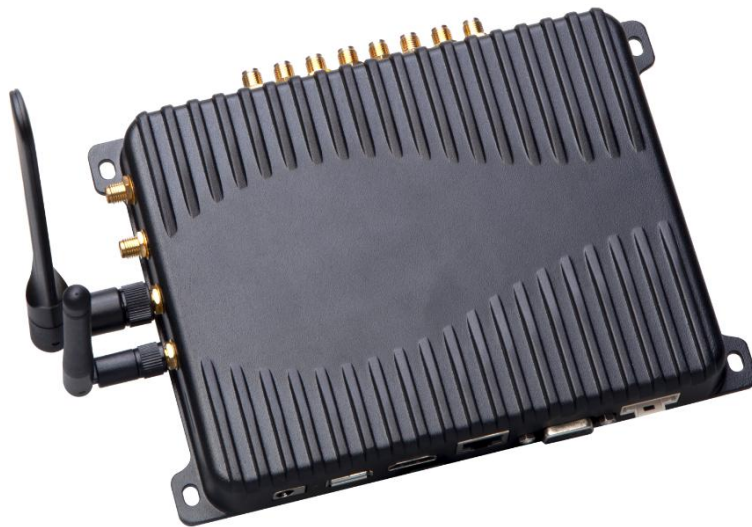


Ex10 Android OS Fixed Reader(8-Port)



Model: RRU7189AOS-SC

Size: 179 x 137.3 x 25 mm

GENERAL DESCRIPTION

RRUx189AOS-SC is designed on IMPINJ E710 chip with G2X ready. It maximizes anti-collision capability and embeds Android 10 OS platform with abundant peripheral interfaces. It is best choice for high-end RFID system in fields such as warehousing, logistics, apparel, production lines and retail.

FEATURES

- Independent intellectual property rights (IPR) protected design;
- 865~868MHz/902~928MHz frequency band(frequency customization optional);
- Impinj E710 based design, fully supports EPC CLASS1 G2 protocol tag;
- Capable for both Frequency Hopping Spread Spectrum (FHSS) transmission and fixed-frequency transmission;
- Maximum inventory speed* up to 1000pcs/s;
- SMA sockets for 8 external antennae, Supports RSSI ;
- 8 cores 64-bit ARM Cortex-a55 (UIS8581E) processor based, multi-network system intelligent LTE Cat4 module, 1.6G basic frequency, PowerVR Fentale GE8322 high-performance graphics engine and NEON multimedia processing engine;
- Android10.0 OS;
- Memories: 2GB LPDDR3 + 16GB EMMC / 4GB LPDDR3 + 64GB 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 100M / 10M auto-negotiation network ports;
- Supports RS232 interface, Supports USB 2.0 OTG;
- Low power consumption design, single +9V ~ 24V power supply;
- Supports multi-channel isolated GPIO ports (4-input and 4-output), 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

ITEM	SYMBOL	VALUE	UNIT
Supply Voltage	VCC	30	V
Operating Temperature	T _{OPR}	-20~+65	°C
Storage Temperature	T _{STR}	-40~+85	°C
Humidity	TS	<95% (+25°C)	%RH

● Electrical and Mechanical Specification

Under $T_A = 25^{\circ}\text{C}$, $V_{CC} = +13.6\text{V}$ unless otherwise specified.

1. Electrical characteristics

ITEM	SYMBOL	MIN	TYP	MAX	UNIT
Supply Voltage	VCC	9	13.6	24	V
Current Consumption	I _c		1.5	2.5	A
RF working frequency	Freq		865~868(ETSI) 902~928(FCC)		MHz
RF output frequency	Prf	5		33	dBm
Receiver sensitivity	Sr		-87(using E710)		dBm

2. Mobile communication parameters

PARAMETER	SYMBOL	DESCRIPTION
Frequency band	Fb	LTE-FDD: B1 B3 B5 B8 LTE-TDD: B34 B38 B39 B40 B41 WCDMA: B1 B8 GSM/EDGE: 900/1800 MHz
Transmission power	TPrf	Class 4(2W) Class 1(1W) Class 3(0.25W):Pmax< 23dBm
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

