

RF-N6801 Operation Manual



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1 Demo Instruction

The Demo mainly carries out the functions of system control, parameter set and get, tag reading and writing, and data display, etc.

Before using the demo, please check whether the reader hardware connection is all done, and pay attention to the following aspects:

1. The network parameters are configured correctly (connect WIFI if necessary);

2. The antenna ports that need to be used are connected to antennas;

3. The reader is power-on(the buzzer is ringing).

2 Demo Applicating Environment

Software Environment

Windows Server 2003、Windows XP Service Pack 2、Windows 7、 Windows10 operating systems.

Hardware Environment

P4/1.7GHz PC with better configuration,512M or larger storage, 40G hard disk.

3 Demo Version

♦ V0.17.0.0

4 Demo Operation

4.1 Connect Reader

All functions can only be operated after a successful connection.

4.1.1 RS232 Communication Connection

Double click "GReaderDemo.exe" to start the Demo. Grey icons on the main interface means the reader is not connected. Select communication mode "RS232 connection", "connection parameters", "COM"(the COM number of the PC chose) in Device Connection. Choose 115200(default) as Baud rate, then click "Confirm", as figure 4.1.1.1 shows.

		Device ma	anagement platform v0.17.0.0	简体中文 - 🗆 🗙
Settings(F)	Read Write Tools	Search		
EPC			٢	
Report	Type EPC	TID	Userdata Reservedata Totalcou	◯ Single
🏹 Logs			Connection	× ● 6C ○ 6B ○ GB
		Type Param	RS232 COM12 115200 Confirm Cance	imer(ms) 1000 NT1 ANT2 ANT3 ANT4 NT5 ANT6 ANT7 ANT8 NT9 ANT10 ANT11 ANT12 NT13 ANT14 ANT15 ANT16 ALL d Count: 27 Speed: 27 ± 1/ s Time: 27 27 27 27 27 () () () () () () () () () () () () () (
•	<		>	
				current. Online

Figure 4.1.1.1 RS232 Connection

If the connection is successful, the icons in the tool bar will be colored as figure 4.1.1.2 shows. It means COM is connected.



Figure 4.1.1.2 RS232 Connection success

4.1.2 RS485 Communication Connection

Select communication mode "RS485 connection" in Device Connection, fill in the parameters, and then click "Confirm" to connect the device, as Figure 4.1.2.1 shows. If the connection is successful, the icons will be colored as Figure 4.1.2.2 shows.

	Device management platform v0.17.0.0 👼 🗰 🕁 🗖 💈					
Settings(F	Read Write Tools	Search				
EPC			80			
📑 Report	Type EPC	TID	Userdata Reservedata Totalcou	◯ Single		
🏹 Logs			Connection	× ● 6C ○ 6B ○ GB		
				imer(ms) 1000		
		Туре	R\$485	NT1 ANT2 ANT3 ANT4		
		Param	COM12 • 115200 • 1	NT9 ANT10 ANT11 ANT12 NT13 ANT14 ANT15 ANT16		
			Confirm Cance	d Count: 2 c C		
				Time: 2 2:0 2:0 2:0		
Ŧ	<		>			
				Current: Offline ,;;		



				De	vice ma	nagement pl:	atform vO.1	7.0.0			简体中文	-		×
Settings(F)	Read	d Write	Tools	Search										
			2		€	ČD								
📑 Report		Type EPC		TID	_		Userdata	Reservedata Totalcou	0	Single 🔘	Inventory			
🗹 Logs									● 6C	() 6B	⊖ gb			
									Timer(ms)	1000				
									ANT1	ANT2	ANT3		NT4	
						_			ANT5	ANT6	ANT7		NT8	
						Con	nect success.		ANT9	ANT10	ANT11		NT12	
									ANT13	ANT14	ANT15		NT16	
									ALL					
									Read Count:	Ø				
									Tag Count:	Ø				
									Speed:	Ø t.	5			
									Time:	1313131	34343			
•	4									400 7 ⁰⁰ 118				
										Curr	ent: CON	112:11	5200:	1.3

Figure 4.1.2.2 RS485 Connection success

4.1.3 TCP Client Communication Connection

Select communication mode" TCP client" in the " connect reader", "connection parameter", and fill in" "192.168.1.168:8160 " (192.168.1.168 is the default IP of the reader, 8160 is the port number). Click "Confirm", as Figure 4.1.3.1 shows. If the connection is successful, the icons will be colored like Figure 4.1.3.2.

		Device ma	nagement platform v0.17.0.0	简体中文 - 🗖 🗙
Settings(F)	Read Write Tools	Search		
			٢	
📑 Report	Type EPC	TID	Userdata Reservedata Totalcou	◯ Single
🍕 Logs			Connection	× ● 6C ○ 6B ○ GB
				imer(ms) 1000
		Туре	TcpClient 🔹	NT1 ANT2 ANT3 ANT4
		Param	192.168.1.168:8160	NT9 ANT10 ANT11 ANT12
				ALL
			r	d Count: 💋
			Confirm Cancel	count: 2
				Time: (2) (2)+(2) (2)
Ŧ	٤		>	
				Current: Offline ,;;

Figure 4.1.3.1 TCP Connection

				Device	management pla	atform vO.1	7.0.0			简体中文	-	□ ×
Settings(F)	Read	Write To	ols Searc	:h								
			0		8							
📑 Report	Ту	pe EPC		TID		Userdata	Reservedata Totalcou	C) Single 🔘	Inventory		
🍕 Logs								6C	() 6B	GB		
								Timer(ms)	1000			
								✓ ANT1	ANT2	ANT3		NT4
					_			ANT5	ANT6	ANT7		NT8
					Conr	nect success.		ANT9	ANT10	ANT11		NT12
					_			ANT13	ANT14	ANT15		VT16
								ALL				
								Read Count:	Ø			
								Tag Count:	Ø			
								Speed:	Ø t	1 5		
								Time:	000	0:00		
Ţ	٤						,		405 10 00 10 10			
									Currer	nt: 192.16	8.1.16	3:8160

Figure 4.1.3.2 TCP Connection success

4.2 Data Displaying Area

Click, the data displaying area will be like Figure 4.2.1.

				Device management pla	tform vO.	17.0.0		简体中文	- 🗆	×
Settings(F)	Rea	ad	Write Tools Search							
		0								
TReport		Туре	EPC	TID	Userdata	Reservedata Totalcou	0	Single Inventory		
🖌 Logs	▶1	6c	300833B2DDD9014000000042	E280110520007149A8AD08A8		32				
A rogs	2	6c	300833B2DDD901400000039	E28011052000799DA8F808A8		33	0 60	O 6B O GB		
	3	6c	300833B2DDD901400000043	E280110520007993A8F708A8		33	Timer(ms)	1000		
	4	<mark>6</mark> c	300833B2DDD901400000041	E280110520007951A8B508A8		31				
	5	6c	123443217890014000000017	E280110520007883A8F808A8		31	✓ ANT1	ANT2 ANT3	ANT4	
	6	<mark>6</mark> c	300833B2DDD901400000038	E280110520007995A8AB08A8		31	ANT5	ANT6 ANT7	ANT8	
	7	<mark>6</mark> c	E280110520007A5CA8AB08A8	E280110520007A5CA8AB08A8		30	ANT9	ANT10 ANT11	ANT12	2
	8	<mark>6</mark> c	300833B2DDD901400000040	E280110520007B5EA8AB08A8		32				6
	9	6c	300833B2DDD901400000037	E280110520007B05A8C208A8		33				0
	10	6c	300833B2DDD901400000034	E28011052000729CA8BB08A8		33	ALL			
	11	<mark>6</mark> c	300833B2DDD901400000036	E280110520007A42A8B508A8		32	⊳ Read Count:	351		
							Tag Count:	1.1		
							Speed:	Øtis		
							Time:	00:00:0S		
-	<					->				
								Current: CO		00 .::

Figure 4.2.1 data displaying area parameter meaning

Type: type of tag:6C, 6B and GB;

EPC: EPC data of the tag which is readable and writable ;

TID: TID data of the tag, which is a unique identification and readable only;

Userdata: data of the user area, readable and writable ;

Reservedata: data of the reserved data, to store the tag password, etc. ;

Totalcount: total number of the times the tag read ;

ANT1: number of the times antenna 1 read ;

ANT2: number of the times antenna 2 read ;

ANT3: number of the times antenna 3 read ;

ANT4:number of the times antenna 4 read ;

ANT5: number of the times antenna 5 read ;

ANT6: number of the times antenna 6 read ;

ANT7: number of the times antenna 7 read ;

ANT8: number of the times antenna 8 read ;

RSSI: signal strength ;

Frequency: the frequency of the tag being read ;

Phase: phase value of the tag being read ;

ReadTime: reading time .

4.2.1 Read EPC

Click click

EPC is displayed in hexadecimal strings, and the length is in words (1 word=2 bytes=4 hexadecimal character).

To read the EPC data of custom length, please refer to Custom Reading for details.

4.2.2 Read TID

Click Click

TID is displayed in hexadecimal strings, and the length is in words (1 word=2 bytes=4 hexadecimal character). The length of TID is defaulted to be 6 words.

To read the TID data of custom length, please refer to Custom Reading for details.

4.2.3 Custom Read

4.2.3.1 ISO18000-6C Tag

Select "6C" as tag type , click , and a dialog box will pop up, like Figure 4.2.3.1. Detail parameter instruction will be as follows:

Match parameter, which can be read by matching the known tag data, means that only this tag can be read.

Read TID: select read tag TID data. The reading mode is defaulted to be "self-adaptable" and the reading length is in words, as shown in Figure 4.2.3.1.

Read user data: choose to read the data of the tag user area. The starting address and reading length are in words, as shown in Figure 4.2.3.2.

Read reserved area: select the data of the tag reserve area. The starting address and reading length are in words, as shown in Figure 4.2.3.3.

Access password, the access password for tag checking, as shown in Figure 4.2.3.4.

