

With on-board infrared and motion sensors, M102-i asset tags enable room-level asset tracking accuracy at a very affordable price.

Features & Benefits

- ◆ **Encoded Radio Transmissions at 433 MHz**
- ◆ **IR-Enabled for Room-Level Location Accuracy**
- ◆ **Small Size and Low Cost**
- ◆ **Onboard Motion Sensor**
- ◆ **Customizable Beacon Rates**
- ◆ **Low Power Consumption for Long Battery Life**
- ◆ **Smart Tag Option: Tamper Detection**
- ◆ **Superior Anti-Collision Technology for High Tag Densities**
- ◆ **Compatible with A740 Rack Locator and A750 Room Locator Operating with Series 2 Protocol**

M102-i IR Asset Tags are equipped with on-board infrared (IR) and motion sensors. IR-enabled tags monitor their environment for incoming IR signals and periodically report both their own unique ID and IR location codes. Like the M100 tag, motion-activation allows the tag to operate at 2 beacon rates, providing a method for rapidly locating mobile assets with room-level accuracy.

These tags can also be customized to support a range of integrated sensors. Tamper switches can be installed to trigger an alert if a tag is removed from the tagged item. RF Code's patented communication

protocols allow for very high tag densities. Large populations of tags can be monitored using a single reader. Since tag location is determined via the IR room code, there is no need for deploying multiple overlapping readers, signal strength calculations, or complicated triangulation algorithms.

Tag cases are impact resistant, splash resistant and temperature stable. Read ranges up to 1,000 feet can be obtained with optional antenna configurations. The M102-i tag operates with a very low duty cycle that translates to long battery life (typically > 4 years).

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RF Code M102-i IR Asset Tag Specifications

OPERATION

Operating Frequency	433.92 MHz
Group Code & Tag ID Codes	> 540,000 unique IDs per Group Code
Typical Transmission Range	Up to 300 ft
Radiated Emissions	71.8 dBuV/m at 3 meters (maximum)
Modulation	ASK
Stability	Saw stabilized
Onboard Sensors	Infrared, Motion
Sensor Option	Tamper

TAG DIMENSIONS (WITHOUT ENCLOSURE)

Tag Width	1.64 in (41.65 mm)
Tag Depth	1.125 in (28.57 mm)
Tag Height	0.30 in (7.62 mm)

ENCLOSURE

Case Length	1.84 in (46.74 mm)
Case Width	1.35 in (34.28 mm)
Case Height	0.46 in (11.68 mm)
Case Weight (with tag)	.50 oz (14.1 g)
Construction	Polycarbonate
Durability	Tough, impact resistant and temperature stable
Mounting Options	Tape, lanyard, asset strap, cable tie, magnet, screw

IR COMPATIBILITY

Rack Locators	RF Code A740 with Series 2 Protocol
Room Locators	RF Code A750 with Series 2 Protocol

ENVIRONMENTAL

Operating Temperature	-20° C to +70° C
Storage Temperature	-40° C to +80° C
Operating Humidity	< 95% RH non-condensing; not recommended for outdoor applications
Sealing	Splash resistant

POWER

Battery Type	Lithium CR2032 replaceable coin cell
Smart Tag Feature	Low battery indication
Battery Life	> 4 years (nominal)*

* Battery life measured at 2-second motion beacon interval / 12.5-second static beacon interval with 10% motion over the life of the tag.

