

**The 6424 MeshScape® Wireless Direct Current Meter (Wi-Meter) Measures and Communicates Direct Current and Power Values as a Node in a Self-Forming and Self-Healing Wireless Network**

**Features at a Glance**

- MeshScape-compatible wireless sensor node
- Operates on a worldwide and license-free 2.4 GHz ISM radio band with 15 user-selectable channels
- Wide range of electrical parameter measurements:
  - Load current and power
  - Source current and power
  - Battery voltage
- Compatible with 72, 48, 24, 12, and 6 V batteries
- Factory-installed thermistor for battery temperature sensing
- User-adjustable current and voltage sampling intervals
- Logs minimum, maximum, average, and cumulative values
- Available in NEMA enclosure for outdoor installation
- CE- and FCC-compliant hardware modules
- RoHS-compliant

**Wireless Energy Sensor**

The 6424 MeshScape Wireless Direct Current Meter, Wi-Meter, is ideal for retrofit or new installations and is designed for purposes such as electricity sub-metering, energy auditing, and diagnostics. As a MeshScape 6424 Mesh Node with a factory-installed transducer, the Wi-Meter enables the electronic measurements of direct current and voltage.

**Measurement Values**

The Wi-Meter processes multiple sensor signals to provide electric parameters. The capabilities of the Wi-Meter are indicated by the shaded boxes in the chart below:

		Min	Max	Mean	Cum.	Inter.
<b>Source</b>	Current, A					
	Power, KWH					
<b>Load</b>	Current, A					
	Power, KWH					
<b>Battery</b>	Voltage, V					
	Temp, F					

**Typical Applications**

The Wi-Meter is ideal for retrofit installations, new installations, or temporary consumption studies of any direct current power supply systems. It is particularly suited for measuring the status and performance of all renewable energy sources that use rechargeable batteries. Applications include:

- Solar power harvesting
  - Photovoltaic systems
  - Thermal-electric power generators
- Wind power generators
- Marine and hydro power generators

Available in indoor and outdoor enclosures, Millennial Net's Wi-Meter is the perfect direct current sensor for monitoring all DC power supply systems.

**Try it for yourself**

Setting up a wireless mesh network is fast and easy. The MeshScape self-forming and self-healing network is designed for rapid deployment and easy operation.

For more information, visit [www.millennialnet.com](http://www.millennialnet.com)

**MeshScape 4 Networking**

The Wi-Meter uses the industrially-proven MeshScape 4 networking system, which employs patented Persistent Dynamic Routing™ (PDR) techniques to form a self-configuring wireless mesh network. PDR uses a node-initiated network formation to enable efficient topology discovery and facilitates network re-formation (required in ever-changing RF environments) by applying "best route" information. With MeshScape, you can deploy industrial-class wireless mesh networks that are:

- **Self-administrating:** a self-forming and self-healing mesh network requires no administration
- **Robust:** a network that ensures multi-route, reliable data transmission over extensive distances
- **Responsive:** a network that quickly adapts to changes in topology and radio frequency (RF)
- **Power efficient:** can run for years on a single battery set
- **Scalable:** with the application, can scale to hundreds of wireless nodes with minimal overhead
- **Low latency:** very short network data delivery times



Wi-Meter is shown in a NEMA enclosure, suitable for any outdoor installation. The DC meter is connected to a wireless transmitter, allowing the device to act as a node in a wireless mesh sensor network.

**Remote Monitoring/Control Software Features**

The Wi-Meter is designed to interface with a MeshScape-compatible Wireless Energy Management software application, allowing users to remotely monitor and control energy usage. Millennial Net's Wi-EMS is a full-featured and easy-to-use energy management system that provides all the tools you need to report, trend, and analyze energy consumption.

**Long Range**

The Wi-Meter II transmits at a radio power of 60-mW, allowing for communication distances of at least 750 feet clear line of sight.