots
Communication	RS-232 via 3.5 mm serial port*
Logging Interval	1 second to 18 hours, user-specified interval
Sensor Excitation	12 V DC at 200 mA total, with user-programmable warm up time on a per-channel basis
Battery Life	1 year typical
Battery Type	8 standard AA alkaline batteries (included)
External Power	Supports optional 13.6 V DC regulated AC Wall Adapter Connector
Time Accuracy	0 to 2 seconds for the first data point and ± 5 seconds per week at 25°C (77°F)
Dimensions	15.6 cm x 8.4 cm x 4.6 cm (6.13 in x 3.31 in x 1.81 in)
CE Compliant	Yes

*USB to Serial interface cable, part #CABLE-PC-3.5, see page 51

MyJ Sensores

MX Gateway

Remote access to your data and cloud storage!

The new MX Gateway automatically transmits data from your HOBO MX Bluetooth data loggers, right to the cloud! Now you can remotely manage your data, set alarm notifications, and create custom dashboards, all using Onset's HOBOlink cloud software. Saves time by reducing multiple site visits.

Key Advantages:

- Near real-time measurements to your HOBOlink dashboard
- Alarm notifications via email or SMS text messages
- Unlimited cloud storage via HOBOlink.com
- Transmits data from MX Series loggers within 100-foot range
- Wi-Fi & Ethernet connectivity

Minimum System Requirements:

Mobile device

HOBOlink Data Plan*

MX Data Logger

Cloud Access to Your Data

The MX Gateway works with Onset's HOBOlink software, giving you powerful web-based access to your data.

- View and analyze data in HOBOlink from any HOBO MX Series data logger connected to the MX Gateway
- Easily configure alarms such as out-of-range measurements, low-battery warnings, and more
- Create custom dashboards for data visualization
- Export data or set automated data delivery

For complete information and accessories, please visit: **www.onsetcomp.com**

Part number	MXGTW1
Transmission Range	Approximately 30.5 m (100 ft) line-of-sight
Wireless Data Standard	Bluetooth 5.0 (BLE)
Connectivity	WiFi 802.11a/b/g/n 2.4/5 GHz or 10/100 Ethernet
Power Source	AC adapter or Power over Ethernet (PoE)
Dimensions	12.4 x 12.4 x 2.87 cm (4.88 x 4.88 x 1.13 inches)
Weight	137 g (4.83 oz)
CE compliant	Yes

*Requires paid Data Plan. For more information, please visit www.onsetcomp.com/products/software/hobolink

HOBO MX2300 Series Temperature, RH, and Soil Moisture Loggers

Bluetooth weatherproof loggers for outdoor temperature, humidity, and soil moisture measurements

With Onset's HOBO MX2300 Series Temp/RH and Soil Moisture data loggers, you can set up and offload loggers wirelessly to your mobile device or Windows computer - so field data collection is easier than ever!

Remotely access your data in Onset's HOBOlink cloud software with the MX Gateway (see page 14).

Key Advantages:

- Convenient wireless setup and download via Bluetooth
- Compact, weatherproof housing with built-in mounting
- Current data in real time with Onset's free HOBOconnect app
- Ability to easily share downloaded data from your mobile device or Windows laptop

Supported Measurements:

Temperature, Relative Humidity, Soil Moisture, Soil Temperature, Dew Point

Minimum System Requirements:

HOBOconnect See pg 43

Mobile device

Choice of Models

The HOBO MX2300 Series offers seven models covering a broad range of outdoor monitoring applications, from agricultural research to forest ecology studies. The series includes internal sensor models that are highly durable and easy to deploy, and external probe models that are well-suited for monitoring conditions in soils, water, walls, and more.

For complete information and accessories, please visit: **www.onsetcomp.com**

Part number	MX2301A (Internal Temp/RH)	MX2302A (External Temp/RH)	MX2303 (2x External Temp)	MX2304 (External Temp)	MX2305 (Internal Temp)
	Temperature Sensor				
Range	-40 to 70°C (-40 to 158°F)		-40 to 100°C (-40 to 212°F) with tip and cable immersion in fresh water up to 50°C (122°F) for one year		-40 to 70°C (-40 to 158°F)
Accuracy	±0.25°C from -40 to 0°C (±0.45 from -40 to 32°F) ±0.2°C from 0 to 70°C (±0.36 from 32 to 158°F) ±0.25°C from 70 to 100°C (±0.45 from 158 to 212°F), MX2303 and MX2304 only				
Resolution	0.04°C (0.072°F)				
Drift	<0.01°C (0.018°F) per year				
	Relative Humidity Sensor (MX2301, MX2302 only)				
Range	0 to 100% RH, -40° to 70°C (-40° to 158°F); exposure to conditions below -20°C (-4°F) or above 95% RH may temporarily increase the maximum RH sensor error by an additional 1%				
Accuracy	±2.5% from 10% to 90% (typical) to a maximum of ±3.5% including hysteresis at 25°C (77°F); below 10% RH and above 90% RH: ±5% typical				
Resolution	0.01%				
Drift	<1% per year typical				
	Logger				
Memory	128 KB (63,488 measurements, maximum)		128 KB (84,650 measurements, maximum)		
Operating Range	-40° to 70°C (-40° to 158°F), IP67 and NEMA 6				
Transmission Range	Approximately 30.5 m (100 ft) line-of-sight				
Logging Rate	1 second to 18 hours				
Dimensions	Logger housing: 10.8 x 5.08 x 2.24 cm (4.25 x 2.0 x 0.88 in.)				
Mobile Device Compatibility	iOS 13+, Android 10.0+, Windows 10, and Bluetooth 4.X and up				
CE compliant	Yes				

Temperature and Relative Humidity

HOBO MX2305
Temperature

HOBO MX2301A
Temperature/RH

HOBO MX2304
External Temperature

HOBO MX2302A
External Temperature/RH

HOBO MX2303
External Temperature x2

Soil Moisture and Soil Temperature

These two models feature the robust and accurate TEROS 10 soil moisture sensor with stainless-steel probes, as well as calibration options for both mineral soils and soilless media.

HOBO MX2306
Soil Moisture

HOBO MX2307
Soil Moisture & Temperature

For complete information and accessories, please visit: **www.onsetcomp.com**

Part number	MX2306 (Soil moisture)	MX2307 (Soil Moisture/Temp)
	Soil Moisture: Volumetric Water Content (VWC)	
Measurement Range	0.00 to 0.64 m^3/m^3 in mineral soils 0.00 to 0.70 m^3/m^3 in soilless media	
Accuracy	±0.031 m^3/m^3 typical in mineral soils that have solution EC <8 dS/m ±0.051 m^3/m^3 typical in soilless media	
Resolution	0.001 m^3/m^3	
Dielectric Measurement Frequency	70 MHz	
Range	**Temperature Sensor (MX2307)**	
Range	-40 to 100°C (-40 to 212°F), with tip and cable immersion in fresh water up to 50°C (122°F) for one year	
Accuracy	±0.25°C from -40 to 0°C (±0.45 from -40 to 32°F) ±0.2°C from 0 to 70°C (±0.36 from 32 to 158°F) ±0.25°C from 70 to 100°C (±0.45 from 158 to 212°F)	
Resolution	0.04°C (0.072°F)	
Drift	<0.01°C per year (0.018°F per year)	
	Logger	
Memory	110,000 measurements, maximum (472 kB)	
Operating Range	-25° to 60°C (-13° to 140°F)	
Transmission Range	Approximately 30.5 m (100 ft) line-of-sight	
Logging Rate	1 second to 18 hours	
Dimensions	Logger housing: 10.8 x 5.08 x 2.24 cm (4.25 x 2.0 x 0.88 in.)	
Device Compatibility	iOS 13+, Android 10.0+, Windows 10, and Bluetooth 4.X and up	
Cable Length	2 meters	
CE compliant	Yes	

HOBO RX2100 MicroRX Station

Easy to deploy, affordable web-based monitoring

The web-enabled HOBO MicroRX station is an easy-to-deploy, low-cost cellular field monitoring solution. With a compact size and rugged design, the MicroRX Station offers long-term, reliable environmental monitoring. Configurable station-side alarms provide immediate notification of critical conditions, and Onset's HOBOlink cloud platform makes it easy to view, access, and share your data.

Key Advantages:

- Optional integrated solar panel for easy deployment
- Battery-powered option for covered or shaded deployment locations
- Wide range of research-grade plug-and-play sensors
- Optional water level sensor input, and water flow conversion
- Station-side alarms include new accumulated rainfall alarm
- Real-time monitoring with up to 10-minute connection rates via 4G cellular

Supported Measurements:

Temperature, Relative Humidity, Dew Point, Solar Radiation, PAR, Rainfall, Water Level, Flow, Wind Speed, Wind Direction, Soil Moisture, Barometric Pressure, Leaf Wetness, 4-20mA, Voltage Input, Pulse Input

Minimum System Requirements:

HOBOlink Data Plan*

Sensor* See pg 46

If you would like to have this station with a water level input, see page 29.

For complete information and accessories, please visit: **www.onsetcomp.com**

Part number	RX2101	RX2102
Operating Range	-40° to 60°C (-40° to 140°F)	-20° to 60°C (-4° to 140°F)
Smart Sensor Connectors	5	
Smart Sensor Network Cable Length	100 m (328 ft) maximum	
Logging Rate	1 minute to 18 hours	
Alarm Notification Latency	Logging interval plus 2–4 minutes, typical	
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	
Memory	16 MB, 1 million measurements, continuous logging	
Battery Type	6 AA 1.5 V lithium batteries or optional AC power adapter (P-AC-1)	Integrated 1.7 watt solar panel and NiMH rechargeable battery pack
Battery Life	Daily connections: 1 year with 1 minute logging Hourly connections and 1 minute logging: 3 months	Typical 3–5 years when operated in the temperature range -20° to 40°C (-4° to 104°F)
Smart Sensor Data Channels	Maximum of 15	
Enclosure Access	Hinged door secured by two latches with eyelets for use with user-supplied padlocks	
Materials	Outer enclosure: Polycarbonate/PBT blend with brass inserts; Interior: Polycarbonate/PBT; Gasket: Silicone foam. Cable channel: Santoprene™ TPE	
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)	
Environmental Rating	Weatherproof enclosure, NEMA 4X and IP66	
CE Compliant	Yes	

*Requires paid Data Plan. For more information, please visit www.onsetcomp.com/products/software/hobolink

HOBO Pro v2 Temp/RH Loggers

Weatherproof loggers for outdoor temperature and humidity measurements

HOBO Pro v2 data loggers are weatherproof loggers that provide high-accuracy temperature and relative humidity measurements in a wide range of outdoor environments.

Supported Measurements:

Temperature, Relative Humidity, Dew Point

Key Advantages:

- Weatherproof housing for use in outdoor or condensing environments
- High-accuracy measurements
- Replaceable RH sensor provides superior recovery from condensing conditions
- Small-diameter, external sensor versions for measurements in tight spaces
- Optic USB interface for fast and reliable download

Minimum System Requirements:

Software See pg 44
Base Station* See pg 54
Coupler[1]

For complete information and accessories, please visit: **www.onsetcomp.com**

Part number	U23-003 (2x External Temp)	U23-004 (Temp/External Temp)
Memory	42,000 measurements	
Sampling rate	1 second to 18 hours, fixed rate or multiple logging intervals	
Battery life	3 years typical, user-replaceable,1/2 AA lithium	
	Internal Temperature	
Measurement range	-40° to 70°C (-40° to 158°F)	
Accuracy	± 0.21°C over 0° to 50°C (± 0.38°F over 32° to 122°F)	
Resolution (12-bit)	± 0.02°@ 25°C (± 0.04°@ 77°F)	
Stability (drift)	< 0.1°C (0.18°F) per year	
	Relative Humidity (U23-001 & U23-002 only)	
Measurement range	0 to 100% RH, -40° to 70°C (-40° to 158°F)	
Accuracy	±2.5% from 10%RH to 90%RH typical to a maximum of ±3.5% including hysteresis at 25˚C (77˚F); below 10%RH and above 90%RH ±5% typical	
Resolution (12-bit)	0.05%RH	
	External Temperature	
Measurement Range	U23-002: -40° to 70°C (-40° to 158°F), U23-003 & U23-004: -40° to 100°C (-40° to 212°F) with sensor tip and cable immersion in fresh water up to 50°C (122°F) for one year	
Accuracy	± 0.21°C from 0° to 50°C (± 0.36°F from 32° to 122°F)	
Resolution	0.02°@ 25°C (0.04°@ 77°F)	
Dimensions	Housing measures 10.2 × 3.8 cm (4.0 × 1.5 in.)	
CE compliant	Yes	

*HOBO Base Station or HOBO Waterproof Shuttle required. See page 54 for more details.
[1]Coupler included with HOBO Base Station or HOBO Waterproof Shuttle.

MyJ Sensores

HOBO RG3 Rain Gauge

Rainfall data logging system

The HOBO RG3 is a self-contained device that includes an integrated data logger with a high-quality tipping-bucket rain gauge. The RG3's logger has a built-in temperature sensor includes a cable so it can be used with an optional radiation shield for logging air temperature.

