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1. Product Introduction

Developed based on domestic chips of independent intellectual property, Fongwah Module U8 Series are highly integrated, of high performance and highly robust UHF Reader Modules equipped with 4 antenna ports. The module complies with protocols of EPC global C1 Gen 2, ISO 18000-6C and GB/T 29768-2013.

Compared with devices U2 Series, the U8 series have further optimized the receiving link in physical layer and improved the receiver sensitivity and system robustness. Dual CPU processor chips are sealed on the module where the master CPU is in charge of tags polling and the slave one is responsible for data management. The parallel CPUs can greatly enhance the overall performance of the module since polling tags and sending data are processed simultaneously.

We offer multi-platform open SDK as to support any software development. The module is applied for occasions where group uhf tags and long distance reading, data transmission and high security are required. In the near future, it will enjoy a promising market in a variety of industries including storage, retail, authentication, identification, medical and aviation etc.

2.Product Dimension and PIN Definition



Specification of UHF Reader Module U8 Series

File No.: U8-2303-01 Version: A0 Date: 03/23/2023

PIN	Definition	Description
1	GND	Ground
2	GND	Ground
3	5.0V-5.5V DC	Power
4	5.0V-5.5V DC	Power
5	GPIO5	Master Output Slave Output
6	GPIO4	SPI Clock
7	GPIO3	Test Only
8	Buzzer	Driver Buzzer
9	UART_RXD	Module Serial Port
10	UART_TXD	Module Serial Port
11	UART_RXD1	Test Only

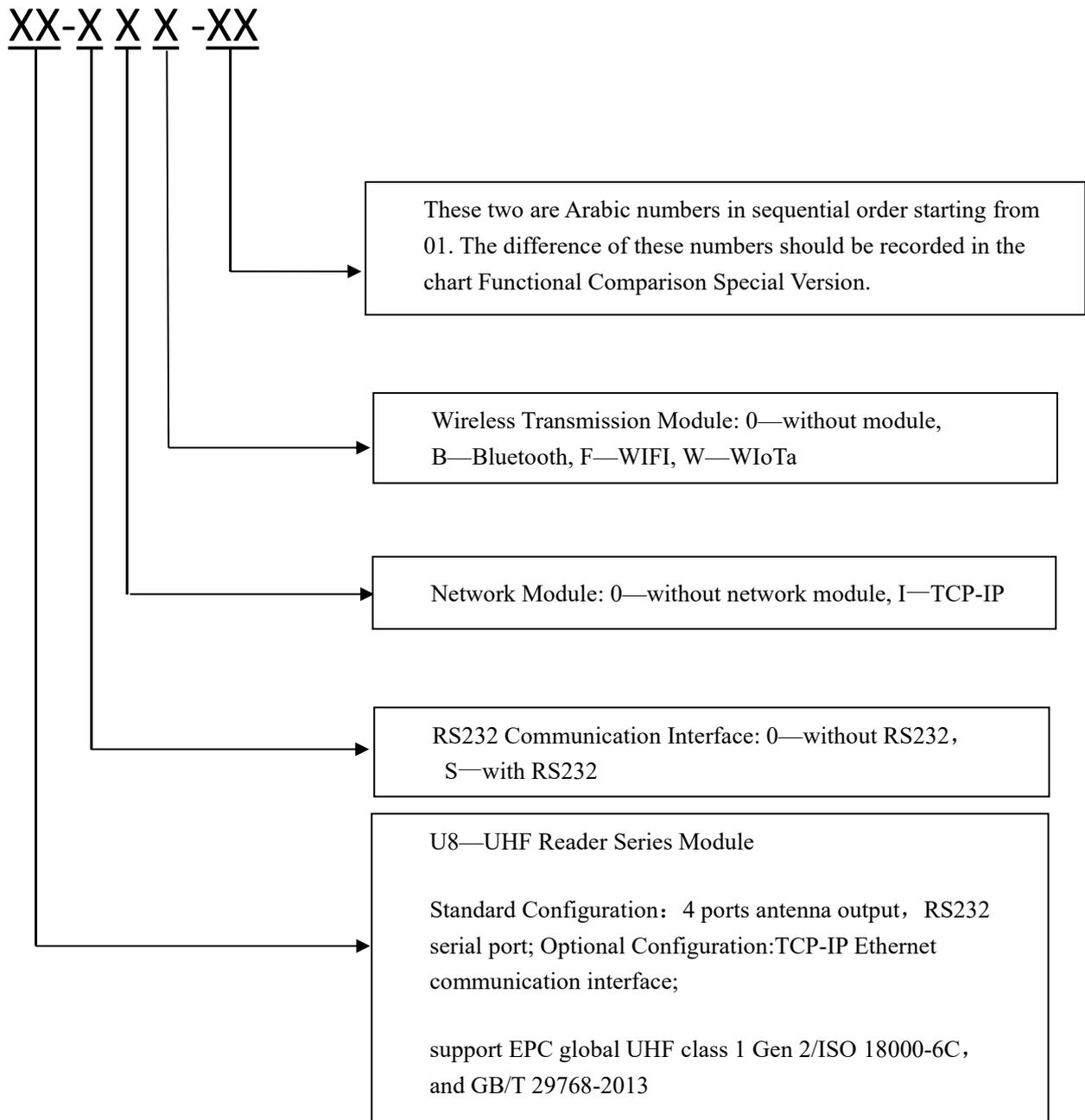
Specification of UHF Reader Module U8 Series

