Onset HOBO Weather Stations

HOBO Weather Stations

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

HOBO Weather Stations save you time and money by offering plug-and-play convenience and research-grade performance.

HOBO RX3000

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

HOBO U30-NRC

- 5 or 10 Smart Sensor inputs
- Optional analog sensor port
- Built-in relay
- Supports broad range of sensors

HOBO H21-002

- 4 Smart Sensor inputs
- Compact, low-cost
- Improved weatherproof enclosure
- Supports broad range of sensors

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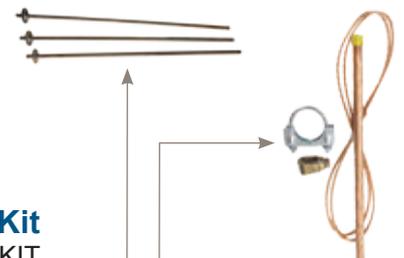Guy Wire Kit (M-GWA)
Mast Level (M-MLA)

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.
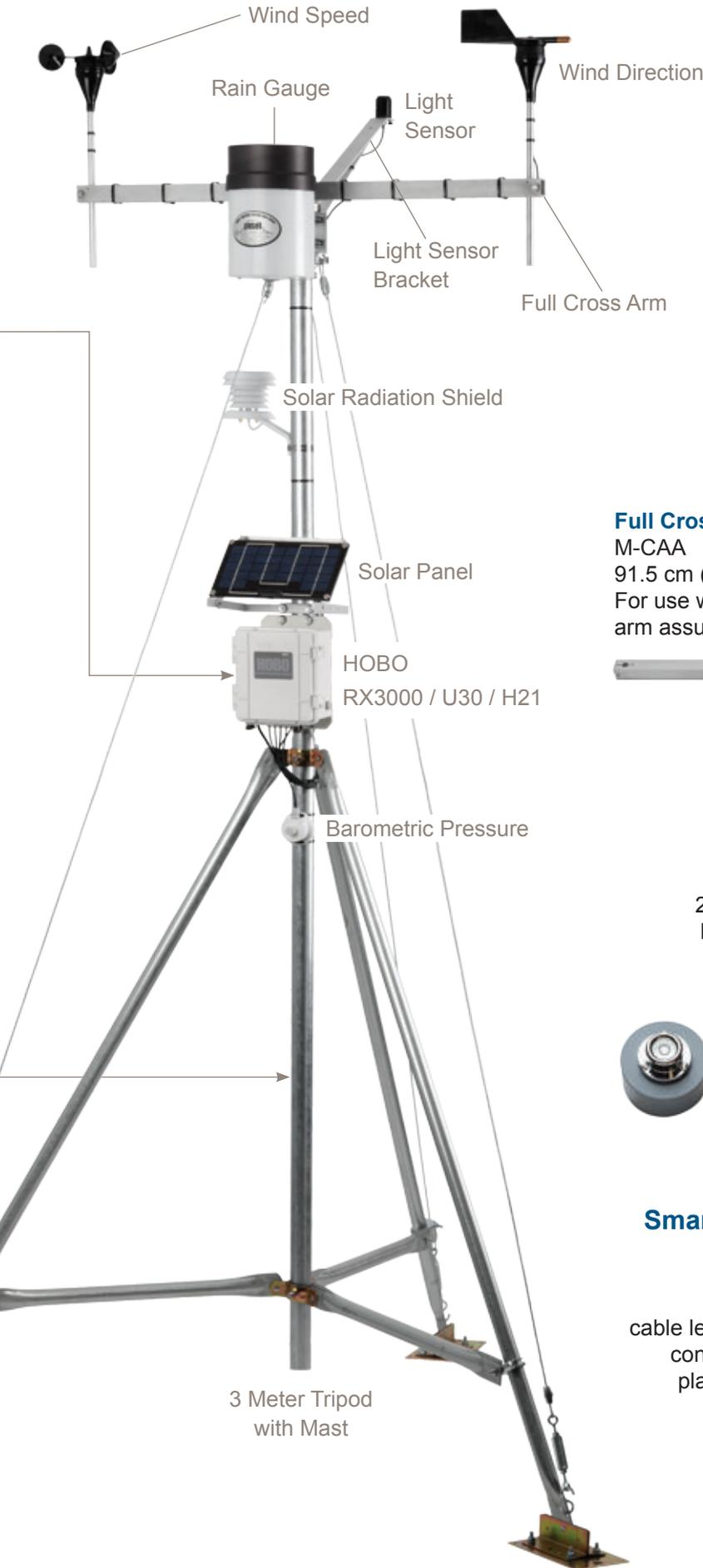
Wind Speed

Rain Gauge

Light Sensor

Wind Direction

Light Sensor Bracket

Full Cross Arm

Solar Radiation Shield

Solar Panel

HOBO
RX3000 / U30 / H21

Barometric Pressure

3 Meter Tripod
with Mast

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

Solar Radiation Shield
RS3
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 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:

- Cloud-based data access
- 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:

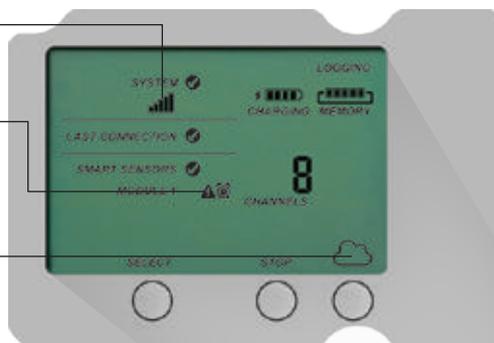| Software See pg 37	HOBOlink Data plan*	Power source[1]	Sensor See pg 41

Confirm signal strength at the site

Receive immediate notification of sensor or system problems

Connect with HOBOlink to upload configuration changes and latest readings

Deployment Friendly

On-board LCD display helps you confirm system operation, sensor connections, cellular signal strength and other parameters before leaving the deployment site.

