

UHF Fixed Reader UF2889-AOS



Model : SID-FXRD-UF2889

Dimension : 180 x 128 x 28 mm

Overview

SID-FXRD-UF2889 is a high performance UHF RFID reader. It is designed upon fully self-intellectual property. Base on the proprietary decoding and signal processing algorithm, SID-FXRD-UF2889 is able to perform high-speed tag read/write operations with an outstanding identification rate. SID-FXRD-UF2889 is embedded with Android OS, and supports 4G Wide Area Network (WAN). SID-FXRD-UF2889 forms an ideal choice for RFID applications, such as logistics, access control, anti-counterfeit and industrial production process control system.

Key features

- Independent intellectual property rights (IPR) protected design;
- Working frequency: 840 ~ 960MHz (adjustable according to various frequency requirements in different countries and regions);
- Impinj R2000 based design, fully supports EPC CLASS1 G2、ISO18000-6B defined tag;
- Capable for both Frequency Hopping Spread Spectrum (FHSS) transmission and fixed-frequency transmission.
- Supports Received Signal Strength Indication (RSSI).
- Inventory speed > 700 tags/s at peak;
- Carries 8 external antenna ports and supports antenna check;
- MTK 8735 4G platform based, 4 cores 1.3GHz ARM®Cortex-A53, embedded Mali-T720 MP2;
- Android 5.1/6.0 OS;
- Memories: 1GB LPDDR3+8GB EMMC/2GB LPDDR3+16GB EMMC (optional);
- Supports 4G networks (capable with all network modes) with main and secondary 4G antenna ports;
- Supports Bluetooth 4.0;
- Supports GPS positioning;
- HDMI D Type port, supports up to 5GB/s transmission speed and 1920x1080P HD video signal output;
- Supports USB 2.0 OTG;
- Supports 100M / 10M auto-negotiation network ports;
- Supports RS-232 interface;
- Low power consumption design, single +9V ~ 24V power supply;
- Supports multi-channel isolated GPIO ports (4 inputs and 4 outputs), isolated voltage $V_{RMS} > 3kV$;
- Supports firmware online update, and SDK is provided for secondary development.
- Compact design with IP43 standards, capable for various applications.

Characteristics

- Absolute maximum rating

Parameter	Symbol	Value	Unit
Supply Voltage	VCC	30	V
Operating Temperature	T _{OPR}	-30~+70	°C
Storage Temperature	T _{STR}	-40~+85	°C
Humidity	H	<95% (+25°C)	

- Specifications

T_A = 25°C, VCC = +13.6V unless otherwise specified.

1. Electrical characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit
Supply Voltage	VCC	9	13.6	24	V
Current Consumption	I _c		1.5	2.5	A
Dimensions	L x W x H		180 x 128 x 28		Mm

2. UHF RFID parameters

Parameter	Symbol	Min.	Typ.	Max.	Unit
RF working frequency	Freq	860		960	MHz
RF output frequency	Prf			33	dBm
Output frequency accuracy	Aprf		+/-1		db
RF output power flatness	Fprf		+/-0.2		db
Receiver sensitivity	Sr	-85			dBm

3. Mobile communication parameters

Parameter	Symbol	Description
Frequency band	Fb	2G GSM: B2 B3 B5 B8(B2 is optional) 3G WCDMA: B1 B2 B5 B8(B2 is optional) 3G TD-SCDMA: B34 B39 4G LTE: B1 B3 B7 B38 B39 B40 B41(B7 is optional) CDMA2000&1X EVDO: BC0
Transmission power	TPrf	Class 4(2W) Class 1(1W) Class 3(0.25W): $P_{\max} < 23\text{dBm}$
Data rate	Dbr	LTE Downlink: 150Mbps LTE Uplink: 50Mbps HSDPA: 42.2Mbps HSUPA: 11.5Mbps TD-HSDPA: 2.8Mbps
SIM card	SC	SIM/USIM card, rated voltage: 1.8V, 3V

