

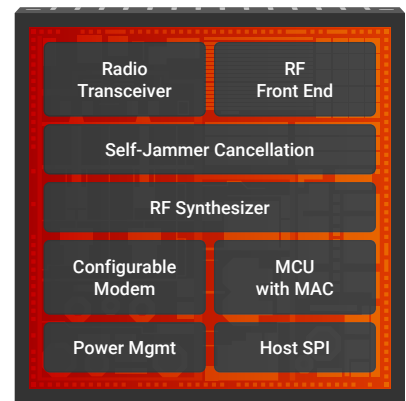


Impinj E500 Series RAIN RFID Reader Chips

High-performance receive sensitivity for medium read range, fast read rate, and support for next-generation RAIN tags—this chip is designed for a range of IoT devices that identify, locate, and authenticate groups of tagged items quickly.

The Impinj E510 reader chip is designed for point-of-sale devices, mobile and wearable readers, smart appliances, and connected consumables. The Impinj E510 offers improved reader sensitivity, a compact footprint, low power consumption, and support for the Impinj Gen2X solutions toolbox that unlocks advanced reader capabilities. Compared to the Impinj Indy R500, the Impinj E510 reader chip delivers:

- High-performance receive sensitivity with up to 19 dB improved reader sensitivity for reliable performance in new and emerging uses
- Up to 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 E510 Reader Chip

Why use Impinj E500 series reader chips

Design a range of performance RAIN RFID readers

Build a portfolio of devices where high-performance sensitivity, mid-range distances, and fast read rates differentiate your products from the competition.

Build small, powerful, energy-efficient products

Target new and emerging use cases with small, efficient, wearable devices that support hands-free workflows. Design embedded readers for connected consumer applications and smart appliances.

Accelerate innovation of next-generation IoT solutions with Impinj Gen2X

Speed time to market and reduce development complexity with comprehensive development tools and design compatibility across the Impinj E Family of reader chips, along with pre-certified partner-built modules. The Impinj Gen2X solutions toolbox speeds inventory, increases tag read range, declutters the environment, protects consumers, inhibits label and item counterfeiting, and reduces solution cost.

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

Impinj Gen2X Performance

Improves reader sensitivity, tag read range, tag decluttering, and tag filtering. Reduces reader inventory time, tag communication errors, and solution cost.

Impinj Gen2X Protection





Protects consumer privacy and tag data integrity, while inhibiting tag and item counterfeiting and fraudulent returns.

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 family reader chips.

Tools for easy design and development

Speed time to market with comprehensive development tools and pre-certified partner-built modules with worldwide region support.

Impinj Reader Chip Portfolio					
		E910	E710	E510	E310
SPECS	Air interface protocol	RAIN RFID / ISO 18000-63 and EPCglobal Gen2v2 compliant Supports Impinj Gen2X, an enhancement to the RAIN radio standard ³			
	Receive sensitivity ¹ (dBm)	-103	-98	-93	-84
		3-5 dB improvement with Impinj Gen2X inventory rounds			
	Maximum read rate ² (tags/second)	1,100		700	250
	Typical power consumption (watts)	0.5			
	Package type and size (mm)	56-pin QFN, 6 x 6			
FEATURES	Self-jammer cancellation	✓	✓	✓	✓
	Impinj adaptive tag access	✓	✓	✓	✓
	RAIN RFID integration	Radio, Modem, MAC, Baluns, and Power Detectors			
	Worldwide region support	✓	✓	✓	✓
IMPINJ GEN2X	Impinj Gen2X Performance ³	✓	✓	✓	✓
	Impinj FastID high speed verification ⁴	✓	✓	✓	✓
	Impinj Authenticity cryptographic authentication ⁴	✓	✓	✓	✓
	Impinj Protected Mode tag data protection ⁴	✓	✓	✓	✓

Impinj product performance is based on Impinj's modeling and test data. Actual results may vary.

1. Sensitivity measured at the chip Rx pin using the most sensitive reader mode (160 kHz BLF, Miller-8) at 10% PER in ideal conditions

2. Maximum tag read rate measured over the air with a large tag population in a quiet RF environment

3. Available in Impinj E Family SDK v2.1

4. Impinj FastID, Impinj Authenticity, and Impinj Protected Mode are included in Impinj Gen2X Protection

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.