TECHNICAL SPECIFICATIONS

FEATURES SUMMARY	MERCURY6E SERIES		MERCURY5E SERIES	
	M6e	Micro / Micro-LTE	M5e	Compact
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)	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)	82 mm L x 54 mm W x 5 mm H (3.23 in L by 2.13 in W by 0.20 in H)	56 mm L x 36 mm W x 5 mm H (2.2 in L x 1.4 in W x 0.2 in H)
RFID Protocol Support	EPCglobal Gen 2 (ISO 18000-6C) with DRM; ISO 18000-6B and IP-X optional	EPCglobal Gen 2 (ISO 18000-6C) with DRM; ISO 18000-6B and IP-X optional	EPCglobal Gen 2 (ISO 18000-6C) with DRM	EPCglobal Gen 2 (ISO 18000-6C) with DRM
Antenna Connector	Four 50 Ohm MMCX connectors supporting four monostatic antennas	Two 50 Ohm connections (board-edge or U.FL) supporting two monostatic antennas	Two MMCX connectors supporting two monostatic antennas or one bistatic antenna	MMCX connector supporting one monostatic antenna
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[1]	Separate read and write levels, commanded adjustable from -5 dBm to 30 dBm in 0.5 dB steps, accurate to +/- 1 dBm[3]	Separate read and write levels, command adjustable from 5 dBm to 30 dBm (1 W), +/- 1.0 dBm accuracy[1]	Separate read and write levels, command adjustable from 10 dBm to 23 dBm (200mW), +/- 1.0 dBm accuracy[1]
Regulatory	Pre-configured for the following regions: FCC (NA, SA), ETSI (EU, India), TRAI (India), KCC (Korea), ACMA (Australia), SRRC-MII (P.R.China), 'Open' (Customizable) 865-869 MHz and 902-928 MHz	Pre-configured for the following regions: FCC (NA, SA), ETSI (EU, India), TRAI (India), KCC (Korea), ACMA (Australia), SRPC-MII (P.R. China), MIC (Japan), 'Open' (Customizable) 865-868 MHz and 902-928 MHz	Pre-configured for the following regions: FCC (NA, SA), ETSI (EU, India), TRAI (India), KCC (Korea), ACMA (Australia), SRRC-MII (P.R.China), 'Open' (Customizable) 860-960 MHz	Pre-configured for the following regions: FCC (Americas), ETSI (EU), KCC (Korea), TRAI (India), ACMA (Australia), SRRC-MII (P.R.China), 'Open' (Customizable) 860-960 MHz
Physical	15-pin low-profile connector providing DC power, communication, control and GPIO signals	28 board-edge connections or Molex low profile connector (53748-0208) providing DC power, communication, control and GPIO signals	12-pin ZIF connector providing DC power, communication, control and GPIO signals	12-pin ZIF connector providing DC power, communication, control and GPIO signals
Control/Data Interfaces	UART with 3.3/5V logic levels from 9600 to 921,600 bps; USB 2.0 full speed device port (up to 12 Mbps)	UART with 3.3/5V logic levels from 9600 to 921,600 bps; USB 2.0 full speed device port (up to 12 Mbps)	UART; 3.3/5V logic levels (5 V input tolerant); 9.6 to 921.6 kbps	UART; 3.3/5V logic levels (5 V input tolerant); 9.6 to 921.6 kbps
GPIO Sensors and Indicators	Four 3.3V bidirectional ports configurable as input (sensor) ports or output (indicator) ports	Two 3.3V bidirectional ports configurable as input (sensor) ports or output (indicator) ports	Two 3.3/5V input (sensor) ports and 2 output (indicator) ports	Two 3.3/5V input (sensor) ports and 2 output (indicator) ports
API support	C#/.NET, Java, C	C#/.NET, Java, C	C#/.NET, Java, C	C#/.NET, Java, C
DC Power Required	DC Voltage: 5.0 VDC +/- 5% DC power: 6.7 W @ 31.5 dBm 4.2 W @ power levels under +17 dBm	DC Voltage: 3.5 to 5.25 V[4] 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	DC Voltage: 5.0 VDC +/- 4% DC power: 3.5 - 6.5W when transmitting (depends on RF level)	DC Voltage: 3.0 to 5.5 VDC DC Power: 2.7 W

