

M250 Fixed Reader

With a modular design, the M250 fixed reader provides an economical solution to a wide variety of asset tracking problems.



High throughput supports high density of sensors



Instantaneous sensor reporting



Radio is receive-only with no transmission capability



Standard 110-220V power supply and on-board power-over-ethernet (PoE)



32MB RAM and on-board sensor database supporting **up to 65,000 sensor IDs**



Supports multiple simultaneous connections

Integrates with RF Code's CenterScape platform

M250 readers are dual-channel radio receivers tuned to 433.92 MHz. The readers are programmed, calibrated and dedicated to interpreting and reporting the radio frequency messages emitted by RF Code sensors. Sensor transmissions are processed in real-time to quickly locate and identify tagged assets or personnel in defined areas. M250 readers use standard network secure protocols for rapid integration into an organization's IT infrastructure.

RF Code's patented communication protocols allow for very high sensor densities. Large populations of sensors can be monitored using a single reader. A single M250 reader will process in excess of 140 events per second, or 1,400 sensors monitored simultaneously with 10-second beacon intervals. Readers running in 'exception reporting' mode will report only those events that represent a change in asset / location status; this significantly reduces the amount of software data processing.

The M250 also supports multiple simultaneous network connections enabling multiple applications to consume sensor event information. For example, the M250 can be utilized by RF Code's CenterScape applications all at the same time.

The M250 reader's maximum sensitivity (maximum range) depends upon the installation, location and antenna configuration. The operating read range is software configurable and can be adjusted for customized applications.

The software presents all the collected power parameters and computes additional attributes from this data to provide a complete picture of power utilization, power efficiency and power status.

Readers can communicate received tag data over the network using encrypted sessions and optional user installed signed certificates on up to eight simultaneous network connections. An optional "Up Connect" feature is also provided whereby a reader can be configured to initiate a connection to a known remote host running CenterScape or Zone Manager in cases where the network that the reader resides is not accessible by the consuming application.

M250 readers can be powered over Ethernet, 100-240 V power supply w/ IEC connector and US cord, DC barrel jack connector, or DC bare wire connector (12 to 24 volt).

M250 Fixed Reader Specifications

Operation

Operating Frequency	433.92 Mhz
Ethernet	10/100 Mbps Full Duplex via RJ45
Protocol	TCP/IP
USB	USB_A and USB-B serial
Receiver Sensitivity	> 50 dB dynamic range (-58 dB to -108 dB)
Default Range Settings	8 factory programmable range settings in 5 dB increments
Customizable Control	Range settings selectable in 1 dB increments
Sensor Density	Up to 140 sensor reports per second (TRPS)
Group Code Management	Monitors up to 16 tag group codes simultaneously

Enclosure

Width	5.72 in (145 mm)
Depth	5.72 in (145 mm)
Height	0.98 in (25 mm)
Weight	24.7 oz (700 g)
Construction	Powder coated steel enclosure
Mounting	Ceiling, wall-mount or desktop operation

Power

Power	12-24V DC (non-PoE operation)
Power Consumption	2.5 W (typical), <3 W PoE
Power Supply	100-240 V with IEC connector
Optional Power	On-board Power over Ethernet (PoE) adapter (IEEE 802.3af-2003 compliant)

Antenna Connection

Connector Type	Dual-channel SMA flange receptacles
----------------	-------------------------------------

M250 Fixed Reader Specifications (continued)

Read Range

Helical Antenna	Up to 150 feet (45 m)
Omni-angle antenna	Up to 300 feet (91 m)

Environmental

Operating Temperature	-20° C to +65° C
Storage Temperature	-40° C to +80°C
Operating Humidity	10% to 90% non-condensing

LED Indicators

Front	On-Ready, Sensor Activity
Back	Link, Speed, USB-A In Use, Status