

Spider-8000

8-Port UHF RFID Reader



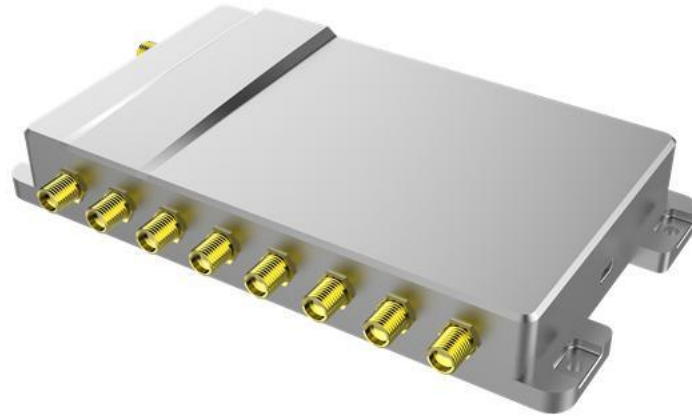
The Ultimate RFID Reader

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SHANGHAI HUAYUAN ELECTRONIC CO., LTD | 517, B-Bld, No 399 Hengnan Rd, Shanghai 201112, China | T:+86 21 5424 6151 ;
F: +86 21 5424 6163, litrfd@huayuansh.com, www.litrfd.com



1. Product View



2. Advantages

Feature	Description
Impinj R2000 Built-in	Based on R2000 module, which is stable and mature.
Based on Freescale Platform	IMX6S(Solo) / IMX6DL(Dual) / IMX6Q(Quad) 800MHz vehicle grade CPU.
Compact Size	133(L) * 84(W) * 22mm(H) Surprisingly compact CNC aluminum body, very convenient to deploy.
Online Upgrade	The OS kernel and APP can be updated online remotely.
POE Power	25W max, IEEE 802.3 supported.
Wide Voltage	Wide voltage input range from DC9V to DC24V.
Powerful OS Based	Linux 4.9.11 / Android 7.0 (for Quad core CPU and 2G RAM only)
RAM + ROM	Spider-8000-Lite: 512MHz+4G (for Solo core CPU only) Spider-8000: 1G+8G 2G+16G/ 2G+32G (Optional)
HDMI Output Supported	HDMI D Type interface, peak transmission speed 5GB/s. 1080P, 720P supported.
Micro USB OTG Interface	USB 2.0 OTG, Micro USB interface. Compatible with USB 2.0 Peripherals.
Dual-Band WIFI Supported	SMA interface for external 2.4G/ 5G antenna.
High-speed Internet Interface	450M/ 100M/ 10M adaptive Ethernet.
GPIO	4 inputs, 4 outputs. Up to 8kV isolation voltage.
Classy Industrial Design	Compact and artistic design with CNC aluminum material.

3. Anti-Collision Algorithm Comparison



Algorithm	Description
Standard fixed Q algorithm	<ul style="list-style-type: none"> * Standard 18000-6C algorithm. * The performance is reduced significantly when tag quantity gets larger. * The efficiency is not high when tag quantity is small.
Impinj dynamic Q algorithm	<ul style="list-style-type: none"> * The algorithm of Impinj. * It has a good efficiency for various tag quantities. * It sacrifices some performance for the sake of compatibility.
I-Search dynamic Q algorithm V1.0	<ul style="list-style-type: none"> * Based on Impinj dynamic Q algorithm. * The performance is optimized. * It's the algorithm for firmware version 6.6 or below.
I-Search dynamic Q algorithm V2.0	<ul style="list-style-type: none"> * Based on Impinj dynamic Q algorithm. * It's a brand new data structure, the performance of which is significantly improved for firmware version 6.7 or above. * The improvement of performance can be easily sensed after the first round of inventory especially when the tag volume increases.

