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READER CHIPS

This product began the end-of-life process in September 2022

Impinj Indy R2000
RAIN RFID Reader Chip

Impinj Indy RAIN RFID reader chips set the performance standard for more than a decade. Together, the Indy R2000 and R500 reader chips power a wide range of RAIN RFID devices.

Embedded RAIN RFID chips enable a broad spectrum of devices and solutions

The Impinj Indy R2000 reader chip contains a complete RAIN RFID front-end and modem, and requires minimal external components to implement a RAIN RFID reader circuit.

The Impinj R2000 offers high sensitivity and tag read rate performance, and has the same dimensions and pinout as the Impinj R500 to enable easy migration between the two. Together the two Impinj Indy reader chips power a wide range of RAIN RFID devices, including handhelds, tablets, POS, access control, shelf readers, gateways, fixed readers, and more.

Why Use Impinj Indy R2000?

High Performance
Get embedded connectivity without sacrificing read range and rates

Flexibility
Design custom RAIN RFID enabled devices or IoT solutions, optimized for size, mobility, and cost

Compatibility
Pin compatibility with Impinj Indy R500 enables single hardware design for both high-performance and cost-sensitive applications

Key Features

❯ ### Demanding Environments
Proprietary Self-Jammer Cancellation (SJC) technology maintains performance even with antenna reflections in metal-rich environments

❯ ### Worldwide Compliance
An easy path to regulatory compliance with market-proven reference designs

❯ ### Long Range
Receiver performance enables greater than 10 meters read range

Primary Uses

❯ ### Inventory Management
Drive sales with enhanced store, in-transit or warehouse inventory visibility with Impinj Indy R2000-powered handheld readers

❯ ### Industrial Automation
Improve work flow efficiencies with better visibility. Impinj Indy R2000's SJC technology ensures reliable read performance even in challenging environments

❯ ### Shipment Verification
Streamline operations and ensure correct shipments and customer satisfaction with Impinj Indy R2000-based readers

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Impinj RAIN RFID Reader Chips Embed Connectivity into Devices

Impinj reader chips provide a foundation for designing devices with embedded RAIN RFID read/write capability. The Impinj Indy R2000 and R500 are pin- and software-compatible for easy performance upgrades and design reuse.

Impinj partner-built reader modules enable accelerated product development, time to market, and government certifications worldwide.

Impinj Reader Chip Portfolio

R500 and R2000 are in the end-of-life process.

		E710	E510	E310	R2000	R500
SPECIFICATIONS	Air interface protocol	RAIN RFID / ISO 18000-63 and EPCglobal Gen2v2 compliant				
	Receive sensitivity[1] (dBm)	-88	-82	-75	-84	-68
	Maximum read rate[2] (tags/second)	1,000	700	250	900	190
	Typical power consumption (watts)	0.5			1.5	1.1
	Package type	56-pin QFN			64-pin QFN	
	Package size (mm)	6 x 6			9 x 9	
FEATURES	Self-jammer cancellation	✓	✓	✓	✓	
	Reader modes	8	7	5	4	4
	Impinj adaptive tag access	✓	✓	✓		
	RAIN RFID integration	Radio, Modem, MAC, Baluns, and Power Detectors			Radio + Modem	
	Pin- and software-compatible	E710, E510, E310			R2000, R500	
	Worldwide region support	✓	✓	✓	✓	✓

[1]Sensitivity measured with 10dBm antenna reflection, at chip receive pins, FCC DRM Reader Mode, 99% success rate
[2]Maximum tag read rate measured over the air with a large tag population in a quiet RF environment

Impinj product performance is based on Impinj's modeling and test data, actual results may vary.
For a list of supported regions and geographies please go to: www.impinj.com/supported_regions.

Ready to discuss how Impinj can help your business?

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Impinj (NASDAQ: PI) helps businesses and people analyze, optimize, and innovate by wirelessly connecting billions of everyday things—such as apparel, automobile parts, luggage, and shipments—to the Internet. The Impinj platform uses RAIN RFID to deliver timely data about these everyday things to business and consumer applications, enabling a boundless Internet of Things.

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