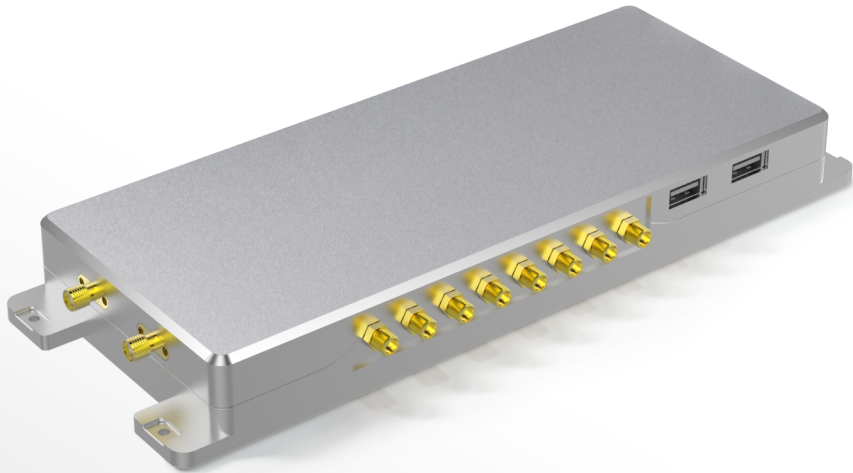


Spider AI

8-Port UHF RFID Fixed Reader



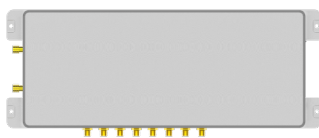
AI computing platform based on independent NPU

comprehensively improves the efficiency of face recognition, image processing and other algorithms.

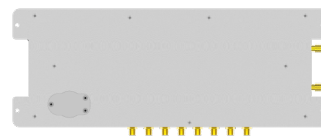
1. Advantages

Feature	Description
CPU	Hexa-core 64 bit processor (Dual-core Cortex-A72+Quad-core Cortex-A53) Frequency is up to 1.8GHz
GPU	Mali-T860MP4 GPU Supports OpenGL ES1.1/2.0/3.0/3.1, OpenVG1.1, OpenCL, DX11
NPU	1G independent RAM, computing power up to 3.0TOPs Supports multiple face recognition algorithms Supports TensorFlow/Caffe Model
High-end UHF RFID Engine	Equipped with RodinBell self-developed UHF module based on Impinj R2000 chip, offering the best performance and excellent multi-tag identification ability in the industry.
Rich Communication Interface	Supports LTE data service, bluetooth 5.0, 2.4G/ 5G WIFI Supports RS232 & RS485 Supports CAN Bus Supports USB3.0
Gyroscope	Nine axis (Acceleration+Gyroscope+Magnetometer)
Camera Interface	2 USB3.0 (Type-A) camera interfaces Supports dual 4K HD cameras input
HDMI	1 HDMI2.0 (Type-A) interface Supports 4K/ 60fps output
Classy Industrial Design	Compact and artistic design with aluminum material.

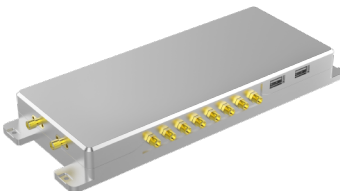
2. Product view



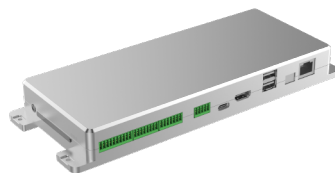
Top view



Bottom view



Side view (front)