Supported Measurements:

Rainfall, Temperature

Key Advantages:

- Aluminum housing and 15.4 cm (6.06 in) collector ring
- Field-proven design
- Logger can used with an optional radiation shield for logging air temperature
- Three mounting feet to use on flat, level surfaces
- Side bracket for mast mounting (hose clamps included)
- Self-emptying for continuous rainfall logging

Minimum System Requirements:

Software
See pg 44

Base Station*
See pg 54

Coupler[1]

For complete information and accessories, please visit: **www.onsetcomp.com**

Part numbers	RG3-M, RG3
Memory	Events only: 16K to 23K events Events and temperature: 25K to 30K data points
Measurement range	Up to 320 cm (RG3-M), up to 160 in (RG3)
Resolution	0.2 mm (RG3-M), 0.01 in (RG3)
Time stamp resolution	1 second
Maximum Rainfall rate	12.7 cm (5 in) per hour
Battery life	1 year typical, user-replaceable, CR2032
	Temperature
Measurement range	-20° to 70°C (-4° to 158°F)
Accuracy	± 0.53°C from 0° to 50°C (± 0.95°F from 32° to 122°F); a solar radiation shield is required for temperature measurements in sunlight
Resolution	0.14°C at 25°C (0.25°F at 77°F)
Sample rate	1 second to 18 hours, user-selectable
Dimensions	15.2 cm diameter x 25.7 cm high (6 x 10 in) 1.2 kg (2.5 lbs)
CE compliant	Yes

*HOBO Base Station or HOBO Waterproof Shuttle required. See page 54 for more details.
[1]Coupler included with HOBO Base Station or HOBO Waterproof Shuttle.

HOBO Pendant® Event

Measures temperature, events, and rainfall

The HOBO Pendant Event data logger is ideal for rainfall logging and connects to most standard tipping-bucket rain gauges to determine rainfall rates, times, and duration.

Supported Measurements:

Temperature, Event, Rainfall

Key Advantages:

- Records tips or momentary contact closures and temperature
- Event-based data storage provides detailed data and efficient memory usage
- Stores over 16,000 tips (160 inches of rainfall with a 0.01-inch rain gauge)
- Includes scaling to inches, millimeters, or other units

Minimum System Requirements:

Software
See pg 44

Base Station*
See pg 54

Coupler[1]

For complete information and accessories, please visit: **www.onsetcomp.com**

Part number	UA-003-64
Memory	Events only: 16K to 23K events Events and temperature: 25K to 30K data points
Battery life	1 year typical, user-replaceable CR2032
	Rain Gauge Tips
External Event type:	Relay contact closure or rain gauge “tips”
Connection	2 m (6 ft) cable with 2-wire input
Maximum input frequency	1 Hz (1 pulse per second)
	Temperature
Measurement range	-20° to 70°C (-4° to 158°F)
Accuracy	± 0.53°C from 0° to 50°C (± 0.95°F from 32° to 122°F); a solar radiation shield is required for temperature measurements in sunlight
Resolution	0.14°C at 25°C (0.25°F at 77°F)
Response time	Airflow of 2 m/s (4.4 mph): 10 minutes, typical to 90%
Sample rate	1 second to 18 hours, user-selectable
Dimensions	7.1 x 3.3 x 2.3 cm (2.8 x 1.3 x 0.9 in) Cable 1.8 m (6 ft)
CE compliant	Yes

*HOBO Base Station or HOBO Waterproof Shuttle required. See page 54 for more details.
[1]Coupler included with HOBO Base Station or HOBO Waterproof Shuttle.

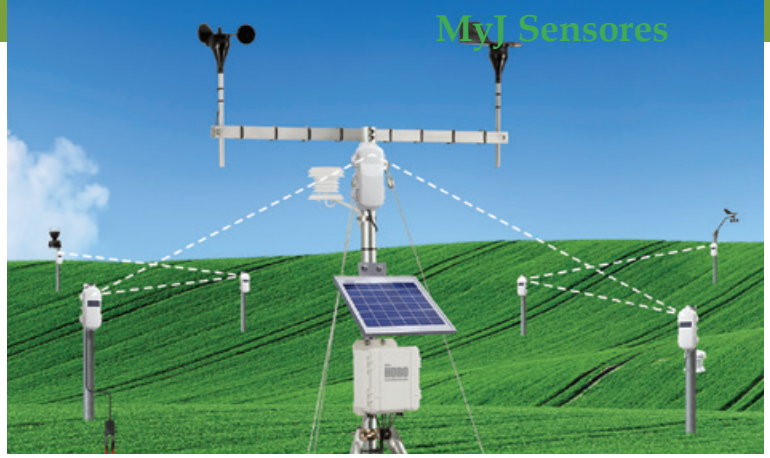
MyJ Sensores

HOBOnet®
Field Monitoring System

Research-grade field monitoring with wireless and plug-and-play convenience

HOBOnet is a cost-effective, scalable solution for web-enabled monitoring of field conditions for applications such as crop management, research, and greenhouse operations.

Onset's wireless sensors are ready to deploy and easily link to the network, and data is accessed through the HOBOlink, Onset's innovative cloud software platform.



Key Advantages:

- Lowest cost-per-measurement point
- Wide coverage with wireless mesh technology
- Scalable, with up to 50 wireless sensors streaming back to a central weather station
- Remote access to data and current conditions with a customizable dashboard for analysis
- Alarm notifications for user-set thresholds

Supported Measurements:

Temperature, Relative Humidity, Dew Point, Solar Radiation, PAR, Rainfall, Wind Speed, Wind Direction, Soil Moisture, Barometric Pressure, Evapotranspiration, Leaf Wetness, Pulse Input, Water Flow, Water Level

Minimum System Requirements:

Software See pg 43
HOBOlink Data Plan*
Power source[1]
Sensor See pg 46

Powerful Visualization in Real Time

More powerful than ever, Onset's HOBOlink cloud software makes it easy to view your data and manage your HOBOnet Field Monitoring System remotely. With customizable dashboards and Google Maps integration, your field monitoring data is more accessible and more meaningful.

Protect Your Crops and Reduce Costs

The HOBOnet Field Monitoring System helps growers reduce water use, save costs, improve crop quality, and protect against climate hazards such as frost and heat.

Monitor Greenhouse Conditions with Real-Time Notifications

The HOBOnet Field Monitoring System provides data for crop and irrigation management, and helps growers protect plants with real-time notifications in case conditions exceed user-set thresholds.

*Requires paid Data Plan. For more information, please visit www.onsetcomp.com/products/software/hobolink
[1]AC power adapter or solar panel required. See page 53.

HOBO RX2100

- Integrated solar panel or battery power
- 4G cellular station
- 16 MB memory
- Inputs: 5 (wired) + 50 (wireless)
  (Learn more on page 17)

HOBO RX3000

- Low-cost Data Plans available
- 4G cellualar station
- 32 MB memory
- Inputs: 10 (wired) + 50 (wireless)
  (Learn more on page 23)

Wireless Sensors

- Connect up to 50 wireless sensors
- 900 MHz wireless mesh technology
- 600m line-of-sight range
- No additional data fee charges per sensor

Plug-and-Play Sensors

- Connect up to 10 plug-and-play Smart Sensors
- Reliable, research-grade performance
- No need for programming or complicated wiring

For complete information and accessories, please visit: **www.onsetcomp.com**

Wireless Sensors	
Operating Temperature Range	-25° to 60°C (-13° to 140°F) with rechargeable batteries -40 to 70°C (-40 to 158°F) with lithium batteries
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	RXW-TMB-900: 904–924 MHz RXW-TMB-868: 866.5 MHz RXW-TMB-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 RX Wireless Sensor Network
Battery Type/Power Source	Two AA 1.2 V 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)
Battery Life	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
Memory	16 MB
Dimensions	Sensor: 5.1 x 33 mm (0.2 x 1.3 inches) Cable length: 5 m (16.4 ft) Mote: 16.2 x 8.59 x 4.14 cm (6.38 x 3.38 x 1.63 inches)
Weight	Mote: 223 g (7.87 oz)
Materials	Mote: PCPBT, silicone rubber seal
Environmental Rating	Mote: IP67, NEMA 6
CE Compliant	Yes

HOBO RX3000 Remote Weather Station

Research-grade weather monitoring with plug-and-play convenience

The HOBO RX3000 is a research-grade data logging weather station that combines greater measurement flexibility and an on-board LCD display in a rugged, easy-to-deploy package.

Supported Measurements:

Temperature, Relative Humidity, Dew Point, Solar Radiation, PAR, Rainfall, Wind Speed, Wind Direction, Soil Moisture, Barometric Pressure, Leaf Wetness, 4-20mA, Voltage Input, Pulse Input

Key Advantages:

- Data access via HOBOlink cloud software
- Configure & check on your RX3000 from mobile devices
- Plug-and-play operation
- Flexible support for a broad range of sensors
- LCD display for easy field deployment
- Alarm notifications via text, email
- Rugged double-weatherproof enclosure

Minimum System Requirements:

Software See pg 44
HOBOlink Data Plan*
Power source[1]
Sensor See pg 46

For complete information and accessories, please visit: **www.onsetcomp.com**

Part number	RX3004-00-01 (4G)
Smart Sensor Connectors	10 (up to 15 data channels as some sensors use more than one data channel)
Maximum Number of Sensors	65 (including 50 wireless sensors)
Smart Sensor Cable Length	100 m (328 ft) maximum
Module Slots	2 (for optional Analog, Relay, or RX Manager; see manual for detailed module specification)
Fastest Logging Rate	1 minute
Memory	32 MB, 2 million measurements
Alarm notification latency	Logging interval plus 2-4 minutes, typical
Environmental Rating	Weatherproof enclosure, NEMA 4X
Operating Range	-40° to 60°C (-40° to 140°F)
Power	Onset solar panel, AC charger or user-provided external power supply is required
Battery Life	Typical 3-5 years; 4 Volt, 10 AHr, rechargeable sealed lead-acid
Size	18.6 x 18.1 x 11.8 cm (7.3 x 7.1 x 4.7 in.)
Weight	2.2 kg (4.85 lb)
Communications	4G LTE with 3G and 2G fallback
CE Compliant	Yes

*Requires paid Data Plan. For more information, please visit www.onsetcomp.com/products/software/hobolink

[1]AC power adapter or solar panel required. See page 53.

HOBO USB Micro Station

Multi-channel weatherproof station for monitoring outdoor environmental conditions

Rugged and compact, the redesigned HOBO USB Micro Station is a weatherproof data logger for multi-channel monitoring of microclimates. This battery-powered station accepts up to five plug-and-play Smart Sensors and has a hinged door to make sensor installation simple and quick. The Micro Station is equipped with a built-in USB port for fast, efficient data readout to a computer, and integrated mounting tabs for easy installation.

Key Advantages:

- Compact size for easy deployment
- Weatherproof IP66 enclosure for harsh environments
- Direct USB offload – no need for an adapter cable
- Includes five plug-and-play Smart Sensor inputs
- Hinged door and integrated mounting tabs
- Runs for up to a year on four standard AA batteries
- Compatible with HOBOware and HOBOware Pro software for logger setup, and graphing & analysis

Supported Measurements:

4-20mA, Amp Hour, Barometric Pressure, DC Voltage, Kilowatt Hours, Leaf Wetness, Light Intensity, Power Factor, Pulse Input, Rainfall, Relative Humidity, Soil Moisture, Temperature, Volt-Amp Reactive, Volt-Amp Reactive hour, Volt-Amps, Water Flow, Watt Hours, Watts, Wind

Minimum System Requirements:

Software See pg 44 | USB cable* | Sensor* See pg 46

For complete information and accessories, please visit: **www.onsetcomp.com**

Part number	H21-USB
Operating Range	-20° to 50°C (-4° to 122°F) with alkaline batteries -40 to 70°C (-40 to 158°F) with lithium batteries
Smart Sensor Connectors	5
Smart Sensor Network Cable Length	100 m (328 ft) maximum
Logging Interval	1 second to 18 hours
Start Modes	Immediate, at interval, push button, or delayed start
Memory Modes	Stop when full or wrap when full
Memory	512 KB nonvolatile flash data storage
Time Accuracy	0 to 2 seconds for the first data point and ±5 seconds per week at 25°C (77°F)
Battery Type	Four AA 1.5 V alkaline batteries for operating conditions of -20° to 50°C (-4° to 122°F); four AA 1.5 V lithium batteries for operating conditions of -40 to 70°C (-40 to 158°F)
Battery Life	1 year, typical use (up to five sensors with 1 minute or greater logging interval)
Communication Type	USB 2.0 interface
Full Memory Download Time	4 minutes
Enclosure Access	Hinged door secured by one latch with eyelet for use with user-supplied padlock
Materials	Outer enclosure: Polycarbonate/PBT blend with stainless steel hinge pins; Gasket: Silicone foam; Cable channel: EPDM rubber
Dimensions	17.04 x 11.94 x 4.47 cm (6.71 x 4.70 x 1.76 in.) Padlock hole diameter: 0.58 cm (0.23 in.)
Weight	414 g (14.6 oz)
Environmental Rating	Weatherproof enclosure, NEMA 4X and IP66
CE Compliant	Yes

*USB cable included with software part # BHW-PRO-CD

HOBO U30-NRC Weather Station

Research-grade data logging weather station

This rugged weather station is one of Onset's most durable outdoor environmental monitoring solutions. Users can easily configure the HOBO U30-NRC Weather Station to fit their application needs. Use up to 15 channels to collect environmental data and then upload to HOBOware Pro software for expert analysis.

Supported Measurements:

Barometric Pressure, Leaf Wetness, Light Intensity, PAR, Pulse Input, Rainfall, Relative Humidity, Soil Moisture, Solar Radiation, Temperature, Wind Speed & Direction, 4-20mA, Voltage Input

Key Advantages:

- Rugged double-weatherproof, tamper-proof enclosure
- Setup is quick and easy with plug-and-play sensors
- Fast data offload via USB
- Optional analog inputs with sensor excitation
- Includes relay that can be activated on user-defined alarm conditions

Minimum System Requirements:

Software See pg 44 | Power source[1] | Sensor* See pg 46

For complete information and accessories, please visit: **www.onsetcomp.com**

Part number	U30-NRC
Smart-Sensor Inputs	5 or 10
Data Channels	Maximum of 15 (some sensors use more than one data channel)
Smart Sensor Cable Length	100m (323ft) maximum
Alarm Relay	Can be activated, deactivated or pulsed on user-defined sensor alarms.
Logging Interval	1 minute to 18 hours, user-specified
Data Storage Memory	512K bytes local storage in non-volatile flash memory
Environmental Rating	Weatherproof enclosure, NEMA 4x
Operating Range	-40 to 60ºC (-40 to 140ºF) see battery life
Power	An Onset solar panel (3w, or 6w) or AC adapter is required
Battery Life	3-5 years, 4 volt 10 AHr rechargeable sealed lead acid
Dimensions	17.8 x 11.7 x 19.3 cm (7.0 x 4.6 x 7.6 in)
Weight	2kg (4lbs 10oz)
Local Communication	USB
CE Compliant	Yes

[1]AC power adapter or solar panel required. See page 53.