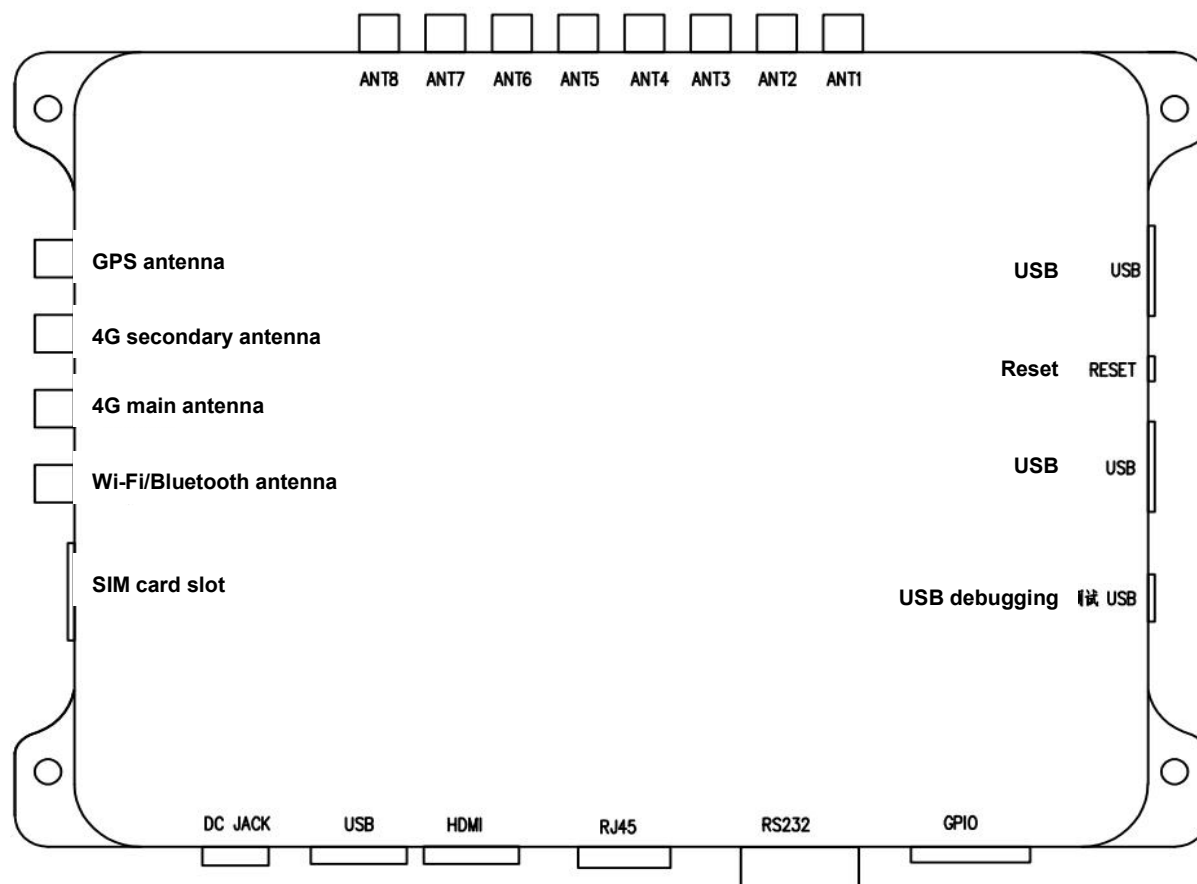
3. Wi-Fi / Bluetooth parameters

PARAMETER	DESCRIPTION
Wi-Fi	Wireless standards: 2.4/5GHz 802.11 b/g/n/a Security: WFA WPA/WPA2 Output power: Pmax <20dBm
Bluetooth	Bluetooth characteristics: V2.1+EDR, 3.0+HS, V4.0+HS Receiver sensitivity: GFSK -94dBm, DQPSK -93dBm, 8-DPSK -87.5dBm