	ISO18000-6C custom read -	- ×
Mat	ch parameter	
	EPC(Hex)	
	No match 💌 Start(bit) 0 TID(Hex)	
	Userdata(Hex)	
TID	Userdata Reserved Password/Other	
	Mode Auto - Length(word) 6	
	✓ Read T	ID
	Confirm Cance	I

Figure 4.2.3.1 Custom Reading for EPC Tag (TID)

ISO18000-6C custom read	– ×
Match parameter	
EPC(He)	x)
No match Start(bit) 0 TID(Hex)
Userdat	a(Hex)
TID Userdata Reserved Password/Other	
Start(word) 0 Length(word	d) 4
	-,
	Read Userdata
	Confirm Cancel

Figure 4.2.3.2 Custom Reading for EPC Tag (Userdata)

	ISO18000-6C custom read	- ×
Match parameter		
	EPC(Hex)	
No match 💌 Start(bit)	0 TID(Hex)	
	Userdata(Hex)	
TID Userstein Perspred	Descrive of (Others	-
TID Userdata Reserved	Password/Other	•
Start(word)	0 Length(word) 4	
	✓ Read reser	ved
	Confirm Cance	el

Figure 4.2.3.3 Custom Reading for EPC Tag (reserved area)

ISO18000-6C custo	om read – X
- Match parameter	
	EPC(Hex)
No match 💌 Start(bit) 0	TID(Hex)
	Userdata(Hex)
TID Userdate Decement Decement/Other	
TID USEIGAIA RESERVED PASSWORD/OUTER	
Password 0000000	
Monza QT Peek Rfmicron	EM Sensor data
	Confirm Cancel

Figure 4.2.3.4 Custom Reading for EPC Tag (Access Password/Other)

4.2.3.2 ISO18000-6B Tag

Select "6B" as tag type, click \bigcirc , and the dialog box will pop up. As shown in Figure 4.2.3.5. TID data or user data can be selected to read, and TID matching reading can be performed. Users unfamiliar with tag protocol

please ignore this function. The starting address and reading length are in words.

	ISO18000-6B	Custom Read		– ×
- Match parameter -				
M	atch TID			
Read parameter				•
	Content	Only TID 👻		
	Userdata start	0		
	Userdata length	4		
			Confirm Ca	ncel

Figure 4.2.3.5 Custom Reading for 6B tag

4.2.3.3 GB/T 29768-2013 Tag

Select"GB" as tag tye, click , and the dialog box will pop up as shown in Figure 4.2.3.6. TID data or user data can be selected to read, and TID matching reading can be performed.

		GB custo	m read	- ×
Match	parameter			
			Match(Hex)	
Nor	match 💌 Star	t(bit) 0	TID(Hex)	
			Userdata(Hex)	
TID	userdata Passv	vord/Other		-
	Mode	Auto Ien 💌	Length(word)	6
1				Comfirm Cancel

Figure 4.2.3.6 Custom Reading for GB-T 29768—2013 Tag (TID)

GB custom read —						
- Match parameter						
	Match(Hex)					
No match Start(bit)	TID(Hex)					
	Userdata(Hex)					
TID userdata Password/Other	▼					
Child Area	•					
Start(word) 0	Length(word) 0					
	Comfirm Cancel					

Figure 4.2.3.7 Custom Reading for GB-T 29768—2013 Tag (userdata)

GB custom read —						
Match parameter						
	Match(Hex)					
No match 🔹 Start(bit) 0	TID(Hex)					
	Userdata(Hex)					
TID userdata Password/Other			•			
Password	00000000					
		Comfirm Can	cel			

Figure 4.2.3.7 Custom Reading for GB-T 29768—2013 Tag (accesss password)

4.2.4 Stop

Click **O** to stop all RFID operations of the reader and put the reader into an idle state.

4.3 Write Data

4.3.1 Write EPC Data

Select Write on the main interface -> click, and the dialog box will pop up as shown in Figure 4.3.1.

ISO18000-6c Write EPC							
Selected	ag						
EPC	300833B2DDD901400000038						
TID	E280110520007995A8AB08A8						
Data	Password 00000000 Len 0						
	Confirm	Cancel					

Figure 4.3.1 Write EPC Data

Select data (with TID information) of a tag, fill in EPC data (hexadecimal character string), then click "Confirm".

4.3.2 Write User Data

Select Write on the main interface -> click and the dialog box will pop up, as shown in Figure 4.3.2.

	ISO18000-6C write userdata						
Selected t	ag						
EPC	300833B2DI	DD90140000000	38				
TID	E280110520	E280110520007995A8AB08A8					
	Password	0000000	Len 0				
Data	1						
			Confirm	Cancel			

Figure 4.3.2 write user data

Select data (with TID information) of a read tag, fill in EPC data (hexadecimal character string), then click "Confirm".

4.3.3 Custom Tag Operation

Select a tag data in the displaying data area before custom tag operation.

Otherwise, the tag with the best signal will be the default one. Take care to follow the communication protocol about the writing/ reading/ locking/ destroying for the tag.

4.3.3.1 ISO18000-6C Tag

Select 6C as tag type. Click \checkmark , and the dialog box will pop up, as shown in Figure 4.3.3.1. Writing operation can change data of the specified area of the tag. Access passwor is needed if such area is locked.

	ISO18000-6C custom option – >	ĸ
-Match par	rameter	
	Match TID Start(bit) 0 Password(Hex) 00000000	
EPC	300833B2DDD9014000000038 TID E280110520007995A8AB08A8	
Userdata		
Write	Lock Destroy QT	•
	Area Reserved - pointer 0	
Write	e data(Hex) Write	
	block No 1 block	

Figure 4.3.3.1 6C Tag Custom Operation(Write)

Locking operation to 6C tag. The interface is 6C as shown in Figure 4.3.3.2. Select the area for operation and corresponding operation, fill in password then the operation can be done, or it will fail (it also fails for tag without any password).

ISO18000-6C custom option – 🗙							
Match parameter							
Match TID 👻 Start(bit) 0	Password(Hex) 00000000						
EPC 300833B2DDD901400000038	TID E280110520007995A8AB08A8						
Userdata							
Write Lock Destroy QT							
Area 💽 Mode	- Lock						

Figure 4.3.3.2 6C Tag Custom Operation(Lock)

Destroying operation to 6C tag is as shown in Figure 4.3.3.3. Click Destroy after filling in the password, then the tag will be destroyed. This operation is irrevocable and the tag destroyed will be invaid permanently.

		ISO18000	-6C custo	om optic	on		-	×
Match para	ameter							
	Match TID 👻 🤤	Start(bit)	0	Passwo	rd(Hex)	0000000		
EPC	300833B2DDD9014	00000038		TID	E280110	520007995A8AB08A8		
Userdata								
Write I	Lock Destroy	QT						•
	Password(Hex)	0000000]	Destroy		

Figure 4.3.3.3 6C Tag Custom Operation(Destroy)

4.3.3.2 ISO18000-6B Tag

Select 6B as tag type. Click \bigcirc , and the dialog box will pop up, as shown in Figure 4.3.3.4. Only user area is writable area for 6B tag. Click "Write" after filling in the start address and writing content.

	ISO18000-6b Custom option	– ×
Match parameter		
Match TID	E0040000F8B3E808	
Write Lock		~
Pointer 0		
Write data(Hex)		Write

Figure 4.3.3.4 6B Tag Custom Operation(Write)

The locking operation for 6B tag includes locking and locking get. As shown in Figure 4.3.3.5, fill in operation address, and click "Lock" to lock this address. The locked address is irreversible. Click "Get" to check if the adress is locked.

Notes: The locking for 6B tag is irrevocable and irreversibel. And The lock operation defined by this command is a single operation.

		ISO18000-6b Custom option	– ×
 Match paramet 	er		
	Match TID	E0040000F8B3E808	
Write Lock			•
	Lock pointer	Lock Get	

Figure 4.3.3.5 6B Tag Custom Operation(lock)

4.3.3.3 GB/T 29768-2013 Tag

Select GB as tag type. Click \bigotimes , and the dialog box will pop up, as shown in Figure 4.3.3.6. Select the writing area, fill iin the address and content, click "Write", then the opertion is done with the Write successfully Prompt. Read the data after writing to check if the data writing is correct if needed.

		G	B custom	option		- ×
-Match para	ameter					
	TID	▼ Start(bit)	0	Passwo	rd(Hex)	0000000
EPC	300833B2	DDD901400000	0037	TID	E2801	10520007B05A8C208A8
Userdata						
Write Lo	ck Destr	oy				•
	Area	EPC	▼ inter	0		
Data	a(Hex)					
						Write

Figure 4.3.3.6 GB/T 29768—2013 Tag Custom Operation(Write)

The locking operation of national-standard tag is as shown in Figure 4.3.3.7. Select the area for operation and corresponding operation, fill in password then the operation can be done, or it will fail (it also fails for tag without any password).

	GB custom op	otion	- :	×		
-Match para	ameter					
	TID Start(bit) 0	Password(Hex)	0000000			
EPC	300833B2DDD901400000037	TID E2801	10520007B05A8C208A8			
Userdata	Userdata					
Write Lo	Write Lock Destroy					
An	aa 🔻 Mode	•	Lock			

Figure 4.3.3.7 GB/T 29768—2013 Tag Custom Operation(Lock)

Destroying operation to national-standard tag is as shown in Figure 4.3.3.8. Click Destroy after filling in the password, then the tag will be

destroyed. This operation is irrevocable and the tag destroyed will be invaid permanently.

	GB custom option – 🗙						
-Match para	ameter						
	TID 👻	Start(bit)	0	Passwor	rd(Hex)	0000000	
EPC	300833B2DDD9	0140000003	7	TID	E28011	10520007B05A8C208A8	
Userdata							
Write Lo	ck Destroy						•
	Password(Hex)	00000000				Destroy	

Figure 4.3.3.8 National-standard Tag Custom Operation(destroy)

4.4 Device Configuration

Select Device Control in the main interface of the Demo ->Device Configuration and then the dialog will pop up as shown in Figure 4.4.

		Device settings		- ×
Base WIFI GPIO	RS232 Baudrate 115	5200 bps 👻 Get Set	Time 2019.08.28 10:35:02 Get	Set
Cus-1	Baudrate 115	5200 bps 🔽 1 Get Set	A6-B0-09-BF-3B-F4 Get	
	Ethernet		Client/Server	
	Stati	ic IP] O [Auto IP]	Server 8160	
	IP	192.168.1.168	O Client 192.168.11.236 8160	
	Mask	255.255.255.0	Get	Set
	Gateway	192.168.1.1		
	DNS1	114.114.114.114		
	DNS2	8.8.8.8		
•		Get Set		

Figure 4.4 Device Configuration

4.4.1 RS232 Parameter

The COM parameter is on the top left corner as shown in Figure 4.4.1. Click "Get" to acquire the communication baud rate parameter of the COM. Then click Setting to set the communication baud rate parameter of the COM. Baud rate includes 9600 bps, 19200 bps, 115200 bps, 230400 bps and 460800bps, and the others are unsupported. The default one is 115200 bps.

		Device settings	-	×
Base WIFI GPIO Cus-1	RS232 Baudrate 115 RS485 Baudrate 115 Ethernet () [Stati IP Mask Gateway	Device settings 5200 bps Get Set 5200 bps 1 Get Set 192.168.1.1 1 1 1	- Time 2019.08.28 10:35:02 Get Set MAC A6-B0-09-BF-3B-F4 Get Client/Server Server 8160 Client 192.168.11.236 8160 Get Set	×]]
Ŧ	DNS1 DNS2	114.114.114.114 8.8.8.8 Get Set		

Figure 4.4.1 COM Parameter

4.4.2 RS485 Parameter

The RS485 parameter is on the top left corner as shown in Figure 4.4.2. Click "Get" to acquire the communication baud rate parameter of the RS485. Then click Setting to set the communication baud rate parameter of the COM. Baud rate includes 9600 bps, 19200 bps, 115200 bps, 230400 bps and 460800bps. The default one is 115200 bps. The RS485 BUS address(0~255) is on the text box on the right.

