SHENZHEN CHAINWAY INFORMATION TECHNOLOGY CO., LTD

UR1A Integrated UHF Reader



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Statement

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No license is granted, either expressly or by implication, estoppel, or otherwise under any Chainway intellectual property rights. An implied license only exists for equipment, circuits, and subsystems contained in Chainway products. Chainway UR1A is a high-performance fixed UHF reader. Chipset can be integrated with either Impinj R2000 or Impinj E710. It has high integration, excellent performance, stability and reliability. It has superior electromagnetic interference resistance, heat dissipation and performance, and can meet the installation and use needs of various indoor and outdoor environments. It is suitable for warehousing, archives management, book management, banks, footwear, jewelry, watches, industrial laundry and production line management, medical instrument cabinet, unmanned retail and other challenging application environments with high requirements for RFID reading performance.

1. Overview

The UR1A uses DC 12V/2A power supply, integrates UHF, feeder and antenna, also integrates RS232 and RJ45 interfaces, provides C# demo.

2. Device List

(1) UR1A fixed UHF all-in-one device; 12V 2A power adapter.

(2) PC and software management, where UHFAPP.exe is an executable file, as shown in Pic 1.

6.0)	(0.0.110)	22	#2	(E.S.)	化相应用
a istorfight	3008/12/07 14:41	119	1819		
- UHFARLAD	3005/11/8 15/15	.714.58	出现根本17篇		
B Literate and	1008/11/04 17/08	2117 122	12568		
Wednesdowelawoolikrary1.dl	ana/ton mrr	6.48	10024110		

Pic.1

3. Connect Device

The connection of fixed reader is shown in Pic 2. PC can connect equipment through serial cable, with a speed of 115200bps; Or the RJ45 network cable is connected to the device (default IP: 192.168.99.202, port: 8888). The IP addresses of the PC and the device are set in the same network segment. The PC can connect multiple readers and writers through network devices such as switches.



Pic.2

- 1: RJ45
- 2: Power supply
- 3: GPIO
- 4: Serial port
 - 4. Parameter Setup

Click UHFAPP in the management software folder, connects equipment through serial cable, and connection mode

select "Serial port", COM selects the serial port number of the computer connecting device, click "Open" button to connect the device, and the initial interface is configuration

Interface, as shown in Pic 3.

12 UHF(1.2.4) - [ConfigForm]					
ReadIPC	ReadWriteTag	Configuration	Gil-Lock	UHF Info	Temperature	UDP-ReceiveEPC
Mode 20	eiPort 🗧	CON	COM1		Open	



Connect via RJ45 network cable, select "Network" as the communication mode, enter the device IP address and port number in the IP input box (factory default IP: 192.168.99.202, port: 8888; the IP address of the PC should be set in the same network segment), click the "Open" button, and the interface after connecting the PC and the device is as shown in Pic. 4. Click

the "Close" button to disconnect.

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() (a	e 70			1		A Stanlar (Inc.) C Ser
101 102 - 104 - 1	200	ant atta	24) (Cast 12)	Not the	A law	Gase

Pic.4

When the device is connected, the parameters in the configuration interface are empty. Click the "Get" button under each parameter to obtain the device parameters. You can click the "Setting" button in the main menu to enter the configuration interface. The following parameters can be set, and most parameters are set by default.

Set the output power. The output power setting range is 1~30dBm. If you want to change the output power, select the power value in the pull-down option, as shown in Pic 5, and click the "Set" button. If the "Save" button is checked in advance, the set parameters will be saved until the equipment is shut down; If the "Save" button is not checked in advance, the parameters set after shutdown will not be saved. This is true for other parameter items with "Save" or "Save".



Set the region, as shown in Pic 6.

Region:	USA	
	Chinal China2 Europe	/ Save
	USA	
EFLink	Korea Japan	

Set RFLink, as shown in Pic 7.

PR_ASE/Willer4.250KHr	-	
DSB_ASK/FMO/40KHz		
PR ASK/Hiller4/300KHz	-	bSave
	OSB_ASK/FM0/40KHz PR_ASK/Willer4/300KHz	SB_ASK/FN0/40KHz PR_ASK/Willer4/300KHz

Set continuous wave, as shown in Pic.8

ON	OFF	

Set the working mode. There are two working modes: "command mode" and "auto mode".

