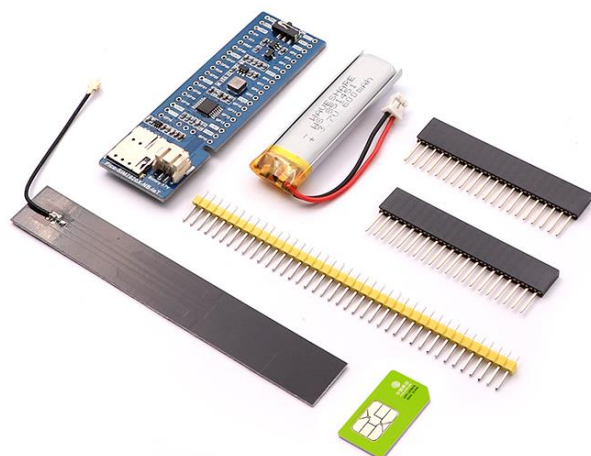


SIM7020E NB-IoT Module for Raspberry Pi Pico



Description:

The Pico-SIM7020E-NB-IoT is an NB-IoT (Narrow Band-Internet of Things) module designed for Raspberry Pi Pico. It supports multiple NB-IoT frequency band, can be controlled via serial AT commands, and supports communication protocols like HTTP/MQTT/LWM2M/COAP, etc. Due to the advantages of low delay, low power, low cost, and wide coverage, it is the ideal choice for IoT applications such as intelligent instruments, asset tracking, remote monitoring, and so on.

Features:

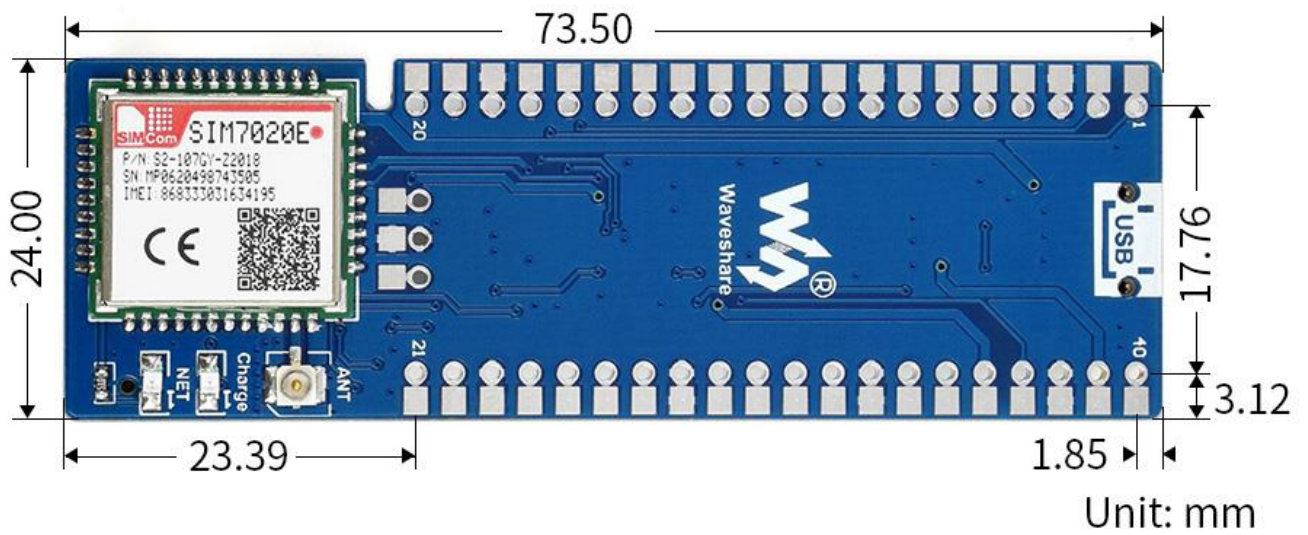
- Standard Raspberry Pi Pico header, supports Raspberry Pi Pico series boards.
- UART communication, serial AT commands control, multiple communication protocols support, multiple cloud platform support.
- Integrates 3.7V Li-po battery connector and recharge circuit, allows being powered from external rechargeable Li-po battery, or recharging it in turn.
- 2x LED indicators, for monitoring the module operating status.
- Onboard Nano SIM card slot for NB-IoT specific card.
- Comes with development resources and manual (MicroPython examples).

Specifications:

Communication Interface	UART
UART Baud Rate	115200 bps
WI-FI Standard	IEEE 802.11b/g/n
Frequency Range	2400 ~ 2483.5 MHz
WI- FI Operating Mode	WiFi STA, WiFi AP, WiFi STA+AP
Antenna	PCB antenna
Operating Voltage	3.3 V
Operating Temperature	-40°C ~ 85°C
Dimensions	58 × 25 mm

	SIM868	SIM7080G	SIM7020E
Applicable Region	most countries/regions	global applicable	Asia, Europe, Africa, Australia
Frequency Band			
NB-IoT	N/A	B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B25/B26/B28/B66/B71/B85	LTE-FDD: B1/B3/B5/B8/B20/B28
Cat-M	N/A	B1/B2/B3/B4/B5/B8/B12/B13/B14/B18/B19/B20/B25/B26/B27/B28/B66/B85	N/A
2G	GSM 850/EGSM 900/DCS 1800/PCS 1900 MHz	N/A	N/A
GNSS	GPS, GLONASS, BeiDou	GPS, GLONASS, BeiDou, Galileo	N/A
Data Rate			
NB-IoT(Kbps)	-	136(DL)/150(UL)	26.15(DL)/62.5(UL)
Cat-M(Kbps)	-	589(DL)/1119(UL)	-
2G(Kbps)	85.6(DL)/85.6(UL)	-	-
Others			
Communication Protocol	TCP/UDP/HTTP/SSL/FTP/POP3/SMTP/MQTT...	TCP/UDP/HTTP/HTTPS/TLS/DTLS/PING/LWM2M/COAP/MQTT...	
Power Supply	External Li-po battery OR Raspberry Pi Pico USB port		
Battery Interface	3.7V ~ 4.2V		
Logic Level	3.3V		
Module Standalone Current	Idle mode: 12mA	Idle mode: 10mA	Idle mode: 5.6mA
	Sleep mode: 0.65mA	Sleep mode: 1.2mA	Sleep mode: 0.4mA
	Backup mode: 8uA	PSM mode: 3.2uA	PSM mode: 3.4uA
Audio Input/Output	onboard microphone, with speaker header	N/A	
Indicator	NET: network indicator Charge: recharge indicator		
Switch	Li-po battery and USB power supply switch	Li-po battery power supply switch	
SIM Card	2G SIM card (1.8V / 3V)	NB-IoT / Cat-M card (1.8V ONLY)	NB card (1.8V / 3V)
Antenna Connector	LTE, GNSS, BT	LTE, GNSS	LTE
Dimensions	76.15 × 24.00mm	73.5 × 24.00mm	

Outline Dimensions:



Made in China