

Speedway® Revolution Readers At A Glance

PRODUCT DETAILS	SPEEDWAY R420	SPEEDWAY R220																
Air Interface Protocol	EPCglobal UHF Class 1 Gen 2 / ISO 18000-6C																	
Performance	Includes all possible performance configurations and functionality to deliver peak performance for even the most challenging of applications																	
Supported Regions or Geographies	<ul style="list-style-type: none"> • US, Canada, and other regions following US FCC Part 15 regulations • Europe and other regions following ETSI EN 302 208 v1.2.1 without LBT regulations For complete region list visit: http://www.impinj.com/Speedway_Revolution_Reader.aspx																	
Antennas	4 high performance, monostatic antenna ports optimized for Impinj reader antennas (RP TNC)																	
Transmit Power	<ul style="list-style-type: none"> • +10.0 to +30.0 dBm (PoE) • +10.0 to +32.5 dBm (external universal power supply) 																	
Max Receive Sensitivity	-82 dBm																	
Min Return Loss	10 dB																	
Application Interface	EPCglobal Low Level Reader Protocol (LLRP) v1.0.1, Speedway Revolution SDK & EDK																	
Network Connectivity	10/100BASE-T auto-negotiate (full/half) with auto-sensing MDI/MDX for auto-crossover (RJ-45)																	
Cellular Connectivity*	<ul style="list-style-type: none"> • Sierra Wireless AirLink PinPoint XT (CDMA or GSM connectivity with GPS data) • Sierra Wireless AirLink Raven XT (CDMA or GSM connectivity) (* Available through Impinj-authorized partners)																	
IP Address Configuration	DHCP, Static, or Link Local Addressing (LLA) with Multicast DNS (mDNS)																	
Time Synchronization	Network Time Protocol (NTP)																	
Management Interfaces	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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 																	
Management Console	<ul style="list-style-type: none"> • RS-232 using a standard Cisco-style management cable (DB-9 to RJ-45) • Baud rate: 115200, Data: 8 bit, Parity: none, Stop: 1 bit, Flow control: none 																	
USB	<ul style="list-style-type: none"> • USB 1.1 Device (Type B) and Host (Type A) ports • USB Virtual COM Serial Port and USB drive support for embedded applications 																	
GPIO	<ul style="list-style-type: none"> • 4 inputs, optically isolated 3-30V; 4 outputs, optically isolated, 0-30V, non-isolated 5V, 100mA supply (DB-15) 																	
Power Sources	<ul style="list-style-type: none"> • Power over Ethernet (PoE) IEEE 802.3af • +24 VDC @ 800mA via external universal power supply with locking connector—sold separately 																	
Power Consumption	<table border="1"> <thead> <tr> <th></th> <th>Idle</th> <th>Typical</th> <th>LDC</th> </tr> </thead> <tbody> <tr> <td>PoE at +30 dBm</td> <td>3W</td> <td>11.5W</td> <td>6W</td> </tr> <tr> <td>Power Supply at +30 dBm</td> <td>3W</td> <td>13.5W</td> <td>6W</td> </tr> <tr> <td>Power Supply at +32.5* dBm</td> <td>3W</td> <td>15W</td> <td>6W</td> </tr> </tbody> </table> (*maximum is 31.5 dBm for ETSI region readers)			Idle	Typical	LDC	PoE at +30 dBm	3W	11.5W	6W	Power Supply at +30 dBm	3W	13.5W	6W	Power Supply at +32.5* dBm	3W	15W	6W
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Environmental Sealing	IEC IP52																	
Shock and Vibration	Mil-Std-810G Certified																	
Operating Temperature	-20 °C to +50 °C																	
Humidity	5% to 95%, non-condensing																	
Dimensions (H x W x D)	7.5 x 6.9 x 1.2 in (19 x 17.5 x 3 cm)																	
Weight	1.5 lbs (24.5 oz)																	
RoHS	Compliant to European Union directive 2002/95/EC																	

Speedway® Revolution Readers At A Glance

Autopilot

Senses, Configures, Adapts—24/7

RF interference, tag quantity, ambient RF noise, and even building materials near an RFID installation all affect system performance. Most users configure their readers for worst case scenarios, often compromising best performance in the process. With the Speedway Revolution's Autopilot, innovative firmware features work together, automatically optimizing the reader operation to its environment—delivering peak performance at all times.

- > **Autoset** continuously optimizes the reader's configuration for the best, most reliable performance. The Speedway Revolution senses levels of RF noise and interference, automatically selecting the appropriate settings.
- > **Low duty cycle** reduces RF interference, power consumption, and energy costs. The Speedway Revolution only transmits when tags are in the field, helping to clear the air of unnecessary RF noise.
- > **Dynamic antenna switching** improves throughput and helps the reader work more efficiently. Speedway Revolution senses where tags are in the field and automatically focuses more time on the antennas with the largest tag populations in view. For example, if a low-height pallet follows taller pallets through a portal, the Speedway Revolution reduces time spent on antennas in the upper positions.

And the Speedway Revolution improves upon the advanced hardware capabilities which made the original Speedway the reader of choice for many demanding customers interference rejection , and item-level **carrier cancellation** .



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.



Speedway R220



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DilinxRFID

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