		Device settings		- ×
Base WIFI	RS232 Baudrate 11	5200 bps 💌 Get Set	Time 2019.08.28 10:35:02 Get	Set
GPIO Cus-1	RS485 Baudrate 115	5200 bps 🔹 1 Get Set	A6-B0-09-BF-3B-F4 Get	
	Ethernet		Client/Server	
	Stati	ic IP] O [Auto IP]	Server 8160	
	IP	192.168.1.168	O Client 192.168.11.236 8160	
	Mask	255.255.255.0	Get	Set
	Gateway	192.168.1.1		
	DNS1	114.114.114.114		
	DNS2	8.8.8.8		
•		Get Set		

Figure 4.4.2 RS485 parameter

4.4.3 Ethernet Parameter

The Ethernet parameter is on the lower left corner as shown in Figure 4.4.3.1. Click "Get" to check the Ethernet parameter of the reader, then click Setting to set the Ethernet parameter.

Click "Get" to check the Ethernet parameter after configuration(as shown in Figure 4.4.3.2) if Acquire IP Automatically is being used as shown in Figure 4.4.3.3. Connect the reader with TCP as shown in Figure 4.4.3.4,fill in IP address, click "Set", then the prompt will pop up as shown in Figure 4.4.3.5. Acquire IP Automatically normally works with a router.

		Device settings		- ×
Base WIFI GPIO	RS232 Baudrate 115 RS485	5200 bps 💌 Get Set	Time 2019.08.28 10:35:02 Get	Set
Cus-1	Baudrate 115	5200 bps 🔹 1 Get Set	A6-B0-09-BF-3B-F4 Get	
	- Ethernet		Client/Server	
	Stati	ic IP] O [Auto IP]	Server 8160	
	IP	192.168.1.168	O Client 192.168.11.236 8160	
	Mask	255.255.255.0	Get	Set
	Gateway	192.168.1.1		
	DNS1	114.114.114.114		
	DNS2	8.8.8.8		
•		Get Set		

Figure 4.4.3.1 Ethernet parameter

		Device se	ettings	- ×
Base WIFI GPIO Cus-1	RS232 Baudrate 115	200 bps 🔹 Get Se	Time 2019.08.28 10:35:02	Get Set
	RS485 Baudrate 115	200 bps 🔹 1 Get Sa	et A6-B0-09-BF-3B-F4	Get
	Ethernet	: IP] O [Auto IP]	Client/Server Server 8160	
	IP	192.168.1.168	Set success.) Client 192.168.11.236	8160 Get Set
	Gateway	192.168.1.1		
	DNS1	8.8.8.8		
	DNS2	114.114.114.114		
•		Get Set		

Figure 4.4.3.2 Acquire IP Automatically

		Device settings		- ×
Base WIFI GPIO	RS232 Baudrate 115	5200 bps 💌 Get Set	Time 2019.08.28 10:35:02 Get	Set
Cus-1	Baudrate 115	5200 bps 🔹 1 Get Set	A6-B0-09-BF-3B-F4 Get	
	Ethernet	c IP] 🔿 [Auto IP]	Client/Server Server 8160	
	IP Mask	192.168.1.168 255.255.255.0	O Client 192.168.11.236 8160	Set
	Gateway	192.168.1.1		
	DNS1	8.8.8.8		
	DNS2	114.114.114		
-		Get Set		

Figure 4.4.3.3 IP Parameter

	Device management platform v0.17.0.0 简体中文 一 [
Settings(F)	Read Write Tools	Search		
			٢	
📑 Report	Type EPC	TID	Userdata Reservedata Totalcou	O Single Inventory
🍕 Logs			Connection	× ○ 6C ○ 6B ● GB
				imer(ms) 1000
		Туре	TcpClient •	NT1 ANT2 ANT3 ANT4
		Param	192.168.1.168:8160	NT9 ANT10 ANT11 ANT12 NT13 ANT14 ANT15 ANT16
				d Count:
			Confirm Cancel	5 Count: []
				Speed: D t / s
-	K		>	
				Current: Offline





Figure 4.4.3.5 TCP Connect Success

4.4.4 Reader Time

The reader time is on the top right of the reader as shown in Figure 4.4.4.1. Click "Get" to acquire the time of the reader. The time is based on UTC and displayed according to the current time zone. Double click the text box to fill in the current system time automatically. Click setting to set the reader time as shown in Figure 4.4.4.2.

		Device settings	-	×
Base WIFI GPIO	RS232 Baudrate 11 RS485	5200 bps 💌 Get Set	Time 2019.08.28 10:41:04 Get Set	
Cus-1	Baudrate 11	5200 bps 🔹 1 Get Set	A6-B0-09-BF-3B-F4 Get	
	Ethernet	ic IP] O [Auto IP]	Client/Server Server 8160	
	IP	192.168.1.168	O Client 192.168.11.236 8160	
	Mask	255.255.255.0	Get Set	
	Gateway	192.168.1.1		_
	DNS1	8.8.8.8		
	DNS2	114.114.114.114		
•		Get Set		

Figure 4.4.4.1 Get the Reader Time

		Device setting	s	- ×
Base WIFI GPIO Cus-1	RS232 Baudrate 115	200 bps 💌 Get Set	Time 2019.08.28 10:41:27 Get	Set
	RS485 Baudrate 115	200 bps 🔹 1 Get Set	MAC A6-B0-09-BF-3B-F4 Get	
	- Ethernet		Client/Server	
	Station	c IP] () [Auto IP]	• Server 8100	
	IP	192.168.1.168	Client 192.108.11.236 8160	
	Mask	255.255.255.0	Get	Set
	Gateway	192.168.1.1		
	DNS1	8.8.8.8		
	DNS2	114.114.114.114		
•		Get Set		

Figure 4.4.4.2 Reader Time Setting

4.4.5 Reader MAC

The MAC parameter is on the top right of the popup as shown in Figure 4.4.5. Click "Get" to acquire the MAC parameter of the reader.

		Device settings	s – ×
Base WIFI GPIO Cus-1	RS232 Baudrate 115 RS485 Baudrate 115 Ethernet () [Stati IP	Device settings 5200 bps Get Set 5200 bps 1 Get Set 5200 bps <t< th=""><th> Time 2019.08.28 10:41:27 Get Set MAC A6-B0-09-BF-3B-F4 Get Get Get Get Get Get Get Get </th></t<>	 Time 2019.08.28 10:41:27 Get Set MAC A6-B0-09-BF-3B-F4 Get Get Get Get Get Get Get Get
	Mask Gateway DNS1 DNS2	192.168.1.1 8.8.8.8 114.114.114.114	
•		Get Set	

Figure 4.4.5 Reader MAC

4.4.6 TCP Server/Client Mode

The TCP server/client mode parameter is on the lower right of the popup as shown in Figure 4.4.6.1. Click "Get" to acquire the TCP server/client mode parameter of the reader. If it is configured to be client mode, this IP should be fill in the IP of the user's computer, then click Setting as shown in Figure 4.4.6.2. The default port is 8160.

Disconnect and go back to the main interface after setting, select Connect Device ->Tcp Server, then the tcp server interface will pop up as shown in Figure 4.4.6.3. Click Start Monitoring as shown in Figure 4.4.6.4, there will be prompt saying the connection is successful after a few seconds. Then click Stop Monitoring or close the popup directly.

		Device settings	- x
Base WIFI GPIO Cus-1	RS232 Baudrate 11	5200 bps 🔹 Get Set	Time 2019.08.28 10:41:27 Get Set
	RS485 Baudrate 11	5200 bps 🔹 1 Get Set	A6-B0-09-BF-3B-F4 Get
	Ethernet	ic IP] O [Auto IP]	Client/Server
	IP	192.168.1.168	O Client 192.168.1.120 8160
	Mask	255.255.255.0	Get Set
	Gateway	192.168.1.1	
	DNS1	8.8.8.8	
	DNS2	114.114.114.114	
•		Get Set	



		Device s	ettings	- ×
Base WIFI GPIO Cus-1	RS232 Baudrate 115	200 bps 🔻 Get	Time Set 2019.08.28 10:41:27	Get Set
	RS485 Baudrate 115	200 bps 🔽 1 Get 5	MAC Set A6-B0-09-BF-3B-F4	Get
	Ethernet		Client/Server	
	Static	: IP] O [Auto IP]	O Server 8160	
	IP	192.168.1.168	Set success.) Client 192.168.1.120	8160
	Mask	255.255.255.0		Get Set
	Gateway	192.168.1.1		
	DNS1	8.8.8.8		
	DNS2	114.114.114.114		
-		Get Se	rt	

Figure 4.4.6.2 Set TCP Server/Client Mode Parameter

Device management platform v0.17.0.0 🛚 👘 🖛 🗖 🗖						
Settings(F) Read	Write Tools Sea	rch				
Connect(C) Device Settings F1 RFID Settings F2	RS232 RS485 Tcp Client					
Typical Application	Tcp Server(F3)	TID	Userdata Reservedata Totalcou	0 s	ingle Inventory	
Exit(X) Ctrl+X				() 6C	○ 6B	
				Timer(ms)	1000	
				✓ ANT1	ANT2 ANT3	ANT4
				ANT5	ANT6 ANT7	ANT8
				ANT9	ANT10 ANT11	ANT12
			4	ANT13	ANT14 ANT15 [ANT16
				ALL		
			Þ	Read Count:	0	
				Tag Count:	Ø	
				Speed:	Ø t×s	
				Time:	00:00:00	
• <			>	1		
					Curren	t: Offline



Device management platform v0.17.0.0 🛍 🗰 中文 🗖 🗖							
Settings(F) Read Write Tools	Search						
Report Type EPC	TID	Userdata Reservedata Totalcou	0	Single Inventory			
V Logs			() 6C	○ 6B			
	тся) Server — 🗙	Timer(ms)	1000			
	Listen port	8160 Start	ANT1	ANT2 ANT3 ANT4			
	1.When the device is config connects to the remote ho	gured in client mode, it automatically st.	ANT9	ANT10 ANT11 ANT12			
	2.When listening,close thi	swindow withoutstopping port listening.	ANT13	ANT14 ANT15 ANT16			
			Read Count:	Ø			
			Tag Count:	Ø			
			Speed:	Ø t×s			
			Time:	000000			
▼ <		\$					
				Current: Offline			





Figure 4.4.6.5 Connection success

4.5 WIFI Configuration

Select Device Control in the main interface of the Demo ->Device Configuration and the dialog box will pop up. Select WIFI on the left of the popup and enter WIFI controlling interface as shown in Figure 4.5.

