ThingMagic Micro-LTE

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

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

ThingMagic Micro-LTE is one of the smallest 2-port, multi-protocol, embedded UHF RAIN RFID modules. ThingMagic Micro-LTE delivers the size, operating efficiency, RF power, and flexibility needed to embed UHF RFID into applications where small form factor is important. The 2-port Micro-LTE is optimized for small tag populations reading 50 tags/second. It features low power consumption, especially helpful for battery-operated solutions.

ThingMagic Micro-LTE's wide RF output range (-10 dBm to +30 dBm) is a key requirement for RFID-enabled printers, tag commissioning statements, and point-of-sale readers.

ThingMagic Micro-LTE 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-LTE is supported by ThingMagic API.

Applications:

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

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ThingMagic Micro-LTE

Ordering Information	
Module	M6E-MICRO
Development Kit	M6E-MICRO-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 -10 dBm to +30 dBm* in 0.5 dB steps, accurate to +/- 1 dBm
Regulatory	Pre-configured for the following regions: FCC (NA, SA) 902-928 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.	-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 50 tags/second
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

Microtron
Flexible electronic solutions

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