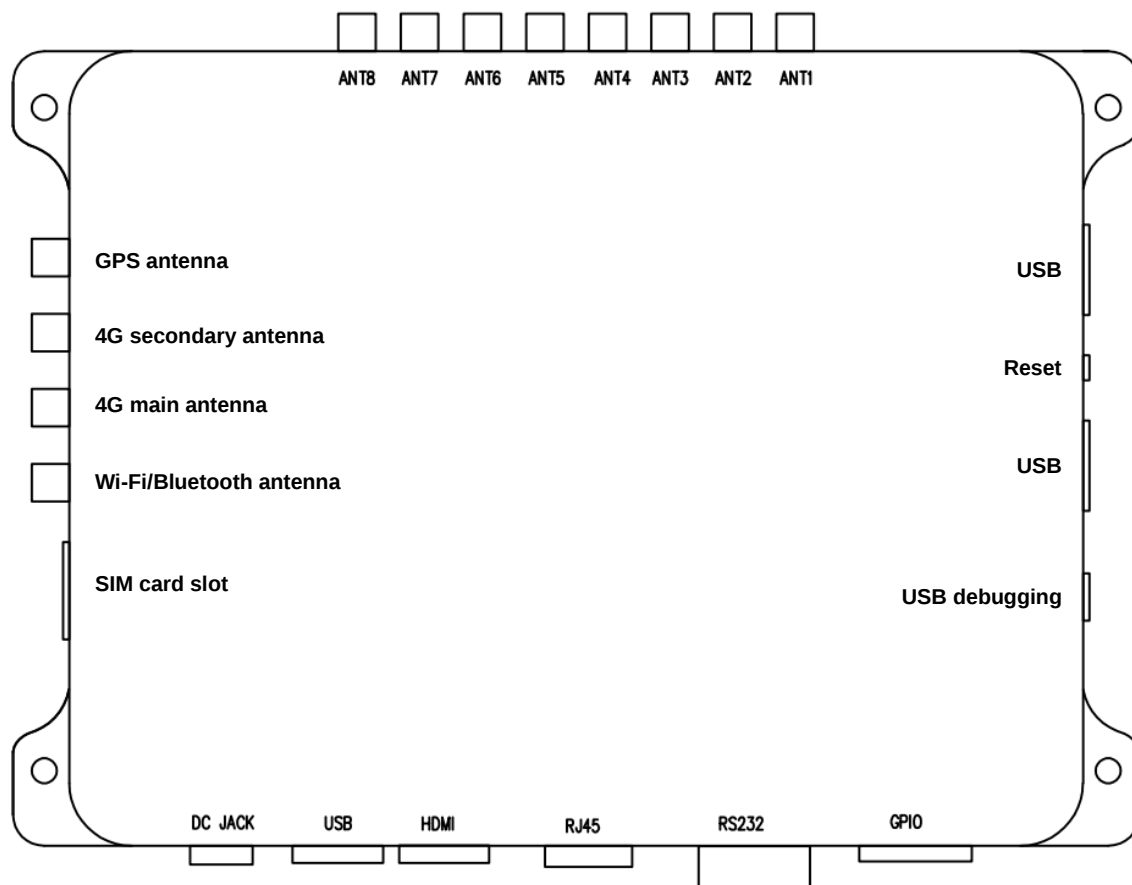
4. Wi-Fi/Bluetooth parameters

Parameter	Description
Wi-Fi	Wireless standards: 802.11 b/g/n/a Security: WPA WPA/WPA2 Output power: $P_{\max} < 20\text{dBm}$
Bluetooth	Bluetooth characteristics: V2.1+EDR, 3.0+HS, V4.0+HS Receiver sensitivity: GFSK -94dBm, DQPSK -93dBm, 8-DPSK -87.5dBm

5. GPS parameters

Parameter	Description
GPS	Frequency: 1575.42MHz Carrier to Noise Ratio(CNR): 41db/Hz Sensitivity: -163dBm

Interfaces



1. GPS antenna
2. 4G network secondary antenna
3. 4G network main antenna
4. Wi-Fi/Bluetooth antenna
5. 4G network SIM card slot

6. DC power supply jack

Pin	Symbol	Description
Central	PWR	+9V ~ +24V DC
Outer	GND	Ground

7. USB port

8. HDMI port

9. TCP/IP network port (RJ45)

10. RS232 serial COM port (DB9 Female)

Item	Symbol	Description
1	NC	Reserved
2	TXD	Serial COM transmitter
3	RXD	Serial COM receiver
4	NC	Reserved
5	GND	Signal ground
6	NC	Reserved
7	NC	Reserved
8	NC	Reserved
9	NC	Reserved

11. GPIO port

12. Debugging/download USB port

13. USB port

14. System reset button

15. USB port

16. SMA antenna ports (ANT1 ~ ANT8)