# S-8600 UHF
## Industrial Reader


The S-8600 is a high performance 4-channel UHF reader which can be well adapted to the installation requirements for indoor or outdoor environments.

It is developed based on M-2800 UHF RFID reader module,with INDY R2000 core chip. With an output power up to 33dbm, this powerful reader can reads up to 700 tags/sec.

It is easy to install and use with high performance.

### Key features

- 700 tags/s
- 4 antennas
- RS232, TCP/IP, 8 pins


*V2.0*
*Non-contractual datasheet*

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### Physical specifications

| | |
|---|---|
| Dimensions | 240 x 180 x 28mm |
| Weight | 1,8kg |
| Body material | Die-cast aluminum |

### General specifications

| | |
|---|---|
| Air Interface protocol | EPC Global UHF Class 1 Gen 2 / ISO18000-6C ISO 18000-6B |
| RF transceiver | Indy R2000 |
| Input Voltage | DC 12V - 18V |
| Standby Mode Current | < 80mA |
| Sleep mode Current | < 100µA |
| Max operating current | 700mA +/-5% at DC 12V Input |
| Spectrum range | EU: 865MHz-868MHz or US: 902-928MHz |
| Output Power | 0 - 33dBm |
| Output Power precision | +/- 1dBm |
| Output power flatness | +/- 0.2 dBm |
| Receive Sensitivity | ><-85dBm |
| Peak Inventory Speed | >700 tags/sec |
| Tag buffer capacity | 1000 tags at 96 bit EPC |
| GPIO | 2 inputs optical coupling 2 output optical coupling |
| Working mode | Single/DRM |
| Max Baud rate | 115200 bps |
| Heat Dissipation | Air cooling |
| Tag RSSI | Supported |
| Antenna detector | Supported |
| Ambient Temp monitor | Supported |

### User environment

| | |
|---|---|
| Operating Temp. | -20°C~+55°C |
| Storage Temp. | -20°C~+85°C |
| Humidity | <95% (+25°C) |

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## Anti-collision Algorithm Comparision


| PIN ID | Fonction | Descriptions |
|---|---|---|
| | Standard fixed Q algorithm | • Standard 18000-6C algorithm.<br>• The performance is reduced significantly when tag quantity gets larger.<br>• The efficiency is not high when tag quantity is small. |
| | Impinj dynamic Q algorithm | • The algorithm of Impinj.<br>• It has a good efficiency for various tag quantities.<br>• It sacrifices some performance for the sake of compatibility. |
| | I–Search dynamic Q algorithm V1.0 | • Based on Impinj dynamic Q algorithm.<br>• The performance is optimized.<br>• It's the algorithm for firmware version 6.6 or below. |
| | I–Search dynamic Q algorithm V2.0 | • Based on Impinj dynamic Q algorithm.<br>• It's a brand new data structure, the performance of which is significantly improved for firmware version 6.7 or above.<br>• The improvement of performance can be easily sensed after the first round of inventory especially when the tag volume increases.<br>• When tag quantity increases, it outworks other algorithms more. |

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.

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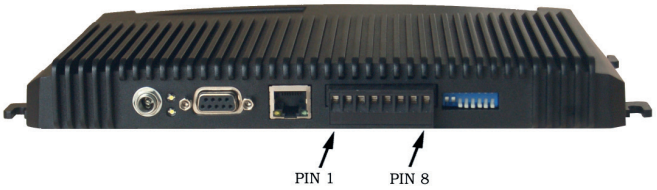
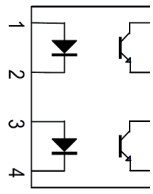
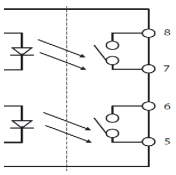
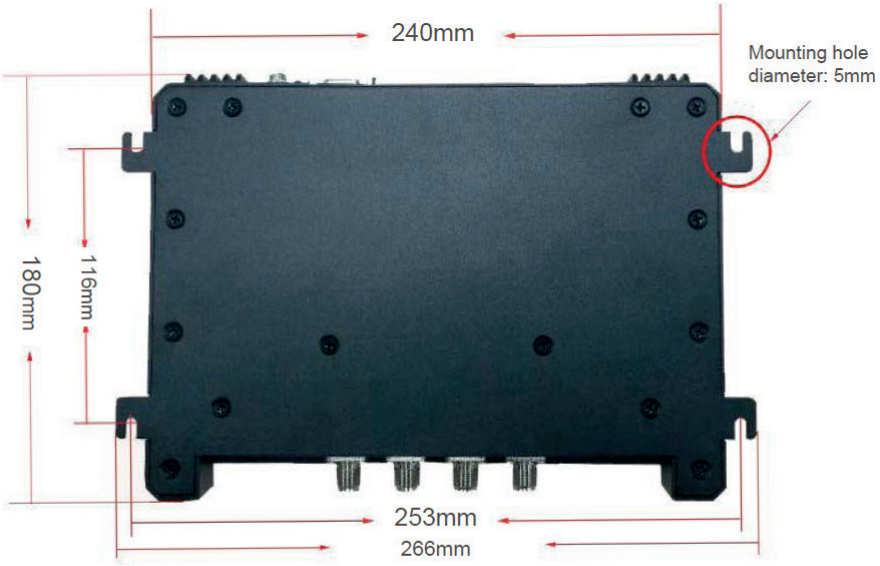



### Interface Definition List

| PIN ID | Fonction | | Descriptions |
|---|---|---|---|
| 1 | GPIO 1 Input + |  | Voltage between PIN 1,2 (PIN 3,4) <= 12V |
| 2 | GPIO 1 Input - | | Heteropolarity |
| 3 | GPIO 2 Input + | | LED equivalent resistance 470 Ω |
| 4 | GPIO 2 Input - | | Response time <= 150uS |
| 5 | GPIO 4 Input Output |  | Voltage between PIN 5,4 (PIN 7,8) <= 12V<br>Nonpolarity<br>On resistance 110 Ω<br>Response time <= 6mS |
| 6 | GPIO 4 Input Output | | |
| 7 | GPIO 3 Output | | |
| 8 | GPIO 3 Output | | |

### S-8600 Structure Dimensions





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