Under the command working mode, receive the tag data in the "Inventory EPC" window, click the "Start" button, the PC sends the command to the equipment, the equipment inventory tag, the PC receives the inventory data, and click the "Stop" button to stop the equipment inventory.

In automatic working mode, in "UDP ReceiveEPC", the window receives tag data, click "Start" to receive data, and click "Stop" to stop receiving data. After the automatic working mode is set, the device must be restarted to take effect, as shown in Pic 9.

Mode:	command mode	-
	command mode	
	auto mode	

Set the IP address of the device. The IP address of the device and the IP address of the PC are in the same network segment. For example, the IP address of the PC is 192.168.1.109, and the mask is 255.255.255.0. You can set the IP address of the device to 192.168.1.201, and the port number does not need to be modified. (as shown in Pic 10).

Local If	100 100	1 001	
117;	197 * 168	. 1 . 201	
Port:	8888		
ſ	get	set	
		3	Pic

Set the target IP address and port number. The target IP address is the IP address of the PC receiving the inventory data under the automatic working mode of the device.

IP address:

IP:	192 , 168	. 1	, 109
Port:	9999		
	get		1

- Enable	• Disable
Get	Set

Set TagFocus:

Enable	• Disable
Get	Set

Set protection temp. of UHF module:

aperature	rotect		
value	75		50-75
	get	set	

Set EPC and TID:

EPC And Tid		
O Enable	• Disable	
Get	Set	Save

To reset the software, click the "Reset" button to reset the device. After the reset, click the "Close" button, and then click the "Open" button to reconnect the device.

0		
-	Reset	
-		

Set the buzzer, turn on the buzzer, and the device will emit a prompt tone when reading tags. Turn off the buzzer, and the device will not emit a prompt tone when reading the tag.

• Open	O Close
get	cet

Set Gen2:

Target:	000(\$0)	 startQ; 	4	•
Action:	000	- minQ:	0	•
'runcate:	O(Disable)	• maxQ:	15	•
Q:	1 (Dynamic)	• DR:	1 (DR=64/3)	
Hiller:	10(M=4)	• Session:	01 (S1)	
TRext:	1(Use pilot	• Tanget	(A)	
sel:	01 (ALL)	·	011 (250KHz)	
	Set	Get		

5. Inventory

5.1 Tag Inventory

Click the "Inventory EPC" button in the main menu to enter the inventory EPC interface, and click the "Start" button to start the inventory tag. Click the "Stop" button to stop counting.

100012	Andrew Colorest and an Annual and Annual and Annual and					-			
-13		L II Fet -	-	e inde	2 4				
lara i			- 14	the E	an and	198 (64) * 101 - 101	BH.	c.dwe	340
	DC Science of Science and Article Science of Science and Article Science of Science and Article Science an				728		NACAA	Coast 1 1 1 1 1 1	in the second
	1400,2048 1313,2028 2000,2029,202,203,203,203,204,203 1500,2035 1514,2035 10						南南安山南南北		the period of all the period
	Total: 14 Time: 4(a) 6	ner)	50	en]				
_				_			_	_	_

User can enter the filter data in the "Filter" input box. The EPC filter data can be up to 12 bytes (96bit). To set the filter data, starting address, and length, click the "Set" button. After setting the filter data, only the tags that meet the filter conditions are counted. For example, in the filter input box, enter 16 01, starting address 32 (bit), length 16 (bit), select EPC for the bank, click the "Set" button, and then click the "Start" button to start counting. Only counting EPC is the tag of starting 16 01.

Derec 14	94				(a	Pus	n ini kanalah di	ina Arri + IPC	113 - 164e	(566)	1
	870 1402,2004 1402,2004 1402,2004 1402,2009 1402,2009 1402,2009						.18		3+0+0	Creat 198 199 199 199 199 199 43	
		Totali Time:	5 9 (a)	Clour			Start				

5.2 Read&Write Tag

Click the "Read Write Tag" button in the main menu to enter the read write tag interface. The tag readable storage area includes RESERVED, EPC, TID, USER, and the writable storage area includes RESERVED, EPC, USER.

