SPEEDWAY READER
Antenna Hub

Thank you for purchasing the Speedway Antenna Hub. This guide provides basic installation instructions for an RFID system using a Speedway reader and the Antenna Hub. Additional information is available in the Speedway Revolution Installation and Operations Guide at http://www.impinj.com/downloads

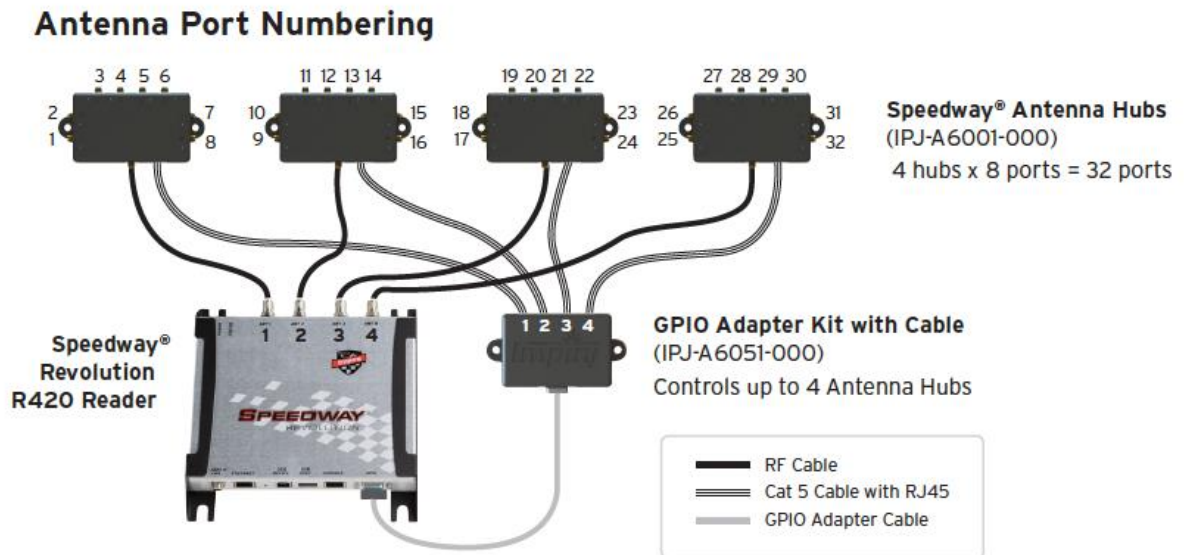## BOX CONTENTS

- 1 Speedway Antenna Hub (IPJ-A6001-000)

SETTING UP A SPEEDWAY ANTENNA HUB SYSTEM

1. Check Firmware Version on the Speddway R420 reader

   a. Connect to reader WebUI using a web browser http://<reader name or IP address>
   b. Log in to the reader. Default credentials are:

      i. User name: root
      ii. Password: impinj

   c. Note the "Software Version" shown on the Web UI> If it is 4.10.0.240 or later, then no additional action is required. Otherwise, ask your authorized Impinj partner or reseller for the latest Octane firmware release and upgrade using the "Reader Upgrade" utility in the WebUI.

2. Enable the Antenna Hub Feature

   a. In the WebUI, click on the "Enable" button in the Antenna Hub section to enable the feature. You will need to manually reboot the reader (click on the reboot button in the WebUI) for the changes to take effect.
   b. The Antenna Hub environment can also be enable from Rshell using the command below and then rebooting the reader:

      i. >config feature enable anthub

3. Connect Cables

   a. All cable connections should be made with the reader powered off.
   b. RF signal connections using RF cables

      i. Requires cables with SMA male connectors for the Antenna Hub connection and the R-TNC male connectors for the reader connections.
      ii. Attach the RF cable to the appropriate reader antenna port and the Antenna Hub input port. NOTE: Antenna Hub ports are marked 1 through 8 to show the port ordering. These port markings correspond to a different antenna number sequence when connected to the reader and GPIO Adapter ports 2, 3, or 4 (as referenced in the diagram).
      iii. Connect the appropriate RF cables between that Antenna Hub output ports and antennas
      iv. Unused ports can be left empty or terminated

   c. Digital signal connections with GPIO Adapter

      i. Use the cable provided with the GPIO Adapter and the Antenna Hub using the RJ-45 connectors. IMPORTANT: Check that the reader antenna port number and the GPIO Adapter output port number match at the same Antenna Hub (e.g., reader antenna port 1 and GPIO Adapter port 1 are connected to the same Antenna Hub). The system will not operate correctly with mismatched wiring.

   d. Power the reader and look for the Antenna Hub LEDs to light in sequence to show that it is enabled an operating.

REQUIRED ACCESSORIES SOLD SEPARATELY	
1 Speedway R420 reader with Octane firmware v4.10 or higher	IPJ-REV-R420
1 GPIO Adapter for Antenna Hub	IPJ-A6051-000
SMA to R-TNC 2m cable	IPJ-A3002-000
RF cables (various)	NA
Cat5 cables for control channel	NA
Antennas (various)	NA

e. Click on "Check connections" in the WebUI Antenna Hub page for help with any connection problems.

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

4. Affix Antenna Hub(s)

    a. Mount using ¼ inch mounting holes
    b. It may be necessary to temporarily disconnect RF cables (with reader powered off) in order to access the mounting holes.

mounting → hole   ← mounting hole

5. Next Steps

    a. Set up the reader following instructions in the Speedway Reader Installation and Operations Guide.
    b. Develop controlling application using the LLRP Toolkit or Octane SDK
    c. Find helpful information here: http://support.impinj.com

RESOURCES & NEXT STEPS

● Find helpful information at www.impinj.com and support.impinj.com
● For purchasing assistance, contact orders@impinj.com

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*Samples are provided courtesy of our inlay partner(s), and may not be available with every reader. Samples are provided for use in reader setup and to experience unique Monza features, and are not intended to represent all the Monza-based inlay varieties available from Impinj inlay partners. We encourage you to ask your provider about RFID labels or inlays featuring Monza tags.

**This product is intended to be supplied with a Listed/Certified power supply, marked LPS or Class 2, with 24Vdc output, rated minimum 2.5A. (Ce produit est conçu pour être alimenté avec une alimentation Mis / certifiés, marqué LPS ou de classe 2, avec sortie 24V, 2,5 A nominal minimum)