

NEW

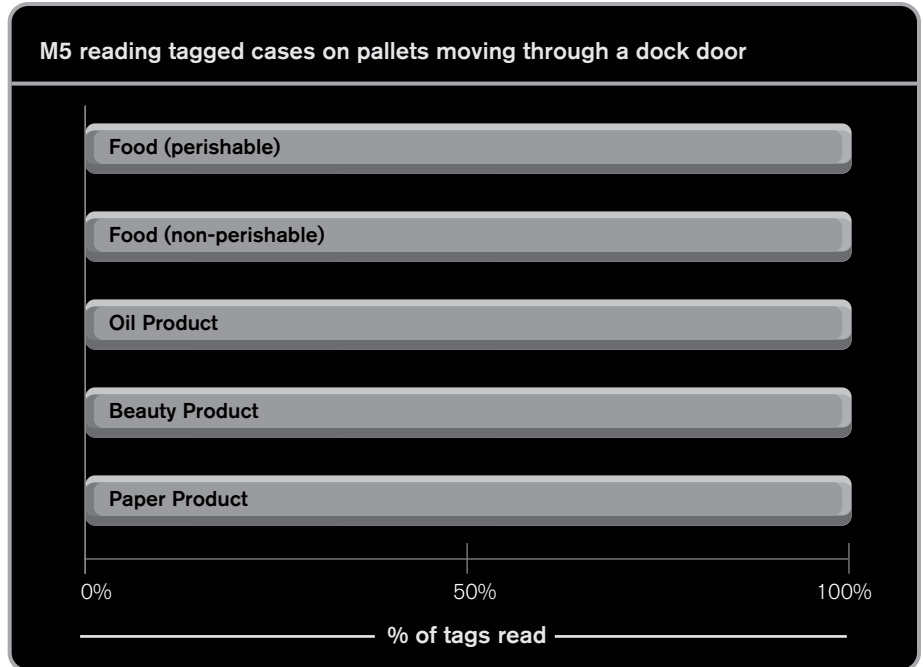
MERCURY5

Ignores interference. Gives more 100% reads.



More 100% reads

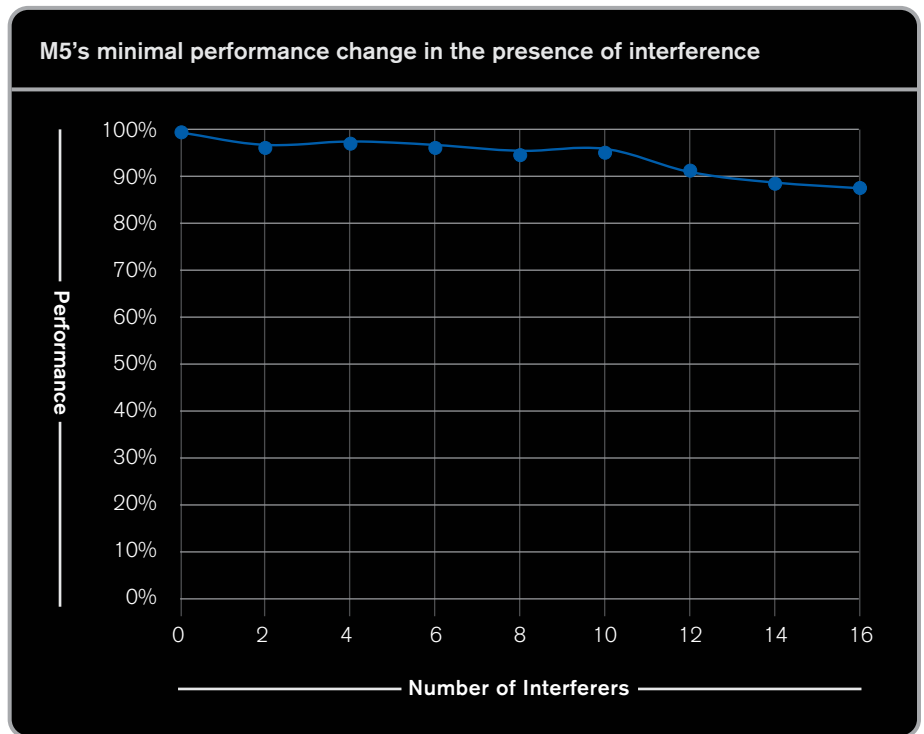
The ultimate RFID reader would achieve 100% read rates 100% of the time. We don't think this is an impossible dream, and Mercury 5 proves it. It's the fifth generation of our widely deployed Mercury platform, and it provides more 100% read rates than ever before, on a wider variety of products.



