

# MERCURY6e

## World-class UHF RFID Engine



Mercury6e (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 ISO 18000-6B (optional) IP-X (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 (NA, SA) 902-928 MHz ETSI (EU, IN) 865.6-867.6 MHz MIC (KR) 910-914 MHz SRRC-MII (P.R.China) 920-925 MHz 'Open' (Customizable) 865-869 MHz and 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	DC Voltage: 5.0 VDC +/- 5% DC power: 6.5 W @ 31.5 dBm < 4W @ power levels under +17 dBm
Idle Power Consumption	0.25 W in fast-response idle mode Power Saving Options: 0.07 W in ready mode 0.05 W in standby mode

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	
RFID Processor	Indy R2000
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)

\* 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

Specifications subject to change without notice.

