Impinj®

Introducing

Speedway® Reader Antenna Hub

Impinj's Speedway® Antenna Hub provides a low cost opportunity to create a large, contiguous RFID read zone with many antennas connected to a single reader. The Speedway Antenna Hub supports up to 32 antennas connected to a single Speedway® Revolution R420 reader for a robust solution to today's popular item monitoring and other antenna-intensive RFID applications which deliver enhanced business intelligence and customer experience.
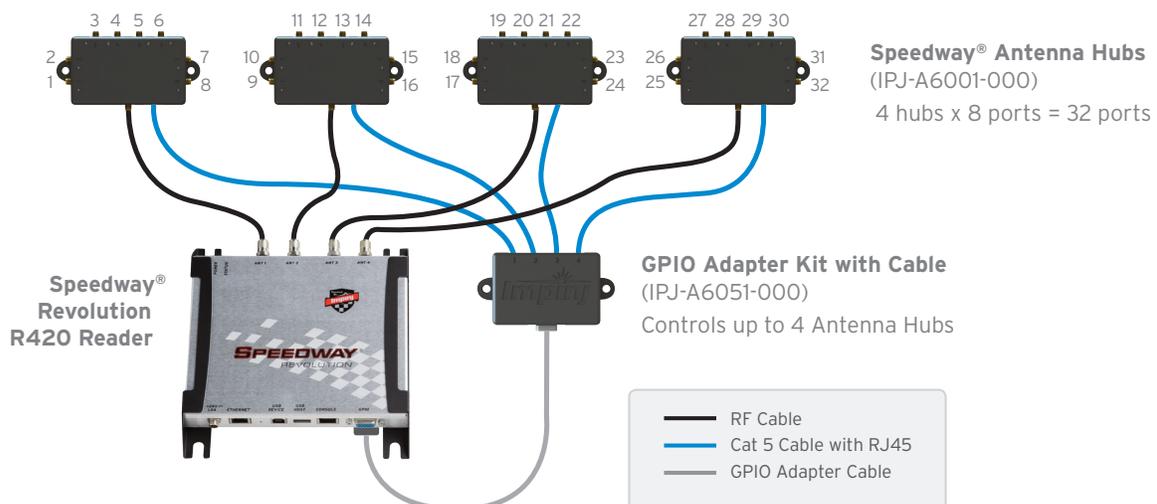
Users will benefit from fast, hassle-free installation and deployment with the Speedway Antenna Hub solution which includes antenna virtualization software, GPIO adapter, and an enclosure with LEDs for system feedback.

The Speedway Antenna Hub delivers:

> Hassle-free operation of 5-32 antennas when connected to a single high-performance Speedway Revolution reader and GPIO Adapter

> Robust and easy to install design with system level feedback for reliable installations in real world conditions

- Enclosed electronics board with mounting tabs
- LEDs for system level feedback
- Software alerts/health diagnostics

> All of the performance benefits of the Speedway Revolution reader without the need to learn a new API or make extensive programming changes

With the Speedway Antenna Hub, Impinj makes RFID monitoring applications, including smart shelves, interactive marketing displays, and document or item tracking, cost-effective and easy to deploy.

Antenna Port Numbering:

Speedway® Antenna Hubs
(IPJ-A6001-000)
4 hubs x 8 ports = 32 ports

Speedway® Revolution R420 Reader

GPIO Adapter Kit with Cable
(IPJ-A6051-000)
Controls up to 4 Antenna Hubs

— RF Cable
— Cat 5 Cable with RJ45
— GPIO Adapter Cable

Product Specifications

Speedway® Antenna Hub (IPJ-A6001-000)

Dimensions	4 x 2.4 x 1 in (102 x 61 x 24 mm)
Weight	3.5 oz (100 g)
Power Supply	5V provided by the GPIO Adapter
Power Consumption	25mA (80mW) max
Connectors	RF Input: SMA Female 8 RF Outputs: SMA Female 1 Digital I/O: RJ45
Mounting Options	Two 1/4 in mounting holes
Max Input Power	34 dBm
Insertion Loss	1.3 dB (Max)
Isolation	36 dB (Min)
Return Loss	24 dBm (Min)
Antenna Hub Switching Speed	<200 µs based on hardware design
Device Switching Speed	~25 ms based on Speedway Revolution firmware
Operating Temperature	-40 °C to +80 °C
Storage Temperature	25 °C
Humidity	5% to 95%, non-condensing
IP Rating	IP52
Frequency	860-960 MHz
Certifications	FCC, CE, RoHS
Cables	RF cable maximum length: depends on environment/region, typical 1/2 dB per meter signal loss Digital cable (Cat5) for control, maximum length: • 300 ft (100 m) if shielded • 100 ft (30 m) if unshielded
Configuration	Octane Rshell, Speedway Revolution WebUI
Antenna Port Numbering	1-32 on Antenna Hubs 1, 9, 17, 25 on native reader ports
API	LLRP Tool Kit (LTK), Speedway Development Kit (SDK)
Test Software	MultiReader v6.6.4 or later

GPIO Adapter (IPJ-A6051-000)

Dimensions	3.5 x 2.4 x 1 in (92 x 61 x 24 mm)
Weight	2.8 oz (80 g)
Power Supply	5V provided by the Speedway Revolution reader
Power Consumption	5mA (20mW) max, nominal voltage is 3.3V I/O with 5V max
Connectors	• 1 GPIO Input: HD-15 • 4 Digital I/O: RJ45
Mounting Options	Two 1/4 in mounting holes
Operating Temperature	-40 °C to +80 °C
Storage Temperature	25 °C
Humidity	5% to 95%, non-condensing
IP Rating	IP52
Certifications	FCC, CE, RoHS
Cables	• HD-15: 1 ft cable for Speedway Revolution GPIO port included • Custom HD-15 can be manufactured up to 100ft (30 m) max

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