MODEL M87

# UHF RAIN RFID Modules

Supports GEN2X™

## THE RFID CORE FOR YOUR CUSTOM DESIGN

The M87 module, powered by the Impinj E710, delivers exceptional read performance and high-speed data capture, making it an ideal choice for a wide range of RFID applications. Offered in 1-port, 4-port, and 8-port configurations, it provides flexible antenna connectivity to meet diverse system requirements—from compact embedded solutions to large-scale deployments.




Designed for seamless integration, the M87 enables faster development cycles and efficient system deployment. Its reliable performance and scalable architecture make it well-suited for integration into various devices, including handheld readers, fixed readers, kiosks, and access control systems.

With its compact form factor and versatile design, the M87 supports efficient item tracking, precise inventory management, and real-time operational visibility across industries such as retail, logistics, manufacturing, and healthcare. Combining performance, flexibility, and scalability, the M87 stands out as a powerful and dependable solution for modern RFID systems.








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# SPECIFICATIONS

## RFID CHARACTERISTICS & PERFORMANCE

| | |
|---|---|
| **Air Protocols** | ISO 18000-63 (EPC Class1 Gen2 v2) |
| **Frequency Range** | 860~930 MHz |
| **RF Power Output** | Up to 33 dBm; adjustable in 0.1dBm steps |
| **RX Sensitivity** | <-83 dBm |
| **Fastest Read Rate** | >1,000 tags/s |
| **Demodulation** | ASK/PR-ASK |
| **Modulation Depth** | 90% normally |
| **Data Encoding** | FM0 or Miller |
| **DRM Mode** | Supported |

## CHIPSET & CONNECTIVITY

| | |
|---|---|
| **Chipset** | MTI MS710 SIP with Impinj E710 |
| **Input Power** | 5V 1.4A max |
| **Interface** | 14-Pin 1.0mm Pitch FPC |
| **Protocol** | UART, Baud Rate 921600 bps |
| **Antenna Connector** | MMCX Receptacle, 50Ω, monostatic |
| **General Purpose I/O** | 4x GPIO |
| **Trigger Run Mode** | Supported |

## REGULATORY/CERTIFICATION

| | |
|---|---|
| **Supported Regions & Certification** | USA/FCC 14 CFR 15.247<br>EU/ETSI EN 302 208<br>Japan/Giteki 2-1-6-2<br>Taiwan/NCC LP0002<br>and other worldwide regions |

## PHYSICAL & ENVIRONMENTAL CHARACTERISTIC

| | |
|---|---|
| **Dimensions** | **M87P1:** 55.5 L x 37.5 W x 4.3 H (mm)<br>**M87P4:** 70 L x 45 W x 4.3 H (mm)<br>**M87P8:** 75 L x 80 W x 4.3 H (mm) |
| **Weight** | **M87P1:** 13.7 gr / 0.48 oz<br>**M87P4:** 21.8 gr / 0.77 oz<br>**M87P8:** 32.8 gr / 1.16 oz |
| **Operating Temp.** | -20°C to 70°C / -4°F to 158°F |
| **Storage Temp.** | -40°C to 85°C / -40°F to 185°F |
| **Humidity** | 10%~85% non-condensing |

## COUNTRY OF ORIGIN

**Taiwan**

## ORDERING INFORMATION

M87 [xx] - [xx] N

| | Number of Ports |
|---|---|
| **P1** | 1-Port |
| **P4** | 4-Port |
| **P8** | 8-Port |

| | Country/Region |
|---|---|
| **US** | USA |
| **EU** | EU |
| **JP** | Japan |
| **TW** | Taiwan |

*Example: **M87P4-USN** is UHF RAIN RFID 4-port modules for USA market.*


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