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 / ISED (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-DEKA is the smallest form factor for a Mercury Series embedded UHF RAIN RFID module with extended RF power. With low power consumption, it is ideal for battery- operated, small form-factor portable use cases. ThingMagic M7E-DEKA's wide RF output range (0 dBm to +27 dBm) is important for the read/write requirements for RFID enabled Mobile tablets,printers and tag commissioning stations.

ThingMagic M7E-DEKA 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, printers, consumables authentication, device configuration and access control.

ThingMagic M7E-DEKA is supported by ThingMagic Mercury API.

Applications:

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

Ordering Information	
Module	M7E-DEKA
Module on Carrier Board	M7E-DEKA-CB
Development Kit	M7E-DEKA-DEVKIT
Physical	
Dimensions	18 mm L x 21 mm W 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 +27dBm 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 (Typical)	DC Voltage: 3.3 to 5.5 V for +25 dBm out; 3.7 to 5.5 V for +27 dBm out DC power consumption @ RF level: 　　3.1 W @ 5 VDC for +27 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 4.5 meters (15 feet) with 6 dBi antenna (33 dBm EIRP) *
Specifications subject to change without notice.	*Best case with good antenna matching

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.

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