

ThingMagic® M7E-PICO UHF RAIN® RFID Module



18 mm L x 21 mm W x 3.0 mm H

Features & Benefits:

- Small Surface Mount Technology (SMT) Form Factor for Highly Integrated, Compact Designs
- Low Power Consumption for Efficient Battery-Use
- Features the Impinj E310 RAIN RFID Reader Chip
- Support for EPCglobal Gen2V2 (ISO 18000-63) Protocol Meets Industry Tag Standards
- Reads up to 300 tags / second
- Configured for Multiple Regions, such as FCC/IC (North & South America), ETSI (European Union), and Other Regions Including India, China, Korea, Australia and Japan
- Single SKU for Global Use
- Support for full Open region (860 to 930MHz)

The Industry's Smallest Embedded UHF RAIN® RFID Module

ThingMagic M7E-PICO is the smallest form factor for a Mercury Series embedded UHF RAIN RFID module. With very low power consumption, it is ideal for battery-operated, low cost, small form-factor portable readers. ThingMagic M7E-PICO's wide RF output range (0 dBm to +24 dBm) is important for the read/write requirements for RFID-enabled printers and tag commissioning stations.

ThingMagic M7E-PICO features a surface mount package designed for the efficiency of SMT manufacturing, driving down the total cost for embedding RFID in volume applications. It is ideal for handheld devices, consumables authentication, device configuration and access control.

ThingMagic M7E-PICO is supported by ThingMagic Mercury API.

Applications:

- Mobile Devices, including Printers, Handhelds, and Sensor Networks
- Tag Commissioning Stations
- Battery-operated devices
- Smartphone Accessories
- Medical Equipment for Healthcare and Pharmaceutical Industries
- Kiosks and Vending Machines



Authorized Reseller: [RFID4UStore](http://RFID4UStore.com)
www.rfid4ustore.com
1-408-739-3500



JADAK
A Novanta Company

ThingMagic® M7E-PICO UHF RAIN® RFID Module

| Ordering Information | |
|---|---|
| Module | M7E-PICO |
| Module on Carrier Board | M7E-PICO-CB |
| Development Kit | M7E-PICO-DEVKIT |
| Physical | |
| Dimensions | 18 mm x 21 mm x 3.0 mm H (0.71 in x 0.83 in x 0.12 in H) |
| Tag / Transponder Protocols | |
| RFID Protocol Support | EPCglobal Gen 2V2 (ISO 18000-63) |
| RF Interface | |
| RF Transceiver | Impinj E310 |
| Antenna Connector | Single 50 Ω connection (board-edge) |
| RF Power Output | Separate read and write levels, command-adjustable from 0 dBm to +24dBm in 0.5 dB steps, accurate to +/- 1 dBm |
| Regulatory | Pre-configured for the following regions: FCC (NA, SA) 902-928MHz; ETSI (EU) 865.6-867.6 MHz; TRAI (India) 865-867 MHz; KCC (Korea) 917-923.5 MHz; ACMA (Australia) 920-926 MHz; SRRC-MII (P.R. China) 920.1-924.9 MHz; MIC (Japan) 916.8-922.2 MHz; 'Open' (Customizable channel plan; 860-930 MHz) |
| Data/Control Interface | |
| Physical | 41 board-edge connections providing access to RF, DC power, communication, control and GPIO signals |
| Control/Data Interfaces | UART; 3.3V logic levels 9.6 to 921.6 kbps |
| GPIO Sensors and Indicators | Four 3.3V bidirectional ports configurable as input (sensor) ports or output (indicator) ports |
| API support | C, C#/.NET, Java |
| Power | |
| DC Power Required | DC Voltage: 3.3 to 5.5 V for +24 dBm out DC power consumption @ RF level: <2.5 W @ 5 VDC for +24 dBm out*, <1.2 W @ 5 VDC for 0 dBm out |
| Idle Power Saving Options | Ready: 0.665 W Sleep: 0.080 W Shutdown: 0.065 W |
| Environment | |
| Certification | USA (FCC 47 CFR Ch. 1 Part 15); Canada (Industry Canada RSS-247); EU (ETSI EN 302 208 v3.3.1, RED 2014/53/EU), JAPAN (MIC Article 38 Section 24) |
| Operating Temperature | -40°C to +60°C (case temperature) |
| Storage Temperature | -40°C to +85°C |
| Shock and Vibration | Survives 1 meter drop during handling |
| Performance | |
| Max Read Rate | Up to 300 tags/second* |
| Tag Read Distance (Typical) | Over 3 meters (10 feet) with 6 dBi antenna (30 dBm EIRP)* |
| *Best case with good antenna matching | |
| Specifications subject to change without notice. | |



Authorized Reseller: RFID4UStore
www.rfid4ustore.com
 1-408-739-3500