HOBO Pendant® G

Measures acceleration, tilt, and motion

Measure 3-dimensional motion, such as sports activity or medical therapy compliance, with the HOBO Pendant G data logger. With this logger, users can measure acceleration and angular displacement in 1, 2 or 3 axes. Use this data to monitor activity and improve performance.

Supported Measurements:

Acceleration, Tilt, Motion

Key Advantages:

- Low-cost acceleration and tilt measurement
- Waterproof housing for wet or underwater use
- Data readout in less than 30 seconds via fast Optic USB interface

Minimum System Requirements:

Software
See pg 44

Base Station*
See pg 54

Coupler[1]

For complete information and accessories, please visit: **www.onsetcomp.com**

Part number	UA-004-64
Memory	64K bytes (approximately 21.8K combined x-, y-, and z-axis readings or events)
Battery life	1 year typical, user-replaceable, CR2032
Resolution	0.025 g; 0.245 m/s² (0.8 ft/s²)
Logging interval	1 second to 18 hours, 12minutes, 15 seconds in Normal mode 0.01 seconds (100 Hz) to 0.99 seconds (1.01 Hz) in Fast mode
Time accuracy	±1 minute per month at 25°C (77°F)
Operating range	In water/ice: -20° to 50°C (-4° to 122°F) In air: -20° to 70°C (-4° to 158°F)
Water depth rating	30 m from -20° to 20°C (100 ft from -4° to 68°F)
Dimensions	5.8 x 3.3 x 2.3 cm (2.3 x 1.3 x 0.9 in)
CE compliant	Yes

*HOBO Base Station or HOBO Waterproof Shuttle required. See page 54 for more details.
[1]Coupler included with HOBO Base Station or HOBO Waterproof Shuttle.

HOBO Weather Stations

Research-grade weather monitoring with plug-and-play convenience

A range of HOBO stations to choose from:

HOBO RX3000

- 10 Smart Sensor inputs
- Cloud-based data access
- Configure & check from mobile devices
- Supports broad range of sensors
- LCD display
- Optional analog sensor & relay modules

Learn more on page 23

HOBO RX2100

- 5 Smart Sensor inputs
- Cloud-based data access
- * Configure & check from mobile devices
- Compact, low-cost
- Supports broad range of sensors including water level
- LCD display

Learn more on page 17

HOBO H21-USB

- 5 Smart Sensor inputs
- USB configuration and data access
- Compact, low-cost
- Weatherproof IP66 enclosure
- Supports broad range of sensors

Learn more on page 24

HOBO U30-NRC

- 5 or 10 Smart Sensor inputs
- USB configuration and data access
- Optional analog sensor port
- Built-in relay
- Supports broad range of sensors

Learn more on page 25

2 Meter Tripod

M-TPB

- Height range: 1.72 to 2.13 m (5.6 to 7 ft)
- Mast diameter: 4.1 cm (1.63 in)
- Weight: 5.8 kg (12.8 lbs)

M-GKA Grounding Kit is recommended when using tripods in exposed locations.
2 Meter Tripod Kit also available M-TPB-KIT

3 Meter Tripod

M-TPA (shown at right)

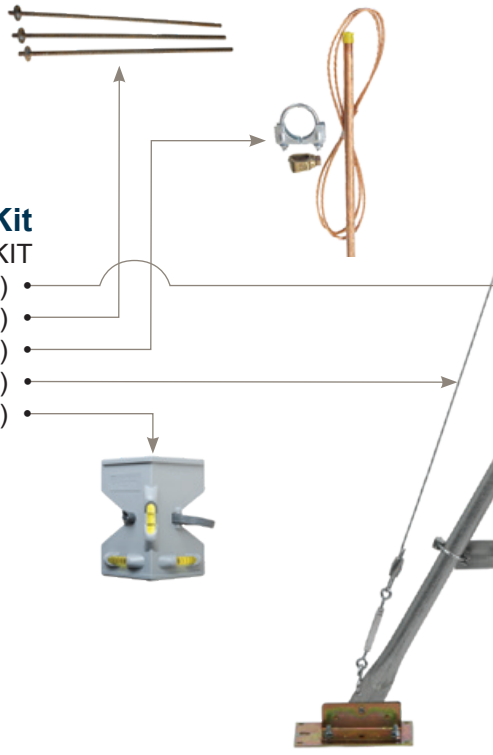
- Height range: 2.74 to 3.20 m (9 to 10.5 ft)
- Mast diameter: 4.1 cm (1.63 in)
- Weight: 12.7 kg (28 lbs)
- Maximum slope: 13 degrees for installation on moderately uneven ground

M-GKA Grounding Kit is recommended when using tripods in exposed locations.

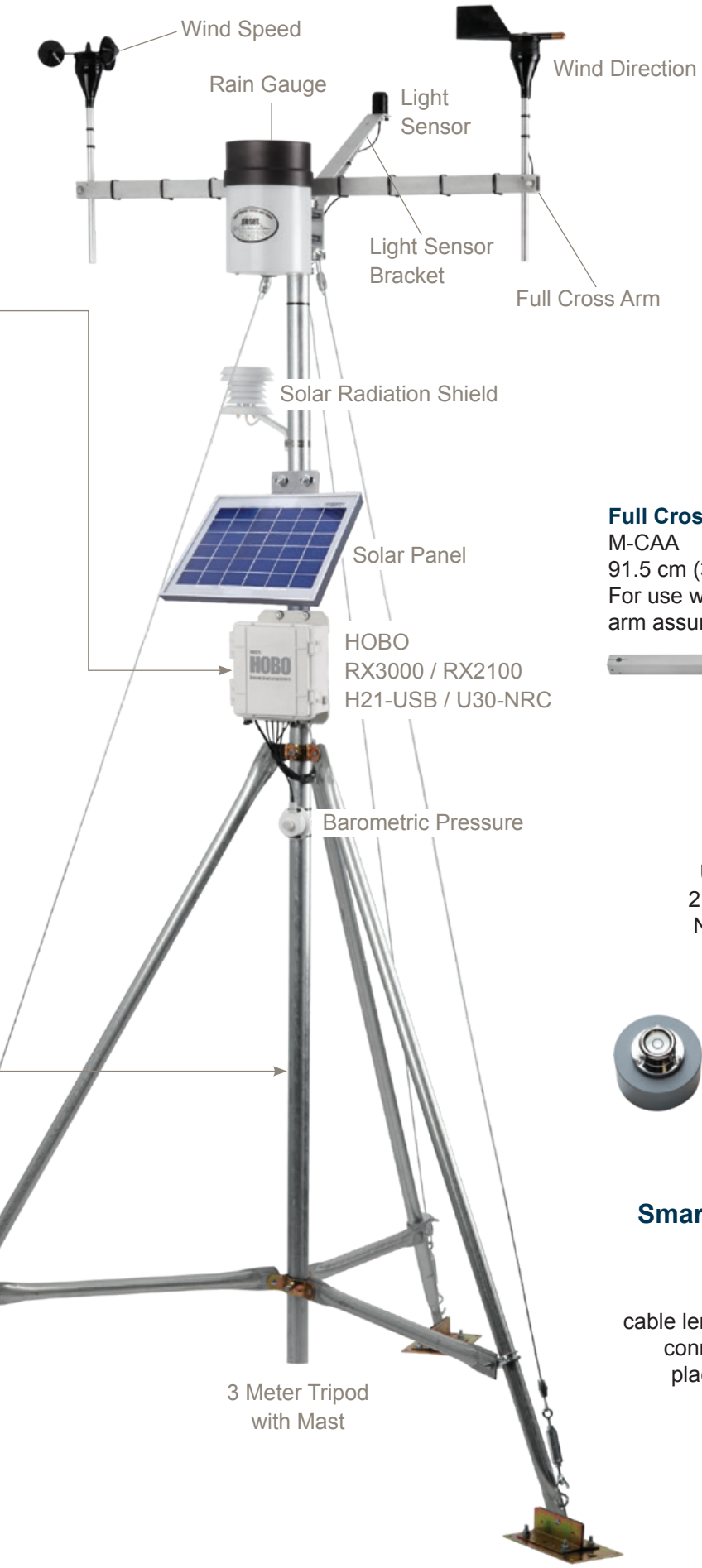
3 Meter Tripod Kit

M-TPA-KIT

- 3-meter tripod (M-TPA)
- 1/2-in Stake Kit (M-SKA)
- Grounding Kit (M-GKA)
- Guy Wire Kit (M-GWA)
- Mast Level (M-MLA)



HOBO Weather Stations



Light Sensor Bracket
M-LBB
Includes leveling screws and u-bolts for mast mounting.

Solar Radiation Shield
RS3-B
Pre-assembled for S-THBs, S-TMBs, includes clamp for mast mounting.

Full Cross Arm
M-CAA
91.5 cm (36 in)
For use with Onset tripods or masts, the full cross arm assures unobstructed wind measurement.

NDVI Light Sensor Bracket
M-NDVI
Used to mount 2 PAR sensors and 2 solar radiation sensors for making NDVI measurements. Also requires M-LBB light sensor bracket.

Light Sensor Level
M-LLA
Purchase one for use on any number of light sensors.

Smart Sensor Extension Cables
S-EXT-M0xx
2 m, 5 m, 10 m, 25 m (16 ft, 33 ft, 82 ft) cable lengths available. Use individually or connected together to optimize sensor placement. A weatherproof housing is required for outdoor connections (Part# S-EXT-CASE2). Network cable length limited to 100 meters per data logger.

HOBO RX2100 MicroRX Water Level Station

Water level data anywhere, anytime? You got It.

The cellular, web-enabled HOBO MicroRX station works with Onset's own water level sensor to deliver water level and flow monitoring data to HOBOlink cloud software. Spend more time focusing on results, and less time on configuration and data access.

Supported Measurements:

Water Level, Flow, Temperature, Relative Humidity, Dew Point, Solar Radiation, PAR, Rainfall, Wind Speed, Wind Direction, Soil Moisture, Barometric Pressure, Leaf Wetness, 4-20mA, Voltage Input, Pulse Input

Key Advantages:

- Eliminate complicated manual calculations with pre-programmed water flow formulas
- Act quickly in response to alarms triggered at time of measurement for water flow and accumulated rainfall
- Reduce maintenance with the non-vented water level sensor
- Tough, compact station design for deployment in harsh conditions
- Monitor multiple environmental parameters with the flexibility of Onset's suite of Smart Sensors

Minimum System Requirements:

HOBOlink Data Plan*

Sensor See pg 46

Cable See pg 51

Powerful Web-Based Access to your Data

View and manage your water level measurements, configure alarms, create custom dashboards, and view current and historical data on any device with an internet connection through Onset's HOBOlink cloud software.

Multi-Environment Water Level Monitoring

- Stormwater Monitoring
- Floodwater Mitigation
- Irrigation Control
- Hydrological Studies

*Requires paid Data Plan: See page 45 or www.onsetcomp.com/products/software/hobolink

Reliable Water Level Monitoring

With a tough, compact station design and durable water level sensor, you can monitor water level in the harshest conditions.

- Mounting tabs for simple installation
- Non-vented, durable ceramic sensor
- Integrated barometric pressure sensor
- Robust IP66/NEMA 4X enclosure
- Built-in solar panel or battery power
- Five inputs for plug-and-play Smart Sensors
- On-board LCD display
- Interchangeable, Kevlar-reinforced cable

If you would like to have this station without a water level input, see page 17.

For complete information and accessories, please visit: **www.onsetcomp.com**

Water Level Sensors

Part number	MX2001-01 (and-Ti)	MX2001-02	MX2001-03	MX2001-04 (and-Ti)
Range	Approx. 0 to 9 m (0 to 30 ft)	Approx. 0 to 30.6 m (0 to 100 ft)	Approx. 0 to 76.5 m (0 to 251 ft)	Approx. 0 to 4 m (0 to 13 ft)
Calibrated Range (0° to 40°C (32° to 104°F)	69 to 207 kPa (10 to 30 psia)	69 to 400 kPa (10 to 58 psia)	69 to 850 kPa (10 to 123.3 psia)	69 to 145 kPa (10 to 21 psia)
Accuracy (Typical)	±0.05% FS, 0.5 cm (0.015 ft)	±0.05% FS, 1.5 cm (0.05 ft)	±0.05% FS, 3.8 cm (0.125 ft)	±0.075% FS, 0.3 cm (0.01 ft)
Resolution	0.02 kPa (0.003 psi), 0.21 cm (0.007 ft) water	<0.04 kPa (0.006 psi), 0.41 cm (0.013 ft) water	<0.085 kPa (0.012 psi), 0.87 cm (0.028 ft) water	<0.014 kPa (0.002 psi), 0.14 cm (0.005 ft) water

Data Loggers

Part number	RX2103	RX2104
Operating Range	-40° to 60°C (-40° to 140°F)	-20° to 60°C (-4° to 140°F)
Smart Sensor Connectors	5	
Smart Sensor Network Cable Length	100 m (328 ft) maximum	
Logging Rate	1 minute to 18 hours	
Alarm Notification Latency	Logging interval plus 2–4 minutes, typical	
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	
Memory	16 MB, 1 million measurements, continuous logging	
Barometric Pressure		
Operating Range	66 to 107 kPa (9.57 to 15.52 psia)	
Temperature Calibrated Range	-20 to 50°C (-4 to 122°C)	
Accuracy	±0.2 kPa (±0.029 psi) over full temperature range at fixed pressure; maximum error ±0.5% FS	
Battery Type	6 AA 1.5 V lithium batteries or optional AC power adapter (P-AC-1)	Integrated 1.7 watt solar panel and NiMH rechargeable battery pack
Battery Life	Daily connections: 1 year with 1 minute logging Hourly connections and 1 minute logging: 3 months	Typical 3–5 years when operated in the temperature range -20° to 40°C (-4° to 104°F)
Smart Sensor Data Channels	Maximum of 15	
Materials	Outer enclosure: Polycarbonate/PBT blend with brass inserts; Interior: Polycarbonate/PBT; Gasket: Silicone foam. Cable channel: Santoprene™ TPE	
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)	
Environmental Rating	Weatherproof enclosure, NEMA 4X and IP66	
CE Compliant	Yes	

MyJ Sensores

HOBO MX2501 pH/Temp Logger

Easy data offload to mobile devices via Bluetooth

The low-cost HOBO MX2501 pH/Temperature logger is designed for long-term monitoring of pH in estuaries, lakes, streams, rivers, and oceans. It communicates wirelessly via Bluetooth to the free HOBOconnect app on your mobile device or Windows laptop, making logger setup, calibration, and data offload quick and easy, with no need for extra equipment or complicated calibration procedures.

