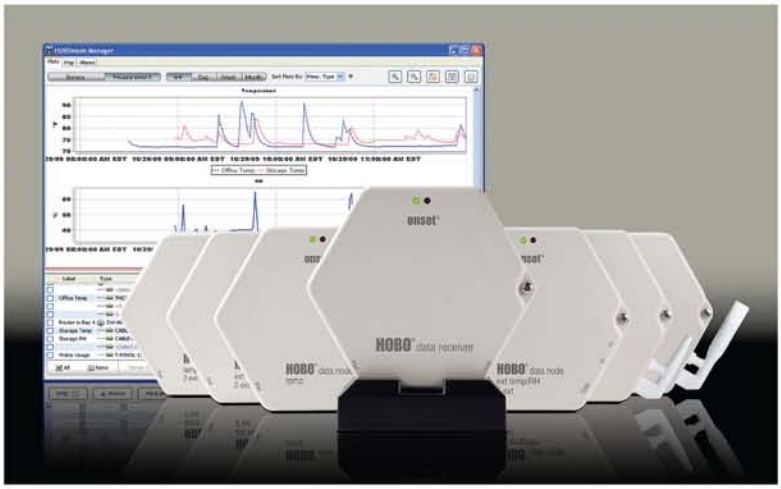


HOBO ZW Series is a family of wireless data nodes that provide centralized monitoring of energy and environmental conditions in buildings.

Best suited for on-site facility monitoring applications where web-based data access is not required, HOBO data nodes transmit high-accuracy, real-time data from dozens of points to a central PC. This eliminates the need of having to manually retrieve and offload individual data loggers, saving you time and money.

Measurements:

Temperature
Relative humidity
AC voltage
AC current
Kilowatts
Kilowatt hours
Gauge pressure
CO_2
Compressed airflow
DC current
Differential pressure
Water usage
4-20 mA
0-10 vdc
Pulse

Key Advantages:

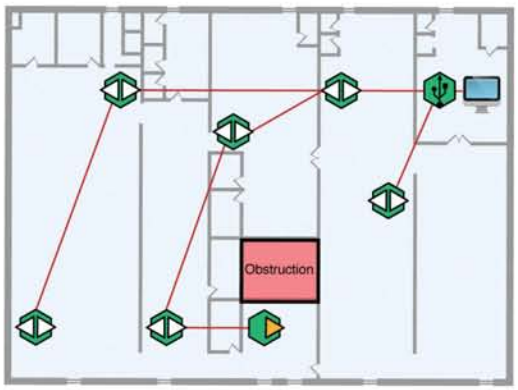
- Provides centralized building performance data collection
- Transmission of real-time data within a self-healing mesh network eliminates line-of-sight issues
- Automatically routes data back to receiver
- Onboard buffer memory helps prevent data loss
- Alarm notification via email or text messages
- Powerful software for organizing and viewing data
- Map deployed data nodes
- Label and group data nodes for easy identification

Centralized Data Collection

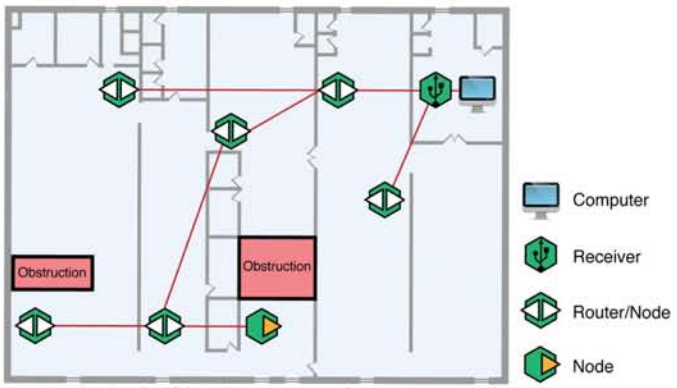
HOBO data nodes, routers, and receivers all work together as a system to provide reliable, accurate real-time information on how a building is performing. Whether you are a warehouse manager looking to keep a close eye on temperature and humidity conditions, a facility manager looking at indoor air quality, or a building energy manager tracking energy use, HOBO data nodes provide reliable data collection without the hassles of manually offloading data.

