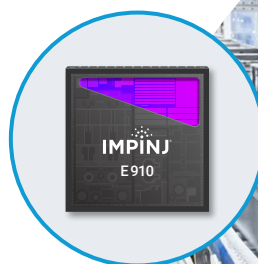




Impinj E Family RAIN RFID Reader Chips



Supports
GEN2X™

Impinj E family reader chips provide a foundation for designing a wide range of smart edge devices that identify, locate, and authenticate RAIN RFID tags.

Delivering performance, integration, and ease of use

Impinj E family reader chips are high-performance, low-power, highly integrated systems-on-chips (SoCs) that deliver exceptional readability, inventory speed, range, decluttering, and data and privacy protection. Compared to Impinj Indy reader chips, the Impinj E family delivers:

- Support for Impinj Gen2X, unlocking advanced capabilities on next-generation RAIN tags
- Up to 50% lower chip power consumption, supporting battery-powered, energy-efficient IoT devices
- Up to 80% smaller RAIN system designs ideal for small, next-generation devices
- Up to 2x improved reader sensitivity for reliable performance in new and existing solutions



Impinj E310, E510, E710, E910 reader chips

Why use Impinj E family reader chips

The Impinj E family provides a comprehensive portfolio of RAIN reader chips spanning a range of performance and price points, opening the doors of product innovation. All Impinj E family chips support the Impinj Gen2X solutions toolbox, which speeds inventory, increases tag read range, declutters the environment, protects consumers, inhibits label and item counterfeiting, and reduces solution cost.

Impinj E900 series: Industry-leading receive sensitivity for longest read range and fastest read rates of dense populations of tagged items. Ideal for enterprise-grade readers in portals, gateways, conveyors, and warehouses.

Impinj E700 series: Superior receive sensitivity for long read range and fast read rate of large numbers of tagged items. Ideal for high-performance handheld readers and fixed readers in shelves, cabinets, and conveyors.

Impinj E500 series: High-performance receive sensitivity for medium read range and fast reading of tagged items. Ideal for point-of-sale devices, mobile and wearable readers, and smart appliances.

Impinj E300 series: Good receive sensitivity for close read range and fast reading of individual or small groups of tagged items. Ideal for cost-effective printers, kiosks, and access management systems.

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 system-on-chip in a 6x6mm package

Includes a radio modem, self-jammer cancellation, RF front-end, microcontroller, and power regulation. Pin-for-pin and software compatible across all E family 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.

		Supports GEN2X			
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.