		Device settings		
WIFI OnOff Disable	- Get	Set	Flush Hotspot	Config Hotspot
WIFI Paramter	ID	0.0.00	DNS1 88	8.8
 [Static IP] [Auto IP] 	Mask	255.255.255.0	DNS2 8.8.	8.8
	Gateway	0.0.0	Get Set	
lotspot List	If Wifi	is enabled with Ethernet,	, give priority to Ethernet!	
ESSID				State

Figure 4.5 WIFI Configuration

4.5.1 WIFI Switch Configuration

The WIFI switch configuration on the top left, through which the WIFI switch can be configured as shown in Figure 4.5.1.1. The current device WIFI is disabled. Select WIFI Enabled, click "Set" to switch on the WIFI as shown in Figure 4.5.1.2. It would be better to get the WIFI for double checking after setting .

		Device set	ings			-
- WIFI OnOff Disable	▪ Get	Set		Flush Hotspo	ot	Config Hotspot
WIFI Paramter (Static IP) (Auto IP)	IP Mask Gateway	0.0.0.0 255.255.255. 0.0.0.0	0	DNS1 DNS2 Get	8.8.8.8 8.8.8.8 Set	
Hotspot List ESSID	E	3SSID	RSSI	Encry		State
<						

Figure 4.5.1.1 WIFI switch

			Device settings			– ×
Base	WIFI OnOff					
WIFI	Enable 🝷	Get	Set	Flush Hotsp	ot Config Hotspo	t
GPIO	WIFI Paramter					
Cus-1	Static IP]	IP	0.0.0.0	DNS1	8.8.8.8	
	O [Auto IP]	Mask	255.255.255.0	DNS2	8.8.8.8	
		Gateway	0.0.0.0	Get	Set	
·	-Hotsp	ion sent successfu	ully, please click the quer	y button to query ti	he configuration result.	>

Figure 4.5.1.2 WIFI switch configuration
4.5.2 WIFI Hotspot Configuration

The hotspot configuration is on the top right of the interface(as shown in Figure 4.5.2.1). When the WIFI is on, click Reload Hotspot , then the current WIFI hotspot will be in the hotspot list(as shown in Figure 4.5.2.2). Select one hotspot of them, click Hotspot Configuration and a WIFI hotspot Connection interface will pop up.

Click "Confirm" after filling in the password, then the Configured Successfully prompt will come out (as shown in Figure 4.5.2.3). Reload the hotspot list, and check if the status of the hotspot is current after putting in the password. If yes, then WIFI is connected.

			Device set	tings				- ×
Base	WIFI OnOff							
WIFI	Enable 🔹	Ge	t Set		Flush	Hotspot	Config Hotspot	
GPIO	WIFI Paramter							
Cus-1	Static IP]	IP	0.0.00		DNS	8.8.8.	8	
	O [Auto IP]	Mask	255.255.255	0	DNS	2 8.8.8.	8	
		Gateway	0.0.00		Ge	et Set		
	Hotspot List							
	ESSID		BSSID	RSSI		Encry	State	
-	<							>

Figure 4.5.2.1 WIFI Hotspot Configuration

			Device set	tings				- ;
WIFI	I OnOff Enable	Get	Set		Flush Hotspot	Config H	Hotspot	
WIFI	Paramter [Static IP]	IP	0.0.0.0		DNS1	8.8.8.8		
0	[Auto IP] N	/lask	255.255.255	0	DNS2	8.8.8.8		
	G	Gateway	0.0.00		Get S	et		
Hotsp	pot List		or	tion success.				
	ESSID	BS	SID		Encry		State	
▶1	GXWL_24	50:	64:2b:9e:52:49	-40	[WPA-PS	K-CCMP+TKIP][disabled	
2	ChinaNet-cZCx	dc:	a3:33:9e:34:62	-49	[WPA-PS	K-TKIP][WPA2	null	
3	GXWL_5G	50:0	54:2b:9e:52:4a	-55	[WPA-PS	K-CCMP+TKIP][null	
4	ezviz_4447CC0ACD9	0 84:2	2c:80:62:62:4b	-52	[WPA2-P	SK-CCMP][WPS	null	
5	ChinaNet-fmEC	ca:	50:e9:89:f5:fe	-54	[WPA-PS	K-CCMP+TKIP][null	
6	fengniao88	30:4	45:96:ea:7b:20	-56	[WPA-PS	K-CCMP][WPA2	null	
7		a0:5	57:e3:42:b6:a5	-59	[WPA2-P	SK-CCMP][ESS]	null	
<								>

Figure 4.5.2.2 Hotspot List

				Devie	ce setti	ings					- ×
Base WIFI	WIFI	OnOff Enable	Ţ G	et Set			E1		Config	Hotspot	1
GPIO Cus-1	 WIFI O 	Paramter [Static IP] [Auto IP]	Se	ESSID Generative	5XWL_S	5G PA2		-			
	Hotsp	oot List	Er	Acryption	AES .		•			State	^
	1 2 • 3	GXWL_24 ChinaNet-c	Pa	assword					·TKIP][/PA2 ·TKIP][disabled null null	
	4 5 6	ezviz_44470 ChinaNet-f	mee	30:45:96:ea:7	/b:20	-56	Confi	Irm Cancel][WPS TKIP][MP][WPA2	null null null	
•	7 <			a0:57:e3:42:b	o6:a5	-59		[WPA2-PSK-C	CMP][ESS]	null	>

Figure 4.5.2.3 WIFI Hotspot Connection

4.5.3 WIFI Parameter Configuration

The WIFI parameter is in the middle of the interface of the Demo (as shown in Figure 4.5.3.1). Choose a WIFI hotspot whose status is current to configure the WIFI parameter. And click "Get" to check the parameter of the current hotspot. as shown in Figure 4.5.3.2. Click Setting after filling in related parameter, then there will be configured successfully prompt as shown in Figure 4.5.3.3. The parameter can be double checked by clicking "Get" if needed.

				Device sett	ings					– ×
Base	WIFI	OnOff								
WIFI	E	nable 🝷	Get	Set		Flush H	lotspot	Config H	lotspot]
GPIO	- WIFI	Paramter								
Cus-1	۱۱	[Static IP]	IP	0.0.00		DNS1	8.8.8.8	}		
	01	[Auto IP]	Mask	255.255.255.	0	DNS2	8.8.8.8	}		
			Gateway	0.0.00		Get	Set			
l	Hotsp	ot List								
		ESSID	BS	SID	RSSI	E	ncry		State	^
	1	GXWL_24	50:6	54:2b:9e:52:49	-40	[V	VPA-PSK-CCM	P+TKIP][null	
	2	ChinaNet-cZCx	dca	a3:33:9e:34:62	-54	[V	VPA-PSK-TKIP]	[WPA2	null	
	} 3	GXWL_5G	50:6	54:2b:9e:52:4a	-55	[V	VPA-PSK-CCM	P+TKIP][current	
	4	ezviz_4447CC0AC	D90 84:2	2c:80:62:62:4b	-48	[V	VPA2-PSK-CCN	AP][WPS	null	
	5	ChinaNet-fmEC	ca:	50:e9:89:f5:fe	-47	[V	VPA-PSK-CCM	P+TKIP][null	
	6		a0:5	57:e3:42:b6:a5	-59	[V	VPA2-PSK-CCN	/IP][ESS]	null	
	7	ChinaNet-vC0t	cat	i0:e9:47:fb:a0	-62	[V	VPA-PSK-CCM	P+TKIP][null	~
-	<									>

Figure 4.5.3.1 WIFI Hotspot Parameter

			Device set	tings				– ×
Base	WIFI	OnOff						
WIFI	E	nable 🔹 🤇	Get Set		Flush Hotspot	Config H	Hotspot]
GPIO	WIFI	Paramter						
Cus-1	0	[Static IP] IP	192.168.11.23	7	DNS1	192.168.11.1		
	۱	[Auto IP] Mask	255.255.255.0)	DNS2	0.0.0.0		
		Gateway	192.168.11.1		Get	et		
	Hotsp	ot List		at currant				
		ESSID	BSSID	Set success.	Encry		State	^
	1	GXWL_24	50:64:2b:9e:52:49	-40	[WPA-PS	K-CCMP+TKIP][null	
	2	ChinaNet-cZCx	dc:a3:33:9e:34:62	-54	[WPA-PS	K-TKIP][WPA2	null	
	▶ 3	GXWL_5G	50:64:2b:9e:52:4a	-55	[WPA-PS	K-CCMP+TKIP][current	
	4	ezviz_4447CC0ACD90	84:2c:80:62:62:4b	-48	[WPA2-P	SK-CCMP][WPS	null	- I
	5	ChinaNet-fmEC	ca:50:e9:89:f5:fe	-47	[WPA-PS	K-CCMP+TKIP][null	
	6		a0:57:e3:42:b6:a5	-59	[WPA2-P	SK-CCMP][ESS]	null	
	7	ChinaNet-vC0t	ca:50:e9:47:fb:a0	-62	[WPA-PS	K-CCMP+TKIP][null	~
-	<							>

Figure 4.5.3.2 WIFI Hotspot Parameter Get

			Device sett	ings				- ×
Base	WIFI	OnOff						
WIFI	E	nable 🗾 G	et Set		Flush Hotspot	Config I	Hotspot]
GPIO	WIFU	Paramter						
Cus-1	0	[Static IP] IP	192.168.11.23	7	DNS1	192.168.11.1		
		[Auto IP] Mask	255.255.255.0		DNS2	0.0.0.0		
		Gateway	192.168.11.1		Get	et		
	Hotsp	ot List						
		ESSID	BSSID	et success.	Encry		State	^
	1	GXWL_24	50:64:2b:9e:52:49	-40	[WPA-PS	K-CCMP+TKIP][null	
	2	ChinaNet-cZCx	dc:a3:33:9e:34:62	-54	[WPA-PS	K-TKIP][WPA2	null	
	▶ 3	GXWL_5G	50:64:2b:9e:52:4a	-55	[WPA-PS	K-CCMP+TKIP][current	
	4	ezviz_4447CC0ACD90	84:2c:80:62:62:4b	-48	[WPA2-PS	SK-CCMP][WPS	null	
	5	ChinaNet-fmEC	ca:50:e9:89:f5:fe	-47	[WPA-PS	K-CCMP+TKIP][null	
	6		a0:57:e3:42:b6:a5	-59	[WPA2-PS	SK-CCMP][ESS]	null	
	7	ChinaNet-vC0t	ca:50:e9:47:fb:a0	-62	[WPA-PS	K-CCMP+TKIP][null	~
•	<							>

Figure 4.5.3.3 WIFI Hotspot Parameter Configuration

4.6 GPI/O Configuration

Select Device Control in the main interface of the Demo->Device Configuration, and the dialog box will pop up. Select GPIO on the left of the popup and enter the GPIO controlling interface as shown in Figure 4.6.

