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# RK2668C-Technical Specification

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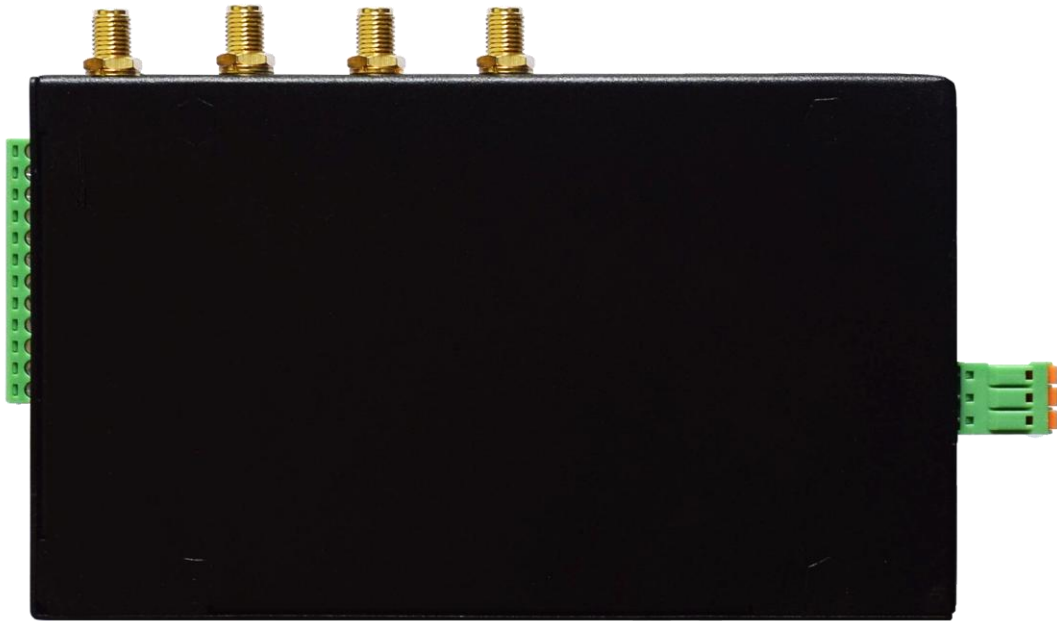
# 1.Parameter List

Product Specifications	
Model Description	RK2668C Standard type(DDR2G+EMMC16G) RK2668C-WB Standard type with Dual-band wifi Bluetooth RK2668C-C-WB Standard type with CAN2.0*2 RK2668C Standard type with Full function (Antenna and Power) <b>Note: This product also supports 4G and GPS BeiDou function, such as the need to practice customer service to ask the detailed configuration and the corresponding price</b>
CPU	Rock chip RK3568 2GHz Quad-Core Processor
GPU	ARM Mail-G52 2EE Quad-core GPU
NPU	0.8Tops@INT8 Performance with integrated high-performance AI gas pedal RKNN NPU
Multimedia	Support 4K VP9 and 4K 10bits H265/H264 video decoding, up to 60fps 1080P multi-format video decoding (WMV, MPEG-1/2/4, VP8) 1080P video encoding, support H.264
Memory	LPDDR4 Optional : 2GB
Local Storage	EMMC Flash Optional :16GB
Supported Operating Systems	Ubuntu 18.04 / Android 11
Extended memory	TF Card
Ethernet	Wiredx2 10/100/1000M
WIFI	2.4GHz/5.8GHz dual-band WiFi with 802.11a/b/g/n/ac protocol support (Optional)
Bluetooth	Bluetooth 4.2 (Optional)
USB	USB3.0 x1, USB2.0 x3, USB type-C x1 (OTG)
HDMI Output	x1
Audio I/O	line out x1 and mic x1, 3.5mm Headphone jack
UART	RS232/TTL x 2 RS232 x 1 RS485 x 2