Self-Healing Technology

HOBO data nodes leverage MESH networking technology, which ensures that data is automatically re-routed back to the receiver without any manual intervention.



Scenario 1. Typical data flow back to the receiver



Scenario 2. Self healing network automatically compensates for new obstruction

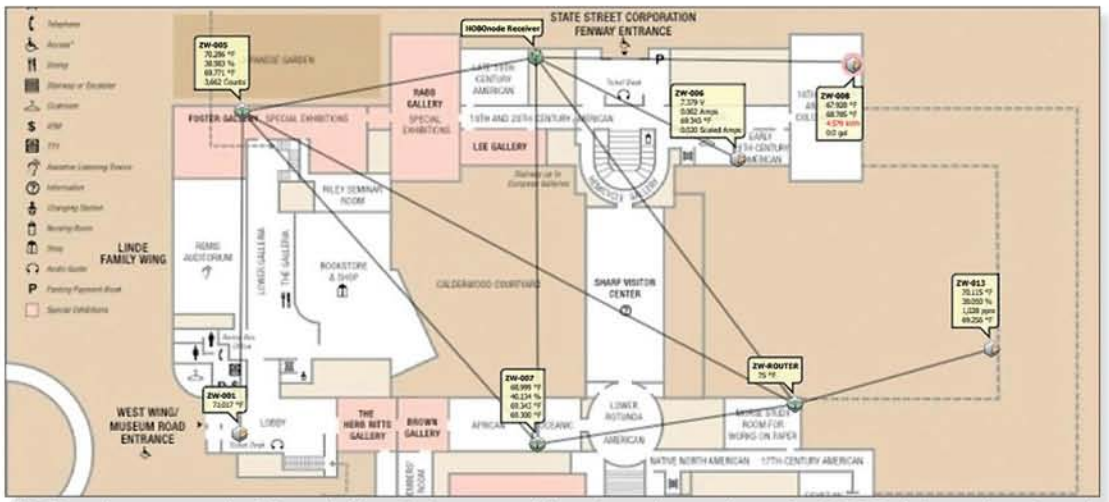
HOBOware Pro 3.1 is included with the ZW Receiver

Advanced Software Capabilities

HOBOnode™ Manager software, a component of HOBOware Pro graphing and analysis software, lets you view real-time energy and environmental data, set alarm notifications, and get an at-a-glance view of your network with the Network Map feature. HOBOnode Manager software also offers one-click export of your data to Microsoft Excel and other programs, and provides network signal strength indication.

Network Map Feature

In many monitoring applications, it's important to view a complete network of your HOBO Data Nodes. HOBOnode Manager's Network Map feature provides an at-a-glance view of your network so you can easily locate your HOBO Data Nodes within a building.



HOBOnode manager's Network Map feature provides at-a-glance view of a HOBO data node network.

