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

- Support for EPCglobal Gen2V2 (ISO 18000-63) Protocol

- Optional Protocols: AEI ATA, IP-X and ISO 18000-6B

- Reads up to 750 Tags/ Second to Support Fast Moving Tags and Large Tag Populations

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

High Performance, Multi-Protocol 2-Port, Embedded UHF RAIN® RFID Module

ThingMagic Micro is one of the smallest 2-port, multi-protocol, high performance embedded UHF RAIN RFID modules. ThingMagic Micro 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 Micro can read up to 750 tags per second and features low power consumption. Its wide RF output level range, from -5 to +30 dBm (1 W), 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 and USB 2.0 control/data interfaces.

ThingMagic Micro has flexible mounting options, with both edge pads, for soldering the module directly to a motherboard and a Molex connector for board-to-board connections. The two RF connections to the antennas can be made via edge pads or U.FL connectors.

ThingMagic Micro is supported by ThingMagic API.

Applications:

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

Ordering Information	
Module	M6E-M
Development Kit	M6E-M-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. Optional AEI ATA, IP-X and ISO 18000-6B
RF Interface	
Antenna Connector	Two 50 Ω connections (board-edge or U.FL) supporting two monostatic antennas
RF Power Output	Separate read and write levels, command-adjustable from -5 dBm to +30 dBm* in 0.5 dB steps, accurate to +/- 1 dBm
Regulatory	Pre-configured for the following regions: FCC (NA, SA) 902-928 MHz; ETSI (EU) 865.6-867.6 MHz; TRAI (India) 865-867 MHz; KCC (Korea) 917-920.8 MHz; ACMA (Australia) 920-926 MHz; SRRC-MII (P.R. China) 920-925 MHz; MIC (Japan) 916.8-923.4 MHz; 'Open' (Customizable channel plan; 865-869, 902-928 MHz)
Data/Control Interface	
Physical	28 board-edge connections or Molex low profile connector (53748-0208) providing DC power, communication, control and GPIO signals
Control/Data Interfaces	UART; 3.3V logic levels 9.6 to 921.6 kbps / USB 2.0 interface (12 Mbps)
GPIO Sensors and Indicators	Two 3.3V bidirectional ports configurable as input (sensor) ports or output (indicator) ports
API support	C#/.NET, Java, C
Power	
DC Power Required	DC Voltage: 3.5 to 5.25 V **DC power consumption @ RF level: 5.5 W @ +30 dBm***; 3.5 W @ +27 dBm; 2.5 W @ +23 dBm; 2.0 W @ 0 dBm
Power Consumption when not transmitting	0.32 W
Idle Power Saving Options	Standby: 0.06 W Sleep: 0.008 W Shutdown: 0.0003 W
Environment	
Certification	USA (FCC 47 CFR Ch. 1 Part 15); Canada (Industrie Canada RSS-21 0); EU (ETSI EN 302 208 v3.1.1, RED 2014/53/EU)
Operating Temp.	-40C to +60C (case temperature)
Storage Temp.	-40C to +85C
Shock and Vibration	Survives 1 meter drop during handling
Performance	
Max Read Rate	Up to 750 tags/second using high-performance settings
Max Tag Read Distance	Over 9 meters (30 feet) with 6 dBi antenna (36 dBm EIRP)

Specifications subject to change without notice.
*Duty cycle restrictions, based on temperature, apply at power levels above +23 dBm   **Will operate below +3.5 V with reduced input line noise immunity   ***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 company designs and manufactures embedded detection and analysis solutions that help customers solve unique inspection, tracking, scanning and documenting. The company is ISO 9001 and ISO 13485 registered.

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.

ThingMagic is the JADAK line of RFID products.   **www.jadaktech.com**

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