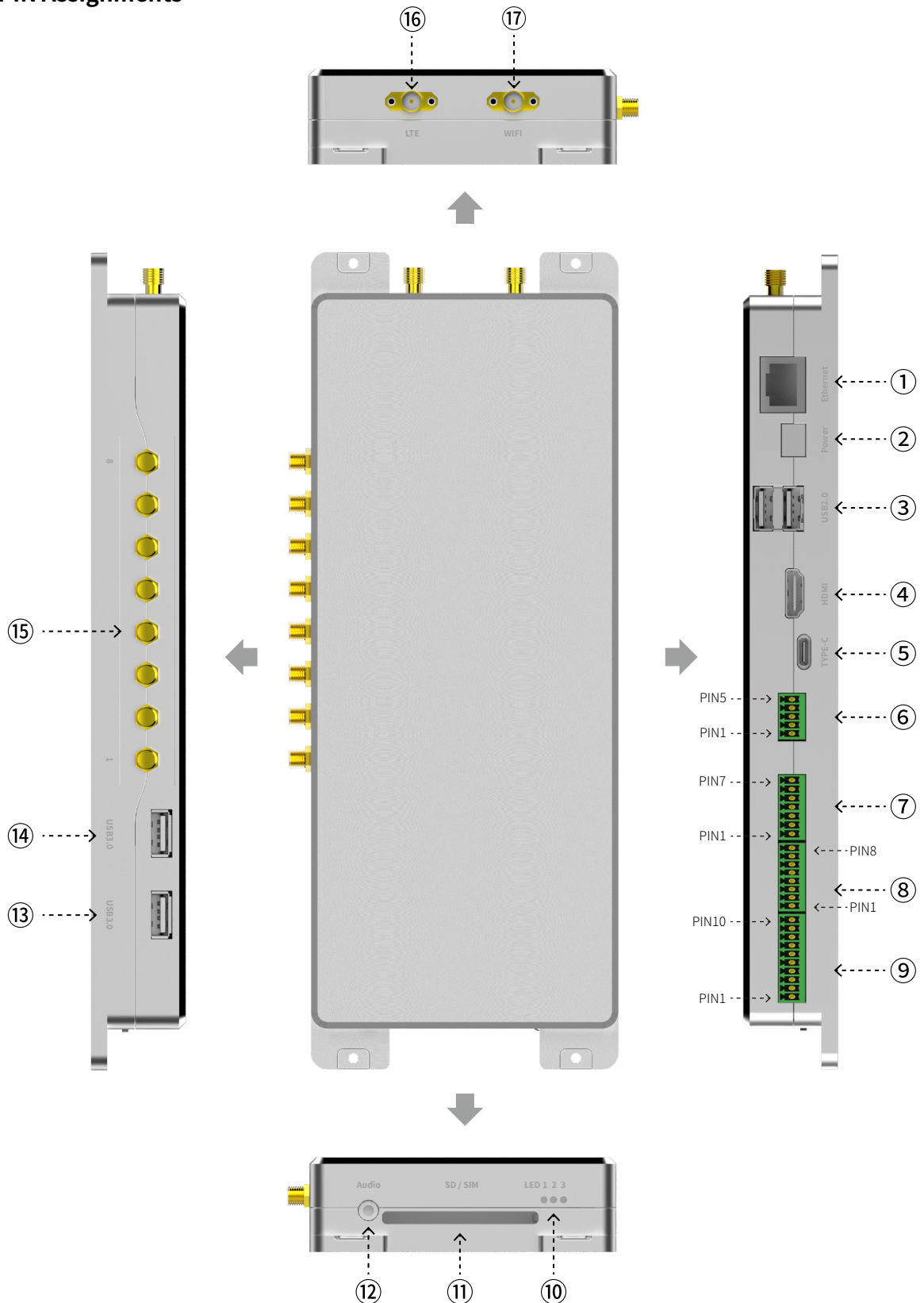


Side view (back)