Supported Measurements:

pH, Temperature

Key Advantages:

- Data offload via Bluetooth
- Guided pH calibration with the HOBOconnect app
- Rugged PVC design for freshwater or saltwater deployments
- Water detection feature for longer battery life
- User-replaceable battery, pH electrode, and anti-biofouling copper guard

Minimum System Requirements:

HOBOconnect
See pg 43

Mobile device

For complete information and accessories, please visit: **www.onsetcomp.com**

Part number	MX2501	
	pH Sensor	**mV**
Range	2.00 to 12.00 pH	-512 to 512 mV
Accuracy	±0.10 pH units within ±10°C of temperature at calibration	±0.20 mV
Resolution	0.01 pH	0.02 mV
Response time	1 minute typical to 90% at constant temperature in stirred water	
	Temperature Sensor	
Range	-2° to 50°C (28.4° to 122°F)	
Accuracy	±0.2°C (±0.36°F)	
Resolution	0.04°C (0.072°F)	
Response time	7 minutes typical to 90% in stirred water	
	Logger	
Operating range	-2° to 50°C (28.4° to 122°F) — non-freezing	
Buoyancy	Fresh water: 13.6 g (0.48 oz) negative Salt water: 19.6 g (0.69 oz) negative	
Waterproof	To 40 m (131.2 ft)	
Logging rate	1 second to 18 hours	
Time accuracy	±1 minute per month 0° to 50°C (32° to 122°F)	
Battery Type	One AA 1.5 Volt, user-replaceable	
Battery life	1 year typical at 25°C (77°F) with logging interval of 1 minute and Bluetooth Always On selected in software. 2 years typical at 25°C (77°F) with logging interval of 1 minute and Bluetooth Off Water Detect enabled in software. 3 years typical at 25°C (77°F) with logging interval of 1 minute and Bluetooth Always Off selected in software.	
Memory	152 KB (43,300 measurements, maximum)	
Dimensions	22.86 x 4.27 cm (9.0 x 1.68 inches)	
Weight	268.2 g (9.46 oz)	
CE compliant	Yes	

TidbiT® v2 Temp Logger

Small, durable logger for measuring water temperature

Onset's smallest data logger, the TidbiT v2 has 12-bit resolution and a precision sensor for ±0.2°C accuracy over a wide temperature range. It is waterproof to 300 meters (1,000 feet) and can be used in a wide range of water temperature monitoring applications.

Supported Measurements:

Temperature

Key Advantages:

- Onset's smallest temperature logger
- Waterproof to 300 meters (1,000 feet)
- Data readout in less than 30 seconds via fast optic USB interface

Minimum System Requirements:

Software
See pg 44

Base Station*
See pg 54

Coupler[1]

For complete information and accessories, please visit: **www.onsetcomp.com**

Part number	UTBI-001
	Temperature Sensor
Operation range	-20° to 70°C (-4° to 158°F) in air; maximum sustained temperature of 30°C (86°F) in water**
Accuracy	± 0.21°C over 0° to 50°C (± 0.38°F over 32° to 122°F)
Resolution	0.02°C at 25°C (0.04°F at 77°F)
Response time	5 minutes in water; 12 minutes in air moving 2 m/sec; 20 minutes in air moving 1 m/sec (typical to 90%)
Stability (drift)	0.1°C (0.18°F) per year
	Logger
Real-time clock	± 1 minute per month 0° to 50°C (32° to 122°F)
Battery	3 Volt lithium, non-replaceable
Battery life	5 years with 1 minute or greater logging interval
Memory	42,000 measurements
Waterproof	To 305 m (1,000 ft)
Dimensions	3.0 × 4.1 × 1.7 cm (1.2 × 1.6 × 0.68 in); mounting bail 4.6 mm (3/16 in) diameter hole
CE compliant	Yes

*HOBO Base Station or HOBO Waterproof Shuttle required. See page 54 for more details.
[1]Coupler included with HOBO Base Station or HOBO Waterproof Shuttle.
**To guarantee accuracy, the TidbiT v2 Temp must not be used in condensing environments and water temperatures higher than 30°C (86°F) for more than eight cumulative weeks over the life of the logger. Frequent or prolonged exposure will lead to measurement drift and eventual failure.

HOBO MX2200 Series Waterproof Temp Loggers

Water temperature data straight to your mobile device

HOBO MX2200 Series waterproof temperature loggers bring convenient wireless setup and download to Onset's field-proven TidbiT and Pendant water temp loggers! These models feature the power of Bluetooth to deliver high-accuracy temperature measurements straight to your mobile device or Windows laptop.

With their rugged case design and expanded memory, these loggers are ideal for measuring temperature in streams, lakes, oceans, and soil environments.

Remotely access your data in Onset's HOBOlink cloud software, with the optional MX Gateway (see page 14).

Supported Measurements:

Temperature, Light

Key Advantages:

- Convenient wireless setup and download via Bluetooth
- Large memory stores 96,000 measurements
- Mounting tabs to make deployment fast and easy
- Water-detect feature conserves battery life (MX2203, MX2204)
- User-replaceable battery (MX2201, MX2202, MX2203)
- Works with the free HOBOconnect app

Minimum System Requirements:

HOBOconnect See pg 43

Mobile device

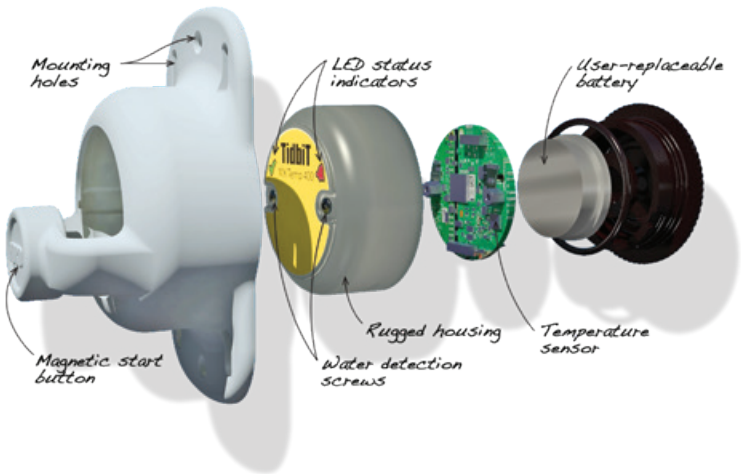
Effortless, Accurate Data

Onset's HOBOconnect app makes it easy to configure MX2200 Series loggers in the field and manage your data.

The loggers provide high accuracy over a wide temperature range. And, the HOBO MX2202 model features a built-in light sensor to give you repeatable light-level data in shallow-water monitoring applications.

Feature-packed

Reliable HOBO MX2200 Series loggers integrate a rich set of features in a compact, rugged package designed to streamlines deployment.



MX2201
Temperature
Depth rating 100 ft

MX2202
Temperature / Light
Depth rating 100 ft

MX2203
Temperature
Depth rating 400 ft

MX2204
Temperature
Depth rating 5000 ft

MX2205
External Temperature
Depth rating 100 ft

For complete information and accessories, please visit: **www.onsetcomp.com**

MX2201, MX2202 Data Loggers		
Temperature Sensor (MX2201, MX2202)	Range	-20° to 70°C (-4° to 158°F) in air -20° to 50°C (-4° to 122°F) in water
	Accuracy	±0.5°C from -20° to 70°C (-4° to 158°F)
	Resolution	0.04°C (0.072°F)
	Drift	<0.1°C (0.18°F) per year
	Response Time	17 minutes typical to 90% in air moving 1 m/s, unmounted 7 minutes typical to 90% in stirred water, unmounted
Light Sensor (MX2202)	Range	0 to 167,731 lux (15,582 lum/ft2)
	Accuracy	±10% typical for direct sunlight
Logger	Operating Range	-20° to 70°C (-4° to 158°F) in air
	Waterproof Rating	To 30.5 m (100 ft)
	Wireless Data Standard	Bluetooth Low Energy (Bluetooth Smart)
	Logging Rate	1 second to 18 hours
	Time Accuracy	±1 minute per month at 25°C (77°F)
	Battery	CR2032 3V lithium, user-replaceable
	Battery Life	1 year typical at 25°C (77°F) with logging interval of 1 minute and Bluetooth Always On, 2 years typical with Bluetooth Always Off
	Memory	96,000 measurements
	Dimensions	3.35 x 5.64 x 1.6 cm (1.32 x 2.22 x 0.63 inches)
MX2203, MX2204, MX2205 Data Loggers		
Internal Sensor (MX2203, MX2204, MX2205)	Range	**MX2203**: -20° to 70°C (-4° to 158°F) in air; -20° to 50°C (-4° to 122°F) in water **MX2204 & MX2205**: -20° to 70°C (-4° to 158°F) in air; -20° to 50°C (-4° to 122°F) in water, maximum sustained temperature in water 30°C (86°F)
External Sensor (MX2205)	Probe Range	-40 to 100°C (-40 to 212°F), with tip and cable immersion in fresh water up to 50°C (122°F) for one year
	Accuracy	**Probe**: 0.25°C from -40° to 0°C (±.45°F from -40° to 32°F) ±0.2°C from 0° to 70°C (±0.36°F from 32° to 158°F) ±0.25°C from 70° to 100°C (±0.45°F from 158° to 212°F) **Logger:** ±0.25°C from -20° to 0°C (±.45°F from -4° to 32°F) ±0.2°C from 0° to 70°C (±0.36°F from 32° to 158°F)
	Resolution	0.01°C (0.018°F)
	Drift	<0.1°C (0.18°F) per year
	Response Time	**MX2203**: 17 minutes typical to 90% in air moving 1 m/s, unmounted; 7 minutes typical to 90% in stirred water, unmounted **MX2204**: 15 minutes typical to 90% in air moving 1 m/s, unmounted; 4 minutes typical to 90% in stirred water, unmounted **MX2205**: Probe | 3 minutes in air moving 1 m/sec; 20 seconds in stirred water Logger | 15 minutes typical to 90% in air moving 1 m/s, unmounted; 4 minutes typical to 90% in stirred water, unmounted
Logger	Operating Range	-20° to 70°C (-4° to 158°F)
	Waterproof Rating	**MX2203**: To 122 m (400 ft) **MX2204**: To 1,524 m (5,000 ft) **MX2205**: To 30.5 m (100 ft)
	Transmission Range	Approximately 30.5 m (100 ft) line-of-sight
	Wireless Data Standard	Bluetooth Low Energy (Bluetooth Smart)
	Logging Rate	1 second to 18 hours
	Time Accuracy	±1 minute per month at 25°C (77°F)
	Battery	CR2477 3V lithium, user-replaceable in **MX2203**, non-replaceable in **MX2204** and **MX2205**
	Battery Life	3 years, typical at 25°C (77°F) with logging interval of 1 minute and Bluetooth Always On, 5 years typical with Bluetooth Always Off
	Memory	96,000 measurements
	Dimensions	**MX2203**: 4.45 x 7.32 x 3.58 cm (1.75 x 2.88 x 1.41 inches) **MX2204 & MX2205**: 4.06 x 6.99 x 3.51 cm (1.6 x 2.75 x 1.38 inches)

HOBO Water Temp Pro v2 Logger

Affordable temperature monitoring for freshwater or saltwater

The HOBO Water Temp Pro v2 data logger features 12-bit resolution and a precision sensor for ±0.2°C accuracy over a wide temperature range. Designed with a durable streamlined case for extended deployment in freshwater or saltwater, the Water Temp Pro v2 is equipped with an Optic USB interface for data offload in the field, even when the data logger is wet.

Supported Measurements:

Temperature

Key Advantages:

- Research-grade measurements at an affordable price
- Waterproof to 120 meters (400 feet)
- Data readout in less than 30 seconds via fast Optic USB interface

Minimum System Requirements:

Software
See pg 44

Base Station*
See pg 54

Coupler[1]

For complete information and accessories, please visit: **www.onsetcomp.com**

Part number	U22-001
Memory	42,000 measurements
Logging interval	1 second to 18 hours, fixed - or multiple-rate up to 8 user-defined sampling intervals
Battery life	6 years with 1 minute or greater logging interval, factory-replaceable ONLY
Measurement range	-40° to 70°C (-40° to 158°F) in air; maximum sustained temperature of 50°C (122°F) in water
Accuracy	± 0.21°C over 0° to 50°C (± 0.38°F over 32° to 122°F)
Resolution	0.02°C at 25°C (0.04°F at 77°F)
Response time	(90%) 5 minutes in water; 12 minutes in air moving 2 m/sec (typical)
Dimensions	3.0 cm (1.19 in) maximum diameter, 11.4 cm (4.5 in) length; mounting hole 6.3 mm (0.25 in) dia
CE compliant	Yes

*HOBO Base Station or HOBO Waterproof Shuttle required. See page 54 for more details.
[1]Coupler included with HOBO Base Station or HOBO Waterproof Shuttle.

