

File No. U1-2023-01 Version: A0 Date: 03/29/2023



#### UHF Reader Module U1-CT-01

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#### **1.Product Introduction**

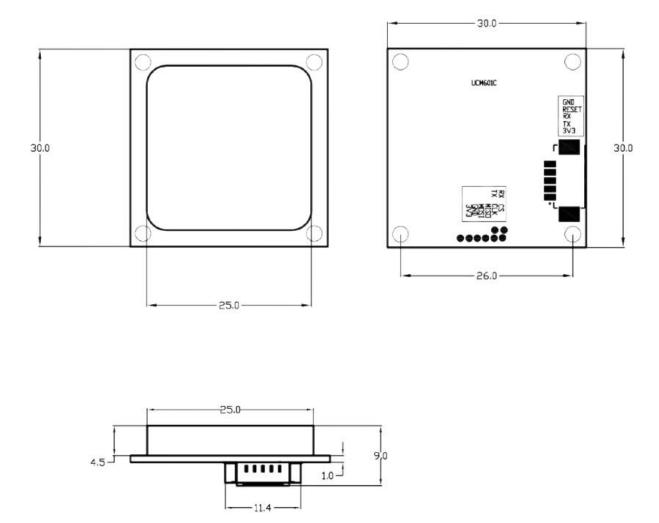
Fongwah UHF U1-CT-01, a small size, highly integrated, low cost UHF RFID reader writer module with ceramic antenna, is developed based on fully independent IP core chip. Being portable, it is applied in a variety of desktop applications and embedded applications. It is compliant with Protocols of EPC Global UHF Class 1 Gen2, ISOISO 18000-6C as well as GB/T29768-2013. We offer multi-platform open SDK as to support any software development. The module not only is applicable for a small number of tags or places where short-range identification, read/write function and high security is required, but also supports to read or write temperature monitoring labels.



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## **2.Product Dimension and PIN Definition**

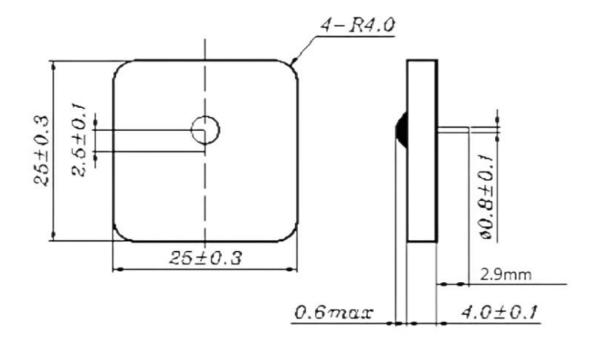
The Dimension and Interface of the Module





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The Dimension of the Antenna



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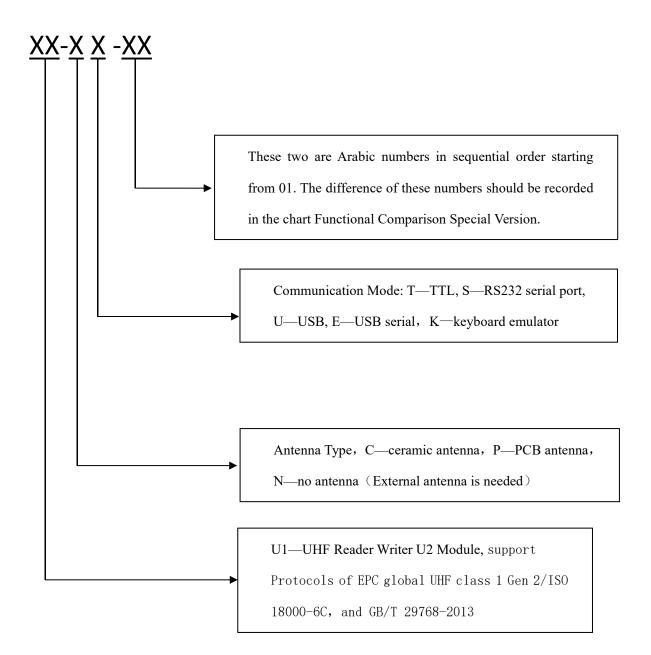


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# **3.Model Type Description**

Users can choose their model types on their demands. Below is the model type description for

Fongwah U1 series UHF Module.





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## **4.Product Features**

Items	Specifications		
Performance Parameters			
Protocols Compliance	EPC Global UHF Class1 Gen2, ISO18000-6C,		
	GB/T29768-2013		
Output Power	3~20dBm		
Output Power Accuracy	$\pm 1$ dB		
Output Power Flatness	±0.2dB		
Receiver Sensitivity	-67dBm		
Working Frequency	FCC 902~928MHz/GB 920~925MHz		
Peak Power	30 pcs/second		
Tags Buffer Zone	100 pcs@96bit EPC		
Tags Read Write Range	0-0.5m (depending on tags' performance and the working		
	environment)		
Interface Parameters			
Communication Port	TTL UART Port		
Maximum Baud Rate	115200bps		
Communication Interface	TTL		
Antenna Type	Single-fed ceramic antenna		
Antenna Port	1 port		
Antenna Impedance	50Ω		
Man-machine Interface			
Indicator	To indicate the power status		
Support Systems	Windows Me, 2K, XP, 2003, Vista, Unix, Linux, WinCE,		
	Win7		

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Power Parameters			
Working Voltage	3.3V		
Working Current	20mA-110mA		
Working Temperature	-40°C~70°C		
Working Humidity	10%~95%		
Physical Parameters			
Product Dimension	30mm x 30mm x 9mm		
Product Weight	about 16g		
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.		



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#### **5.UHF Series Product Advantages**

- Self-interference cancellation circuit
- Support main protocols including EPC Global UHF Class 1 Gen 2, ISO 18000-6C and GB/T 29786-2013
- Support anti-collision
- Support multi tags identification, reading/writing data
- Support RSSI tags
- 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.
- 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.



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## **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.