ThingMagic
A DIVISION OF TRIMBLE

Mercury® *x*PRESS Platform
Innovating with Embedded RFID

November 2013

Challenges with Embedding RFID

General purpose finished readers can be expensive and are not optimized for specific applications

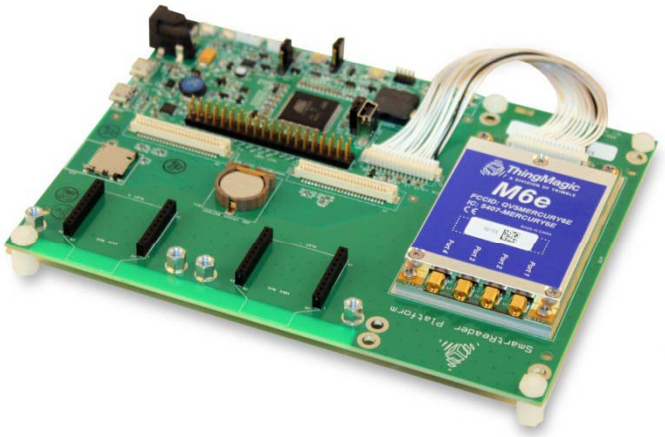
Starting with an RF chip and reference design can be a complex and expensive development effort

“Low-end” modules offer limited performance and lack robust integration tools

RFID Expertise Delivered

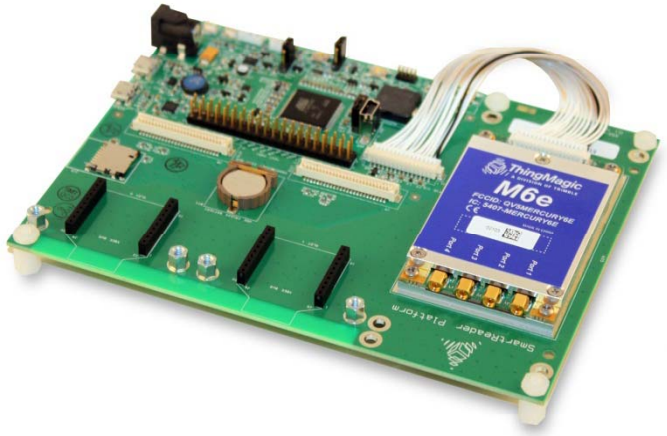
*Leverage **ThingMagic RFID expertise** to get to market faster and more cost effectively with an extensible RFID solution development platform*

The **Mercury® xPRESS Platform** represents a shift from the cost prohibitive and limited approach of integrating general purpose RFID readers or low-performance modules, to the flexible and extensible platform-based approach of developing low cost, high performance, application specific RFID solutions



Mercury® *x*PRESS Platform Overview

- **Key Features:**
  - Microcontroller based motherboard
  - Integrated ThingMagic RFID module
  - Wide range of transport interfaces
  - Integrated software development environment built on ThingMagic Mercury C API and open source toolkits
  - Sample applications (e.g. Keyboard wedge)