Wide range of measurements

The measurement possibilities are nearly endless with the RX3000 Station. You can configure up to 15 channels of plug-and-play Smart Sensors, and add modules for up to 8 analog sensors.

And, the station can power external sensors requiring 12-volt excitation power, extending the range of possible measurements.
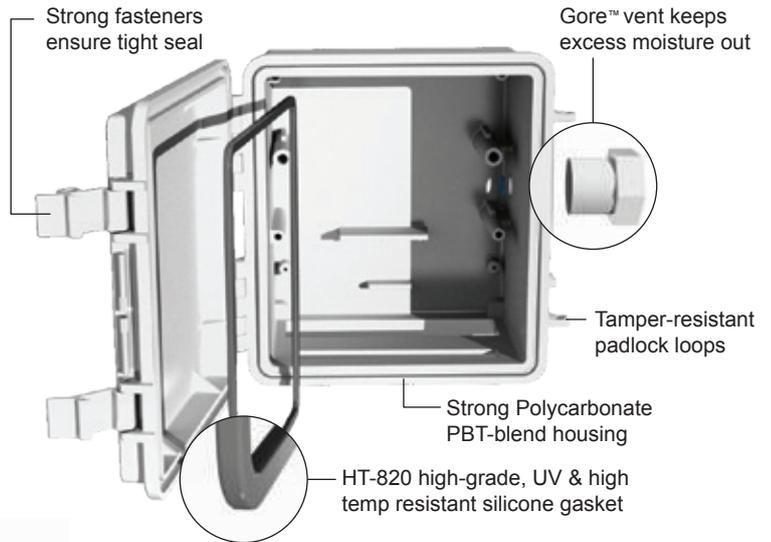
*Requires paid data plan. See page 40 for more details.
[1]AC power adapter or solar panel required. See page 46. For more details, please visit onsetcomp.com, or call us at 1-800-564-4377.

HOBO RX3000 Remote Weather Station

Reliable, field-proven performance

The HOBO RX3000 features a field-proven, double-weatherproof enclosure designed for long-term use – even in the harshest environments. Critical system electronics are sealed in the unit's secondary enclosure, and weathertight sensor cable seal keeps moisture out.

Strong fasteners ensure tight seal

Gore™ vent keeps excess moisture out

Tamper-resistant padlock loops

Strong Polycarbonate PBT-blend housing

HT-820 high-grade, UV & high temp resistant silicone gasket

Convenient plug-and-play operation

Simply plug in a Smart Sensor and the RX3000 Station will recognize it and begin taking measurements. No need for programming or complicated wiring!

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

Part number	RX3001-00-01 (ETH)	RX3002-00-01 (WiFi)	RX3003-00-01 (3G)
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)		
Fastest Logging Rate	1 second	1 second	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	RJ45/100BaseT	IEEE 802.11 b/g/n	GSM/GPRS/EDGE: Quad band 850/900/1800/1900 MHz, UMTS/HSPA+: Five band 800/850/900/1900/2100 MHz
CE Compliant	Yes		

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 37   Power source[1]   Sensor See pg 41

▸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 46. For more details, please visit onsetcomp.com, or call us at 1-800-564-4377.

HOBO Micro Station

4-channel weatherproof station for monitoring outdoor environmental conditions

The HOBO Micro Station offers reliable monitoring performance at industry-leading prices. Designed for stand-alone data logging applications, the 4-channel HOBO Micro Station accepts Onset's full suite of plug-and-play Smart Sensors, and is battery-powered for up to one year.

Supported Measurements:

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

Key Advantages:

• Improved weatherproof enclosure for harsh environments
• Compact and low cost, with 4 sensor inputs
• Up to 2 DC voltage or 4-20mA input adapters

Minimum System Requirements:

Software See pg 37	Interface Cable*	Sensor See pg 41

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

Part number	H21-002
Memory	512K non-volatile flash data storage
Operating Range	-20° to 50°C (-4° to 122°F) with alkaline batteries, -40° to 70°C (-40° to 158°F) with lithium batteries
Sensor Inputs	Up to four Smart Sensors (including multiple-parameter sensors)
Communication	RS-232 via 3.5 mm serial port
Logging Interval	1 second to 18 hours, user-specified interval
Time Accuracy	0 to 2 seconds for the first data point and ± 5 seconds per week at 25°C (77°F)
Battery Life	1 year typical, up to 10 sensors w/10 minute or longer logging interval, 4 AA alkaline batteries (included)
Dimensions	8.9 cm H x 11.4 cm D x 5.4 cm W (3.5 x 4.5 x 2.125 in)
CE Compliant	Yes

*USB interface cable. See page 43