Specifications

	 ZW-RCVR (Receiver)	 ZW-001	 ZW-003	 ZW-005**	 ZW-006	 ZW-007**	 ZW-008	 ZW-ROUTER (Router)
Measurements	N/A	Temp	Temp, RH	External T/RH, 1 analog port, 1 pulse input port	4 external analog ports	External T/RH, 2 analog ports	2 analog ports, 2 pulse input ports	N/A
Probe Size				1cm (0.38 in) diameter probe on 1.8 m (6ft cable)		1cm (0.38 in) diameter probe on 1.8 m (6ft cable)		
Buffer memory	up to 95k measurements	5k measurements	4k measurements	3k measurements	3k measurements	3k measurements	3k measurements	N/A
Sample rate	N/A	1 min to 18 hrs	1 min to 18 hrs	1 min to 18 hrs	1 min to 18 hrs	1 min to 18 hrs	1 min to 18 hrs	N/A
Transmission rate	N/A	2 min and greater	2 min and greater	2 min and greater	2 min and greater	2 min and greater	2 min and greater	N/A
Power options	AC power adapter, USB, Battery	AC power adapter, Battery Backup	AC power adapter, Battery Backup	AC power adapter, Battery Backup	AC power adapter, Battery Backup	AC power adapter, Battery Backup	AC power adapter, Battery Backup	AC power adapter, Battery Backup
Measurement range	N/A	-20C to +50C (-4F to +122F) w/battery power (Node) -20C to +70C (-4F to + 158F) w/AC power (Router)	-20C to +50C (-4F to +122F) w/battery power (Node) -20C to +70C (-4F to + 158F) w/AC power (Router) RH: 5 to 95% RH	Temp: -40° to 70° C (-40° to 158° F) RH: 5 to 95% RH Analog channels: 0 to 2.5 Vdc; 0 to 5 Vdc (w/CABLE-ADAP5); 0 to 10 Vdc (w/ CABLE-ADAP10) 4-20 mA Pulse channel: 0 to 65,535 pulses per logging interval	Analog channels: 0 to 2.5 Vdc; 0 to 5 Vdc (w/CABLE-ADAP5); 0 to 10 Vdc (w/ CABLE-ADAP10)	Temp: -40° to 70° C (-40° to 158° F) RH: 5 to 95% RH Analog channels: 0 to 2.5 Vdc; 0 to 5 Vdc (w/ CABLE-ADAP5); 0 to 10 Vdc (w/ CABLE-ADAP10).	Analog channels: 0 to 2.5 Vdc; 0 to 5 Vdc (w/ CABLE-ADAP5); 0 to 10 Vdc (w/ CABLE-ADAP10). 4-20 mA Pulse channel: 0 to 65,535 pulses per logging interval	N/A
Accuracy	N/A	+/-0.21C, 0C to +50C (+/-0.38F, +32F to +122F) w/battery power (Node) +/-0.54C typical, 0C to +50C (+/-0.97F, +32F to +122F) w/AC power (Router)	+/-0.21C, 0C to +50C (+/-0.38F, +32F to +122F) w/battery power (Node) +/-0.54C typical, 0C to +50C (+/-0.97F, +32F to +122F) w/AC power (Router) RH: ± 2.5% from 10 to 90% typical, max. ± 3.5%	Temp: ± 0.21° C from 0° to 50° C (± 0.38° F from 32° to 122° F) RH: ± 2.5% from 10 to 90% typical, max. ± 3.5% Analog: ±1.544 mV plus 2 % of reading (typical)	Analog: ± 1.544 mV plus 2% of reading (typical)	Temp: ± 0.21° C from 0° to 50° C (± 0.36° F from 32° to 122° F) RH: ± 2.5% from 10 to 90% typical, max. ± 3.5% Analog: ± 1.544 mV plus 2 % of reading (typical)	Analog: ± 1.544 mV plus 2% of reading (typical)	N/A
Resolution	N/A	Temp: 0.02° C @ 25° C (0.04° F @ 77° F)	Temp: 0.02° C @ 25° C (0.04° F @77° F) RH: 0.03%	Temp: 0.02° C @ 25° C (0.04° F @77° F) RH: 0.03% Analog channel: 0.6 mV Pulse Channel: 1 pulse	Analog channel: 0.6mV	Temp: 0.02° C @ 25° C (0.04° F @77° F) RH: 0.03% Analog channel: 0.6 mV	Analog channel: 0.6mV Pulse Channel: 1 pulse	N/A
Response time	N/A	Temp: 5 min. in air moving 1 m/s (3.3 ft/sec)	Temp: 5 min. in air moving 1 m/s (3.3 ft/sec) RH: 10 min. in air moving 1 m/s (3.3 ft/sec)	Temp: 5 min. in air moving 1m/s (3.3 ft./sec) RH: 10 min. in air moving 1 m/s (3.3ft/sec)	Dependent on sensor	Temp: 5 min. in air moving 1m/s (3.3 ft./sec) RH: 10 min. in air moving 1 m/s (3.3ft/sec)	Dependent on sensor	N/A

A base system requires a HOBO Data Node, Receiver, and HOBOware Pro software*

Common Specifications

Range: Approx. 100 m (300ft.) depending on obstructions or interference
Weight: 138 g (4.87 oz) with batteries
Size: 96.5 x 108 x 28 mm (3.8 x 4.25x 1.1 in)

