Project Information

Onset Computer Corporation

HOBO® RX Wireless Sensor Network Family Certification

Product Name	HOBO® RX Wireless Sensor Network
Model Number(s)	RXW PAR Sensor (RXW-LIA-900) RXW Silicon Pyranometer Sensor (RXW-LIB-900) RXW Davis® 0.01" Rain Gauge Sensor (RXW-RGE-900) RXW Davis® 0.2 mm Rain Gauge Sensor (RXW-RGF-900) RXW EC5 Soil Moisture Sensor (RXW-SMC-900) RXW EC5 Soil Moisture Sensor (RXW-SMD-900) RXW Temperature/RH Sensor (RXW-THC-900) RXW Temperature Sensor (RXW-TMB-900) RXW Davis® Wind Speed and Direction Sensor (RXW-WCF-900) HOBO® RXW Repeater (RXW-RPTR-900) RXW Analog Input Sensor (RXW-ANA-900) RXW Pulse State Sensor (RXW-SPER-900) RXW Multi-Input Mote (RXW-OBUS-900) HOBO® RX3000 RXW Manager (RXMOD-RXW-900)
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The HOBO® RX Wireless Sensor Network family of products is an addition to Onset's existing HOBO® RX3000 Data Logger. The RX3000 is a data logger that can accommodate several "wired" sensors. The HOBO® RX Wireless Sensor Network product family adds a two-way sub-GHz radio assembly to the RX3000 and also introduces a family of sensor assemblies that include the same two-way sub-GHz radio. This will enable the RX3000 to wirelessly connect to remote sensors at a minimum line of sight range of 1,000'.

The HOBO® RX Wireless Sensor Network product that connects to the RX3000 is referred to as the "Manager" and the remote products are the "sensors" or "Motes". The Manager product wirelessly collects data from the remote Motes and stores the data in the RX3000's internal memory. The Manager is composed of two assemblies; a radio transceiver assembly and a PCB (WSN Flex PCB) that connects to the RX3000. The two Manager assemblies are connected via a serial data cable. The sensor Mote products use the same radio transceiver assembly as the Manager, and thus share the same processor, radio circuitry, antenna, mechanical enclosure and firmware as The Manager. Each product is personalized during the final manufacturing process, thus enabling it to fulfill its intended function.

There are 14 model names which will be applied to the HOBO® RX Wireless Sensor Network family. These model names are outlined in Table 1 below.

Table 1: RX Wireless Sensor Network Model Names

Model #	Description	Region	Details
RXMOD-RXW-900	HOBO® RX3000 RXW Manager	North America	Connects to the RX3000 Logger. Collects data wirelessly from RX Wireless Sensor Network sensors.
RXW-LIA-900	RXW PAR Sensor	North America	Sensor that measures photosynthetically active radiation (light sensor)
RXW-LIB-900	RXW Silicon Pyranometer Sensor	North America	Sensor that measures total solar radiation (light sensor)
RXW-RGE-900	RXW Davis® 0.01" Rain Gauge Sensor	North America	Sensor that Measures rainfall with a resolution of 0.01 inches
RXW-RGF-900	RXW Davis® 0.2 mm Rain Gauge Sensor	North America	Sensor that Measures rainfall with a resolution of 0.2 millimeters

Model #	Description	Region	Details
RXW-SMC-900	RXW EC5 Soil Moisture Sensor	North America	Sensor that measures soil moisture using the EC5 detector.
RXW-SMD-900	RXW 10HS Soil Moisture Sensor	North America	Sensor that measures soil moisture using the 10HS detector.
RXW-TMB-900	RXW Temperature Sensor	North America	Sensor that measures temperature
RXW-THC-900	RXW Temperature/RH Sensor	North America	Sensor that measures temperature and relative humidity.
RXW-WCF-900	RXW Davis® Wind Speed and Direction Sensor	North America	Sensor that measures wind speed and direction.
RXW-ANA-900	RXW Analog Input Sensor	North America	Sensor that measures analog voltage from a user supplied sensor.
RXW-SPER-900	RXW Pulse State Sensor	North America	Sensor that measures digital inputs from user a user supplied sensor.
RXW-OBUS-900	RXW Multi-Input Mote	North America	Sensor that can interface to up to four existing Onset Smart Sensor assemblies.
RXW-RPTR-900	RXW Repeater	North America	This assembly does not have a sensor. Its purpose is to improve the wireless network stability by allowing data to mesh through it to other Motes.

HOBO® RX Wireless Sensor Network Family