HOBO Temp/Light Pendant Loggers

Low-cost data logging solution for temperature, light, and more

HOBO Pendant data loggers are economical, weatherproof, and waterproof temperature data loggers designed for a variety of short- and long-term monitoring applications.

Supported Measurements:

Temperature, Light Intensity, Tilt, Acceleration

Key Advantages:

- Low-cost temperature, light intensity, and acceleration loggers
- Waterproof housing for wet or underwater use
- Data readout in less than 30 seconds via Optic USB interface

Minimum System Requirements:

Software
See pg 44

Base Station*
See pg 54

Coupler[1]

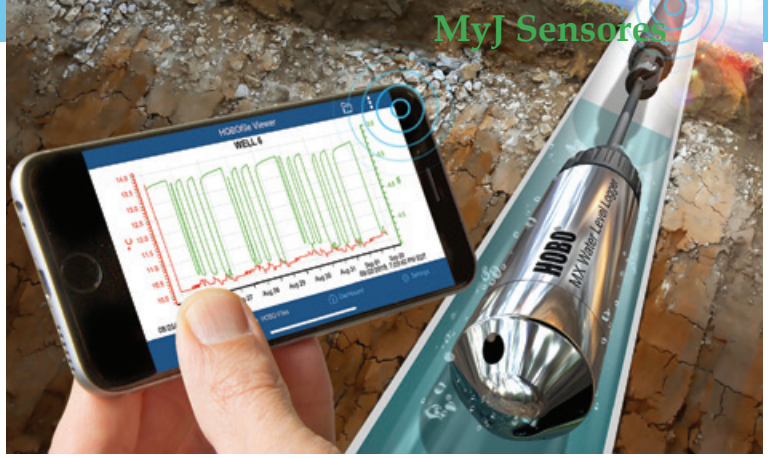
For complete information and accessories, please visit: **www.onsetcomp.com**

Part number	UA-001-64	UA-002-64	UA-004-64[2]
Memory (measurements)	52,000 temp	28,000 temp & light	64,000 accel 32,000 tilt 21,333 motion
Sample rate	1 second to 18 hours, user-selectable		100 per second
Battery life	1 year typical, user-replaceable, CR2032		
Water Depth Rating	30 m from -20 to 20°C (100 ft from -4° to 68°F)		
	Temperature		
Measurement range	-20° to 70°C (-4° to 158°F) in air, -20° to 50°C (-4° to 122°F) in water		
Accuracy	± 0.53°C from 0° to 50°C (± 0.95°F from 32° to 122°F)		
Resolution (10-bit)	0.14°C @ 25°C (0.25°F @ 77°F)		
Response time	10 minutes (to 90% in airflow of 2 m/s), 5 minutes (to 90% in water)		
	Light intensity		
Range	0-323,000 lumens/m2 [0-30,000 foot candles (lumens/ft2)]		
	Acceleration		
Measurement range	± 3 G		
Accuracy	±2.5% FS @ 25°C (77°F)—Factory-calibrated		
Resolution (8-bit)	0.02 G		
	Tilt/Motion		
Measurement range	± 3 G		
Accuracy	±2.5% FS @ 25°C (77°F)—Factory-calibrated		
Resolution (8-bit)	±4.3° @ 90° to ±13° @ 0° and 180°		
Dimensions	5.8 x 3.3 x 2.3 cm (2.3 x 1.3 x 0.9 in)		
CE compliant	Yes		

*HOBO Base Station or HOBO Waterproof Shuttle required. See page 54 for more details.
[1]Coupler included with HOBO Base Station or HOBO Waterproof Shuttle.
[2]For more details, see page 26

HOBO MX2001 Water Level Logger

Wireless access to water level and temperature data via Bluetooth



The industry's first water level data logger designed for convenient wireless setup and download via Bluetooth technology. Dramatically simplifies and lowers the cost of field data collection by providing wireless access to high-accuracy water level and temperature data right from a mobile phone, tablet, or Windows computer running Onset's free HOBOconnect app.

Supported Measurements:

Water Level, Water Temperature, Absolute Pressure, Barometric Pressure, Differential Pressure

Key Advantages:

- Wireless data offload to mobile devices via Bluetooth
- Direct-read cable connects sensor to top-end of logger
- Integrated sensor enables direct water level readout
- Reference water level can be entered at start of deployment
- Use HOBOconnect for setup, data viewing, and data sharing
- Powered by two user-replaceable AA batteries
- Normal, multi-rate, and burst-logging modes
- Durable ceramic sensor
- Available with stainless steel or titanium sensor ends

Minimum System Requirements:

HOBOconnect See pg 43

Mobile device

Cable* See pg 51

Consists of a top-end unit and a water level sensor which are sold as a set. A direct-read cable is required to connect them. Cables can be ordered in lengths from 0.2 to 500m for deployment in a wide range of wells. Add the cable from Compatible Items below or visit the Direct Read Cable product page.

*Direct-read cables can be ordered in lengths from 0.2 m to 500 m

For complete information and accessories, please visit: **www.onsetcomp.com**

Part number	MX2001-01 (and-Ti)	MX2001-02	MX2001-03	MX2001-04 (and-Ti)
Water Level				
Range	Approx. 0 to 9 m (0 to 30 ft)	Approx. 0 to 30.6 m (0 to 100 ft)	Approx. 0 to 76.5 m (0 to 251 ft)	Approx. 0 to 4 m (0 to 13 ft)
Calibrated Range (0° to 40°C (32° to 104°F)	69 to 207 kPa (10 to 30 psia)	69 to 400 kPa (10 to 58 psia)	69 to 850 kPa (10 to 123.3 psia)	69 to 145 kPa (10 to 21 psia)
Accuracy (Typical)	±0.05% FS, 0.5 cm (0.015 ft)	±0.05% FS, 1.5 cm (0.05 ft)	±0.05% FS, 3.8 cm (0.125 ft)	±0.075% FS, 0.3 cm (0.01 ft)
Resolution	0.02 kPa (0.003 psi), 0.21 cm (0.007 ft) water	<0.04 kPa (0.006 psi), 0.41 cm (0.013 ft) water	<0.085 kPa (0.012 psi), 0.87 cm (0.028 ft) water	<0.014 kPa (0.002 psi), 0.14 cm (0.005 ft) water
Temperature				
Range	-20° to 50°C (-4° to 122°F)			
Accuracy	±0.44°C from 0° to 50°C (±0.79°F from 32° to 122°F)			
Resolution	0.1°C at 25°C (0.18°F at 77°F)			
Barometric Pressure				
Range	66 to 107 kPa (9.57 to 15.52 psia)			
Accuracy (typical)	±0.075% FS, 0.3 cm (0.01 ft) water			
Logger Specifications				
Operating Range	-20° to 50°C (-4° to 122°F)			
Transmission Range	Approximately 30.5 m (100 ft) line-of-sight			
Dimensions	Top end (MX2001-TOP): 2.56 cm (1.0 inches) diameter, 28.9 cm (11.4 inches) length Sensor end (MX2001-0x-S and MX2001-0x-Ti-S: 2.54 cm (1.0 inches) diameter, 9.91 cm (3.9 inches) length			
CE compliant	Yes			
FCC compliant	Yes			

MyJ Sensores

HOBO U20 Series Water Level Loggers

Accurate, affordable water level monitoring

HOBO Water Level data loggers offer high accuracy at an affordable price, with no cumbersome vent tubes or desiccants to maintain. These data loggers are ideal for recording water levels and temperatures in wells, streams, lakes, wetlands, and tidal estuaries.

Supported Measurements:

Water Level, Barometric Pressure, Pressure (Absolute), Temperature

Water Level Logger Kits:

Deluxe Kit includes a carrying case, two HOBO Water Level Loggers (one 13 foot for barometric pressure and one 13 foot, 30 foot, or 100 foot), HOBOware Pro software, and a HOBO Waterproof Data Shuttle with coupler. The **Starter Kit** includes a HOBO Water Level Logger, HOBOware Pro Software, and an Optic USB Base Station. Available in 13 foot, 30 foot, and 100 foot depths.

Deluxe Kit

Starter Kit

Key Advantages:

- Available in four depth ranges
- No-vent-tube design for easy and reliable deployment
- Available in stainless steel and titanium* versions
- Durable ceramic pressure sensor for reliable performance
- Calibration certificate included

Minimum System Requirements:

Software See pg 44
Base Station[1] See pg 54
Coupler[2]

For complete information and accessories, please visit: **www.onsetcomp.com**

Part number	U20-001-04/ U20-001-04-Ti	U20-001-01/ U20-001-01-Ti	U20-001-02/ U20-001-02-Ti	U20-001-03/ U20-001-03-Ti
	HOBO Water Level Specifications			
Range	0-4 m (0-13 ft) 0-145 kPa (0-21 psia)	0-9 m (0-30 ft) 0-207 kPa (0-30 psia)	0-30 m (0-100 ft) 0-400 kPa (0-58 psia)	0-76 m (0-250 ft) 0-850 kPa (0-123 psia)
Factory Calibrated Range (0° to 40°C; 32° to 104°F)	69 to 145 kPa (10-21 psia)	69 to 207 kPa (10-30 psia)	69 to 400 kPa (10-58 psia)	69 to 850 kPa (10-123 psia)
Water Level Accuracy (Typical Error)	± 0.3 cm (0.01 ft) (± 0.075% FS)	± 0.5 cm (0.015 ft) (± 0.05% FS)	± 1.5 cm (0.05 ft) (± 0.05% FS)	± 3.8 cm (0.125 ft) (± 0.05% FS)
Resolution	0.14 cm (0.005 ft)	0.21 cm (0.007 ft)	0.41 cm (0.013 ft)	0.87 cm (0.028 ft)
Burst Pressure	310 kPa (45 psia) 18 m (60 ft) depth		500 kPa (72.5 psia) 40.8 m (134 ft) depth	1200 kPa (174 psia) 112 m (368 ft) depth
	Temperature Specifications (all models)			
Range	-20° to 50°C (-4° to 122°F)			
Accuracy	± 0.37° @ 20°C (± 0.67° @ 68°F) ± 0.44° from 0° to 50°C (± 0.79° from 32° to 122°F)			
Resolution (10 bit)	0.1° @ 20°C (0.18° @ 68°F)			
Response time	5 minutes (to 90% in water)			
Dimensions	2.46 cm diameter x 15 cm (0.97 x 5.9 in) hole in mounting bail 6.3 mm (0.25 in)			
CE compliant	Yes			

*Titanium version recommended for saltwater deployment.
[1]HOBO Base Station or HOBO Waterproof Shuttle required. See page 54 for more details.
[2]Coupler included with HOBO Base Station or HOBO Waterproof Shuttle.

www.myj-sensores.com onsetcomp.com info@myj-sensores.com

HOBO U20L Series Water Level Loggers

Low cost, high accuracy

HOBO U20L series loggers are low-cost, research-grade water level data loggers for continuous monitoring of water level and temperature in a wide range of underwater environments. They feature 0.1% measurement accuracy, a polypropylene housing for use in both freshwater and saltwater, and a non-vented design for convenient and hassle-free deployment.

Supported Measurements:

Water Level, Barometric Pressure, Pressure (Absolute), Temperature

Key Advantages:

- Self-contained, non-vented design enables easy deployment
- Ideal for use in both freshwater and saltwater environments
- Durable ceramic pressure sensor
- Ideal for use in wells, streams, lakes, wetlands, and tidal areas

Minimum System Requirements:

Software See pg 44
Base Station* See pg 54
Coupler[1]

For complete information and accessories, please visit: **www.onsetcomp.com**

Part number	U20L-04	U20L-01	U20L-02
	HOBO Water Level Specifications		
Range	0-4 m (0-13 ft) 0 to 145 kPa (0 to 21 psia)	0-9 m (0-30 ft) 0 to 207 kPa (0 to 30 psia)	0-30.6 m (0-100 ft) 0 to 400 kPa (0 to 58 psia)
Factory Calibrated Range (0° to 40°C; 32° to 104°F)	69 to 145 kPa (10 to 21 psia)	69 to 207 kPa (10-30 psia)	69 to 400 kPa (10 to 58 psia)
Water Level Accuracy (Typical Error)	± 0.4 cm (0.013 ft) (± 0.1% FS)	± 1.0 cm (0.03 ft) (± 0.1% FS)	± 3.0 cm (0.1 ft) (± 0.1% FS)
Resolution	0.14 cm (0.005 ft) water	0.21 cm (0.007 ft) water	0.41 cm (0.013 ft) water
Burst Pressure	310 kPa (45 psia) 18 m (60 ft) depth	310 kPa (45 psia) 18 m (60 ft) depth	500 kPa (72.5 psia) 40.8 m (134 ft) depth
	Temperature Specifications (all models)		
Range	-20° to 50°C (-4° to 122°F)		
Accuracy	± 0.37° @ 20°C (± 0.67° @ 68°F) ± 0.44° from 0° to 50°C (± 0.79° from 32° to 122°F)		
Resolution (10 bit)	0.1° @ 20°C (0.18° @ 68°F)		
Response time	10 minutes (to 90% in water)		
Dimensions	3.18 cm diameter x 15.24 cm (1.25 x 6.0 in) hole in mounting bail 6.3 mm (0.25 in)		
CE compliant	Yes		

*HOBO Base Station or HOBO Waterproof Shuttle required. See page 54 for more details.
[1]Coupler included with HOBO Base Station or HOBO Waterproof Shuttle.