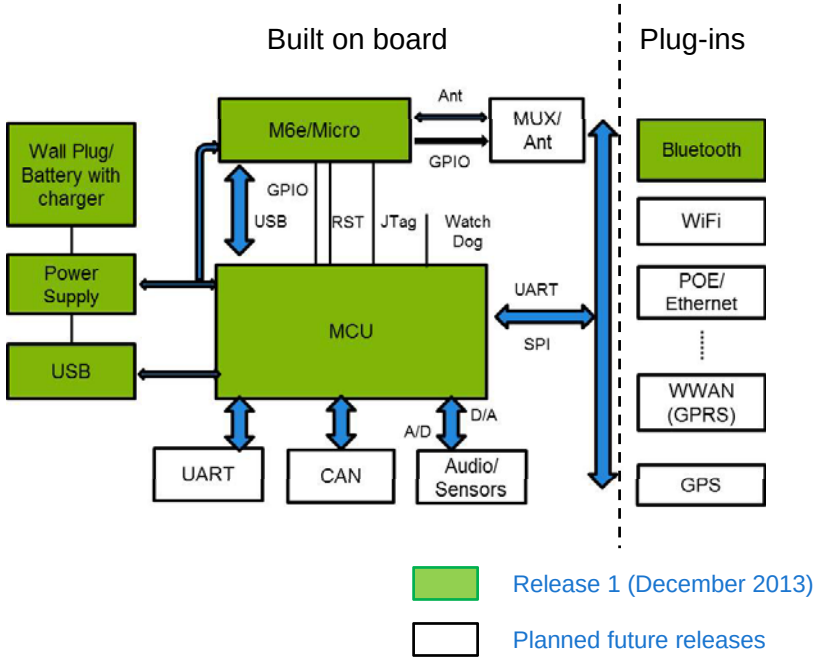


Supports ongoing innovation

Integrated development tools, device drivers and application software will be enhanced with regular updates that expand capabilities and enable development of a wider range of end products

Mercury® *x*PRESS Platform Details

- Microcontroller based motherboard includes:
  - Integrated ThingMagic RFID module (Micro, Micro-LTE, or M6e)
  - USB interface
  - Ports for up to 2 additional plug-in data transport interface modules
- 2 USB cables, antenna adapter cable and universal power adapter
- Bluetooth plug-in module (optional: order separately)
- Software Development tools including *x*PRESS SDK and sample applications (downloadable)
  - xPRESS Platform release1 sample application is native keyboard wedge
- Hardware Development Tools including
  - Reference design files including schematics, layout files, Gerber files, bill of material, component data sheets (downloadable)
- Quick Start Guide – details links to access reference design H/W S/W files



Supported RFID Modules: ThingMagic Mercury®6e Series

World's highest performance, small form factor UHF RFID modules	M6e 	Micro 	Micro-LTE (Low Tag-read Enabled) 
Size (L x W x H mm)	69 x 43 x 7.5	46 x 26 x 4	46 x 26 x 4
Antenna Ports	4	2	2
Interface	UART USB	UART USB	UART USB
Power (dBm)	31.5	30	30
Read Rate (tags/sec)	750*	750*	50
Read Range	30 ft	30 ft	30 ft
Protocol Support	Multiprotocol	Multiprotocol	Multiprotocol

* With high-performance settings

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*x*PRESS SDK Software Development Environment

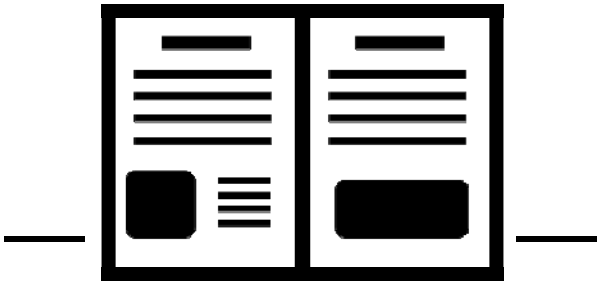
Intuitively designed and well documented SDK requires little RFID expertise

- Built on ThingMagic's Mercury C API
  - Enables developers to rapidly design and test:
    - Reader and tag commands
    - Advanced read functionality such as setting antennas, protocols and filtering criteria
    - Advanced tag operations (kill and lock tags)
    - Privacy and security features
    - Performance and memory optimization
- Debug console for error logs and monitoring
- Microcontroller communication drivers
- Sample applications for common use cases

Developers can bring up a fully functional RFID reader in minutes and testing & proof of concept using sample applications from the software library can start almost immediately

Reference Design Files

- Reference design files – downloadable from ThingMagic support site (with purchase of xPRESS Platform)
  - Schematics
  - Layout files
  - Gerber files
  - Bill of material
  - Component data sheets