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12	UART_TXD2	Test Only
13	GPIO2	GPIO-2 PIN
14	Power_EN	High Level Voltage Enable
15	GPIO1	GPIO-1 PIN

3. Model Type Description

Users can choose their model types on their demands. Below is the model type description for Fongwah U8 series UHF Reader Module.



4. Product Features

Items	Specifications
Performance Parameters	
Protocols Compliance	EPC Global UHF Class1 Gen2, ISO18000-6C, GB/T29768-2013
Output Power	6~32dBm
Output Power Accuracy	± 1dB
Output Power Flatness	± 0.2dB
Receiver Sensitivity	-80dBm
Working Frequency	FCC 902~928MHz/GB 920~925MHz/ETSI 865-868MHz
Peak Power	500 pcs/second
Read Write Range for Tags	0-10m (depending on tags' performance and the working environment)
Interface Parameters	
Communication Port	USB/RJ45
Maximum Baud Rate	115200bps
Communication Interface	RS232/ TCP-IP
Antenna Type	SMA
Antenna Port	4 ports
Antenna Impedance	50Ω
Man-machine Interface	
Indicator	To indicate the power or communication status
Buzzer	Monotone
Support Systems	Windows Me, 2K, XP, 2003, Vista, Unix, Linux, WinCE, Win7

Specification of UHF Reader Module U8 Series

File No.: U8-2303-01 Version: A0 Date: 03/23/2023

Power Parameters	
Working Voltage	5.0-5.5 V
Working Current	300mA~920mA
Working Temperature	-40℃~70℃
Working Humidity	10%~90%
Physical Parameters	
Product Dimension	69.7mm x 51mm x 8mm
Product Weight	about 60g
Service Support	
Software Development Kit	Including dynamic link library(DLL), application examples, user manual and demo software, operation
Supporting Service	Our professional sales technician answers any technical issues in your software development process.

5. Product Advantages

- Self-interference cancellation circuit
- Support mainstream protocols including EPC Global UHF Class 1 Gen 2, ISO 18000-6C and GB/T 29786-2013
- 4 ports antenna (8 ports optional)
- Support anti-collision
- Support multi tags identification, reading/writing data
- Contactless modules are provided to be embedded into users' own equipment.
- The device can be custom-made according to any specific request of users.
- The UHF reader module can be used via a PC and be embedded into other self-designed equipment of users.
- Support OTG communication interface
- Support RS232 communication interface or TCP-IP Ethernet communication interface
- The attached CD provides most driver SDKs and program examples on regular platforms. Users simply call specific functions and they can accomplish the software development, reducing the difficulty of software development and the development circle of products.
- The attached demo program includes all functions to read and write UHF tags.

6.Product Applications

- Smart Garbage Collection Truck
- Smart Warehouse Inventory
- Smart Car Park
- Assembly Line Management
- Automatic Equipment Manufacturer
- Parcel Sorting
- Counting Conveyor System
- Smart Lock Industry
- Retail
- Books and Achieve
- Identification

Note: RFID module is sensitive to its environment. Metals reflect and shield electromagnetic waves, which means metals affect the performance of both readers and tags.If the module is placed near metals, the reading rate of tags shall be lower. Therefore, please try to keep away metal objects and other items like electronic coils while installing this device.