46 mm L x 26 mm W x 4.0 mm H

Features & Benefits:

- Small Form Factor Coupled with Powerful Performance

- RF Power Output of +30 dBm Results in Tag Read Distance Over 9 Meters

- Features the Impinj E510 RAIN RFID Reader Chip

- Support for EPCglobal Gen2V2 (ISO 18000-63) Protocol Meets Industry Tag Standards

- Reads up to 600* Tags/Second to Support Fast Moving Tags and Large Tag Populations

- Configured for Multiple Regions, such as FCC / ISED (North & South America), ETSI (European Union), and other Regions Including India, China, Korea, Australia and Japan

- Module Size and Feature Set comparable to ThingMagic M6e-Micro

High Performance, Gen2-protocol, 2-Port, Embedded UHF RAIN® RFID Module

ThingMagic M7E-MEGA is one of the smallest 2-port, high performance embedded UHF RAIN RFID modules. ThingMagic M7E-MEGA delivers the size, operating efficiency, power, and flexibility needed to embed UHF RFID into applications where small form factor is important. Its exceptionally small size and powerful performance yield increased efficiency, reduced development costs, and time-to-market advantages.

ThingMagic M7E-MEGA can read up to 600* tags per second and features low power consumption. Its wide RF output level range, from -10dBm to +30 dBm (1W), allows it to be used in short range printers or long range readers. Its antenna ports make it easy to embed into demanding applications. It is equipped with UART control / data interfaces.

The two RF connections to antennas can be made via edge pads or U.FL connectors.

ThingMagic M7E-MEGA is supported by ThingMagic Mercury API.

Applications:

- Handheld Devices and Scanners
- Battery-operated
- RFID-Enabled Printers, Desktop and Portable
- Tag Commissioning Stations
- Point of Sale Devices
- Smartphone Accessories
- Medical Cabinets

Ordering Information	
Module	M7E-MEGA
Module on Carrier Board	M7E-MEGA-CB
Development Kit	M7E-MEGA-DEVKIT
Physical	
Dimensions	46 mm L x 26 mm W x 4.0 mm H (1.8 in L x 1.0 in W x 0.16 in H)
Tag / Transponder Protocols	
RFID Protocol Support	EPCglobal Gen 2V2 (ISO 18000-63) with DRM
RF Interface	
RF Transceiver	Impinj E510
Antenna Connector	Two 50 Ω connections (board-edge or U.FL)
RF Power Output	Separate read and write levels, command-adjustable from -10 dBm to +30 dBm 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	38 board-edge connections providing access to 2 RF ports, 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 DC power consumption @ RF level: <5.75 W @ +30 dBm*; <3W @ power levels under +17 dBm
Idle Power Saving Options	Ready: 0.780 W Sleep: 0.130 W Shutdown: 0.090 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 Temp.	-40°C to +60°C (case temperature)
Storage Temp.	-40°C to +85°C
Shock and Vibration	Survives 1 meter drop during handling
Performance	
Max Read Rate	Up to 600* tags/second using high-performance settings
Max Tag Read Distance	Over 9 meters (30 feet)* with 6 dBi antenna (36 dBm EIRP)

*Best case with good antenna matching
Specifications subject to change without notice.

About JADAK:

JADAK, a business unit of Novanta, is a market leader in machine vision, RFID, barcode, printing, and color and light measurement products and services for original equipment manufacturers. The business designs and manufactures custom embedded detection and analysis solutions that help customers solve unique inspection, tracking, scanning and documenting challenges. JADAK is based in Syracuse, New York, with sales and technical locations across the globe. For more information, visit www.jadaktech.com. ThingMagic is JADAK's RFID line of products.

Novanta is a trusted technology partner to OEMs in the medical and advanced industrial technology markets, with deep proprietary expertise in photonics, vision and precision motion technologies. For more information, visit www.novanta.com.

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