	Device settings	;
Base WIFI GPIO Cus-1	GPO GPO1 GPO2 GPO3 GPO4 Set	GPI State GPI1 Iow GPI2 Iow GPI3 Iow GPI4 Iow Get
	Wiegand Settings OnOff Off Format Wiegand3 Data at the end of the EPC Get Set	GPI Trigger Settings Port Start Bind cmd
•	Beep	Stop Delay Time *10ms Get Set

Figure 4.6 GPIO Configuration

4.6.1 GPO Configuration

GPO configuration is on the top left of the interface, through which the electrical level of the GPO can be configured as shown in Figure 4.6.1. The low electrical level will be on and high electrical level will be off, if it is connected with a relay. If it is connected with a optocoupler, the electrical levels remain unchanged.

	Device setting	s – X
Base WIFI GPIO Cus-1	GPO GPO1 Hig GPO2 GPO3 GPO4 GP	GPI State GPI1 low GPI2 low GPI3 low GPI4 low Get
	Wiegand Settings OnOff Off Format Wiegand3 Data at the end of the EPC Set s Get Set	GPI Trigger Settings
Ŧ	Beep Set	Stop Delay Time *10ms Get Set

Figure 4.6.1 GPO Configuration

4.6.2 GPI State Get

The GPI state is on the top right of the interface. Through which the GPI state can be queried as shown in Figure 4.6.2.

	Device setting:	5	- ×
Base WIFI GPIO Cus-1	GPO ✓ GPO1 Hig GPO2 GPO3 GPO4 Set	GPI State GPI1 low GPI2 low GPI3 low GPI4	low Get
	Wiegand Settings OnOff Off To Format Wiegand3 To Data at the end of the EPC Get s Get Set	GPI Trigger Settings	•
•	Beep Set	Stop Delay Time *1 Get S	▼ 10ms iet

4.6.3 GPI Operation Configuration

The GPI operation is on the lower right of the interface. Select a GPI port number, and click "Get" to check the related configuration of the port as shown in Figure 4.6.3.1. There are multiple conditions optional for trigger condition and Stop condition. Trigger instructions can be written according to communication protocols or extract directly from logs with the following methods:

1. Suppose that a port (GPI1) need to be configured to read the TID of the 6C tag after triggering. Operations are detailed in Read TID, as shown in Figure 4.6.3.2 and Figure 4.6.3.3;

2. Click on the left to switch and an interface as shown in Figure 4.6.3.4 will be seen ;

 3.
 Find
 data
 with

 "send-[MsgBaseInventoryEpc]-[5A00010210000800000010102
 0006ED08]"
 in
 the
 log
 interface
 and
 extract"

 5A000102100008000000101020006ED
 08" from it ;
 extract
 extract
 in
 extract"
 in
 in

4. Remove the 2-digit frame header and 4-digit check code in the end. 000102100008000000101020006 is the TID command for tag reading. Other command can be also acquired with the same operation ;

5. Open GPIO interface, select GPI 1 get as shown in Figure 4.6.3.1. Select trigger condition and stop condition, fill the command from step 4 in the trigger command, then click Configure as shown in Figure 4.6.3.4. When the configuration is successful, the reader reads the TID operation of 6C tag when the electrical level of GPI1 port is high and stop reading when the electrical level is low .

When the stop condition is "delay stop", the specific delay time can be filled in at delay time area (0 means infinite delay time). And the unit is 10ms. The reader will stop after corresponding period when the stop condition is triggered if the configuration is done.

	Device settings	s – ×
Base WIFI GPIO Cus-1	GPO GPO1 GPO2 GPO3 GPO4 Set	GPI State GPI1 low GPI2 low GPI3 low GPI4 low Get
	Wiegand Settings OnOff Off Format Wiegand3 Data at the end of the EPC Get s Get Set Beep	GPI Trigger Settings Port GPI1 ▼ Start Off ▼ Iccess.
Ŧ	• Set	Report OnOff Stop Off • Delay Time 0 *10ms Get Set

Figure 4.6.3.1 GPI Operation Get

		Device management	platform v0.17.0.0	简	は 中文 - 🗆 🗙
Settings(F)	Read Write Tools	Search			
)		
📑 Report	Туре ЕРС	TID	Userdata Reservedata Totalcou	◯ Single	ntory
ogs 🗸				● 6C ○ 6B () gb
				Timer(ms) 1000	
				ANT1 ANT2 A	NT3 ANT4
				ANT5 ANT6 A	NT7 ANT8
				ANT9 ANT10 A	NT11 ANT12
			4	ANT13 ANT14 A	NT15 ANT16
				ALL	
			Þ	Read Count: 💋	
				Tag Count: 💋	
				Speed: 💋 t 🗸 s	
				Time: 00000	0
÷	<		>		
				Curren	t: COM12:115200



Settings(F) Read	ead V Type 6c 6c	Vrite Tools Search	р 🕞 т 🍪			
Report ▶ 1 ✓ Logs 2 3 4 5 6 7 7	Type 6c 6c	EPC E280110520007A5CABAB08AB	TID			
Report Logs	Type 6c 6c	EPC E280110520007A5CA8AB08A8	TID			
Logs 1 2 3 4 5 6 7	<u>6с</u> 6с	E280110520007A5CA8AB08A8		Userdata	Reservedata Totalcou	Single Inventory
2 3 4 5 6 7	6c		E280110520007A5CA8AB08A8		35	
3 4 5 6 7		300833B2DDD901400000038	E280110520007995A8AB08A8		29	
4 5 6 7	6c	300833B2DDD901400000040	E280110520007B5EA8AB08A8		33	Timer(ms) 1000
5 6 7	6c	300833B2DDD901400000037	E280110520007B05A8C208A8		33	
6	6c	300833B2DDD901400000034	E28011052000729CA8BB08A8		35	ANT1 ANT2 ANT3 ANT4
7	6c	300833B2DDD901400000041	E280110520007951A8B508A8		34	ANT5 ANT6 ANT7 ANT8
· · · · · · · · · · · · · · · · · · ·	6c	300833B2DDD901400000039	E28011052000799DA8F808A8		33	ANT9 ANT10 ANT11 ANT12
8	6c	300833B2DDD901400000042	E280110520007149A8AD08A8		34	
9	6c	300833B2DDD901400000036	E280110520007A42A8B508A8		35	ANTIS ANTIA ANTIS ANTIG
10	6c	300833B2DDD901400000043	E280110520007993A8F708A8		11	ALL
11	6c	123443217890014000000017	E280110520007883A8F808A8		10 4	Read Count: 322
						Tag Count: / /
						Speed: 42 ± 7 s
						Time: 000005
τ (>	

Figure 4.6.3.3 Read TID of 6C tag

	Device management platform v0.17.0.0	简体中	文 -	×
Settings(F)	Read Write Tools Search			
📑 Report	🗹 Cmd-Logs 🔽 GPI-logs 🗌 Tag-Logs Clear			
Logs	2019-08-28 11:01:38.918 -[Info]- send-[MsgBaseStop]-[5A000102FF0000885A] 2019-08-28 11:01:38.918 -[Info]- send-[MsgBaseInventoryEpc]-[5A000102100001002985] 2019-08-28 11:01:39.562 -[Info]- send-[MsgBaseStop]-[5A000102FF0000885A] [COM12:115200][Epc over.] 2019-08-28 11:01:39.713 -[Info]- receive-[MsgBaseStop]-[5A000102FF00010079B1]			
•				 ~
		Current:		

Figure 4.6.3.3 Log

	Device settings	s – ×
Base WIFI GPIO Cus-1	GPO GPO1 GPO2 GPO3 GPO4 Set	GPI State GPI1 low GPI2 low GPI3 low GPI4 low Get
	Wiegand Settings OnOff Off Format Wiegand3 • Data at the end of the EPC Set set Get Set	GPI Trigger Settings Port GPI1 Start High level GPI1 O00102100008000000101020006
Ŧ	Beep	Stop Low level Delay Time Get Set Set Set

Figure 4.6.3.4 GPI Operation Configuration

4.7 RFID Configuration

Select Device Control in the main interface of the Demo-> RFID Configuration and the dialog will pop up as shown in Figure 4.7.

Device management platform v0.17.0.0	简体中文 - 🗆 🗙
Settings(F) Read Write Tools Search	
	×
Base EPC Baseband EPC Speed 1 Dense mode. Session 2 • QV 4 Multi • Get SearchType Flag A • Get Ant power Get Ant 2 30 • ANT10 0 • + 10ms ANT1 30 • ANT10 0 • + 10ms ANT2 30 • ANT10 0 • Set ANT3 30 • ANT10 0 • Set ANT4 30 • ANT12 0 • Set ANT5 0 • ANT13 0 • ANT14 0 • 0 • Set ANT8 0 • ANT16 0 • Get Set	entory GB ANT3 ANT4 ANT7 ANT8 ANT11 ANT12 ANT15 ANT16 ANT15
	Current: COM12:115200 .;;

4.7.1 EPC Baseband Parameter

The EPC baseband parameter is on the top left as shown in Figure 4.7.1. Click "Get" to acquire the EPC baseband parameter. And click Setting to set the EPC baseband parameter.

		R	FID Settings	-	×
Base F-hop	EPC Baseba EPC Speed Session SearchType	1 Dense mode. 2 • QV 4 Multi. • Flag A •	Get Set	Frequency Range FCC902_928 Auto Free Close time 0 *10ms Get Set	
•	Ant power ANT1 ANT2 ANT2 ANT3 ANT4 ANT5 ANT6 ANT7 ANT8	30 ANT9 ANT10 ANT10 ANT11 ANT11 ANT12 ANT12 ANT13 ANT14 ANT15 ANT16 ANT16 	☐ AII 0 ▼ Get Set	Filter Repeat time 0 *10ms RSSI Max 0 Get Set	

Figure 4.7.1 Baseband Parameter Configuration

R/W effect changes with the changing of the baseband parameter configuration (the configuration can be customized according to the real application, but under the guidance of our engineer).

There are 6 choices for EPC baseband rate: Tair=25us, FMO, LHF=40KHz; dense reading mode; Tair=25us, Miller4, LHF=300KHz; fast reading mode; Tari=25us, Miller4, LHF=320KHz; 255/AUTO.

4 choices for Session:0;1;2;3.

16 choices for Q value:0/single tag; 1; 2; 3; 4/multiple tag; 5; 6; 7; 8; 9; 10; 11; 12; 13; 14; 15.

3 choices for tag searching: A side inventory-taking; B side inventory-taking; A | B double sides inventory-taking.

4.7.2 Power Configuration for Antenna Port

The antenna port is on the lower left as shown in Figure 4.7.2. Click "Get" to acquire the antenna power. And click Setting to set the antenna power.

