



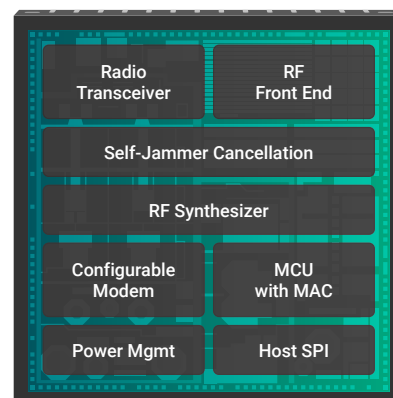
Impinj E300 Series RAIN RFID Reader Chips



Good receive sensitivity for close read range, fast read rate, and support for next-generation RAIN tags—this chip is designed for IoT devices that quickly identify, locate, and authenticate individual or small groups of tagged items.

The Impinj E310 reader chip is designed for cost-effective printers, kiosks, and security and access management systems. The Impinj E310 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 E310 reader chip delivers:

- Good sensitivity and up to 7 dB improved reader sensitivity for reliable performance in proximity uses
- Up to 50% lower chip power consumption, supporting battery-powered, energy-efficient devices
- Up to 80% smaller RAIN RFID system designs ideal for small, next-generation devices



Impinj E310 Reader Chip

Why use Impinj E300 series reader chips

Embed RAIN RFID into a range of cost-effective devices

Bring RAIN RFID reading and writing capabilities to all types of devices, balancing both performance and cost. Turn any barcode product into a true IoT device that adds automation to digital transformation programs.

Build small, powerful, energy-efficient products

Target emerging use cases with small, efficient devices that stay powered longer. Add connectivity to authenticate and manage consumable products for ultimate service and convenience.

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.