HOBO U24 Conductivity Loggers

Conductivity monitoring for freshwater and stable saltwater applications

HOBO U24 loggers are convenient, rugged, and cost-effective, for a variety of freshwater and saltwater monitoring applications.

The HOBO U24-001 model provides high-accuracy conductivity data in freshwater environments, for applications such as environmental impact monitoring, stormwater management, and water quality studies.

The HOBO U24-002-C model is for saltwater environments with relatively small changes in salinity (±5,000 µS/cm) such as saltwater bays, or to detect salinity events such as upwelling, rainstorm, and discharge events. This logger can also be used to gather salinity data for salinity compensation of HOBO U26 Dissolved Oxygen logger data. **Note:** This logger is not intended for monitoring salinity levels in waters with widely changing salinities as it can have significant measurement error and drift in those environments.

Key Advantages:

- Non-contact capacitive sensor provides long life
- Easy access to sensor for cleaning and shedding air bubbles
- HOBOware Pro software provides compensation for fouling using calibration points from the start and end of each deployment
- Optical interface provides high-speed, reliable data offload in wet environments
- Compatible with HOBO Waterproof Shuttle for easy and reliable data retrieval

Minimum System Requirements:

Software See pg 44
Base Station* See pg 54
Coupler[1]

Supported Measurements:

Conductivity, Salinity, Temperature

For complete information and accessories, please visit: **www.onsetcomp.com**

Part number	**U24-001** Conductivity	**U24-002-C** Conductivity/Salinity
Memory	18,500 temperature and conductivity measurements when using one conductivity range; 14,400 sets of measurements when using both conductivity ranges (64 kbytes)	
Conductivity Calibrated Measurement Ranges	Low Range: 0 to 1,000 µS/cm Full Range: 0 to 10,000 µS/cm	Low Range: 100 to 10,000 µS/cm High Range: 5,000 to 55,000 µS/cm
Conductivity Calibrated Range – Temperature Range	5° to 35°C (41° to 95°F)	
Specific Conductance Accuracy (in Calibrated Range using Conductivity Assistant and Calibration Measurements)	Low Range: 3% of reading, or 5 µS/cm Full Range: 3% of reading, or 20 µS/cm, whichever is greater	Low Range: 3% of reading or 50 µS/cm, whichever is greater High Range: 5% of reading, in waters within a range of ±3,000 µS/cm; waters with greater variation can have substantially greater error
Conductivity Resolution (typical)	1 µS/cm	2 µS/cm
Conductivity Drift	Less than 3% sensor drift per year	Up to 12% sensor drift per month. Use monthly start & end-point calibration to compensate
Temperature Accuracy	0.1°C (0.2°F) at 25°C (77°F)	
Temperature Resolution	0.01°C (0.02°F)	
Response Time	1 second to 90% of change (in water)	
Measurement and Operating Range	0° to 36°C (32° to 97°F) -non-freezing	-2° to 36°C (28° to 97°F) -non-freezing
Sample rate	1 second to 18 hrs, fixed or multiple-rate sampling with up to 8 user-defined sampling intervals	
Time Accuracy	± 1 minute per month	
Battery	3.6 Volt lithium battery, life: 3 years (at 1 minute logging), typical	
Maximum Depth	70 m (225 ft)	
Dimensions	3.18 cm diameter x 16.5 cm, with 6.3 mm mounting hole (1.25 in diameter x 6.5", ¼ in hole)	
CE compliant	Yes	

*HOBO Base Station or HOBO Waterproof Shuttle required. See page 54 for more details.
[1]Coupler included with HOBO Base Station or HOBO Waterproof Shuttle.

HOBO U26 Dissolved Oxygen Logger

Affordable, high-performance dissolved oxygen monitoring

The HOBO U26 Dissolved Oxygen Logger measures concentrations of dissolved oxygen in lakes, streams, rivers, estuaries, and coastal waters. Used by aquatic biologists, hydrologists, and other research professionals to monitor water quality, the U26 is ideal for climate change and environmental impact studies as well as ecological and oceanographic research.

The HOBO U26 combines the high-accuracy, robust performance of industry-leading RDO® Basic (Rugged Dissolved Oxygen) sensor technology with an easy-to-maintain design, all at a fraction of the cost of other monitoring options.

Supported Measurements:

Dissolved Oxygen, Temperature

Key Advantages:

- Affordable, high performance DO monitoring
- Optical DO sensor technology for long-lasting calibration, less maintenance
- Software corrects for measurement drift from fouling; provides salinity-adjusted DO concentration and percent saturation (Salinity adjustment requires salinity meter reading or data logger file. Percent saturation requires barometric pressure data file.)
- Optic USB interface for high-speed, reliable data offload
- Easy-to-replace DO sensor cap lasts six months

Minimum System Requirements:

Software See pg 44 | Base Station* See pg 54 | Coupler[1]

For complete information and accessories, please visit: **www.onsetcomp.com**

Part number	U26-001
	Dissolved Oxygen
Sensor Type	Optical
Measurement Range	0 to 30 mg/L
Calibrated Range	0 to 20 mg/L; 0 to 35°C (32 to 95°F)
Accuracy	± 0.2 mg/L up to 8 mg/L; ± 0.5 mg/L from 8 to 20 mg/L
Resolution	0.02 mg/L
Response time	To 90% in less than 2 minutes
DO Sensor Cap Life	6 months (cap expires 7 months after initialization)
	Temperature
Operating Temperature and Measurement Range	-5 to 40°C (23 to 104°F), non-freezing
Temperature Accuracy	0.2°C (0.36°F)
Temperature Resolution	± 0.02°C (± 0.04°F)
Response Time	To 90% in less than 30 minutes
	Logger
Memory	21,700 sets of DO and temperature measurements
Logging Rate	1 minute to 18 hours
Time Accuracy	± 1 minute per month at 25°C (77°F)
Battery	3.6 V lithium battery; factory replaceable, life: 3 years (at 1 minute logging)
Maximum Depth	100 m (328 ft)
Dimensions	39.6 mm diameter x 266.7 mm (1.56 in diameter x 10.5 in)
CE Compliant	Yes

*HOBO Base Station or HOBO Waterproof Shuttle required. See page 54 for more details.
[1]Coupler included with HOBO Base Station or HOBO Waterproof Shuttle.

HOBOconnect® App for MX Data Loggers

Easy logger setup and data management with your mobile device or Windows computer

Onset's free HOBOconnect app makes it fast and easy to configure compatible HOBO MX Series data loggers (chart below) and manage the collected data. Just download the app from the Apple App Store or Google Play to your mobile device, or download from our website to your Windows computer. With HOBOconnect, you can view data in graphs, check the operational status of loggers, share data files and graph images for analysis in Excel, Numbers, and other applications, plus store data in the cloud. HOBOconnect also lets you quickly set up audible alarm notifications, so you're immediately alerted to any problems.

Features:

- Communicates to HOBO MX data loggers using Bluetooth technology
- No internet connection required
- Set data logger's name, password, logging rate, alarm threshold, start and stop time
- Automatically upload data to Onset's HOBOlink cloud software to store and merge data files
- Configure and clear audible alarms
- Page the data logger
- Quickly download and view data
- Export and share data as CSV, TXT, XLSX, or HOBO files

Mobile App Compatibility

	HOBOconnect iOS & Android
MX1101- HOBO Bluetooth Temp/RH Data Logger	✓
MX1102A- HOBO Bluetooth CO_2/Temp/RH Data Logger	✓
MX1104/5- HOBO Bluetooth Multi-Channel Data Loggers	✓
MX2001- HOBO Bluetooth Water Level Data Logger	✓
MX100- HOBO Bluetooth Temperature Data Logger	✓
MX2300 Series- HOBO Bluetooth Temp and Temp/RH Loggers	✓
MX2200 Series- HOBO Bluetooth Temperature Data Loggers	✓
MX2501- HOBO Bluetooth pH and Water Temp Data Logger	✓
MX Gateway- Remote Access to Your Data and Cloud Storage	✓
Multi-Language Support- Traditional and Simplified Chinese, Korean and Japanese only	✓
	Android Download iOS Download

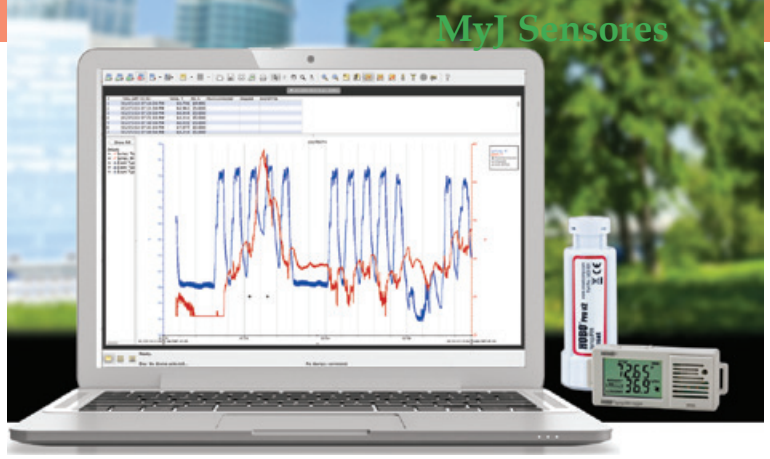
Minimum System Requirements

- iOS 13+
- Android 11+
- Windows 10, 11
- Bluetooth 4.X and up

Download on the App Store | ANDROID APP ON Google play | Get it from Microsoft

HOBOware® & HOBOware Pro

Graphing and analysis software



Designed to work with USB and optic-offloading data loggers, HOBOware simplifies setup and enhances your data analysis with powerful tools for easy setup, graphing, and analysis of our stand-alone products.

Download HOBOware for free, or upgrade to HOBOware Pro for even more advanced data analysis and logger management tools.

Standard Features:

- Simple menus for fast, easy logger setup and readout
- Point & click for fast setup and readout
- Scaling to real-world engineering units
- Presentation-quality graphs
- Easy export of data files to text format
- Free download

HOBOware Pro Features:

- Time-saving tools for fast setup and readout
- Advanced plotting tools for more precise data analysis
- Access to Data Assistants for post-processing data

Download HOBOware today at onsetcomp.com.

Or download your free 30-day trial of HOBOware Pro. From setup to analysis, no other data logger software can compare to the power and simplicity of HOBOware Pro.

HOBOware features comparison	HOBOware	HOBOware Pro
Support for all HOBO data loggers*	✓	✓
Quickly generate presentation-quality graphs	✓	✓
Copy & paste series	✓	✓
Merge data files	✓	✓
Save modified graphs as projects	✓	✓
Easy data export to XLS, CSV, & TXT files	✓	✓
Linear & Pulse Scaling Data Assistants	✓	✓
Multi-Language Support (English / Spanish / French / German / Polish / Portuguese / Japanese / Korean / Simplified Chinese / Traditional Chinese)	✓	✓
Time-saving tools for fast setup, readout & export		✓
Data Assistants for Dissolved Oxygen, Conductivity, Water Level, Growing Degree Days, Grains per Pound & kWh		✓
Ability to create pie charts		✓
Crop a series to a specific time frame		✓
Subset Statistics Tool for details within a time frame		✓
21 CFR Part 11 Compliance		✓
Data Shuttle support		✓
HOBOnode Manager to support ZW Data Nodes		✓
	Free Download	

System Requirements

- HOBOware is not certified to run on Enterprise versions of any version of Windows and is not certified to run on Server versions of Windows. It is certified to run on Windows 10 (Home, Pro), Windows 11 (Home, Pro).
- HOBOware is certified to run on macOS Versions 10.15 (Catalina), 11.0 (Big Sur), 12.0 (Monterey).
- HOBOware no longer needs a Java Runtime Environment on your computer. We include the JRE in HOBOware itself.

HOBOlink® Web-Based Display/Readout

Powerful web-based access to HOBO Remote Monitoring Systems

HOBOlink is a web-enabled software platform that allows you to easily access current and historical data, set alarm notifications, relay activations, and manage and control your HOBO web-based data logging systems.

HOBOlink supports the following:

- HOBO MicroRX Stations
- HOBO RX3000 Remote Monitoring Systems
- HOBOnet Field Monitoring Systems
- HOBO U30 Remote Monitoring Systems
- HOBO MX Gateway

See data plans:
www.onsetcomp.com/products/software/hobolink

Key Advantages:

- Access your data with a web browser or mobile device
- Verify HOBO Station status' remotely
- Set up and manage alarm notifications remotely
- Schedule automated delivery of data
- Configure a dashboard that highlights your most important measurements
- Create dashboards that bring data from multiple systems together in a single view
- Configure calculated channels such as dew point, accumulated rainfall, and evapotranspiration (ET)
- Export the exact date range and sensors you want

Get Notified

HOBOlink will send an email or a text/SMS message to your phone when conditions exceed set thresholds.

Monitor your Stations with Google Maps

HOBOlink integrates Google Maps to allow you to quickly see all your HOBO devices or get a view of the connection patterns for your HOBOnet system, and drill down on the details.

Web-based Configuration

HOBOlink allows you to easily configure sensors, logging, alarm notifications, relay activations, and more.

Dashboards

The HOBOlink dashboard enables instant visualization of your current and historical data, and can be customized to your specific needs with the dashboard builder and our library of widgets.