		RFID) Settings		- ×
Base F-hop	EPC Baseba EPC Speed Session SearchType	and 1 Dense mode. 2 • QV 4 Multi. • Flag A •	Get Set	Frequency Range FCC902_928 Get Auto Free Close time 0 *10ms	Set Get Set
	Ant power ANT1 ANT2 ANT3 ANT4	30 • 30 • 30 • ANT10 • 30 • ANT11 • 30 • ANT11 • 30 • ANT11 • ANT12 •		Filter Repeat time 0 *10ms RSSI Max 0	Get Set
Ŧ	ANT5 ANT6 ANT7 ANT8	0 ▼ ANT13 0 ▼ 0 ▼ ANT14 0 ▼ 0 ▼ ANT15 0 ▼ 0 ▼ ANT16 0 ▼	AII 0 • Get Set		

Figure 4.7.2 Power Configuration for Antenna Port

Select the corresponding antenna port(connected with antenna), and select corresponding power value from the power list. Then click Set, and the Configured Successfully prompt will pop up.

4.7.3 Auto-idleness Configuration

Automatic idle mode means: when in constantly reading, the reader will enter idle state automatically for power saving for a period if no tag is read for 3 round constantly. When the idle state is over time, the reader will start reading again as shown in Figure 4.7.3.

		RF	ID Settings	– ×
Base	EPC Baseba	and		Frequency Range
F-hop	EPC Speed	1 Dense mode. 🔹		FCC902_928 🗸 Get Set
	Session	2 v QV 4 Multi. v		Auto Free
	SearchType	Flag A 🔹	Get Set	Close time 0 *10ms Get Set
	Ant power			Filter
	ANT1	30 • ANT9 0 •		Repeat time 0 *10ms
	ANT2	30 ▼ ANT10 0 ▼ 30 ▼ ANT11 0 ▼		RSSI Max 0 Get
	ANT4	30 - ANT12 0 -		
	ANT5	0 - ANT13 0 -	All	
	ANT6	0 - ANT14 0 -	0 🗸	
	ANT7	0 🗸 🗌 ANT15 0 🗸		
•	ANT8	0 - ANT16 0 -	Get Set	

Figure 4.7.3 Automatic Idleness Configuration

4.7.4 Tag Filtering

The antenna power is on the lower left as shown in Figure 4.7.4. Click "Get" to acquire the tag uploading parameter. And click Setting to set the tag uploading parameter.

Filtering Time: means during a reading instruction execution period, the

same tag content can only be uploaded once in repeated tag filtering time,

0~65535,the time unit is 10ms.

RSSI threshold value: give up uploading and discard when the RSSI value

of the tag is lower than the threshold value.

		RFI	D Settings	-	×
Base	– EPC Baseba	ind		Frequency Range	7
F-hop	EPC Speed	1 Dense mode. 🔹		FCC902_928 - Get Set	
	Session	2 V 4 Multi.		Auto Free	-
	SearchType	Flag A 🔹	Get	Close time 0 *10ms Get	
			Set	Set	
	Ant power			Filter	
	ANT1	30 🔹 🗌 ANT9 0 💌		Repeat time 0 *10ms	
	ANT2	30 - ANT10 0 -			
	ANT3	30 🗸 🗌 ANT11 0 🗸		RSSI Max 0 Get	
	ANT4	30 • ANT12 0 •		Set	
		0 • ANT13 0 •			-
	ANT7	0 - ANT15 0 -	Cat		
	ANT8	0 - ANT16 0 -	Get		
_			Set		

Figure 4.7.4 Tag Filtering

4.7.5 Hopping Frequency Management

Select hopping frequency in the menu bar on the left as shown in Figure 4.7.5.1. Select FCC902~928MHz in the Working frequency range spinner (as shown in Figure 4.7.5.2). Click Set Frequency Range, then select single frequency(as shown in Figure 4.7.5.4) in the frequency list on the left. Click" ' ' to import it to the list box on the right. Then click Set again. To choose full frequency range, just click '. All frequency is in the list box on the right. All frequency is in the list box on the right. All frequency is in the list box on the right. All frequency is in the list box on the right. If removed if <

	RFID Settings	- ×
Base F-hop	Frequency FCC902_928 Set OnOff Auto frequenc 902.750 903.250 903.750 904.250 904.750 >> Point list: 902.750,917.250,917.250,919.250,921.250,921.250,923.250,916.750,919.750 >> >> >> >> Point list: 915.750,918.750,920.750,922.750,917.250,919.250,919.250,921.250,923.250,916.750,919.750 	
•	905.250 906.250 906.750 907.250 V Get Set	

Figure 4.7.5.1 Hopping Frequency Management



Figure 4.7.5.2 Working Frequency Range Selection



Figure 4.7.5.3 Hopping Frequency Switch Selection





Notes: When doing this setting, the purpose of the automatic operations is to avoid the external signal interference. Normally it is defaulted to be automatically(as shown in the spinner of Figure 4.7.5.3).

4.8 Other Configurations

4.8.1 Wiegand Communication Parameter Configuration

Select Device Control in the main interface of the Demo->Device Configuration, and the dialog box will pop up. Select GPIO on the left popup. The Wiegand Configuration is at the lower left. Click "Get" to check the Wiegand communication parameter of the current device as shown in Figure 4.8.1.1.

There are 3 types of Wiegand communication: Wiegand 26, Wiegand 34 and Wiegand 66. Reader extracts the end data of EPC code or TID code according to Wiegand communication format and outputs it through Wiegand signal. It extracts 3 bytes at the end for Wiegand 26, 4 bytes for Wiegand 34 format and 8 bytes for Wiegand 66 format. There are 2 types for data transfer: Transfer EPC end data and transfer TID end data. Click Set after selecting corresponding parameters as shown in Figure 4.8.1.2.

	Device settings	s — ×
Base WIFI GPIO Cus-1	GPO GPO1 GPO2 GPO3 GPO4 Set	GPI State GPI1 low GPI2 low GPI3 low GPI4 low Get
	-Wiegand Settings OnOff Off ▼ Format Wiegand3 ▼ Data at the end of the EPC ▼ Get Set	- GPI Trigger Settings Port Start
-	Beep	Stop 💌 Delay Time *10ms Get Set

Figure 4.8.1.1 Wiegand Communication Parameter Get

	Device settings – X
Base WIFI GPIO Cus-1	GPO GPO1 GPO2 GPI low GPI2 low GPI3 low GPI4 low GPO3 GPO4 Set Get Get
	Wiegand Settings OnOff On Format Wiegand3 Get Set success. Data at the end of the EPC Set success. Get Set Market Control of the EPC Control of
Ŧ	Image: Set interview Stop Image: Stop Image: Delay Time *10ms Image: Get interview Get interview

Figure 4.8.1.2 Wiegand Communication Parameter Configuration

4.8.2 Buzzer Control

Select Device Control in the main interface of the Demo->Device Configuration, and the dialog box will pop up. Select GPIO in the popup on the left. The Buzzer Control is on the lower left. Click Set to set the state of the buzzer as shown in Figure 4.8.2.

	Device settings	- ×
Base WIFI GPIO Cus-1	GPO GPO1 GPO2 GPO3 GPO4 Set	GPI State GPI1 low GPI2 low GPI3 low GPI4 low Get
	Wiegand Settings OnOff Off Format Wiegand3 Data at the end of the EPC Set su Get Set	GPI Trigger Settings
-	Beep Only one Set	Stop Delay Time *10ms Get Set

Figure 4.8.2 Buzzer Control

4.8.3 EAS Alarm

Select Device Control in the main interface of the Demo -> Device Configuration, and the dialog box will pop up. Select Custom-1 in the popup on the left as shown in Figure 4.8.3. This operation is used for configuration for matching alarm parameters. "matching succeeded operation" will be performed when the tags meet the matching condition is read. And "match failed operation" will be performed when the tags fail to meet the matching condition is read. The matching rules are as below:

The calculated result of the mask Bitwise AND and zone data to be matched in the tag is A. And the result of the mask Bitwise AND and zone data matched is B. If A is equal to B, then the matching is successfully, and then the EAS match-successfully operation shall be performed. Conversely, the EAS match-failed operation shall be performed.

		Device settings —	×
Base WIFI GPIO Cus-1	EAS OnOff Match Area Match start Match data(hex)	Device settings	×
•	Mask(hex)	FFFF Get Set Get Set	

Figure 4.8.3 EAS Alarm

4.9 Tools

4.9.1 Restart

Select Tools ->""Restart as shown in Figure 4.9.1.1. Click the icon, and the Command Sent Successfully prompt will pop up as shown in Figure 4.9.1.2.

The reader will restart when it receives this message. And the restart is finished when the beep from the buzzer is heard.

				Devi	ce managem	ent plat	tform vO.	17.0.0				简体中文	-		×
Settings(F)	Read	Write To	ols Search												
	2	e				0									
📑 Report	Туре	EPC		TID			Userdata	Reservedata	Totalcou	0	Single 🔘	Inventory			
🍕 Logs										● 6C	() 6B	GB			
										Timer(ms)	1000				
										ANT1	ANT2	ANT3		NT4	
										ANT5	ANT6	ANT7		NT8	
										ANT9	ANT10	ANT11		VT12	
									₽:	ANT13	ANT14	ANT15		VT16	
										ALL					
									Þ	Read Count:	Ø				
										Tag Count:	Ø				
										Speed	Øt	1.5			
										Time:	00:0	000			
-	<								>		402 402 002				
											Ci	urrent: CO			

Figure 4.9.1.1 Restart

	Device management p	latform v0.17.0.0	简体中文 - 🗆 🗙
Settings(F) Read Write Tools Sear	ch		
) () ()		
Report Type EPC	TID	Userdata Reservedata Totalcou	Single Inventory
🗸 Logs			● 6C ○ 6B ○ GB
			Timer(ms) 1000
			ANT1 ANT2 ANT3 ANT4
	_		ANT5 ANT6 ANT7 ANT8
	Se Se	end success.	ANT9 ANT10 ANT11 ANT12
	_	4	ANT13 ANT14 ANT15 ANT16
			ALL
		٩	Read Count: 2
			Tag Count: 2
			Speed: 💋 t 🗸 s
			Time: 00:000
▼ <		>	
			Current: COM12:115200 _;;

Figure 4.9.1.2 Command Sent Successfully

4.9.2 Restore Factory Setting

Select Tools in the main interface ->""Factory Reset as shown in Figure 4.9.2.1. Click the icon, and the prompt "Factory Reset?" will pop up as shown in Figure 4.9.2.2. This operation will restore all parameters, including RFID configuration parameters, to factory setting except for system time and MAC address.



Figure 4.9.2.1 Factory Reset



Figure 4.9.2.2 Prompt

4.9.3 Data Export

Select Tools ->" export the text(or" export the spreadsheet), and a dialog will pop up as shown in Figure 4.9.3. Then choose the path for the files to be saved.

