

M-2800 UHF



The M-2800 is a high performance 4-channel reader module to which can be connected up to 4 antennas.

This module developed with INDY R2000 chip, is provided with a powerful anti-collision algorithm for a better tag response time.

Simple, convenient and effective for easy integration.

Key features:

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

Software Development Kit

SDK compatible with Windows and available with or without internet port.



V1.3
Non-contractual datasheet

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Physical specifications

Dimensions	70,2 x 51 x 8.2mm
Body material	Gold-plated brass
Shield Material	Aluminum

General specifications

Air Interface protocol	EPC Global UHF Class 1 Gen 2 / ISO18000-6C	ISO 18000-6B
Spectrum range	EU: 865MHz-868MHz or US: 902-928MHz	
RF transceiver	Indy R2000	
RF channel	4 channels	
RF connector	SMA	
Interface connector	Molex 53261-1571	
Working mode	Single/DRM	
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	
Host communication	TTL Uart port	
GPIO	2 inputs optical coupling 2 output optical coupling	
Input Voltage	3.7V – 5V	
DK Input Voltage	12V - 18V	
Standby Mode Current	< 30mA	
Sleep mode Current	< 100mA	
Max operating current	Conditions : @5V (33dbm Output, Multi-tag, 25°C) Min : 300 mA Typ : 1.3A +/-10% Max : 2.5 A	
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~+55°C
Humidity	<95% (+25°C)

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Anti-collision Algorithm Comparison



PIN ID	Fonction	Descriptions
	Standard fixed Q algorithm	- 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	- 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	- 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	- 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.

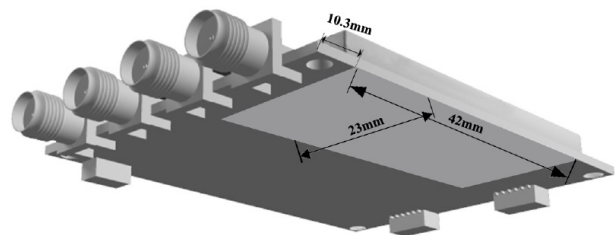
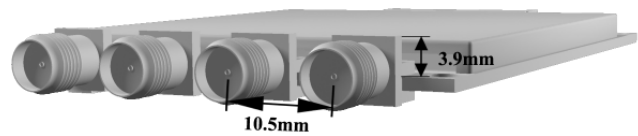
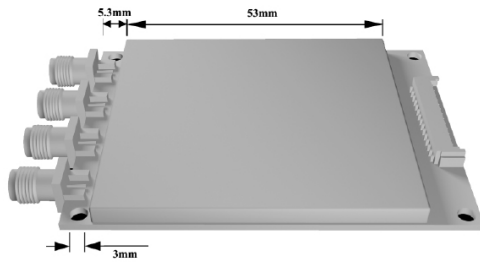
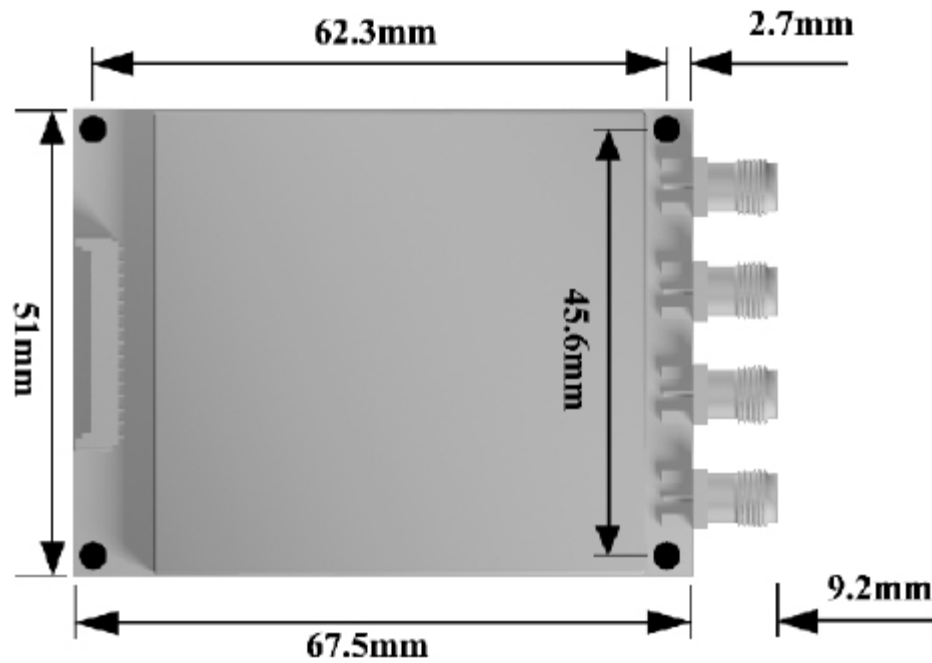
Notes:

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

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