



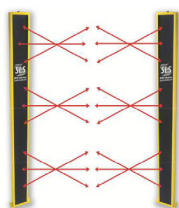
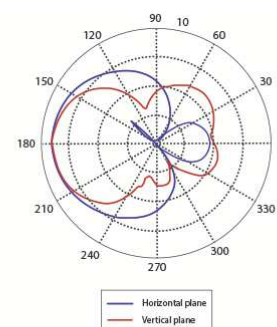
The Surgere RFID Portal

Surgere's sRFID Portal is designed to perform in harsh industrial environments. Each antenna enclosure is constructed with extruded aluminum and is anchored to the concrete floor. Each enclosure includes a 7' Wave Antenna. The enclosures include antenna back planes to direct signal into the designed read zone and eliminates unwanted ambient reads.

Dimensions	96" x 15.5" x 4.5"
Weight	38lbs.
Temperature Range	-4F to 140F (-20C to 60C)
Frequency Range	902-928 MHz
User Defined Zone Coverage Area	2' x 2' x 2' – 10' x 10' x 10'
Gain	5.5 dBi
Impedance	50 Ohms
Polarization	Multi-Linear
Maximum Input Power	10 Watts
H-Plane Beamwidth	360°
E-Plane Beamwidth	360°
Connector	TNC Reverse Polarity
Optional Cables	As Required

The Surgere Wave Antenna

The Surgere Wave Antenna embodies a radically new concept in RFID antenna design. Unlike a patch antenna that radiates a single beam in a given direction, the antenna is designed to uniformly illuminate a volume of space. When installed in pairs the antennas complement each other and provide spatial, direction-of arrival, and polarization diversities throughout the volume. Our Wave Antennas are unique in covering all three tag orientations within a user defined zone up to a 10x10x10 foot zone.



Antenna Design

Surgere's antenna design creates a wide-angle lens effect and covers all three polarizations at once. Designed to work in high fading and multipath environments to provide superior UHF zone coverage.

Specifications

Air Interface Protocol	GS1/EPCglobal UHF Gen2 (ISO 18000-6C) or RAIN RFID																		
Antenna Ports	4 expandable to 32 antennas with Speedway Antenna Hub optimized for Impinj reader antennas (RP TNC connector)	2 monostatic antenna ports optimized for Impinj reader antennas (RP TNC connector)																	
Performance	Optimized for high volume, high concentration scenarios; supports high throughput modes including Max Throughput FM0, Hybrid (m=2), and Max Miller (m=4)	-	Covers a smaller, more specific area to save on deployment costs																
Supported Regions or Geographies	Go to www.impinj.com/supported_regions for regions and geographies by model																		
Transmit Power	<ul style="list-style-type: none"> +10.0 to +31.5 dBm (PoE) (EU1 limited to +30 dBm) +10.0 to +32.5 dBm (Listed/Certified power supply) (EU1 limited to +31.5 dBm, JP2 limited to 30 dBm) 																		
Max Receive Sensitivity	-84 dBm																		
Min Return Loss	10 dB																		
Application Interfaces	<ul style="list-style-type: none"> Low Level Reader Protocol (LLRP): C, C++, Java, and C# libraries OctaneSDK: Java or C# On-reader Applications via Octane ETK: C, C++ 																		
Network Connectivity	<ul style="list-style-type: none"> 10/100BASE-T auto-negotiate (full/half) with auto-sensing MDI/MDX for auto-crossover (RJ-45) 802.1x with PEAP/TLS and MD5 support WPA for Wifi and Ethernet Speedway Connect (not included in Speedway purchase): HID (keyboard) emulation, TCP Socket, Serial/RS-232, HTTP POST 																		
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 SNMP 	-	<ul style="list-style-type: none"> FTP 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 		<ul style="list-style-type: none"> USB Flash Drive Impinj Web Management UI SSH File Transfer Protocol (SFTP) support 																
Management Console	RS-232 using a standard Cisco-style management cable (DB-9 to RJ-45)																		
USB	<ul style="list-style-type: none"> USB Device (Type B) and Host (Type A) ports USB Virtual COM Serial Port and USB drive support for embedded applications 																		
GPIO	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 Listed/Certified power supply, marked LPS or Class 2, with 24Vdc output, rated minimum 2.5A 																		
Power Consumption	<table> <tr> <th></th><th>Idle</th><th>Typical</th><th>LDC</th></tr> <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> </table>		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		*Maximum is 31.5 dBm for EU1 readers and 30dBm JP2 readers
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Environmental Sealing	IEC IP52																		
Shock and Vibration	Mil-Std-810G Certified																		
Electrical Safety	UL Listed (US and Canada), EN 60950-1:2006 / A11:2009 / A1:2010 / A12:2011																		
Operating Temperature	-20 °C to +50 °C																		
Humidity	5% to 95%, non-condensing																		
Dimensions & Weight	7.5 in H x 6.9 in W x 1.2 in D (19 x 17.5 x 3 cm); 1.5 lbs (24.5 oz)																		
RoHS	Compliant to European Union directive 2011/65/EU																		
Warranty and Maintenance Options	<ul style="list-style-type: none"> 1 year limited warranty with purchase, option to extend 3 year Enhanced Maintenance upgrade available 																		

