

M250 Fixed Reader

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

Features & Benefits

- ◆ Full Function Ethernet port (10/100, full duplex)
- ◆ Optional integrated WiFi 802.11b/g
- ◆ Standard 110/220 Power Supply and On-board Power over Ethernet (PoE)
- ◆ 32 MB RAM and On-board tag database up to 65,000 Tag IDs
- ◆ Instantaneous Tag Reporting
- ◆ Software-Configurable Range Control Settings
- ◆ Small Footprint and Flexible Mounting Options Direct API Interface Available
- ◆ High Throughput Performance Supports Large Tag Populations
- ◆ Ability to Support Multiple Simultaneous Connections
- ◆ Optional Antenna Configurations for Customized Coverage Zones
- ◆ Fully Compatible with Zone Manager, Asset Manager, and Sensor Manager

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 tags. Tag transmissions are processed in real-time to quickly locate and identify tagged assets or personnel in defined areas. M250 readers are compatible with wired and wireless networks for rapid integration into an organization's IT infrastructure.

RF Code's patented communication protocols allow for very high tag densities. Large populations of tags can be monitored using a single reader. A single M250 reader will process in excess of 140 events per second, or 1,400 tags 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 tag event information. For example, the M250 can be utilized by RF Code's Asset Manager, Sensor Manager, and Zone Manager applications all at the same time.

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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. At default settings, the reader operates with no attenuation and reports every tag in its environment. The effective range can be reduced in 5 dB steps by selecting one of the pre-programmed settings (1 through 7). Additional fine tuning can be accomplished by dialing down the sensitivity in 1 dB increments to limit coverage to a single room or defined zone.

The RF data is made available by an application connected to the reader via TCP/IP. The operational settings are password protected. The M250 is available in two models: one model features wired Ethernet connectivity only, while the second model includes integrated 802.11b/g WiFi. The M250 reader supports encrypted connections (HTTPS and SSH). 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).



RF Code M250 Fixed Reader Specifications

OPERATION

Operating Frequency	433.92 MHz
Ethernet	10/100 Full Duplex via RJ45
Wireless Ethernet	via 802.11b and 802.11g (option)
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
Tag Density	Up to 140 tag reports per second (TRPS)
Group Code Management	Up to 16 tag group codes can be monitored simultaneously

READ RANGE

Helical Antenna	Up to 150 feet (45 m)
Omni-angle Antenna	Up to 300 feet (91 m)
YAGI Antenna	Up to 1,000 feet (300m)

ENCLOSURE

Width	5.72 in (145 mm)
Depth	5.72 in (145 mm)
Height	.98 in (25 mm)
Weight	24.7 oz (700 g)
Construction	Powder coated steel enclosure
Mounting	Ceiling, wall-mount or desktop operation

ENVIRONMENTAL

Operating Temperature	-20° C to +70° C
Storage Temperature	-40° C to +80° C
Operating Humidity	10% to 90% non-condensing

POWER

Power	12-24V DC
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)

LED INDICATORS

Front	On-Ready, Tag Activity, WiFi Link
Back	Link, 10/100, USB-A In Use, Status

ANTENNA CONNECTION

Connector Type	Dual-channel SMA flange receptacles
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