🖳 Save As				×	简体中文	-	
\leftarrow \rightarrow \checkmark \uparrow \blacksquare \Rightarrow This PC \Rightarrow Software (D:) \Rightarrow	ن ان	Search Software	(D:)	ρ			
Organize 👻 New folder			•== •	8			
This PC Name	Date modified	Туре	Size	^			
> 🔲 3D Objects 🔤 Go	4/30/2019 5:37 PM	File folder			~		
> Desktop	6/26/2019 5:38 PM	File folder		igle	Inventory		
idea_workspace	7/29/2019 1:48 PM	File folder		O 68	GB 🔾 GB		
Java	3/13/2019 9:18 AM	File folder					
Downloads	11/20/2018 10:22	File folder		000			
> 🎝 Music 🔤 log4j	7/26/2019 2:33 PM	File folder					
🕨 📄 Pictures 🔤 🔤 mj	11/16/2018 3:42 PM	File folder		ANT2	AN13		N14
Videos Picture	7/3/2019 10:21 AM	File folder		ANT6	ANT7	A	NT8
> 🏪 OS (C:) Program Files	8/13/2019 5:44 PM	File folder		ANT10	ANT11		NT12
ServicePack	2/21/2019 2:07 PM	File folder		×			
 ∨ <				> AN114	ANT15		NI 16
File name: tag-list.csv				~			
Save as type: csv file (*.csv)				~ Ø			
				a			
∧ Hide Folders		Save	Cancel	0	+ / +		
			1100		0000		
				es es	es es es es		
				1.00	400 tis 40		
				18			
					2		
▼ <		>	•	V .			



The tag data supports data export and the exporting format can be .csv and .xls(Excel datasheet).

4.9.4 Upgrade

It supports baseband software (underlying software) upgrading and application software (system application software) upgrading. Select Tools -> "①" upgrade baseband (or "①" upgrade application). And the dialog box will pop up as shown in Figure 4.9.4.

Settings(F) Read Write Tools Search Image: Search Image: Search Image: Search Image: Search Image: Search Image: Search Image: Search Image: Search Image: Search Image: Search Image: Search Image: Search Image: Search Image: Search Image: Search Image: Search Image: Search Iman	
Report Type EPC TID Userdata Totalcol O Single Inventory	
Report Type EPC TID Userdata Reservedata Totalcou O Single O Inventory	
Upgrade baseband – ×	
File path: Start ANT5 ANT6 ANT7	4
	12
ANT13 ANT14 ANT15	16
O%	
Read Count: 💋	
Tag Count: 2	
Speed: 💋 🛨 s	
Time: 000000	



		Device management	platform v0.17.0.0			简体中文 - 🗆 🗙
Set	Open				×	
	🔶 🔿 🕤 🛧 📘 « xiay	/un0803 > FileStorage > File > 2019-08 >	✓ [™] Se	earch 2019-08	م	
(Organize 🔻 🛛 New folde	r		· ·		
-	This PC	Name	Date modified	Туре	Size	Inventory
Л	3D Objects	🚽 bartender	8/7/2019 5:20 PM	File folder		0.0
4	E. Desktop	Release	8/8/2019 1:53 PM	File folder		6B () GB
	Documents	R2000_RF6004_4S4B_0812.bin	8/20/2019 2:56 PM	BIN File	128 KB	
	Downloads	R2000_RF8004_4S4B_GB.bin	8/14/2019 10:31 AM	BIN File	128 KB	
	Music	R2000_RF8008_HL_4S4B.bin	8/15/2019 11:02 AM	BIN File	128 KB	2 🗌 ANT3 🗌 ANT4
	Dicture:					6 🗌 ANT7 🗌 ANT8
						10 ANT11 ANT12
	Videos					
	- OS (C:)					14 ANT15 ANT16
	Software (D:)					
	🛖 U启动U盘 (H:)					
	🕳 EFI (l:) 🗸 🗸	<			>	
	File na	P2000 PE0004 454P CP him		hin files (* hin * ank)	~	_
	File na	R2000_RF8004_454B_GB.DIn	Ľ	bin nies (.bin, .apk)	~	t/s
			L	Open	Cancel .:	2:00:00
	▼ <			>	100 100	
	• <			>	No. 10	Current: CO

Figure 4.9.4.2 Select Upgrade Files

Find the path to the required. bin(.apk) upgrading file in the Upgrade File

list as shown in Figure 4.9.4.3, click Start. The baseband is upgraded

when the upgrading progress bar shows 100%. And then the Upgraded Successfully prompt will pop up. Then click "OK" to restart as shown in Figure 4.9.4.4.

		Device managemer	nt platform v0.17.0.0		简体中文 - 🗖 🗙
Settings(F)	Read Write Tools Se	arch			
*			0	_	
📑 Report	Type EPC	TID	Userdata Reservedata Totalcou	🔾 Sin	gle Inventory
🍕 Logs				● 6C	○ 6B ○ GB
		Upgrade	: baseband — X	Timer(ms)	000
				ANT1	ANT2 ANT3 ANT4
		File path: C:\Users\xy119	9\Documents\We Start	ANT5	ANT6 ANT7 ANT8
				ANT9	ANT10 ANT11 ANT12
			0%	ANT13	ANT14 ANT15 ANT16
				Read Count:	0
				Tag Count:	Ø
				Speed:	Ø t/s
				Time:	000000
-	¢		>	(
					Current: COM12:115200 .;;

Figure 4.9.4.3 Upgrading baseband

		Device managemer	t platform v0.17.0.0		简体中文 - 🗆 🗙
Settings(F)	Read Write Tools Se	arch			
			0		
📑 Report	Type EPC	TID	Userdata Reservedata To	talcou	O Single Inventory
🍕 Logs					● 6C ○ 6B ○ GB
		Upgrade	baseband	- ×	Timer(ms) 1000
					ANT1 ANT2 ANT3 ANT4
		File path: D8\R2000_RF8	004_4S4B_GB.bin Start	T	ANT5 ANT6 ANT7 ANT8
			100 %	() ()	The upgrade is successful. restart the device?
					OK Cancel
					Speed: 💋 t 🗸 s
					Time: 22:22
-	<			>	
					Current: COM12:115200 _;;

Figure 4.9.4.4 Restart Confirm

The upgrading process of baseband software is the same as the application software. And the detail operation is the same also.

4.9.5 Custom Command

Select Tools ->"^(Q)" Custom Command as shown in Figure 4.9.5.1. Click the icon, and a custom command sending popup will come out as shown in Figure 4.9.5.2.

Head: data frame header, defaulted to be 5A

Command: can be written according to the communication protocol of the reader, or extract by double clicking lines of the log window (detailed in GPI Operation Configuration)

CRC: check code(automatically generated by filling in command and head and clicking the CRC text box).

			Device managem	ent platform v0.1	7.0.0		简体中文	- 🗆	×
Settings(F)	Read Write	Tools Search							
*	2 ()	B B 🙆		1					
📑 Report	Type EPC		TID	Userdata	Reservedata Totalcou	0	Single Inventory		
🍕 Logs						● 6C	○ 6B ○ GB		
						Timer(ms)	1000		
						ANT1	ANT2 ANT3	ANT4	ţ
						ANT5	ANT6 ANT7	ANT8	}
						ANT9	ANT10 ANT11	ANT1	2
					4	ANT13	ANT14 ANT15	ANT1	6
						ALL			
					4	Read Count:	Ø		
						Tag Count:	Ø		
						Speed	Ø t/s		
						1100:	000000		
-	۲				>				
					т. Т		Current: CC	M12:1152	200 .;;

Figure 4.9.5.1 Custom Command

Settings(F) Read Write Tools Search			Device management	: platform v0.17.0.0		简体中文 - 🗖 🗙
Image: Second	Settings(F) Read Write <mark>Tools</mark> Se	arch			
Type Type EPC TID Userdata Reservedata Totalcox Image: Single Image: Si		9 9 6 8		1		
Custom command send - X Timer(ms) 1000 Head: 5A Imer(ms) 1000 Head: 5A Imer(ms) 1000 Command: Imer(ms) 1000 CRC: 0000 Imer(ms) 1000 ANT3 ANT6 ANT7 ANT8 ANT9 ANT10 ANT11 ANT10 ANT13 ANT14 ANT15 ANT10 ALL Rend Count: 0 1 Speed: 0 0 1 1 Time: 02:00:00:00:00:00:00:00:00:00:00:00:00:0	📑 Report	Type EPC	TID	Userdata Reservedata Totalcou	0 s	Single Inventory
Custom command send - X Timer(ms) 1000 Head: SA Image: SA	🍕 Logs				● 6C	○ 6B ○ GB
Head: 5A Image: SA Image: ANT3 ANT4 Command: Image: ANT3 ANT3 ANT4 ANT9 ANT10 ANT11 ANT12 ANT13 ANT10 ANT11 ANT12 ANT13 ANT10 ANT11 ANT12 ANT13 ANT10 ANT11 ANT12 ANT13 ANT14 ANT15 ANT10 ALL Image: Imag			Custom com	nmand send – X	Timer(ms)	1000
Command:			Head: 5A		ANT1	ANT2 ANT3 ANT4
ANT9 ANT10 ANT11 ANT12 ANT13 ANT14 ANT15 ANT10 ALL Read Count: [2] Speed: [2] [2] Time: [2] [2] ANT9 [2] [2] ANT13 [2] [2] ANT14 [2] [2] Speed: [2] [2] [3] [2] [2] [4] [4] [4] [5] [5] [6] [6] [6] [6] [6] [6] [6] [7] [6] [6] [8] [6] [6] [9] [6] [6] [9] [6] [6] [9] [6] [6] [9] [6] [6] [9] [6] [6] [9] [6] [6] [9] [6] [6] [9] [6] [6] [9] [6] [6] [9] [6] [6]			Command:		ANT5	ANT6 ANT7 ANT8
CRC: 0000 Send ANT13 AALL Read Count: 2 Tag Count: 2 Speed: 2 Time: 2 Image: Count: 2 Speed: 2 Time: 2 Count: 2					ANT9	ANT10 ANT11 ANT12
Send ALL Read Count: 3 Tag Count: 3 Speed: 3 + 2 × s Time: 3 (3 (3 (3 (3 (3 (3 (3 (3 (3 (3 (3 (3 (3			CRC: 0000		ANT13	ANT14 ANT15 ANT16
Send Read Count: [] Tag Count: [] Speed: [] t / s Time: [] [] Image: Speed: [] t / s Time: [] [] Image: Speed: [] t / s Image: Speed: [] [] Image: Speed: [] [] Image: Speed: [] [] Image: Speed:					ALL	
Tag Count: 2 Speed: 2 4 5 Time: 2 23 23 23 \$				Send	Read Count:	Ø
					Tag Count:	0
					Speed:	Ø t/s
					Time:	000000
✓ <	•	<		>	1	

Figure 4.9.5.2 Custom Command Sending

	Custom command send	-	×
Head:	5A 000102FF0000		
Command:			
CRC:	885A		
	Se	end	

Figure 4.9.5.3 Send Custom Command

4.9.6 Device Info

Select Tools ->"¹"Device Info as shown in Figure 4.9.6.1. Click the icon and a Device Info window will pop up as shown in Figure 4.9.6.2.

