Superior Performance Made Easy

The Speedway xPortal, an integrated portal reader, incorporates the the industry-leading Speedway Revolution reader and Impinj's Dual-Linear Phased Array (DLPA) antenna technology, yielding the the industry's smallest, most flexible, and cost-effective RFID portal solution.

Overview

Impinj's Speedway xPortal RFID reader solves the size and mounting limitations of traditional portals with an attractive, light-weight, and low-profile unit. Its compact form is unobtrusive, streamlined, and ultimately flexible, yet delivers better performance than larger, more costly industrial-scale portals. Designed for retail, office, hospital, and other indoor environments, the Speedway xPortal RFID reader is ideal for monitoring tagged items, pallets, equipment, files, or people passing through doorways, hallways, or other zonal coverage areas.

Superior performance

Powered by the Speedway Revolution reader with Impinj's patented Autopilot™ technology, the Speedway xPortal reader continuously monitors the environment and RFID tag traffic to automatically and dynamically adapt its operating parameters to yield the best, most reliable performance. No longer do you need an RF engineer to install and configure your readers. Nor do you need to "re-tune" the reader when the environment changes —the Speedway xPortal manages all these concerns automatically.

Total zone coverage

The Speedway xPortal reader integrates high-performance Impinj-designed Dual-Linear Phased Array (DLPA) antenna technology with beam switching and polarization attributes that are dynamically managed by the reader. The system's DLPA antenna configuration provides broad coverage of the read zone, as the elements continuously alternate between vertical and horizontal polarizations, delivering full omni-directional power with greater consistency and intensity than circularly-polarized antennas. Harnessing the Autopilot capability, the Speedway xPortal senses exactly where tags appear in the field, automatically optimizing the read zone for the best, most efficient level of performance. And the Speedway xPortal reader's Low Duty Cycle function conserves energy while also eliminating unnecessary RF noise by limiting operation to only times when tags are detected within the field of view.

The Speedway xPortal DLPA antenna configuration provides full omni-directional power and zone coverage.

Speedway® xPortal™
INTEGRATED PORTAL READER

Name	Speedway® xPortal™ Integrated Portal Reader
Dimension	77.5x22,2x5cm
Weight	3kg

Unprecedented ease of deployment

Not only is the Speedway xPortal a high-performance RFID solution, it's also a practical one. With multiple mounting options to meet real world deployment challenges, the Speedway xPortal chassis incorporates keyhole slots and clearance holes, has VESA compliant mounting patterns, and accommodates gimbal brackets to enable a myriad of mounting possibilities. Fully enclosed cable management clips and conduit knockouts also help maintain a tidy appearance. In short, the Speedway xPortal can flank, pivot, stand-off, or mount overhead—accommodating just about anything your space requires—and look great doing it. The unit's clean, attractive appearance complements the look of any installation environment.

The Speedway xPortal's Power over Ethernet (PoE) connectivity simplifies deployment, eliminating the need for AC outlet installation at read points, and saving considerable energy in the process. In fact, owing to its remarkably low power consumption, the Speedway xPortal reader's energy costs are 75% lower than those of competing readers. PoE also provides for increased system availability via network infrastructure.

The Speedway xPortal combines Impinj technology, superior design, and proven components to deliver unmatched RFID system performance, intelligence, flexibility, and reliability. It is an excellent example of how Impinj is simply doing things better, solving the important challenges, and leading with the industry' s most robust, innovative, and best-performing RFID systems.

About DilinxRFID

As a technology partner with Impinj, DilinxRFID is a unique technology innovator and advanced manufacturer in the global RFID market incorporating the world-leading Battery-Assisted Passive ("BAP") and Printed Battery technologies into its own manufacturing capabilities. We provide highly reliable readers and BAP tags for target applications like Aerospace, Pharma, Parking Control System, Personnel Tracking, Cold Chain for food and medicines, and general logistics in challenging environments.

 For more information, visit www.DilinxRFID.com.

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Speedway® xPortal ™ Reader At A Glance

PRODUCT DETAILS	SPEEDWAY R640
Air Interface Protocol	EPCglobal UHF Class 1 Gen 2 / ISO 18000-6C
Supported Regions or Geographies	• US, Canada, and other regions following US FCC Part 15 regulations (902-928 MHz) • Europe and other regions following ETSI EN 302 208 v1.2.1 without LBT regulations (865-868 MHz) • More regions available
Antennas	Dual-Linear Phased Array (DLPA) antenna technology
Radiated Power	FCC 4W EIRP, ETSI 2W ERP
HPBW (x-z plane)	60° +/- 3° (3 dB beam width)
HPBW (y-z plane)	80° +/- 3° (3 dB beam width)
Radome	High impact strength, UV, chemical and cleaning solution resistant
Transmit Power	FCC +10 to +28.5 dBm, ETSI +10 to +27.5 dBM
Max Receive Sensitivity	-82 dBm
Application Interface	EPCglobal Low Level Reader Protocol (LLRP) v1.0.1
Network Connectivity	10/100BASE-T auto-negotiate (full/half) with auto-sensing MDI/MDX for auto-crossover (RJ-45)
IP Address Configuration	DHCP, Static, or Link Local Addressing (LLA) with Multicast DNS (mDNS)
Time Synchronization	Network Time Protocol (NTP)
Management Interfaces	• Impinj Web Management UI • Impinj RShell Management Console using serial management console port, telnet or SSH • SNMPv2 MIBII • EPCglobal Reader Management v1.0.1 • Syslog
Reliable Firmware Upgrade	• Dual image partitions enable smooth transition to new firmware while the reader is still operating • Scalable upgrade mechanism enables simultaneous scheduled upgrades of multiple readers • USB Flash Drive • Impinj Web Management UI
Power Sources	• Power over Ethernet (PoE) IEEE 802.3af • +24V +/- 5% via external universal power supply with locking connector—sold separately
Environmental Sealing	IEC IP52
Operating Temperature	-20 ºC to +50 ºC
Humidity	5% to 95%, non-condensing
Dimensions (H x W x D)	30.5 x 8.75 x 2 in (77.5 x 22.2 x 5 cm)
Weight	6.5 lbs (3 kg)
Mounting Options	• Keyhole slots, clearance holes, and integrated threaded fasteners (• VESA MIS-D, 100/75, C (M4 X 7 mm thread depth) • Conduit knockouts for easy termination of conduit • Pass-through knockouts on back for data and power cabling
RoHS	Compliant to European Union directive 2002/95/EC

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DECLARATION OF CONFORMITY

Manufacturer's Name: Impinj, Inc
Manufacturer's Address: 701 N. 34th Street, Suite 300
                            Seattle, WA 98103 USA
Product Name: SpeedwayR RFID reader and Speedway
                            xPortal integrated antenna reader
Model Number: IPJ REV-EU1, R420, R220 or R640

The above manufacturer declares under sole responsibility that the above product conforms to the following European directives:

- R&TTE Directive 99 / 5 / EEC
- EMC Directive 2004 / 108 / EC

Supplementary information:

- ETSI EN 302 208-2 V1.2.1 (2008-4)
- ETSI EN 301 489-3 V1.4.1 (2002-08)
- EN 60950-1: 2006

W. Ashley

William Ashley
VP Reader Engineering
Impinj, Inc.
June 2010

Impinj, Inc. is the leading provider of UHF RFID solutions for identifying, locating and authenticating items. Impinj's GrandPrix™ technology platform is the most comprehensive and widely adopted in our industry.