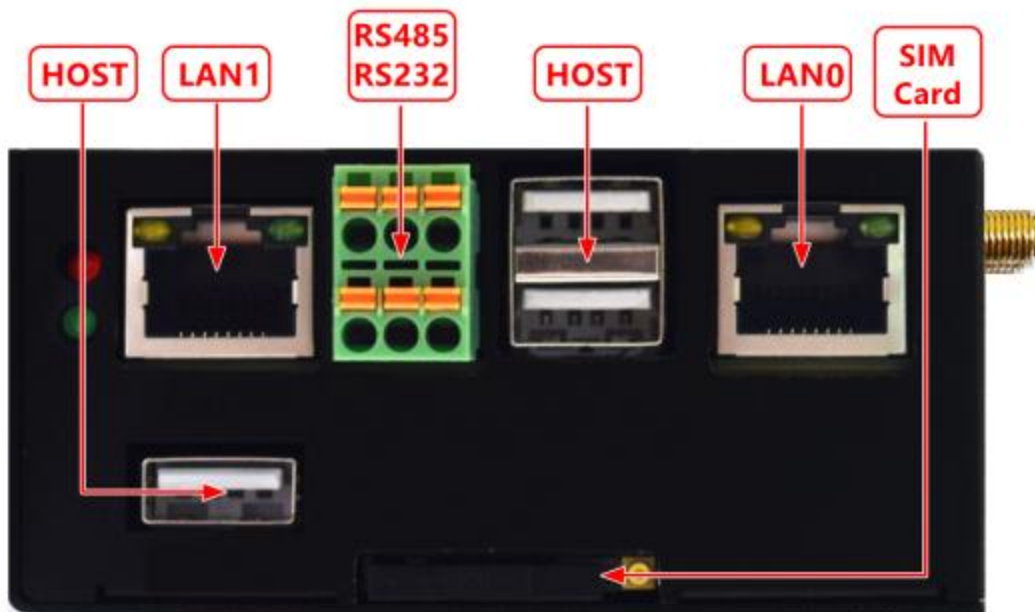
	CAN x 2(Optional)
RTC	Real Time Clock
4G	All-net Access (Optional)
GPS	GPS, Beidou(Optional)
Extended Port	bi-directional x 8 I/O; +/- 15KV ESD
Power	9~36V ; <15W ( 12V or 24V recommended)
Operating temperature	-20-60°C
<b>Product Size</b>	
Overall size	142×84×40.0 mm

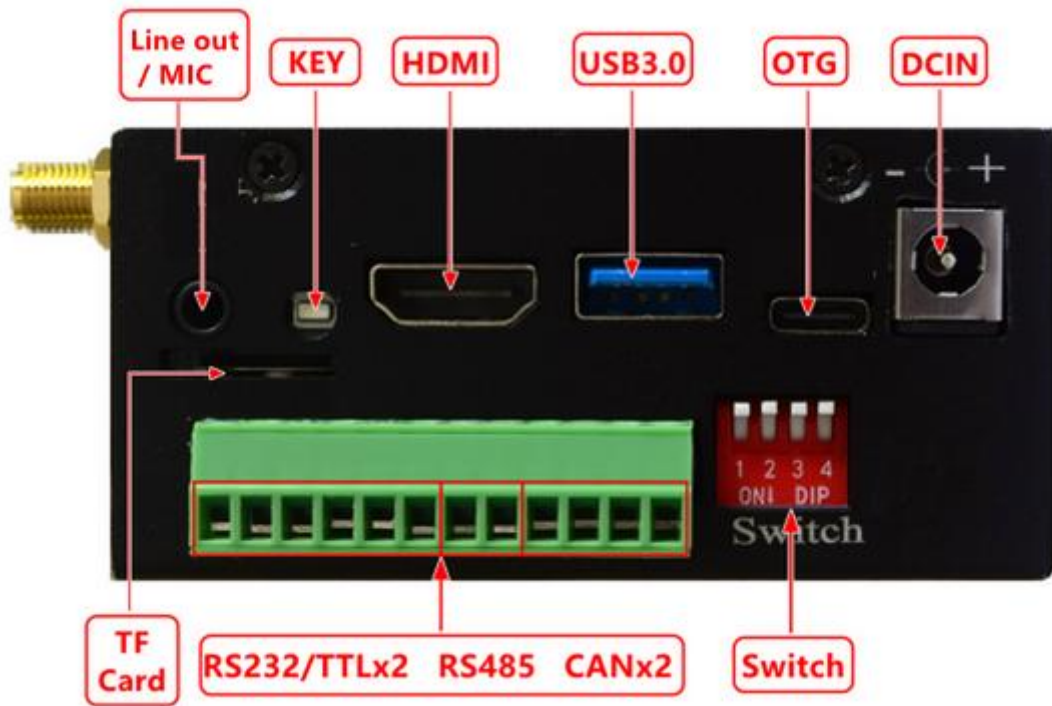
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## 2.Appearance