3. Electrical Parameters

Mechanical Parameters	
Material	Aluminum body
Dimensions	250(L)*94(W)*29(H)mm
Weight	650g
System Characteristics	
Operation System	Android 9.0
CPU	Hexa-core 64 bit processor (Dual-core Cortex-A72+Quad-core Cortex-A53) Frequency is up to 1.8GHz
GPU	Mali-T860MP4 GPU Supports OpenGL ES1.1/ 2.0/ 3.0/ 3.1, OpenVG1.1, OpenCL, DX11
NPU	1G independent RAM Computing power up to 3.0TOPs Supports multiple face recognition algorithms Supports TensorFlow/Caffe Model
RAM+ROM	2G+32G 4G+64G Optional ✓
Input Voltage	DC 12V~24V
RFID Antenna Interface	8 SMA female antenna interfaces
GPIO	4 inputs, 4 outputs Up to 5Kv isolation voltage
HDMI	1 HDMI2.0 (Type-A) interface Supports 4K/ 60fps output
Camera Interface	2 USB3.0 (Type-A) cameras interfaces Supports dual 4K HD cameras input
Gyroscope	Nine axis (Acceleration+Gyroscope+Magnetometer)
Audio	1 Stereo audio output jack
SIM Card	1 Micro SIM slot
PSAM	1 Micro PSAM slot
SD Card	1 Micro SD3.0 slot
Online Upgrade	Supported
UHF	
Engine	Based on Impinj Indy R2000 chip
Protocol	EPC Global UHF Class 1 Gen 2/ ISO 18000-6C/ISO 18000-6B
Frequency	902~928MHz 865~868MHz Optional ✓
Output Power	0~33dBm
Peak Inventory Speed	>700 tags/s
Output Power Precision	+/- 1dB
Output Power Flatness	+/- 0.2dB
Sensitivity	< -85dBm
Tag RSSI	Supported
Antenna Detector	Supported
Supported Regions	US, Canada and other regions Following U.S. FCC Europe and other regions following ETSI EN 302 208 China Korea Malaysia
Communication Mode	
WIFI	SMA female, supports 2.4G/ 5G WIFI
LTE	Supports LTE data service Optional ✓
Bluetooth	Bluetooth 5.0
Ethernet	10/ 100/ 1000Mbps ethernet
USB	2 USB2.0 Host (Type-A) interfaces 2 USB3.0 Host (Type-A) interfaces 1 USB3.0 OTG (Type-C) interface
Serial Interface	4 RS232 interfaces, 1 RS485 interface
Industrial Bus	CAN Bus
Application Environment	
Operating Temp	-20°C~+65°C
Storage Temp	-40°C~+85°C
Humidity	5%RH-95%RH (non-condensing)
Protection Grade	IP53
Heat Dissipation	Air cooling

4. PIN Assignments



PIN Assignment			
PIN ID	Function	Description	
①	Ethernet	10/100/1000Mbps ethernet	
②	POWER	DC 12V ~ 24V	
③	USB	2 USB2.0 Host (TypeA) interfaces	
⑬⑭		2 USB3.0 Host (Type-A) interfaces	
④	HDMI	1 HDMI2.0 (Type-A) interface, supports 4K/ 60fps output	
⑤	Type-C	1 USB3.0 OTG (Type-C) interface	
⑥	RS232	1. RTS1	2. CTS
		3. TX1	4. RX1
		5. GND	
⑦		1. TX2	2. RX2
		3. TX3	4. RX3
		5. TX4	6. RX4
		7.GND	
⑧	CAN Bus	1. GND (CAN)	2. CANH
		3. CANL	
	RS485	1. GDN (485)	2. 485R+
		3. 485R-	4. 485T-
		5. 485T+	
⑨	GPIO	1. IN4	2. IN3
		3. IN2	4. IN1
		5. OUT4	6. OUT3
		7. OUT2	8. OUT1
		9. GND (GPIO)	10. 12V
⑩	Indicator Light	3 LED customized indicators	
⑪	SD/ SIM	1 Micro SD3.0 slot/ 1 Micro SIM slot	
⑫	Audio	1 Stereo audio output jack	
⑮	UHF RFID Connector	SMA female	
⑯	LTE	SMA female, supports LTE data service	
⑰	WIFI	SMA female, supports 2.4G/ 5G WIFI	