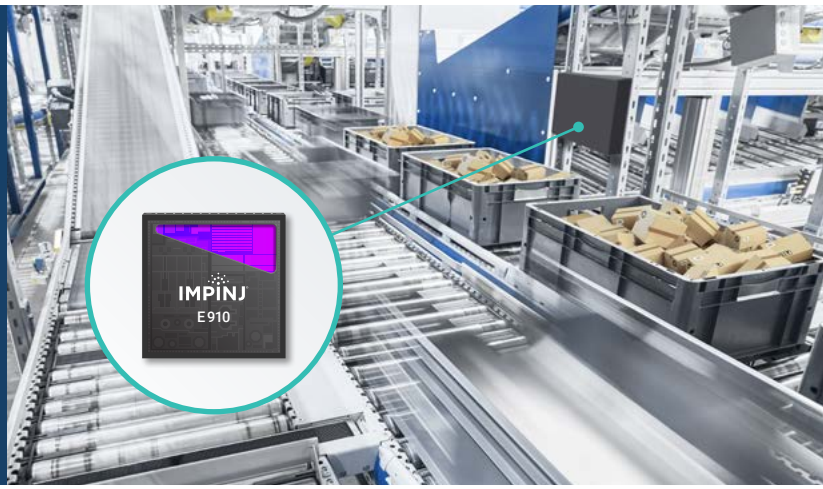
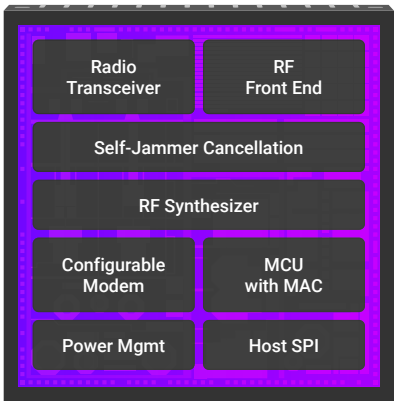
Impinj E900 Series RAIN RFID Reader Chips



Industry-leading receive sensitivity for long read range, fast read rates, and support for next-generation RAIN tags—this chip is designed for enterprise-grade readers that identify, locate, and authenticate dense populations of tagged items quickly.

The new Impinj E910 reader chip is designed for high-performance enterprise-grade readers used in portals, conveyors, and warehouse transition use cases where readers identify densely packed shipment contents and their direction of movement at high speeds. Impinj E910 joins a portfolio of systems-on-chips (SoCs) offering high read sensitivity, a compact footprint, and low power consumption. Compared to the Impinj Indy R2000, the Impinj E910 reader chip delivers:

- Up to 10 dB better receive sensitivity for reliable performance in new and emerging uses
- 50% lower chip power consumption, supporting battery-powered, energy-efficient IoT devices
- Up to 80% smaller RAIN RFID system designs ideal for small, next-generation devices



Impinj E910 Reader Chip

With industry-leading system integration and comprehensive development tools, the Impinj E910 enables the efficient development of high performance RAIN RFID connected IoT devices.

Why use Impinj E900 series reader chips

Design high-performance RAIN RFID enterprise-grade readers

Extend the capabilities of high-performance readers used in the most demanding applications where industry-leading sensitivity, long range, dense tag population reading, and fast read rates are required.

Build small, powerful, energy-efficient products

Build high-performance, compact readers where reader size and power efficiency are critical. The efficient chip design and low power consumption open the doors of product innovation.

Accelerate innovation of next-generation IoT solutions

Speed time to market and reduce development complexity with comprehensive development tools and design compatibility across the Impinj E Family of reader chips. Pre-certified partner-built modules further reduce the complexity and timeline of new product development.

A new bar for performance, integration, and ease of use

Optimized, high-performance design

Enables reading, writing, and authenticating of tags farther and faster with industry-leading receive sensitivity.

Integrated systems-on-chips in a 6x6mm package

Includes a radio modem, self-jammer cancellation, RF front-end, microcontroller, and power regulation. Pin-for-pin and software compatible with other E-Family reader chips.

Tools for easy design and development

Brings an uncomplicated design with fewer components to integrate, a developer-friendly SDK, simple development kit, and worldwide region support.

Impinj Reader Chip Portfolio

R500 and R2000 are not recommended for new designs.

		 E910	 E710	 E510	 E310	 R2000	 R500
SPECS	Air interface protocol	RAIN RFID / ISO 18000-63 and EPCglobal Gen2v2 compliant					
	Receive sensitivity[1] (dBm)	-94	-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	12	12	9	5	4	4
	Impinj adaptive tag access	✓	✓	✓	✓		
	RAIN RFID integration	Radio, Modem, MAC, Baluns, and Power Detectors				Radio + Modem	
	Pin- and software-compatible	Impinj E910, E710, E510, E310				Impinj 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.

Ready to discuss how Impinj can help your business?

Contact us: www.impinj.com

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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