Front view





## 3. Hardware Interfaces

### 3.1 Performance Overview

#### ◆ Electrical performance parameters

Properties	Conditions	Min	TYP	Max	Unit
Power Voltage	—	9	12	36	V
Operation Current	VCC=+12V, running test game load application	—	450	—	mA

#### ◆ Operating environment and reliability parameters

Properties	Conditions	Min	TYP	Max	Unit
Working Temperature	60%RH at 12V voltage	-20	25	60	°C
Storage Temperature	—	-20	25	70	°C
Working Humidity	25°C	10%	60%	90%	RH
Protective Paint	—	—	None	—	—
ESD protection Level	Class 3				

#### ◆ Interface performance parameters

Properties	Conditions	Min	TYP	Max	Unit
UART RS232-0 Baud rate	User set	300	—	115200	bps
Output Voltage	Output 1	—	-5.0	—	V
	Output 0	—	5.0	—	V
Input Voltage	Input 1	—	-5.0	—	V
	Input 0	—	5.0	—	V
UART RS232-4、	User set	300	—	115200	bps

<b>RS232-7</b>					
<b>Baud rate</b>					
<b>Output Voltage</b>	Output 1	—	0	—	V
	Output 0	—	3.3	—	V
<b>Input Voltage</b>	Input 1	—	0	—	V
	Input 0	—	3.3	—	V
<b>UART TTL-4, TTL-7</b>					
<b>Baud rate</b>	User set	300	—	115200	bps
<b>Output Voltage</b>	Output 1	—	3.3	—	V
	Output 0	—	0	—	V
<b>Input Voltage</b>	Input 1	—	3.3	—	V
	Input 0	—	0	—	V
<b>UART 485</b>					
<b>Baud rate</b>	User set	300	—	57600	bps
<b>Serial port level V_AB</b>	Output 1	2.5	5.0	—	V
	Output 0	—	-5.0	-2.5	V
<b>Serial port level V_AB</b>	Input 1	0	2.5	—	V
	Input 0	—	-2.5	-0.2	V

### 3.2 Power connector

- Provide 1 kind of power supply interface for the inner diameter of 2.0mm DC power supply holder, can access 9V ~ 36V DC power supply.

a) Use DC-044A (2.0) horizontal power supply holder for power interface.



### 3.3 Extension interface 1

- Provide 2 RS232 ports, 1 RS485 port and 2 CAN function interfaces, connected by 12PIN 3.5mm pitch single layer Phoenix terminals.



- a) Provide 2 RS232 channels, RS232-4 and RS232-7 respectively, which can be switched to TTL function by Switch switch.

Terminal: KF2EDGK-3.5-12P		
Pin	Description	Equipment name
1	TX4	/dev/ttyS4
2	RX4	
3	GND	
4	TX7	/dev/ttyS7
5	RX7	
6	GND	

**Note: Provide 2-way TTL level interface shared with RS232-4 and RS232-7, switchable via Switch 1.**

- b) Provide 1 RS485 for RS485-9 interface.

Terminal: KF2EDGK-3.5-12P		
Pin	Description	Equipment name
7	RS485_A9	/dev/ttyS9
8	RS485_B9	

**Note: The RS485-9 provides a 120R termination resistor, which is controlled by Switch 2 for access or not.**

- c) Provide 2 CAN channels, CAN0 and CAN1 interfaces respectively.



