

M163-i IR Wristband Tag



With its internal gasket, sonically welded case, reusable design, and integrated infrared sensor the M163-i IR wristband tag brings room-level accuracy to your student, personnel, and patient tracking applications.

Features & Benefits

- ◆ **Encoded Radio Transmissions at 433 MHz**
- ◆ **IR-enabled for Room-Level Location Accuracy**
- ◆ **Onboard Motion Sensor**
- ◆ **Smooth, Form-fitting Design Accepts Standard 3/4" Single-Use Wristbands**
- ◆ **Water-resistant Sonic-welded Enclosure**
- ◆ **Low Power Consumption for Long Battery Life**
- ◆ **Superior Anti-Collision Technology for High Tag Densities**
- ◆ **Compatible with A740 Rack Locator and A750 Room Locator Operating with Series 2 Protocol**

The 433 MHz M163-i Wristband Tag is a battery-powered RF transmitter designed to be worn by children or adults for student, patient or personnel tracking applications. Every tag broadcasts its unique ID and a status message at a periodic rate (that is programmed at the factory). These tags provide an economical solution for educational settings, healthcare or enterprise use. RF Code's patented communication protocols support high tag densities that allow large populations of tags to be deployed in confined spaces.

M163-i Wristband Tags are equipped with on-board infrared (IR) and motion sensors. This family of tags is designed to be deployed in concert with RF Code's IR Room Locators. IR-enabled tags monitor their environment for incoming IR signals and periodically report both their own unique ID and IR location codes. Motion activation allows the tag operate at 2 beacon rates: slow when the tag is stationary, and faster when the motion sensor is activated. This provides a method for rapidly locating personnel with room-level accuracy. Since tag location is determined via the IR room code, there is

no need for deploying multiple overlapping readers or performing complicated signal strength calculations or triangulation algorithms to determine tag location.

The M163 tags are designed to be comfortably worn by the user when attached with standard single-use 3/4" wristbands. Tag cases are impact resistant, splash resistant and temperature stable. They are sealed via sonic-welding at the point of manufacture to resist moisture and fluids. Labels are applied internally to the clear PVC enclosure, allowing the tag to be subjected to rigorous wipe-down and cleaning procedures. Simply discard the wristband and re-use the tags over-and-over.

Powered by a coin cell battery, the M163-i tag operates with a very low duty cycle that translates to long battery life (typically up to 3 years). The tag will continue to operate in just about any environment where people can withstand the extremes (from -20 to +70 degrees Celsius), but battery life is maximized in temperature-controlled environments, such as schools and hospitals, with a nominal temperature of 25 degrees Celsius (77 degrees F).

M163-i IR Wristband Tags are designed for re-use with disposable straps and can be worn by children or adults for student, patient or personnel tracking applications. The sealed case can be cleaned for repeated use in healthcare facilities or entertainment venues, providing an economical solution for educational settings, healthcare or enterprise use.



RF Code M163-i IR Wristband 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

ENCLOSURE

Case Length	1.854 in (47.1 mm)
Case Width (cover)	1.384 in (35.2 mm)
Case Width (base)	1.890 in (48.0 mm)
Case Height	0.553 in (14.05 mm)
Case Weight (with tag)	.50 oz (14 g)
Material	Clear PVC
Durability	Tough, impact resistant and temperature stable
Mounting Options	Designed for use with standard single-use ¾" wristbands.

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
Sealing	Sonically welded: Resistant to moisture, fluids and rigorous cleaning procedures

POWER

Battery Type	Lithium CR2032 replaceable coin cell
Smart Tag Feature	Low battery indication
Battery Life	Minimum 1.5 years*

* Battery life estimated for tag in constant motion. Periodic inactivity can increase battery life substantially.