Add and TS (07 add 12 add 14 add 16 add 16	Sar (+ DC - TH. Rev.	Perit 1	ant Smarth	184.17
Alana sel ti ti ti ti ti ti ti ti ti ti] #	ANNUAL STREET	Iner	bert	Į,
alli het ankane maan in faatmen Reven maan k					

Data:	E2 00 51 57 88 18 01 90 10 90 AB 56	12
Read write Bank: Prt:	RESERVED	
Length: Access Pwd: Data:	USER 00000000 (word)	0
	Read	*

Click a tag in the counting EPC window to enter the tag reading window, and the EPC data will be automatically copied to the filter input box, The default is to read the EPC storage area. Click "Read" to read 12 bytes of the EPC storage area.

Data:	52 00 51 57 88 18 01 90 10 90 AD 56		_ 12
lead-write			
Bank:	EPC •		
Prt:	2		
Length:	6	(word)	
Access Pwd:	00000000		
Data:	E2 00 51 57 88 18 01 90 10 90 AB 56		12
			-
	Read		

Read the RESERVED area, and read 4 words at most. The first two words are the kill password, and the last two words are the access password:

Data:	EZ 00 51 57 88 18 01 90 10 90 AB 56		_ 12
Readrenite .			
Bank:	RESERVED -		
Prt:	0		
Length:	4	(word)	
Access Pwd:	00000000		
Data:	20 18 20 18 20 18 20 18		* 12
			8

Read TID area:

lead-write			
Bank:	TID -		
Prt:	0		
Length:	6	(word)	
Access Pwd:	0000000		
Data:	E2 00 34 12 01 3C FA 00 09 AC AB 56		*
			12

Read User area:

lastwrite			
Bank:	USER -		
Prt:	0		
Length:	4	(word)	
Access Pwd:	0000000		
Data:	12 34 12 34 12 34 12 34		* B

EPC, RESERVED and USER areas can be used to write data. Select the corresponding area, enter the starting address and length, enter data in the "Data" input box, click "Write", and the "Write Successful" data will be written to the corresponding storage area.

5.3 Lock

Click the "Lock Tag" button in the main menu to enter the lock tag interface, as shown in Figure 27. You can perform "Open", "Lock", "Permanently Open" and "Permanently Lock" operations on different areas of the tag. To perform lock tag operations, you need to enter the access password. The tag can be killed, and the kill password must be entered. After the kill operation, the tag is wasted.

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5.4 UDP-ReceiveEPC

After setting the automatic working mode, restart the device, select UDP ReceiveEPC in the main menu, click the "Open" button to connect the device, select the IP address of the PC receiving the inventory tag in the IP address bar, click "Start" to start receiving the tag data of the equipment inventory, and click "Stop" to stop receiving the tag data of the equipment inventory. If you want to exit the automatic working mode, set the "Command Mode" in the work mode item of the configuration interface.

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		155 121 1	
	an inan ini ini ini ini ini ini ini ini	ARE 1944	Bit report 10 Bit re

5.5 Others

Click the "UHF information" button in the main menu to read the device hardware version and firmware version number, and click the "Temperature" button in the main menu to read the module temperature. Frequency Bands: 865.7~867.5 MHz

Modulation Mode: FSK Antenna: Circular polarization Antenna

CE Maintenance

Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.

The device complies with RF specifications when the device used at 20cm you're your body. Declaration of Conformity

Shenzhen Chainway Information Technology Co., Ltd hereby declares that this Integrated RFID Reader is in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EU. In accordance with Article 10(2) and Article 10(10), This product is allowed to be used in all EU member states.



FCC Caution.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and

(2) this device must accept any interference received, including interference that may cause undesired operation.

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-Reorient or relocate the receiving antenna.

-Increase the separation between the equipment and receiver.

-Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

-Consult the dealer or an experienced radio/TV technician for help.

FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 30 cm between the radiator & your body.