Terminal: KF2EDGK-3.5-12P		
Pin	Description	Equipment name
9	CAN1_H	—
10	CAN1_L	
11	CAN0_H	—
12	CAN0_L	

**Note:**A 120R termination resistor is provided for each of the 2 CANs. CAN1 is controlled by Switch switch 3 to access or not, and CAN0 is controlled by Switch switch 4 to access or not.

- **Switch Dipswitch**

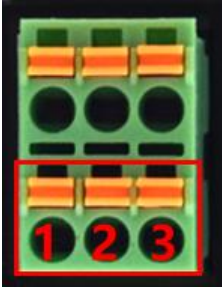


Pin	ON	OFF
1	Serial port 4/7 using TTL mode	Serial port 4/7 using RS232 mode
2	485-9 with 120R Termination Resistor	485-9 without termination resistor
3	CAN1 with 120R termination resistor	CAN1 without termination resistor
4	CAN0 with 120R terminating resistor	CAN0 without termination resistor

## 3.4 Extension interface 2

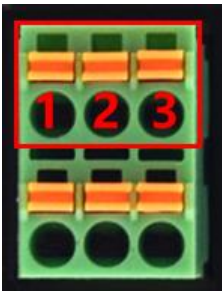
- Provide 1 way RS232 and 1 way RS485 port, connected by 6PIN 3.5mm pitch double layer Phoenix terminal block.

a) Provide 1 RS232 port as RS232-0.



Terminal: KF2EDGKNH-3.5-6P		
Pin	Description	Equipment name
1	RX0	/dev/ttyS0
2	GND	
3	TX0	

b) Provide 1 RS485 for RS485-3 interface.



Terminal: KF2EDGKNH-3.5-6P		
Pin	Description	Equipment name
1	RS485_B3	/dev/ttyS3
2	GND	
3	RS485_A3	

## 3.5 GPIO Interface

- Connected via a 9PIN 2.54mm pitch terminal block.



Terminal: XH2.54-9PIN

Pin	Description	GPIO Number
1	GND	—
2	IO1	8
3	IO2	15
4	IO3	33
5	IO4	32
6	IO5	36
7	IO6	40
8	IO7	41
9	IO8	42