Radio Power: 1.6 mW (2 dBm)
Wireless data Standard: IEEE 802.15.4 2.4 GHz band

For more detailed specifications, please refer to individual device manuals
FCC Certified. Check www.onsetcomp.com for the latest certification. CE

* HOBOware Pro is included with the cost of the ZW Receiver.
**External T/RH cables included

Ordering Information

Data Loggers	
Receiver & HOBOware Pro Software	ZW-RCVR
Router only	ZW-ROUTER
Integrated Temperature	ZW-001
Integrated Temperature/RH	ZW-003
External- T/RH, (1) analog, (1) pulse	ZW-005
External- (4) analog	ZW-006
External- T/RH, (2) analog	ZW-007
External- (2) analog, (2) pulse	ZW-008
kWh* **	
WattNode Wye config 208/240	T-WNB-3Y-208
WattNode Wye 208/240 opt P3	T-WNB-3Y-208P
WattNode Delta/Wye config 208/240	T-WNB-3D-240
WattNode Delta/Wye config 480	T-WNB-3D-480
"B" Series Voltage Lead Set	A-WNB-LEADSET
Veris 1-phase, 300 Amp	T-VER-8051-300
Veris 3-phase, 800 Amp	T-VER-8053-800
Water Flow* **	
Water Flow Meter	T-MINOL-130
kW**	
3 Phase, 480V, 100 AMP	T-VER-8044-100
Gauge Pressure†**	
100 psig	T-ASH-G2-100
200 psig	T-ASH-G2-200
500 psig	T-ASH-G2-500
Differential Air Pressure Transducer†**	
.01-10.0 WC	T-VER-PXU-L
.01-10.0 WC	T-VER-PXU-X
Humidity†**	
Duct-Mount RH/Temp	T-VAI-HMD-40Y
DC Current†**	
0-200 Amp	T-VER-H970-200
-200 to 200 Amp	T-VER-971BP-200
Air Velocity Sensor†**	
0.15-10 m/s	T-DCI-F900-L-P
0.15-5 m/s	T-DCI-F900-L-O
0.15-10 m/s	T-DCI-F900-S-P
0.15-5 m/s	T-DCI-F900-S-O
Compressed Air Flow Meter**	
1-80 SCFM	T-CDI-5200-10S
3-350 SCFM	T-CDI-5400-20S
Volatile Organic Compound (VOC)†**	
0-10, 0-100, 0-1000 ppm	T-ION-TVOC
Temperature Sensors	
Air/Water/Soil Probe 0.3m (1ft)	TMC1-HD
Air/Water/Soil Probe 1.8m (6ft)	TMC6-HD
Air/Water/Soil Probe 6.1m (20ft)	TMC20-HD
Air/Water/Soil Probe 15.2m (50ft)	TMC50-HD
Stainless Steel Temp Probe 1.8m (6ft)	TMC6-HC
Pipe Temp 1.8m (6ft)	TMC6-HE
Split-core AC Current Sensors	
0-20 Amps AC	CTV-A
0-50 Amps AC	CTV-B
0-100 Amps AC	CTV-C
0-200 Amps AC	CTV-D
0-600 Amps AC	CTV-E
CO_2**	
Telaire CO_2/Temp Monitor	TEL-7001
AC Voltage Transmitters**	
0 - 150 Volts AC	T-CON-ACT-150
0 - 300 Volts AC	T-CON-ACT-300
DC Voltage	
0 - 2.5 Volts DC	CABLE-2.5-STEREO
0 - 5 Volts DC	CABLE-ADAP5
0 - 10 Volts DC	CABLE-ADAP10
Milliamps	
4 - 20mA	CABLE-4-20MA
Software	
HOBOware Pro Software (Windows®/MAC®)	BHW-PRO-CD
Accessories	
Sensor Power Adapter, 12 Volt DC @ 400mA	AC-SENS-1

* *Requires HOBOware Pro software. HOBOware includes USB interface cable.*
** *Requires input cable.*
*** *Requires pulse input adapter.*
† *Requires sensor power adapter (AC-SENS-1)*

Power adapters are supplied with ZW-RCVR, ZW-ROUTER, and all data node models.