External Sensors by Measurement

Indoor Environmental

Temperature

Part number	Type	RX3000	RX2100	U30	H21	H22	U12	UX100	UX120	MX1104/5
RXW-THC-B-xxx [1]	HOBOnet wireless temp/RH sensor	√	√							
SD-TEMP-xx	Self-describing air/water/soil temp sensor									√
SD-TEMP-SS-06	Self-describing 6' stainless temp sensor									√
SD-TEMP-P-06	Self-describing 6' pipe temp sensor									√
S-THB-M002 [2]	12-bit temp/RH Smart (2m cable)	√		√	√	√				
S-THB-M008 [2]	12-bit temp/RH Smart (8m cable)	√		√	√	√				
S-TMB-M002	12-bit temp/RH Smart (2m cable)	√	√	√	√	√				
S-TMB-M006	12-bit temp Smart (6m cable)	√	√	√	√	√				
S-TMB-M017	12-bit temp Smart (17m cable)	√	√	√	√	√				
TC6-J	Type J beaded thermocouple							√	√	
TC6-K	Type K beaded thermocouple							√	√	
TC6-T	Type T beaded thermocouple							√	√	
TCP6-K12	Type K Probe thermocouple							√	√	
TMC1-HD	Air/water/soil temp (1' cable)						√		√	
TMC6-HD	Air/water/soil temp (6' cable)						√		√	
TMC20-HD	Air/water/soil temp (20' cable)						√		√	
TMC50-HD	Air/water/soil temp (50' cable)						√		√	
TMC6-HC	Stainless steel temp probe (6' cable)						√		√	
TMC6-HE	Pipe temp (6' cable)						√		√	

Relative Humidity

Part number	Type	RX3000	RX2100	U30	H21	H22
RXW-THC-B-xxx [1]	HOBOnet wireless temp/RH sensor	√	√			
S-THB-M002 [2]	12-bit temp/RH Smart (2m cable)	√		√	√	√
S-THB-M008 [2]	12-bit temp/RH Smart (8m cable)	√		√	√	√

Carbon Dioxide

Part number	Type	RX3000	U30	H22	U12	UX120
TEL-7001	Telaire 7001 CO2	√	√	√	√	√

Air Velocity

Part number	Type	RX3000	U30	H22	U12	UX120
T-DCI-F900-L-O	Air velocity – 5 m/s long	√	√	√	√	√
T-DCI-F900-L-P	Air velocity – 10 m/s long	√	√	√	√	√
T-DCI-F900-S-O	Air velocity – 5 m/s std	√	√	√	√	√
T-DCI-F900-S-P	Air velocity – 10 m/s std	√	√	√	√	√

Differential Pressure

Part number	Type	RX3000	U30	H22	U12	UX120
T-VER-PXU-L	Differential pressure transducer	√	√	√	√	√
T-VER-PXU-X	Differential pressure transducer	√	√	√	√	√

Compressed Air Flow

Part number	Type	RX3000	U30	H22	U12	UX120
T-CDI-5200-10S	Compressed air flow meter	√	√	√	√	√
T-CDI-5200-20S	Compressed air flow meter	√	√	√	√	√

Gauge Pressure

Part number	Type	RX3000	U30	H22	U12	UX120
T-ASH-G2-100	Ashcroft gauge pressure	√	√	√	√	√
T-ASH-G2-200	Ashcroft gauge pressure	√	√	√	√	√
T-ASH-G2-500	Ashcroft gauge pressure	√	√	√	√	√

[1] HOBOnet mote manager part# RXMOD-RXW and RX3000 or RX2100 required
[2] Note: Temp & RH NIST certification services available for this product. Please visit onsetcomp.com, or call us at 1-800-564-4377.

External Sensors by Measurement

Energy/Power

kW & kWh

Part number	Type	RX3000	RX2100	U30	H21	H22	UX90	UX120
T-VER-E50B2	Power and energy meter	√	√	√	√	√		√
T-WNB-3D-240	WattNode 208/240 VAC 3-phase	√	√	√	√	√	√	√
T-WNB-3D-480	WattNode 480 VAC 3-phase	√	√	√	√	√	√	√
T-WNB-3Y-208-P	WattNode 208-240VAC 2 or 3 Branch	√	√	√	√	√		√
T-WNB-3Y-208	WattNode 208/240 VAC 1,2, or 3-Phase	√	√	√	√	√	√	√

AC & DC Current

Part number	Type	EG4100	RX3000	RX2100	U30	H22	U12	UX120	MX1104/5	UX90
SD-CT-xxx	Self-describing current transformer sensor								√	
CTV-A	2 - 20 amp split-core AC current sensor							√	√	
CTV-B	5 - 50 amp split-core AC current sensor							√	√	
CTV-C	10 - 100 amp split-core AC current sensor							√	√	
CTV-D	20 - 200 amp split-core AC current sensor							√	√	
CTV-E	60 - 600 amp split-core AC current sensor							√	√	
T-MAG-0400-05	0.5 - 5 amp split-core AC transformer		√		√	√				√
T-MAG-0400-20	2 - 20 amp split-core AC transformer		√		√	√				√
T-MAG-0400-50	5 - 50 amp split-core AC transformer		√		√	√				√
T-MAG-0400-75	7.5 - 75 amp split-core AC transformer		√		√	√				√
T-ACT-0750-020	0.2 - 20 amp split-core AC transformer	√	√	√	√	√		√		√
T-ACT-0750-050	0.5 - 50 amp split-core AC transformer	√	√	√	√	√		√		√
T-ACT-0750-100	1 - 100 amp split-core AC transformer	√	√	√	√	√		√		√
T-ACT-0750-250	2.5 - 250 amp split-core AC transformer	√	√	√	√	√		√		√
T-MAG-SCT-100	10 - 100 amp split-core AC transformer	√	√		√	√				√
T-MAG-SCT-200	20 - 200 amp split-core AC transformer	√	√		√	√				√
T-MAG-SCT-600	60 - 600 amp split-core AC transformer	√	√		√	√				√
T-VER-971BP-200	split-core Bi-Polar DC transducer		√		√	√		√	√	
T-EG-0390-0050	50 amp split-core CT (0.39” opening)	√	√		√	√		√		√
T-EG-0390-0075	75 amp split-core CT (0.39” opening)	√	√		√	√		√		√
T-EG-0630-0050	50 amp split-core CT (0.63” opening)	√	√		√	√		√		√
T-EG-0630-0100	100 amp split-core CT (0.63” opening)	√	√		√	√		√		√
T-EG-0940-0100	100 amp split-core CT (0.94” opening)	√	√		√	√		√		√
T-EG-0940-0200	200 amp split-core CT (0.94” opening)	√	√		√	√		√		√
T-EG-1420-0400	400 amp split-core CT (1.42” opening)	√	√		√	√		√		√
T-EG-1420-0600	600 amp split-core CT (1.42” opening)	√	√		√	√		√		√

AC & DC Voltage

Part number	Type	RX3000	RX2100	U30	H21	H22	U12	UX90	UX120	MX1104/5
SD-VOLT-xx	Self-describing DC voltage input cable									√
T-MAG-SPT-150	150 volt AC potential transformer	√	√	√		√				
T-MAG-SPT-300	300 volt AC potential transformer	√	√	√		√				
T-MAG-SPT-600	600 volt AC potential transformer	√	√	√		√				
T-CON-ACT-150	ConLab 0-150 volt AC transmitter						√		√	
T-CON-ACT-300	ConLab 0-300 volt AC transmitter						√		√	
S-CIA-CM14	12-bit 4-20mA input adapter	√	√	√	√[1]	√				
S-VIA-CM14	12-bit voltage input adapter	√	√	√	√[1]	√				
CABLE-ADAP5	Voltage input cable 0-5 VDC						√		√	
CABLE-ADAP10	Voltage input cable 0-10 VDC						√		√	
CABLE-ADAP24	Voltage input cable 0-24 VDC								√	
CABLE-2.5-STEREO	Voltage input cable 0-2.5 VDC						√	√	√	
S-FS-CVIA	FlexSmart analog module (2 channels)					√				

Milliamp

Part number	Type	RX3000	RX2100	U30	H21	H22	UX120	MX1104/5
T-ASH-G2-100	Self-describing 4-20mA input cable sensor							√
S-CIA-CM14	12-bit 4-20mA input adapter	√	√	√	√[1]	√		
CABLE-4-20MA	Measures currents from 0-20.1mA						√	

[1] These require Smart Sensor consolidator box, part# S-ADAPT-6

External Sensors by Measurement

Energy/Power (continued)

Amp Hour, Amps, Power Factor, Volt-Amp Reactive, Volt-Amp Reactive Hour, Volt Amps, Volts, Watt Hours, Watts

Part number	Type	RX3000	RX2100	U30	H21	H22	UX120
T-VER-E50B2	Power and energy meter	√	√	√	√	√	√

Pulse

Part number	Type	RX3000	RX2100	U30	H22	UX90	UX120	MX1104/5
S-UCC-M001	Electronic switch pulse input adapter - 1m	√	√	√	√			
S-UCC-M006	Electronic switch pulse input adapter - 6m	√	√	√	√			
S-UCD-M001	Contact closure pulse input adapter - 1m	√	√	√	√			
S-UCD-M006	Contact closure pulse input adapter - 6m	√	√	√	√			
CABLE-2.5-STEREO	Voltage input cable 0-2.5 VDC					√	√	√

Time-of-Use

Motor On/Off

Part number	Type	UX90	UX120
CSV-A8[1]	AC current switch	√	√

Water

Water Temperature

Part number	Type	RX2100	MX2001
T-SDX-93720-xxx-xxx	Stevens SDX water level pressure sensor		
S-TMB-M002[1]	12-bit temp Smart (2m cable)	√	
S-TMB-M006	12-bit temp Smart (6m cable)	√	
S-TMB-M017	12-bit temp Smart (17m cable)	√	
TMC1-HD	Air/water/soil temp (1' cable)		
TMC6-HD	Air/water/soil temp (6' cable)		
TMC20-HD	Air/water/soil temp (20' cable)		
TMC50-HD	Air/water/soil temp (50' cable)		

Water Level

MX2001-04-S	Water level sensor, 4 meter (13')	√	√
MX2001-01-S	Water level sensor, 9 meter (30')	√	√
MX2001-02-S	Water level sensor, 30 meter (100')	√	√
MX2001-03-S	Water level sensor, 76 meter (250')	√	√
MX2001-04-Ti-S	Water level sensor, 4 meter (13') Ti	√	√
MX2001-01-Ti-S	Water level sensor, 9 meter (30') Ti	√	√

[1]Note: Temp & RH NIST certification services available for this product. Please visit onsetcomp.com, or call us at 1-800-564-4377

External Sensors by Measurement

Weather/Field

Temperature

Part number	Type	RX3000	RX2100	U30	H21	H22	UX100	UX120	MX1104/5
RXW-TMB-xxx[1]	HOBOnet wireless temp sensor	√	√						
S-THC-M002[2]	12-bit temp/RH Smart (2m cable)	√	√	√	√	♦			
S-THC-M008[2]	12-bit temp/RH Smart (8m cable)	√	√	√	√	♦			
S-THB-M002	12-bit temp/RH Smart (8m cable)	√	√	√	√	♦			
S-TMB-M006	12-bit temp Smart (6m cable)	√	√	√	√	♦			
S-TMB-M017	12-bit temp Smart (17m cable)	√	√	√	√	♦			
TC6-J	Type J beaded thermocouple						♦	♦	
TC6-K	Type K beaded thermocouple						♦	♦	
TC6-T	Type T beaded thermocouple						♦	♦	
TCP6-K12	Type K probe thermocouple						♦	♦	
TMC1-HD	Air/water/soil temp (1' cable)							♦	♦
TMC6-HD	Air/water/soil temp (6' cable)							♦	♦
TMC20-HD	Air/water/soil temp (20' cable)							♦	♦
TMC50-HD	Air/water/soil temp (50' cable)							♦	♦
TMC6-HC	Stainless steel temp probe (6' cable)							♦	♦
TMC6-HE	Pipe temp (6' cable)							♦	♦

PAR

Part number	Type	RX3000	RX2100	U30	H21	H22
RXW-LIA-xxx[1]	HOBOnet wireless PAR	√	√			
S-LIA-M003	Photosynthetic light (PAR)	√	√	√	√	♦

Solar Radiation

Part number	Type	RX3000	RX2100	U30	H21	H22
RXW-LIB-xxx[1]	HOBOnet wireless solar radiation	√	√			
S-LIB-M003	Solar radiation	√	√	√	√	♦

Barometric Pressure

Part number	Type	RX3000	RX2100	U30	H21	H22
S-BPB-CM50	Barometric pressure	√	√	√	√	♦
S-BPA-CM10	HWS barometric pressure					♦

Wind Speed & Direction

Part number	Type	RX3000	RX2100	U30	H21	H22
RXW-WCG-xxx[1]	HOBOnet ultrasonic wind speed & direction	√	√			
RXW-WCF-xxx[1]	HOBOnet wireless wind direction	√	√			
S-WCG-M003	Ultrasonic wind speed and direction	√	√	√	√	♦
S-WDA-M003	Wind direction (3m cable)	√	√	√	√	♦
S-WSB-M003	Wind speed Smart Sensor (3m cable)	√	√	√	√	♦
S-WSET-A	Wind Smart Sensor set	√	√	√	√	♦
S-WCB-M003	R.M. Young wind monitor-AQ adapter	√	√	√	√	♦
S-WCC-M003	R.M. Young marine wind adapter	√	√	√	√	♦
S-WCE-M003	R.M. Young wind monitor adapter	√	√	√	√	♦
S-WCF-M003	Davis wind speed/direction Smart Sensor	√	√	√	√	♦

Rainfall

Part number	Type	RX3000	RX2100	U30	H21	H22
RXW-RGE-xxx[1]	HOBOnet wireless rainfall (inches)	√	√			
RXW-RGF-xxx[1]	HOBOnet wireless rainfall (metric)	√	√			
S-RGA-M002	.01" rain gauge Smart Sensor (2m cable)	√	√	√	√	♦
S-RGB-M002	.2mm rain gauge Smart Sensor (2m cable)	√	√	√	√	♦
S-RGC-M002	Davis 0.01" rain gauge Smart Sensor	√	√	√	√	♦
S-RGF-M002	Davis 0.2 mm rain gauge Smart Sensor	√	√	√	√	♦

[1] HOBOnet mote manager part# RXMOD-RXW and RX3000 or RX2100 required

[2] Note: Temp & RH NIST certification services available for this product. Please visit onsetcomp.com, or call us at 1-800-564-4377

♦ This logger is intended for indoor environments, but sensors are compatible.