		Device	management platform v0.1	7.0.0		简体中文		×
Settings(F)	Read Write T	ools Search						
*	2 @ C							
📑 Report	Type EPC	TID	Userdata	Reservedata Totalcou	🔿 Single	Inventory		
🍕 Logs					● 6C 〇	6B 🔿 GB		
					Timer(ms) 1000)		
					ANT1 AN	T2 ANT3		4
					ANT5 AN	T6 ANT7		8
					ANT9 AN	T10 🗌 ANT11		12
				⊳:	ANT13 AN	T14 ANT15	ANT	16
					ALL			
				Þ	Read Count: 2			
					Tag Count: []			
					Speed:	t/s		
					Time: []	00000		
Ţ	<			>				
-				~		Current: CC	0M12:115	5200 Ja

Figure 4.9.6.1 Device Info

Settings(F) Read Write Tools Search Image: Settings(F) Read Write Tools Search Image: Settings(F) Image: Search Image: Search Image: Search Image: Search Image: Search Image: Search Image: Search <tr< th=""><th>- 🗆 ×</th></tr<>	- 🗆 ×
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Type EPC TID Userdata Totalcon Clogs Serial No R800800001928000001 ANT1 ANT2 ANT3 App version 0.14.0.0 Base version 1.0.1.0 ANT5 ANT6 ANT7 App build 2019-07-23 Base build Jun 26 2019 ANT10 ANT11 ANT15 Sys version V1.00_20190719 Hull ANT15 ANT14 ANT15 Power on 00:28:41 00:28:41 Image Count: 10	
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ag Count: $[2]$ Speed: $[2]$ $\pm 1/s$	
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Figure 4.9.6.2 Device Info Popup

4.9.7 Devices Search

Select Device searching in the main interface of the Demo -> Device Search (as shown in Figure 4.9.7.1) and then a dialog box will pop up as shown in Figure 4.9.7.2. Open the popup, and the reader will start searching the devices with the same network segment as the computer. And the devices will be in the list as shown in Figure 4.9.7.3.

Notes: This function is also workable when the demo is not connected with any device.



Figure 4.9.7.1 Network Devices Searching

			Search device			- ×			
Base	Searching:								
	• •		Clear	1. Active devices can be found in the network, applicable to some devices.					
	Device list:								
	MAC	Dhop/Static	Eth/IP	Eth/Mask	Eth/Gateway	ServerPort			
•	<					>			



	Search device –									
Base	-Searc	hing:								
	• • C			1. Active devices can be found in the network, applicable to some devices.						
	-Device list:									
		MAC	Dhop/Static	Eth/IP	Eth/Mask	Eth/Gateway	ServerPort			
	1	EE:4D:AD:E5:	STATIC	192, 168, 1, 168	255, 255, 255, 0	192.168.1.1	8160			
	▶ 2	44:D5:F2:D0:	STATIC	192, 168, 1, 168	255, 255, 255, 0	192, 168, 1, 1	8160			
•	<u> </u>									

Figure 4.9.7.3 Searching Devices Successfully

FCC WARNING

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

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.

This device and its antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitter.

15.105 Information to the user.

(b) For a Class B digital device or peripheral, the instructions furnished the user shall include the following or similar statement, placed in a prominent location in the text of the manual:

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.

This equipment complies with FCC radiation exposure limits set forth for an uncon- trolled environment. This equipment should be installed and operated with minimum distance 20

cm between the radiator and your body. Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

The availability of some specific channels and/or operational frequency bands are country dependent and are firmware programmed at the factory to match the intended destination.

The firmware setting is not accessible by the end user.

The final end product must be labelled in a visible area with the following: "Contains Transmitter Module "FCC ID: 2AUF7RF-N6801"

Requirement per KDB996369 D03

2.2 List of applicable FCC rules

List the FCC rules that are applicable to the modular transmitter. These are the rules that specifically establish the bands of operation, the power, spurious emissions, and operating fundamental frequencies. DO NOT list compliance to unintentional-radiator rules (Part 15 Subpart B) since that is not a condition of a module grant that is extended to a host manufacturer. See alsoSection

2.10 below concerning the need to notify host manufacturers that further testing is required.3

Explanation: This module meets the requirements of FCC part 15C (15.247).it Specifically identified AC Power Line Conducted Emission, Radiated Spurious emissions, Band edge and RF Conducted Spurious Emissions, Conducted Peak Output Power, Bandwidth, Power Spectral Density, Antenna Requirement.

2.3 Summarize the specific operational use conditions

Describe use conditions that are applicable to the modular transmitter, including for example any limits on antennas, etc. For example, if point-to- point antennas are used that require reduction in power or compensation for cable loss, then this information must be in the instructions. If the use condition limitations extend to professional users, then instructions must state that this information also extends to the host manufacturer's instruction manual. In addition, certain information may also be needed, such as peak gain per frequency band and minimum gain, specifically for master devices in 5 GHz DFS bands.

Explanation: The product antenna uses an irreplaceable antenna with a gain of 6.29dBi

2.4 Single Modular

If a modular transmitter is approved as a "Single Modular," then the module manufacturer is responsible for approving the host environment that the Single Modular is used with. The manufacturer of a Single Modular must describe, both in the filing and in the installation instructions, the alternative means that the Single Modular manufacturer uses to verify that the host meets the necessary requirements to satisfy the module limiting conditions.

A Single Modular manufacturer has the flexibility to define its alternative method to address the conditions that limit the initial approval, such as: shielding, minimum signaling amplitude, buffered modulation/data inputs, or power supply regulation. The alternative method could include that the limited

module manufacturer reviews detailed test data or host designs prior to giving the host manufacturer approval.

This Single Modular procedure is also applicable for RF exposure evaluation when it is necessary to demonstrate compliance in a specific host. The module manufacturer must state how control of the product into which the modular transmitter will be installed will be maintained such that full compliance of the product is always ensured. For additional hosts other than the specific host originally granted with a limited

module, a Class II permissive change is required on the module grant to register the additional host as a specific host also approved with the module. **Explanation:** The module is a single module.

2.5 Trace antenna designs

For a modular transmitter with trace antenna designs, see the guidance in Question 11 of KDB Publication 996369 D02 FAQ – Modules for Micro-Strip Antennas and traces. The integration information shall include for the TCB review the integration instructions for the following aspects: layout of trace design, parts list (BOM), antenna, connectors, and isolation requirements.

Information that includes permitted variances (e.g., trace boundary limits, thickness, length, width, shape(s), dielectric constant, and impedance as applicable for each type of antenna); b) Each design shall be considered a different type (e.g., antenna length in multiple(s) of frequency, the wavelength, and antenna shape (traces in phase) can affect antenna gain and must be considered); c) The parameters shall be provided in a manner permitting host manufacturers to design the printed circuit (PC) board layout; d) Appropriate parts by manufacturer and specifications; e) Test procedures for design verification; and f) Production test procedures for ensuring compliance

The module grantee shall provide a notice that any deviation(s) from the defined parameters of the antenna trace, as described by the instructions, require that the host product manufacturer must notify the module grantee that they wish to change the antenna trace design. In this case, a Class II permissive change application is required to be filed by the grantee, or the host manufacturer can take responsibility through the change in FCC ID (new application) procedure followed by a Class II permissive change application

2.6 RF exposure considerations

It is essential for module grantees to clearly and explicitly state the RF exposure conditions that permit a host product manufacturer to use the module. Two types of instructions are required for RF exposure information: (1) to the host product manufacturer, to define the application conditions

(mobile, portable – xx cm from a person's body); and (2) additional text needed for the host product manufacturer to provide to end users in their end-product manuals. If RF exposure statements and use conditions are not provided, then the host product manufacturer is required to take responsibility of the module through a change in FCC ID (new application).

Explanation: The module complies with FCC radiofrequency radiation exposure limits for uncontrolled environments. The device is installed and operated with a distance of more than 20 cm between the radiator and your body." This module follows FCC statement design, FCC ID: 2AUF7RF-N6801

2.7Antennas

A list of antennas included in the application for certification must be provided in the instructions. For modular transmitters approved as limited modules, all applicable professional installer instructions must be included as part of the information to the host product manufacturer. The antenna list shall also identify the antenna types (monopole, PIFA, dipole, etc. (note that for example an "omni-directional antenna" is not considered to be a specific "antenna type").

For situations where the host product manufacturer is responsible for an external connector, for example with an RF pin and antenna trace design, the integration instructions shall inform the installer that unique antenna connector must be used on the Part 15 authorized transmitters used in the host product.
The module manufacturers shall provide a list of acceptable unique connectors.

Explanation: The product antenna uses an irreplaceable antenna with a gain of

6.29dBi

2.7 Label and compliance information

Grantees are responsible for the continued compliance of their modules to the FCC rules. This

includes advising host product manufacturers that they need to provide a physical or e-label stating "Contains FCC ID" with their finished product. See Guidelines for Labeling and User Information for RF Devices – KDB Publication 784748.

Explanation: The host system using this module, should have label in a visible area indicated the following texts: "Contains FCC ID: 2AUF7RF-N6801

2.8 Information on test modes and additional testing requirements5 Additional guidance for testing host products is given in KDB Publication 996369 D04 Module Integration Guide. Test modes should take into consideration different operational conditions for a stand-alone modular transmitter in a host, as well as for multiple simultaneously transmitting modules or other transmitters in a host product.

The grantee should provide information on how to configure test modes for host product evaluation for different operational conditions for a stand-alone modular transmitter in a host, versus with multiple, simultaneously transmitting modules or other transmitters in a host.

Grantees can increase the utility of their modular transmitters by providing special means, modes, or instructions that simulates or characterizes a connection by enabling a transmitter. This can greatly simplify a host manufacturer's determination that a module as installed in a host complies with FCC requirements.

Explanation: Shenzhen Nation RFID Technology Co., Ltd. can increase the utility of our modular transmitters by providing instructions that simulates or characterizes a connection by enabling a transmitter.

2.9 Additional testing, Part 15 Subpart B disclaimer

The grantee should include a statement that the modular transmitter is only FCC authorized for the specific rule parts (i.e., FCC transmitter rules) listed on the grant, and that the host product manufacturer is responsible for compliance to any other FCC rules that apply to the host not covered by the modular transmitter grant of certification. If the grantee markets their product as being Part 15

Subpart B compliant (when it also contains unintentional-radiator digital circuity), then the grantee shall provide a notice stating that the final host product still requires Part 15 Subpart B compliance testing with the modular transmitter installed.

Explanation: The module without unintentional-radiator digital circuity, so the module does not require an evaluation by FCC Part 15 Subpart B. The host shoule be evaluated by the FCC Subpart B.