

The Trusted Source for Secure
Identity and Tracking Solutions

FSN smartPORTAL™

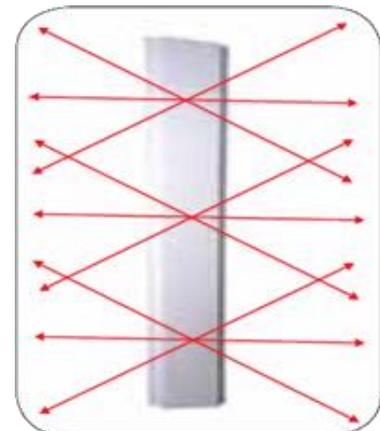


Our RFID Wave Antennas are unique in covering all three tag orientations within a user defined zone up to a 10x10x10 foot zone

Above Photo - Pairs of FSN RFID smartPORTAL installed at each shipping dock

The **FSN RFID smartPORTAL™** is designed to be installed in harsh industrial environments. Each enclosure is constructed with extruded aluminum and is anchored to the concrete floor. Each enclosure includes a 7' Wave Antenna with prewired connectivity to an Impinj R420 four port UHF RFID reader. The enclosures include antenna back planes to direct RF signals into the designed read zone and eliminate adjacent dock door reads- a problem common with other warehouse RFID portal solutions.

The 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. As a result, concerns over tag alignment orientation are eliminated.



Our 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

Dimensions	101.5" x 11" x 3"
Weight	35 lbs
Temperature Range	-4°F to 140°F (-20°C to 60°C)
Frequency Range(North America)	902 - 928 MHz
User Defined Zone Coverage Area	2' x 2' x 2' to 10' x 10' x 10'
Gain	5.5dBi
Impedence	50 Ohms
Polarization	Multi-Linear
Max. Input Power	10 Watts
H-Plane Beamwidth	360 degrees
E-Plane Beamwidth	360 degrees
Connector	TNC Reverse Polarity
Optional Cables	As Required
Country of Manufacture	USA

Upon the mobile Passive UHF Asset tag entering the read zone of any of the antennas, the unique ID tag is read and transmitted along with date & timestamp and antenna/dock ID via Ethernet cabling (or WIFI) back to the application and database server. This can now initiate a variety of alarms when correlated with the customer-defined business rules.

High performance, Gen 2 UHF RFID reader housed in accessible, rugged, low-profile frame

FSN's series of portal appliance pedestal cabinets provides a complete, easy-to-install, dock-door solution in a durable, serviceable package. Housing the industry-leading Impinj R420 Gen 2 RFID reader and up to four custom wave antennas, the family ensures high read rates and effective RFID portal implementations.



Rugged Construction

A rugged, unibody, chassis encloses RFID electronics and accessories. An integrated, angle-iron kick-plate resists glancing blows from equipment and personnel. High-impact, RF-transparent industrial plastic radome covers ensure unimpeded transmission of RF signals, while presenting a sleek, professional appearance.

Easy to Install and Service

The appliance cabinet houses readers and antennas, eliminating the need to route coax cable outside the cabinet. Sturdy mounting hardware for optional light stacks or presence detectors provides flexibility in implementation.

Installation is fast and simple with on-line installation and training available to enable client installations. On-Site installation, repair and training is also available. Four floor-mounted bolts in the baseplate secure the unit to the floor. Covers can be easily removed if desired, providing complete, unobstructed access to the interior for service.

RFID Reader Selection: Impinj R420 Enterprise RFID Reader

The Impinj R420 reader provides exceptional Gen 2 performance in an enterprise-ready package. Designed for scalability, the R420 is manageable, configurable and reliable. The reader and its GPIO Box is fully compatible with the proposed AssetWorx! software suites and is EPC certified for Dense Reader Mode to ensure high read rates in demanding environments.

The Speedway Revolution R420 is manufactured by Impinj – a trusted leader in RFID.



FEATURES

- Autopilot — a set of unique firmware features work together to automatically optimize the reader's operation for its environment.
- Autoset — continuously optimizes the reader's configuration for the best, most reliable performance
- Low duty cycle — reduces RF interference, power consumption, and energy costs
- Dynamic antenna switching — improves throughput and helps the reader work more efficiently
- Power over Ethernet (PoE) — simplifies deployment and dramatically reduces cost by eliminating the need for AC outlet installation at read points.

Impinj R420 Reader Technical Specifications

ELECTRICAL:

Air Interface Protocol: EPCglobal UHF Class 1 Gen 2 (ISO 18000-6C)
Operating Frequency: UHF 860- 960 MHz, North America
Transmit Power (POE): +10.0 to +30.0 dBm, Max Receive Sensitivity: -82 dBm
Transmit Power (External DC Power): +10.0 to +32.5 dBm
Data Interface: RS-232, Ethernet
GPIO: 4 GPI optically isolated 3-30V/ 4 GPO optically isolated, 0-30V
Power Source (POE): IEEE 802.3af
Power Source (External DC Power): +24 VDC @ 800mA

MECHANICAL:

Antenna Ports: 4 RP-TNC, monostatic
Dimensions: 7.5 x 6.9 x 1.2 in (190.5 x 175.3 x 30.5 mm); Weight: 1.5 lbs (680.3 g)

ENVIRONMENT: IP Rating: IP 52 ; Operating Temperature: -20 °C to +50 °C

Training and Support

A detailed installation manual is included. For software integration, a complete software developer’s kit (SDK) is available for the R420, as well as a technical and warranty support.

smartPORTAL Accessories Included

Photo-Eyes:

The smartPORTALS take advantage of the latest photo-eye sensors to identify shipping dock door open or closed and provide a digital signal to the reader via GPIO input. This eliminates the requirement to power up the Readers full-time. Saves electricity, extends reader service life and is a component of a company’s ‘Green Initiative’.



Protective Safety Bollards:

IDEAL 42" tall; 4" thick steel Bollard with radius cap, powder-coated in safety yellow. Provisioned as a set of 2 per shipping dock.



Our solutions are customized for each client’s specific requirements and operational process

For additional information or a detailed proposal,





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