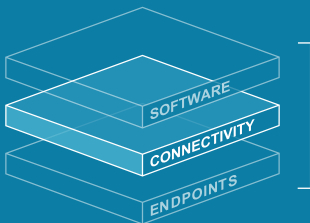


# Indy R500 RAIN RFID Reader Chip

Impinj Indy R500 RAIN RFID chips are ideal for building cost-sensitive proximity readers and provide a platform for OEMs to design devices with embedded read/write capability.

## Embedded Chip Ideal for Proximity Readers

The Indy R500 chip is ideal for applications that require proximity (short range) reads of small tag populations such as RAIN RFID printers, handheld devices, tablets, POS solutions, access control, smart kiosks, smart mirrors and shelf readers.



*The Impinj Platform includes Connectivity Devices*



## Indy R500 Benefits

### Low System Cost

Integrates up to 90% of the components in a traditional discrete modem design

### Flexibility

Small form factor and modem accessibility enable device optimization on form and function

### Compatibility

Pin compatibility with Indy R2000 enables a single hardware design for both high performance and cost sensitive applications

## Key Features

- > Worldwide Compliance**  
An easy path to regulatory compliance with market-proven reference designs
- > Typical Read Range**  
Optimal for applications requiring greater than 3 meters of read range
- > Customization**  
Modem accessibility enables optimization on form or function

## Use Cases

-  **Supply Chain**  
Protect your brand and quality by ensuring the authenticity of consumables with place-of-origin verification
-  **Loss Prevention**  
Ensure security and process control for people and assets with Indy R500-enabled fixed portal or handheld readers
-  **Shopper Experience**  
Optimal for point of sale solutions at retail checkout stations



## Reader Chip and Module Overview

Impinj Indy reader chips and surface-mount modules provide the performance and flexibility needed to enable a full range of RAIN RFID solutions. Indy surface-mount modules provide low development risk and fast time-to-market while Indy chips offer a path to future cost optimization, all based on a common Indy platform.



**INDY R500**



**INDY R2000**

### Product Details

Applications	Cost-sensitive proximity readers, medium range, medium tag population	High-performance devices, customizable devices, demanding conditions
Air Interface Protocols	RAIN RFID / ISO 18000-63 and EPCglobal Gen2v2 compliant	
Package	64-pin 9 mm <sup>2</sup> QFN	
Tag Read Rate	Up to 190 tags per second	Up to 900 tags per second
Receive Sensitivity	-68 dBm (DRM)	-95 dBm (DRM) -82 dBm (DRM) with a -10 dBm carrier at Rx port
Transmit Phase Noise (250 kHz offset)	-126 dBm / Hz	
Operating Frequencies	840–960 MHz	
Supported Regions	US, Canada and other regions following US FCC Part 15 regulations Europe and other regions following ETSI EN 302 208 China, India, Japan, Korea, Malaysia, Taiwan	

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Impinj (NASDAQ: PI) wirelessly connects billions of everyday items such as apparel, medical supplies, and automobile parts to consumer and business applications such as inventory management, patient safety, and asset tracking. The Impinj platform uses RAIN RFID to deliver timely information about these items to the digital world, thereby enabling the Internet of Things.