External Sensors by Measurement

Weather/Field (continued)

Soil Moisture

Part number	Type	RX3000	RX2100	U30	H21	H22
RXW-GP3-xxx[1]	3-segment probe (45 cm, 18 in) soil moisture	√	√			
RXW-GP4-xxx[1]	4-segment probe (60 cm, 24 in) soil moisture	√	√			
RXW-GP6-xxx[1]	6-segment probe (90 cm, 35 in) soil moisture	√	√			
RXW-T12-xxx[1]	HOBOnet wireless T12 soil moisture/temp/EC sensor	√	√			
RXW-SMC-xxx[1]	HOBOnet wireless soil moisture EC-5	√	√			
RXW-SMD-xxx[1]	HOBOnet wireless soil moisture 10HS	√	√			
S-SMC-M005	EC-5 soil moisture Smart Sensor	√	√	√	√	♦
S-SMD-M005	10HS soil moisture Smart Sensor	√	√	√	√	♦

Soil Water Potential

Part number	Type	RX3000	RX2100	U30	H21	H22
RXW-T21-xxx[1]	HOBOnet wireless T12 soil moisture/temp/EC sensor	√	√			

Leaf Wetness

Part number	Type	RX3000	RX2100	U30	H21	H22
RXW-LWA-xxx[1]	HOBOnet wireless leaf wetness sensor	√	√			
S-LWA-M003	Leaf wetness Smart Sensor	√	√	√	√	♦

Relative Humidity

Part number	Type	RX3000	RX2100	U30	H21	H22
RXW-THC-xxx[1]	HOBOnet wireless temp/RH sensor	√	√			
S-THC-M002	12-bit temp/RH Smart (2m cable)	√	√	√	√	♦
S-THC-M008	12-bit temp/RH Smart (8m cable)	√	√	√	√	♦

Pulse Input

Part number	Type	RX3000	RX2100
RXW-UCC-xxx[1]	HOBOnet pulse input- electronic switch sensor	√	√
RXW-UCD-xxx[1]	HOBOnet pulse input- contact closure sensor	√	√

[1] HOBOnet mote manager part# RXMOD-RXW and RX3000 or RX2100 required
♦ This logger is intended for indoor environments, but sensors are compatible.

Accessories

MX Gateway

Part number	Type	MX1101	MX1102	MX2300	MX2200	MX1104/5
MXGTW1	MX Gateway	√	√	√	√	√

Shuttles/Base Stations

Part number	Type	H22	RG3	UA	U12	U20	U22	U23	U24	U26	U30	UTBI	UX90	UX100	UX120
U-DT-1	U-Shuttle data transporter	√			√								√	√	√
U-DT-2	U30 shuttle data transporter										√				
U-DTW-1	Waterproof shuttle		√	√		√	√	√	√	√		√			
BASE-U-4	Optic USB base station		√	√		√	√	√	√	√		√			

Computer Interface Cables

Part number	Type	H21	H22	U12	UX90	UX100	UX120	MX1102A
CABLE-PC-3.5	Serial interface cable for H-series HOBOs		√					
CABLE-USBMB	USB cable for HOBO U-Series	√		√	√	√	√	√
ADAPT-SER-USB	USB to serial interface cable for H-series HOBOs		√					

Water Loggers

Part number	Type	UA	U20	U24	U26	MX2001	RX2100	MX2200	MX2501
WELL-CAP-01	2” (5cm) Well Cap		√	√	√	√			
WELL-CAP-02	2” (5cm) Well Cap		√	√	√		√		
CABLE-DR-5.0	5m Direct Read Cable					√			
CABLE-DR-010	10m Direct Read Cable					√			
CABLE-DR-015	15m Direct Read Cable					√			
CABLE-DR-030	30m Direct Read Cable					√			
CABLE-DR-060	60m Direct Read Cable					√			
CABLE-DR-xxx[1]	xxxm Custom Length Direct Read Cable					√			
CABLE-RWL-1.0	1m RWL Cable						√		
CABLE-RWL-2.0	2m RWL Cable						√		
CABLE-RWL-5.0	5m RWL Cable						√		
CABLE-RWL-010	10m RWL Cable						√		
CABLE-RWL-015	15m RWL Cable						√		
CABLE-RWL-030	30m RWL Cable						√		
CABLE-RWL-060	60m RWL Cable						√		
CABLE-RWL-xxx[1]	xxxm RWL Cable						√		
HOUSING-U2X	Protective Housing		√	√					
GROMMET-5	Replacement Grommets (5-pack)					√			
U26-RDOB-1	Replacement DO Sensor Cap				√				
U26-GUARD-2	Antifouling Protective Guard				√				
MX2203-ORING	MX2203 Replacement O-ring (5-pack)							√	
UA-PARTSKIT	Parts kit for UA loggers	√							
DESICCANT5	Desiccant small packet (25 ea) for UA-003-64	√							
MX2500-ELECTRODE	Replacement Electrode								√
MX2500-GUARD	Anti-Biofouling Copper Guard								√
MX2500-END-CAP	End Cap								√
MX2500-CAL-BKR	Calibration Beaker								√
MX2500-CAL-xx	pH Calibration Solutions (475 mL ea.)								√
MX2500-STORE-SOLN	Electrode Storage Solution (475 mL)								√
MX2500-CAL-KIT	Calibration Kit (Calibration Beaker and 4, 7, 10 Buffers)								√
MX2500-MAINT-KIT	Maintenance Kit (Calibration Kit and Storage Solution)								√

[1]xxx is cable length in meters, ranging from 0.2m to 500m; cable length increments are larger for longer lengths

Accessories

Replacement Batteries

Part number	Type	H21	UA	U12	U23	RX3000	U30	UX90	UX100	RX2100	MX2300
HRB-TEMP-1	Lithium batteries (box of 5)		√	√				√	√		
HRB-U30-S100	10 Ahr battery w/cable					√	√				
HP-B	Replacement battery for HOBO U23				√						
HWSB-LI	Lithium battery	√	√	√				√	√		
HRB-LI-6	Lithium battery									√	
HRB-NIMH-6	Re-chargeable battery									√	
HRB-2/3AA	Replacement AA battery pack										√

For factory battery replacement and calibration services, please call 1-508-759-9500 or 1-800-LOGGERS

Replacement Couplers

Part number	Type	UA	U20	U22	U23	U24	U26	UTBI
COUPLER-UA	Coupler (for use with BASE-U-4)	√						
COUPLER2-A	Coupler (for use with BASE-U-4)	√						
COUPLER2-B	Coupler (for use with BASE-U-4)		√					
COUPLER2-C	Coupler (for use with BASE-U-4)			√		√	√	
COUPLER2-D	Coupler (for use with BASE-U-4)							√
COUPLER2-E	Coupler (for use with BASE-U-4)				√			

Subminiature Connectors

Part number	Type	UX100	UX120
SMC-J	For type J wire	√	√
SMC-K	For type K wire	√	√
SMC-T	For type T wire	√	√

NIST Certification

Part number	Type	UA	U12	U22	U23	UTBI	UX100	UX120	MX1101	MX1102A	MX2300	MX1104
	Temp only											
NIST-SETUP	NIST traceable setup/logger	√	√	√	√	√	√	√	√	√	√	√
NIST-TEMP-POINT	NIST per-point/channel	√	√	√	√	√	√	√	√	√	√	√
	Temp & RH											
RH-NIST-ONEPOINT	One degree Temp & RH certification				√		√		√	√	√	√
RH-NIST-THREEPOINT	Three degree Temp & RH certification				√		√			√		

Accessories

Additional Accessories

Part number	Type	H21	H22	RG3	UA	U12	U14	U20	U22	U23	U24	U26	RX3000	U30	UTBI	UX90	UX100	UX120	MX1102	MX2001	RX2100	MX2300	MX2501
T-VER-AH02	Single phase fuse kit (for T-VER-E50B2 only)		√										√	√				√					
A-WNB-LEADSET	Voltage input lead set with alligator clips	√	√										√	√		√		√					
BOOT-BLK	Protective boot, black (cap included)								√														
BOOT-WHT	Protective boot, white (cap included)								√														
85-CAPLUG-H20-B	Replacement cap for protective boot, black								√														
85-CAPLUG-H20-W	Replacement cap for protective boot, white								√														
BOOT-TIDBIT-BK	Protective boot, black (5 ea)														√								
BOOT-TIDBIT-WH	Protective boot, white (5 ea)														√								
U20-CASE-1	Carrying case							√															
CABLE-1-50	Teflon coated SS cable (50 ft)							√			√	√											
CABLE-1-300	Teflon coated SS cable (300 ft)							√			√	√											
CABLE-1-CRIMP	Crimp sleeve (12 ea) for above cables							√			√	√											
SOLAR-5W	5 watt, 6 volt solar panel												√	√									
SOLAR-15W	15 watt, 6 volt solar panel												√	√									
AC-U30	AC power adapter												√	√									
P-AC-1	AC power adapter																				√		
RS1	Solar radiation shield				√				√	√					√							√	
M-RSA	Solar radiation shield (assembled)				√				√	√					√							√	
RS3-B	Solar radiation shield									√												√	
MX2300-RS-BRACKET	MX2300s bracket for RS1 or M-RSA																					√	
U23-RS-CLAMPKIT	Mounting clamp (2 required)									√													
UX90-LIGHT-PIPE-1	1-foot fiber optic attachment for HOBO UX90															√							
CASE-PELICAN-1510	Pelican case- durable, watertight, FAA carry-on	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
CASE-4X-2	Protective, weather-resistant case																√	√					

Additional Replacement Parts

Part number	Type	H21	UA	U12	U2200	U23	U26	UX100	MX2001	MX2300
U12-015-ORING-E	O-ring kit (EPDM)			√						
U12-015-ORING-V	O-ring kit (Viton)			√						
H8X4-BK	Replacement parts kit			√						
HUM-RHPCB-3A	RH sensor (for serial #s > 9847173)							√		
DESICCANT1	Desiccant, small packet (25 ea) for UA & U23		√			√				
DESICCANT2	Desiccant, large packet (25 ea) submersible cases									√
85-DESICCANT6	Desiccant pack for HOBO Micro Station	√								
HUM-RHCAP2	RH cap kit (5 ea) (includes S-THB))				√	√				

Data Shuttles/Base Stations

HOBO Waterproof Shuttle
U-DTW-1

The HOBO Waterproof Shuttle provides convenient readout and relaunching of underwater and outdoor HOBO loggers with an Optic USB interface, and is waterproof to 20 meters (66 feet). The HOBO Waterproof Shuttle can also be used as a Base Station.

Key Advantages:

- Can be used either as a data shuttle or an Optic USB Base Station
- Supports all HOBO Optic USB loggers
- Outdoor or underwater data readout
- Convenient direct USB connection to host computer
- Waterproof to 20 meters
- Checks and indicates its own battery status
- Offloads full 64K logger in 30 seconds
- Couplers are included

HOBO Base Station
BASE-U-4

The HOBO Optic USB Base Station and a series of couplers are used to offload data from any HOBO data logger with an Optic USB interface. The splash resistant Optic USB Base Station connects to your computer via USB, while connecting to the logger via an appropriate coupler.

Key Advantages:

- Provides fast optical infrared (IR) communications for easy launch and readout of all HOBO Optic USB loggers
- Convenient direct USB connection to host computer
- Splash-resistant
- Offloads full 64K logger in 30 seconds
- Couplers are included

Both the U-DTW-1 and BASE-U-4 are compatible with the following data loggers:
HOBO UA, U20, U20L, U22, U23, UTBI, U24 & U26 series

The Onset Advantage

Responsiveness

Your projects have tight deadlines that your monitoring partner must be able to meet. Onset offers a highly responsive, dynamic manufacturing environment where we build and ship all our products directly from our headquarters on Cape Cod. Our centralized operations and large capacity enable us to provide fast turnaround to meet your tight project deadlines. Most orders ship within 24 hours.

Reliable, Accurate Data

No matter what your application involves, at the end of the day it all comes down to the integrity of your data. Our HOBO data loggers are known for providing the most reliable, accurate energy and environmental data under some of the world's toughest environmental conditions.

Simple & Cost-Effective

At Onset, we realize that the technology skill set of our customers and their technology budgets can vary widely. For this reason, our products are designed from the ground up with ease-of-use and affordability in mind.

Applications Expertise

With more than four decades of experience, Onset has developed an applications expertise that is second to none. Whether it's air quality, agricultural research, preservation management, water quality, or temperature-controlled storage monitoring, chances are we have seen your application before and know how to help.

World Class Support

Our world-class technical service department is staffed by friendly, knowledgeable people who listen carefully to your questions and guide you through any challenges that arise. Unlike many technology companies, Onset offers free technical support for the life cycle of your purchase.

"The time reduction for downloading the MX2001 logger in our wells is significant, since most are 25 to 500 feet deep. The Bluetooth capability eliminates the need to remove the logger from the well and threat of tangled cable."

David Light,
West Virginia University

About Onset

Onset is a leading supplier of data loggers and monitoring solutions used to measure, record, and manage data for improving the environment and preserving the quality of temperature-sensitive goods.

Based on Cape Cod, Massachusetts, Onset has been designing and manufacturing its products on site since the company's founding in 1981.

Onset headquarters, Cape Cod, MA

Go to onsetcomp.com/resources/ to browse our white papers, use cases, videos, and webinars.

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Patented technology (U.S. Patent 6,826,664)

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