TECHNICAL SPECIFICATIONS

FEATURES SUMMARY	MERCURY6E SERIES		MERCURY5E SERIES	
	M6e	Micro / Micro-LTE	M5e	Compact
Idle Power Consumption Ready: Standby: Sleep:	0.25 W w/ 15 Power Saving Options: 0.07 W 0.05 W - - -	0.25 W w/ 15 Power Saving Options: 0.07 W 0.05 W - - -	1.1 W w/ 15 Power Saving Options: 0.3 W 0.08 W 0.03 W	1.43 W w/ 5 Power Saving Options: 0.35 W 0.10 W 0.03 W
Certification	FCC 47 CFR Ch. 1 Part 15 Industrie Canada RSS-21 0 ETSI EN 302 208 v1.4.1	FCC 47 CFR Ch. 1 Part 15 Industrie Canada RSS-21 0 ETSI EN 302 208 v1.4.1	FCC 47 CFR Ch. 1 Part 15 Industrie Canada RSS-21 0 ETSI EN 302 208 v1.4.1 ETSI EN 300 220	FCC 47 CFR Ch. 1 Part 15 Industrie Canada RSS-21 0 ETSI EN 302 208 v1.4.1 ETSI EN 300 220
Operating Temp. (case temperature)	-40C to +60C	-20C to +60C	-20C to +60C	-20C to +60C
Storage Temp.	-40C to +85C	-40C to +85C	-40C to +85C	-40C to +85C
Shock and Vibration	Designed to be installed in host devices which are required to survive 5-foot drops to concrete	Survives 1 meter drop during handling	Designed to be installed in host devices which are required to survive 5-foot drops to concrete	Designed to be installed in host devicesthat are required to survive 5-foot drops to concrete
Max Read Rate	Up to 750 tags/second using high-performance settings	Micro: Up to 750 tags/second using high-performance settings Micro-LTE : 50 tags/second	Up to 200 tags/second	Up to 200 tags/second
Max Tag Read Distance	Over 30 feet (9 m) with 6 dBiL antenna (36 dBm EIRP)	Over 30 feet (9 m) with 6 dBiL antenna (36 dBm EIRP)	Over 30 feet (9 m) with 6 dBiL antenna (36 dBm EIRP)	Over 13 feet (4 m) with 6 dBiL antenna (29 dBm EIRP)

[1]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. [2]Typical values shown. See User Guide for design limits. [3]Duty cycle restrictions, based on temperature, apply at power levels above +23 dBm. [4]Will operate below +3.5 V with reduced input line noise immunity. Specifications subject to change without notice.

ORDERING INFORMATION

Mercury6e Series Embedded RFID Readers	SKU
M6e - Embedded (+30 dBm in North America, +31.5 dBm in Europe)	M6E
M6e-A - Embedded (+31.5 dBm in all regions, requires contract)	M6E-A
M6e-PRC - Embedded (PRC high and low bands)	M6E-PRC
Micro (M6E-M) - North America, Europe, Mainland China	M6E-M
Micro-LTE (M6E-MICRO) - North America, Europe, Mainland China	M6E-MICRO
M6e license for optional IPX and ISO 18K-6B protocols (Gen2 standard)	M6E-LIC-2F
Micro (M6E-M) license for optional IPX and ISO 18K-6B protocols (Gen2 standard)	M6E-M-LIC-2F
Micro-LTE (M6E-MICRO) license for optional IPX and ISO 18k-6B protocols (Gen2 standard)	M6E-MICRO-LIC-2F
Mercury6e Series Embedded RFID Reader Development Kits	
M6e Development Kit (North/South America, EU, IN, KR)	M6E-DEVKIT
Micro (M6E-M) - Development Kit (North/South America, EU, IN, KR, PRC)	M6E-M-DEVKIT
Micro-LTE (M6E-MICRO) - Development Kit (North/South America, EU, IN, KR, PRC)	M6E-MICRO-DEVKIT
Mercury5e Series Embedded RFID Readers	
*M5e - Embedded (North America)	M5E
*M5e-EU - Europe Embedded (Europe)	M5E-EU
*M5e-PRC - China Embedded (Mainland China)	M5E-PRC
Compact (M5E-C) – Embedded	M5E-C
Mercury5e Series Embedded RFID Reader Development Kits	
Compact (M5E-C) Development Kit (North/South America, EU, IN, KR)	M5E-C-DEVKIT

*Developer Note: For new designs, the M5e has been replaced by the Micro which offers improved efficiency, added flexibility, and smaller form factor. Contact ThingMagic for more information.