Notes:

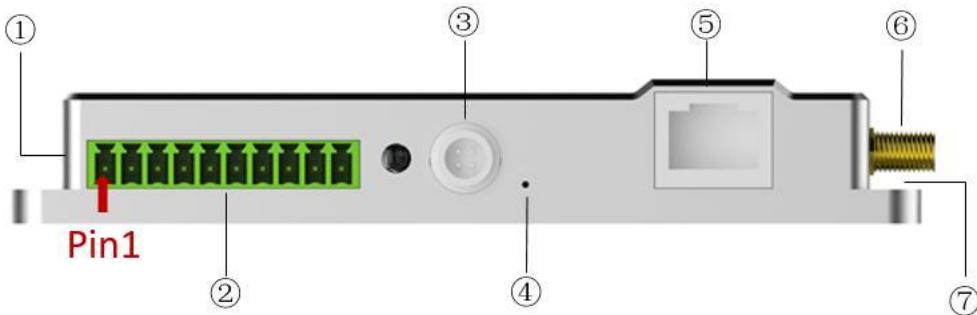
- 1.) The test is on same hardware platform in real applications (Taking Impinj dynamic Q algorithm as the reference which is marked with 100%).
- 2.) The chart shows the comparison for the first round inventory performance.
- 3.) It is tested on the same hardware platform.

4. Electrical Characteristics

Dimensions	133(L) * 84(W) * 22mm(H)
Weight	0.9kg
Material	CNC Aluminum
Input Voltage	DC 9V ~ 24V
POE Power	Supported
Operating Current	1.2A +/-5% @ DC 12V Input
Operating Temperature	- 20 °C~+ 85 °C
Storage Temperature	- 40 °C~+ 85 °C
Operating Humidity	< 95% (+ 25 °C)
Air Interface Protocol	EPC global UHF Class 1 Gen 2 / ISO 18000-6C
Spectrum Range	902Mhz – 928Mhz, 865MHz – 868MHz(Optional)
Supported Regions	US, Canada and other regions following U.S. FCC Europe and other regions following ETSI EN 302 208 Mainland China Japan Korea Malaysia Taiwan
Output Power	0-31dBm
Output Power Precision	+/- 1dB
Output Power Flatness	+/- 0.2dB
Receive Sensitivity	< -85dBm
Peak Inventory Speed	> 700 tags/ s
Tag RSSI	Supported
Antenna Detector	Supported
Ambient Temp Monitor	Supported
GPIO	4 inputs, 4 outputs
OTG	USB 2.0 OTG
HDMI	HDMI D Type interface
Online Upgrade	Supported
Heat Dissipation	Air cooling

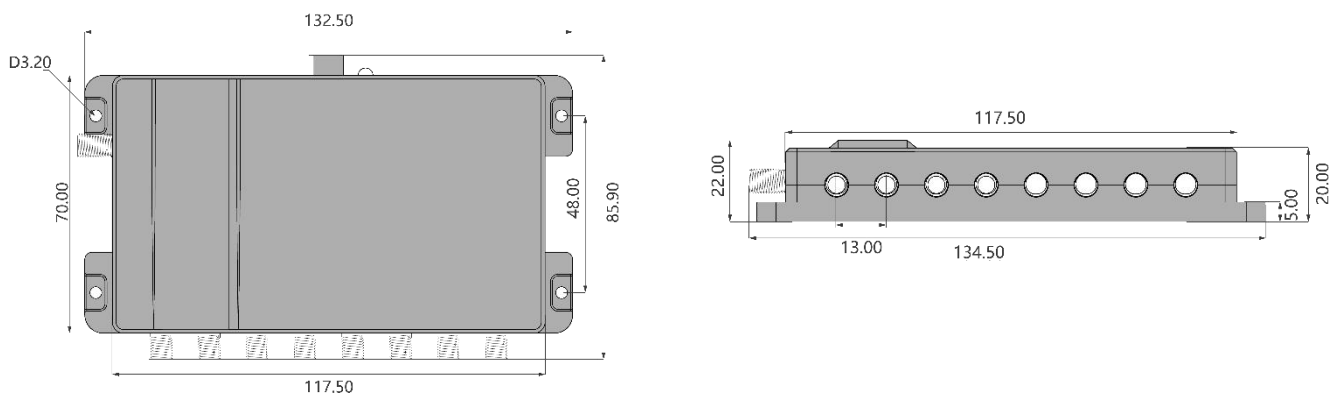
5. PIN Assignments

3-1: PIN Assignment



PIN ID	Function	Descriptions
①	HDMI	HDMI D Type interface
②	GPIO	4 inputs, 4 outputs.
③	POWER	DC 9V ~ 24V
④	Reset	Reset
⑤	Ethernet	450M/ 100M/ 10M adaptive Ethernet. POE supported, 25W max, IEEE 802.3 supported.
⑥	WIFI	SMA interface for external 2.4G/ 5G antenna.
⑦	Micro USB	USB 2.0 OTG

6. Dimensions (mm)



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