4. GPS parameters

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

INTERFACE



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. USB port
7. HDMI port
8. TCP/IP network port (RJ45)
9. 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

10. DC power supply jack

PIN	SYMBOL	DESCRIPTION
Central	PWR	+9V ~ +24V DC
Outer	GND	Ground

11. GPIO port

12. Debugging / download USB port

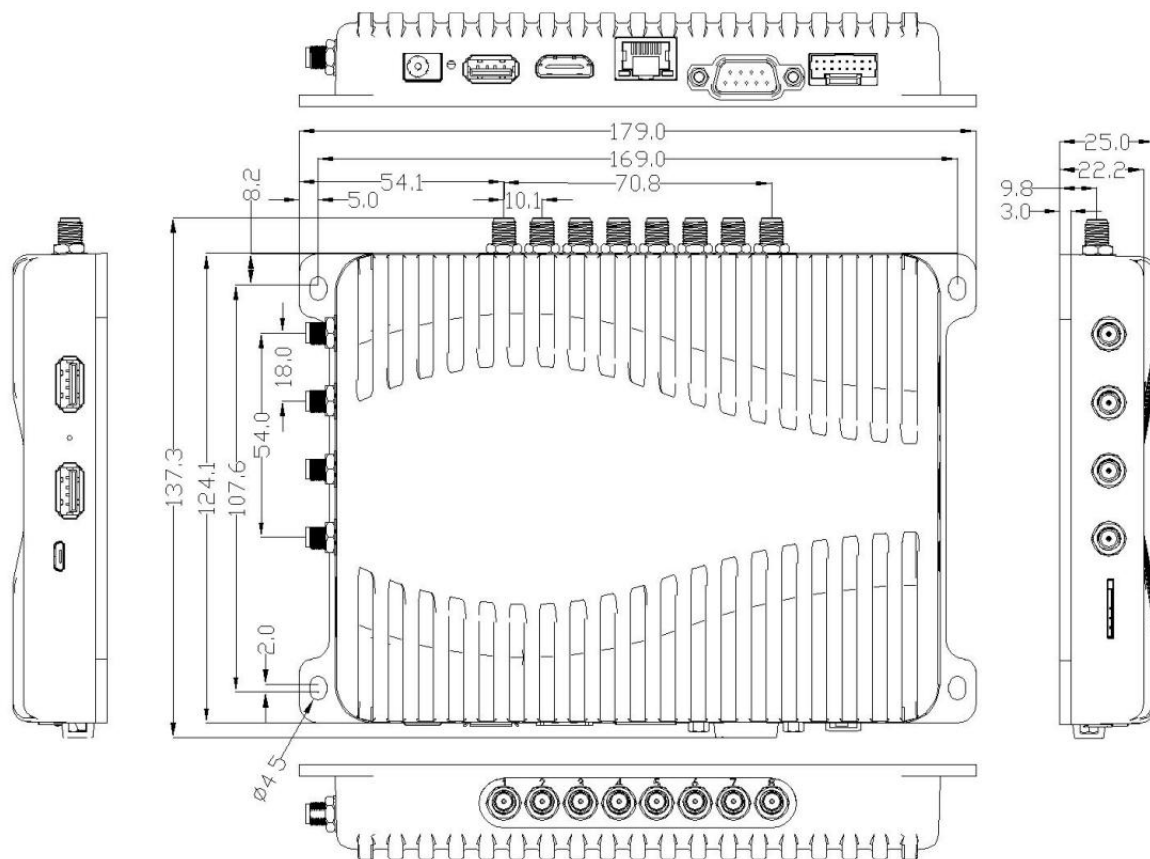
13. USB port

14. System reset button

15. USB port

16. SMA antenna ports (ANT1 ~ ANT8)

MECHANICAL DATA (UNIT:mm)



Remark:

- Specifications are subject to change, please pay attention to our latest one.
- Shenzhen RoyalRay Science and Technology Co., Ltd. reserves the right to the final interpretation of the above terms.