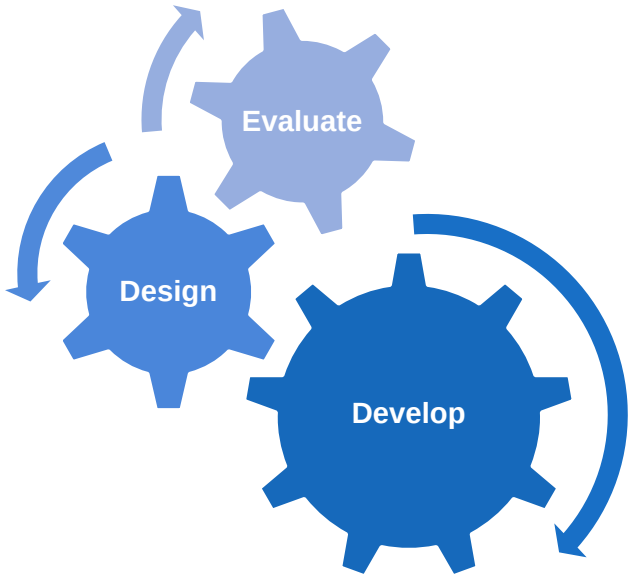


With reference design files, developers can select the elements needed for their product design and advance rapidly to application specific end product design and development

ThingMagic Developer Solutions

ThingMagic DevKits allow users to evaluate ThingMagic RFID modules, learn Gen2 settings and RFID basics, and test and tune module performance

- Test chassis
- ThingMagic RFID module
- Antenna
- Sample tags
- Mercury API



The Mercury xPRESS Platform operates as an extension to ThingMaigc module DevKits, giving users the tools needed to design and develop low cost, high performance, application specific RFID readers

- Hardware platform with microcontroller based motherboard
- ThingMagic RFID module
- Ports for plug-in data transport interface modules
- MCU preloaded with sample applications
- xPRESS SDK
- Reference design files

Benefits Summary

Optimized technology – Supports the technologies specific to the application rather than a general purpose approach

Lower unit cost – Lower cost opportunity by not using (or paying for) unneeded features and functions of a general purpose reader

Reduced development cost & strong ROI – Eliminates the need for OEM to source and select a processor and develop schematics for their application

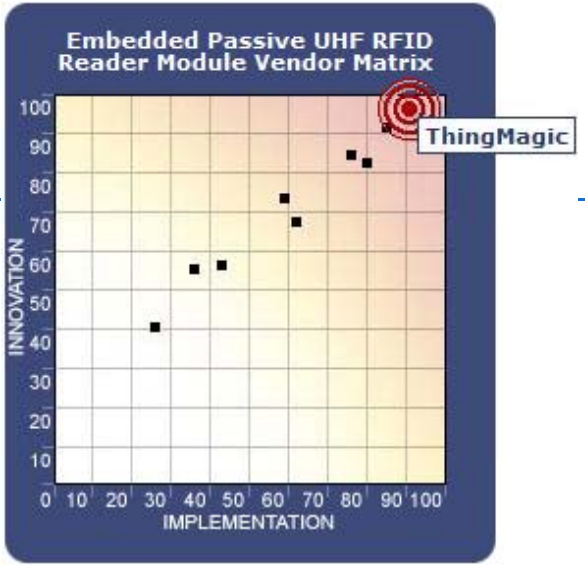
Shorter time to market – Enables faster revenue generation

Consistent infrastructure - Minimizes risks with future device & solution development and offers added value from new features in future platform releases

Embedded RFID Leadership

Proven Advantage: Hundreds of companies - from printer and handheld manufacturers, to asset tracking, supply chain, healthcare and transportation organizations – are using ThingMagic embedded RFID modules to drive innovation and business process improvement

ABIresearch®
what's next in connectivity



June 2010

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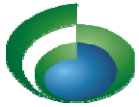
Thank You!

中国区域代理商



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