Goes beyond Dense Reader Mode to ignore all interference

EPC Generation 2 includes a feature called Dense Interrogator Channelized Signaling, or Dense Reader Mode (DRM) to help solve one of the problems that prevents 100% reads - interference. But DRM only addresses interference from other DRM-compliant RFID readers. It doesn't solve the whole interference problem, which can include things like other RFID readers, legacy wireless networks, cordless phones and noise from fluorescent lights. These interferers impair RFID performance in many large-scale real world applications - for example at distribution center dock doors and on high speed conveyors. Like its predecessor Mercury 4, the new Mercury 5 fully supports Dense Reader Mode. But it goes well beyond DRM to ignore all interference - not just interference from other DRM-compliant readers. As a result, Mercury 5 outperforms DRM-only readers anywhere there are multiple sources of interference. This is why it gives more 100% reads more often.





All the features of Mercury 4 - including multiple protocols

Mercury 5 is fully compatible with Mercury 4 interfaces and deployments, and supports the same high levels of network, security, developer and other functionality, including fully optimized support for EPC Generation 1 Class 1 and Class 0 and ISO 18000-6B, as well as EPC Generation 2. This seamless multiple protocol capability is the result of ThingMagic's powerful Software Defined Radio technology, which has been further enhanced in Mercury 5 - and it gives assurance that Mercury 5 will adapt to ever changing RFID tag protocols, including new variants from Generation 2 tag makers, the forthcoming ISO 18000-6C standard, as well as EPC Generation 3, expected around 2008 - 9. This commitment to dynamic protocol support is essential for anyone planning to amortize their RFID infrastructure over 3 or more years. And like Mercury 4, Mercury 5 is ruggedized to survive physically challenging deployment environments.

Performance goes up. Price goes down

Another major advance in Mercury 5 is the price. Careful design and advances in key components mean the while the performance is greatly increased, the price is greatly reduced. Mercury 5 launches with a Manufacturer's Recommended Selling Price (MSRP) of just \$1995, with discounts for large volumes. At the same time, cost reductions in Mercury 4 mean this widely deployed, market-leading DRM compliant reader is now available at an MSRP of only \$995.

When to specify Mercury 5

Mercury 5 is the ideal choice for RFID deployments in environments where there is a lot of interference - either from very large numbers of RFID readers or other sources, or if tags are giving weaker than usual responses - for example because of attenuation due to the presence of metal or water. Where Dense Reader Mode alone is enough to give the required levels of performance, Mercury 4, our DRM-compliant reader, is a cost effective choice.

Hardware Specification

Name	ThingMagic Mercury5
Processors	Intel IXP4xx Network Processor Texas Instruments Digital Signal Processor
Memory	64 MBytes DRAM 16 MBytes FLASH
Connectivity	Serial: RS-232 serial interface Ethernet: 10/100 Base-T Ethernet interface

Mechanical & Environmental Specification

Dimensions	25.4 x 25.4 x 3.8 cm
Temperature	Operating: 0°C to 40°C Storage: -20°C to 70°C
Humidity	Relative humidity 0-90% non-condensing
Weight	3lb 10oz / 1.6 kilograms
Power	24V DC, 2A unregulated



Radio Frequency Specification

Operating Frequencies	902 – 928 MHz
Air Interface Protocols	EPC Class 0 EPC Class 1 EPC Generation 2 (Single Reader, Multi Reader & Dense Reader Modes) ISO 18000-6B / Ucode 1.19 Rewriteable Class 0+
RF Power	+32.5 dBm (1 Watt (30 dBm) per FCC Part 15 +2.5 dB attenuation due to antenna cables)

Data shown in charts are taken from tests performed by Thingmagic's test group in application scenarios at Thingmagic's test facilities. Data is the mean of multiple passes. 100% read test used fully loaded pallets moved through a dock door by hand truck. Interference test used frequency hopping interferers, individually calibrated to have the same effective radiated power measured at the center of the test platform. Power level of the DUT vs. each Interferer was +13dB. Each Interferer had a modulation duty cycle of 95%. Interferer test data was collected using a mixed pallet moved through a dock door by hand truck. All tests used commercially available EPC Generation 2 tags. This device has not been authorized as required by the rules of the Federal Communications Commission. This device is not, and may not be, offered for sale or lease, or sold or leased, until authorization is obtained.

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