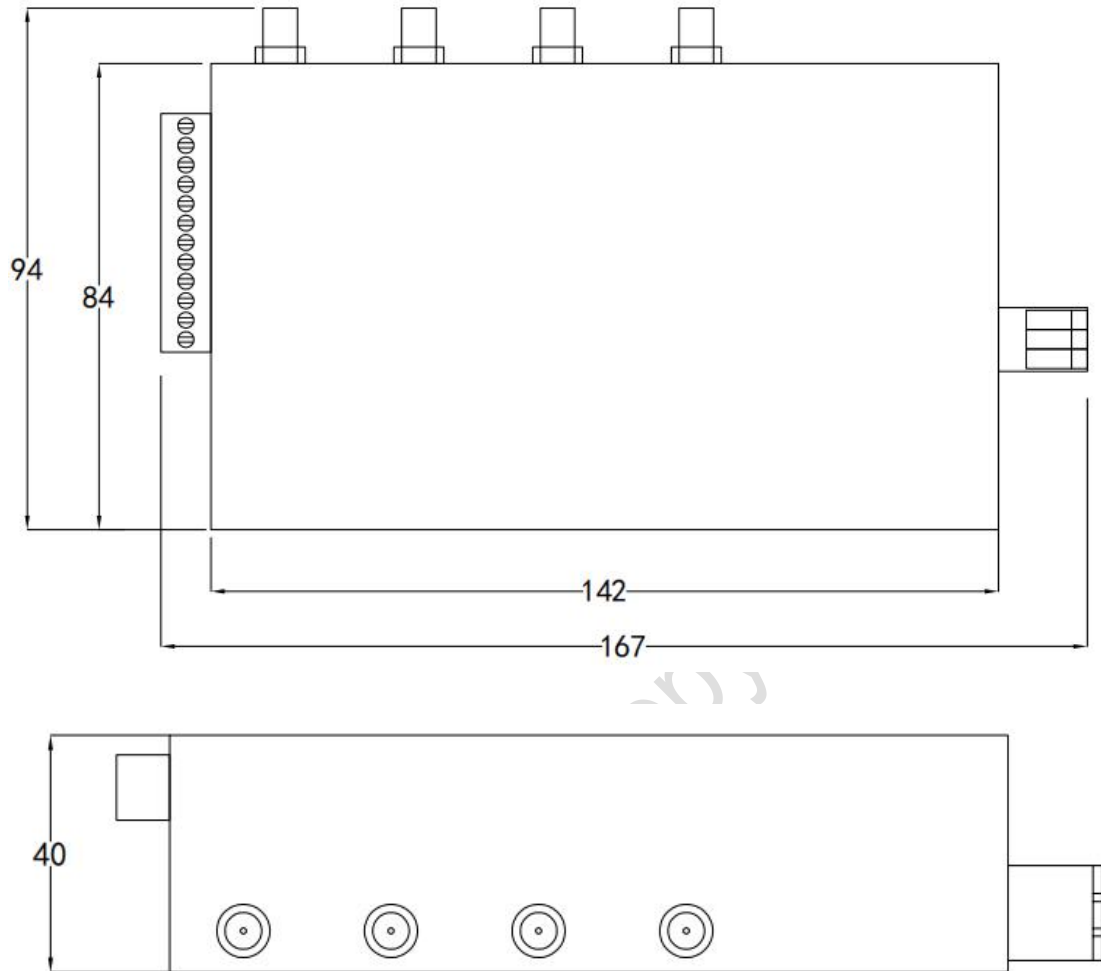
### 3.6 LED Indicator light

- Provide 2 LED indicators, controlled by 2 GPIOs.

Pin	Description	GPIO Number
1	Green Light	95
2	Red Light	60

## 4.Dimension drawing

### 4.1 External dimensions

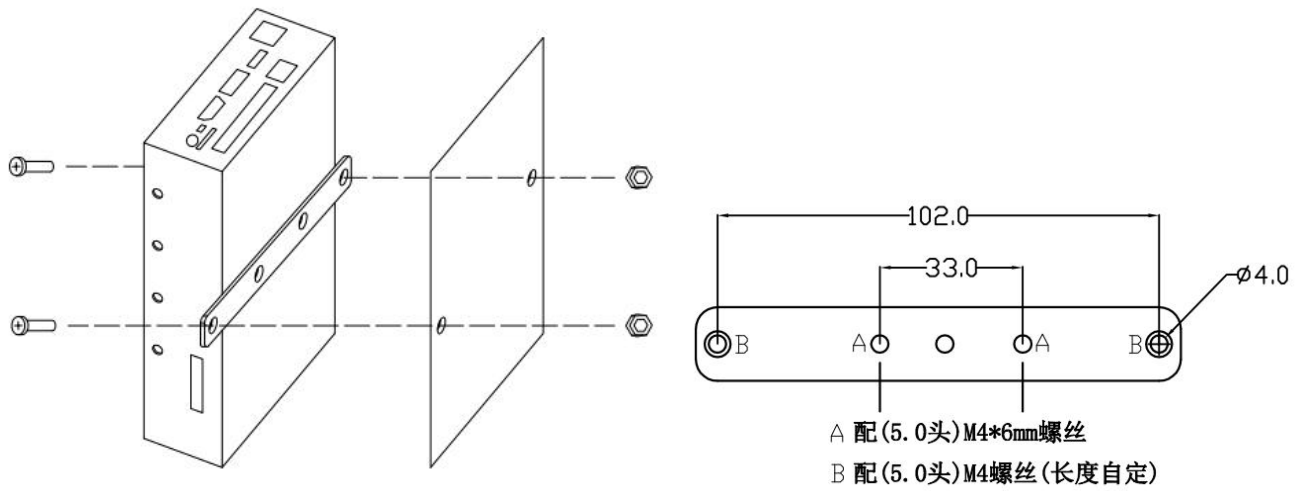


1. 单位: MM

2. 未注公差 $\pm 0.3\text{mm}$

## 4.2 Installation method

### Installation method 1:



### Installation method 2:

