

MERCURY6e

World-class UHF RFID Engine



The Mercury®6e (M6e) embedded UHF RFID reader module offers world leading performance, form factor, and time-to-market advantages to OEM, Value Added Reseller, and Solution Provider customers. It is designed to the performance standards of full size readers, but is small and efficient enough to be used in mobile applications. The M6e supports 4 ports and will operate to a level of +31.5 dBm. Serial and USB interfaces are provided to support both board-to-board and board-to-host connectivity.

Ordering Information

Module	M6E
Development Kit	M6E-DEVKIT

Tag / Transponder Protocols

RFID Protocol Support	EPCglobal Gen 2 (ISO 18000-6C) with DRM Support ISO 18000-6B (optional)
-----------------------	----------------------------------------------------------------------------

RF Interface

Antenna Connector	Four 50 Ohm MMCX connectors supporting four monostatic antennas.
RF Power Output	Separate read and write levels, command-adjustable from 5 dBm to 31.5 dBm* (1.4W) with +/-0.5 dBm accuracy above +15 dBm
Regulatory	Pre-configured for the following regions: FCC 902-928 MHz (Americas) ETSI 865.6-867.6 MHz (EU) KCC 917-920.8 MHz (Korea) TRAI 865-867 MHz (India) ACMA 920-926 MHz (Australia) 'Open' (Customizable) 865-869 MHz, 902-928 MHz

Data/Control Interface

Physical	15-pin low-profile connector providing power, communications signals, and GPIOs
Signaling	UART with 3.3/5V logic levels; from 9600 to 921,600 bps USB 2.0 full speed device port (up to 12 Mbps)
GPIO Sensors and Indicators	Four 3.3/5V serial input configurable as input (sensor) ports or output (indicator) ports
API Support	C, C# (.NET), Java

Physical

Dimensions	69 mm L x 43 mm W x 7.5 mm H (2.7 in L by 1.7 in W by 0.3 inches H)
------------	------------------------------------------------------------------------

Power

DC Power Required (typical values)**	DC Voltage: 5.0 VDC +/- 5% DC power: 6.7 W @ 31.5 dBm 4.2 W @ power levels under +17 dBm
Idle Power Consumption (typical values)**	0.25 W with 15 msec response time Power Saving Options: 0.07 W with 40 msec response time 0.05 W with 50 msec response time

Environment

Certification	FCC 47 CFR Ch. 1 Part 15 Industrie Canada RSS-21 0 ETSI EN 302 208 ETSI EN 300 220
Operating Temp.	-40C to +60C
Storage Temp.	-40C to +85C
Shock and Vibration	Designed to be installed in host devices which are required to survive 5-foot drops to concrete

Architecture

User-accessible Flash Memory	16 kB
Tag Buffer	Over 1000 tags under normal conditions

Performance

Max Tag Read Rate	Up to 400 tags/second
Max Tag Read Distance	Over 30 feet (9 m) with 6 dBi antenna (36 dBm EIRP)
Receive Sensitivity	-75 dBm at full transmit power with typical antenna***

* Maximum power may have to be reduced to meet regulatory limits, which specify the combined effect of the module, antenna, cable, and enclosure shielding of the integrated product

**See User Guide for design limits

***Receive sensitivity will improve as transmit power is reduced

Specifications subject to change without notice.



Develop

Create RFID-enabled solutions using industry-standard tools

Deploy

Enable rapid deployment and reliable operation of RFID solutions within a wide variety of new and existing environments

Optimize

Maximize productivity, improve ROI, and lower operating costs



For more information, visit www.thingmagic.com

To purchase ThingMagic products, please email sales@thingmagic.com or call 1-866-833-4069 (International callers dial +1 617-499-4090)

ThingMagic, A Division of Trimble
Four Cambridge Center
Cambridge, MA 02142

©2012 ThingMagic - a division of Trimble Navigation Limited. ThingMagic and The Engine in RFID are registered trademarks of Trimble Navigation Limited. Other marks may be protected by their respective owners. All Rights Reserved.