



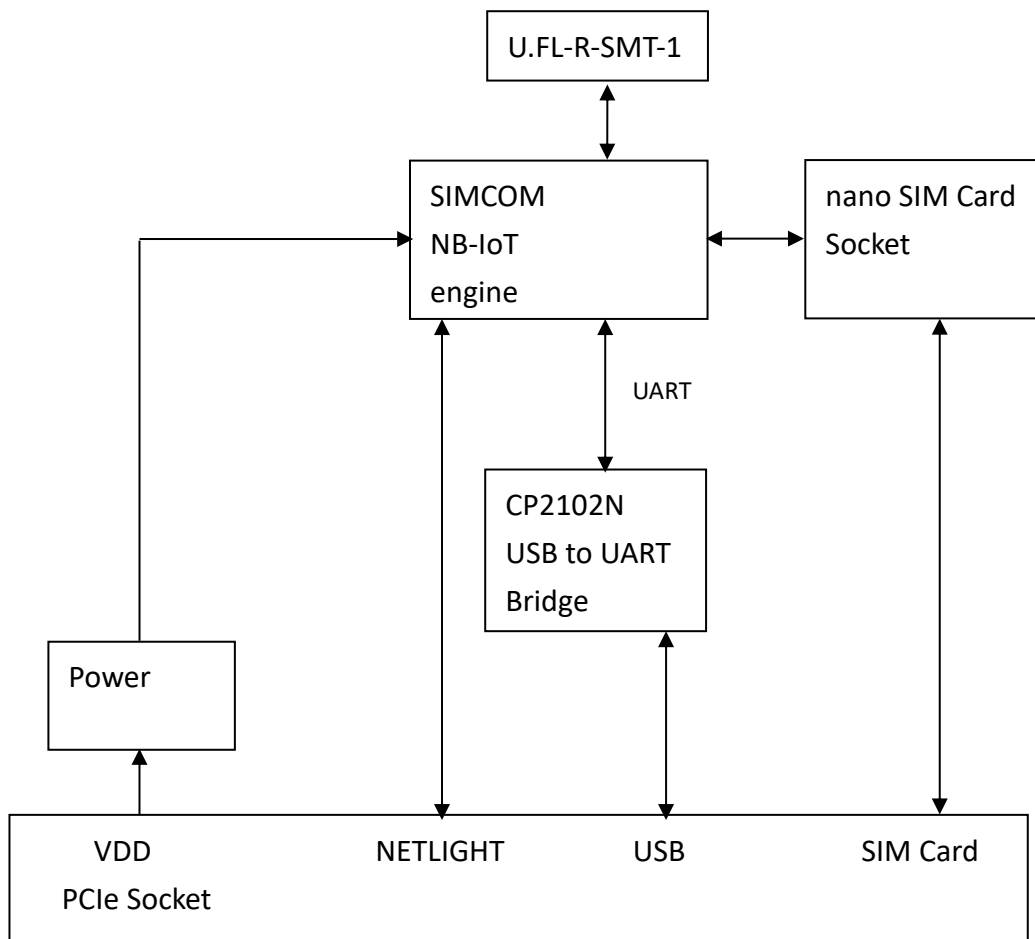
## PRODUCT DESCRIPTION

The RYN020E is based on the PCI Express Mini Card standard with a USB 2.0 interface.

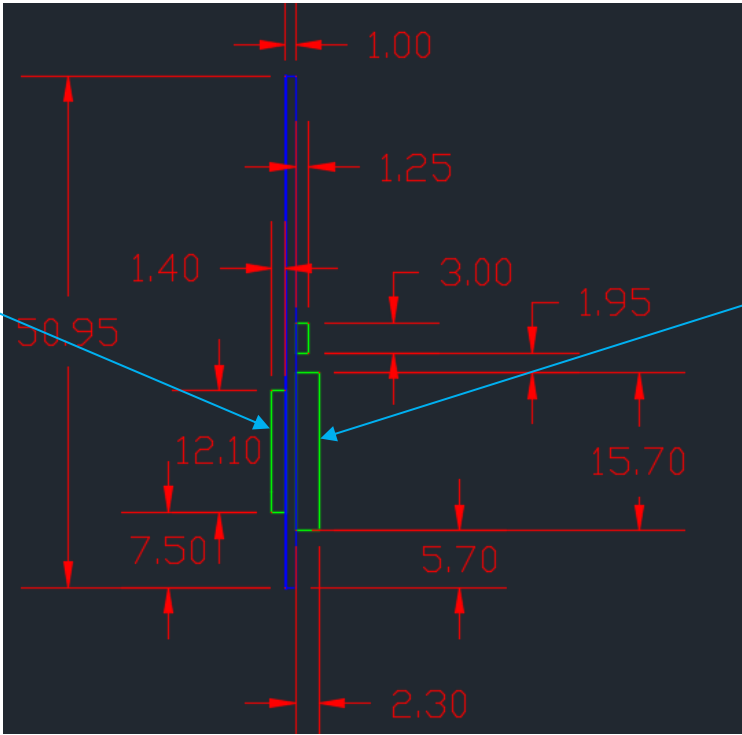
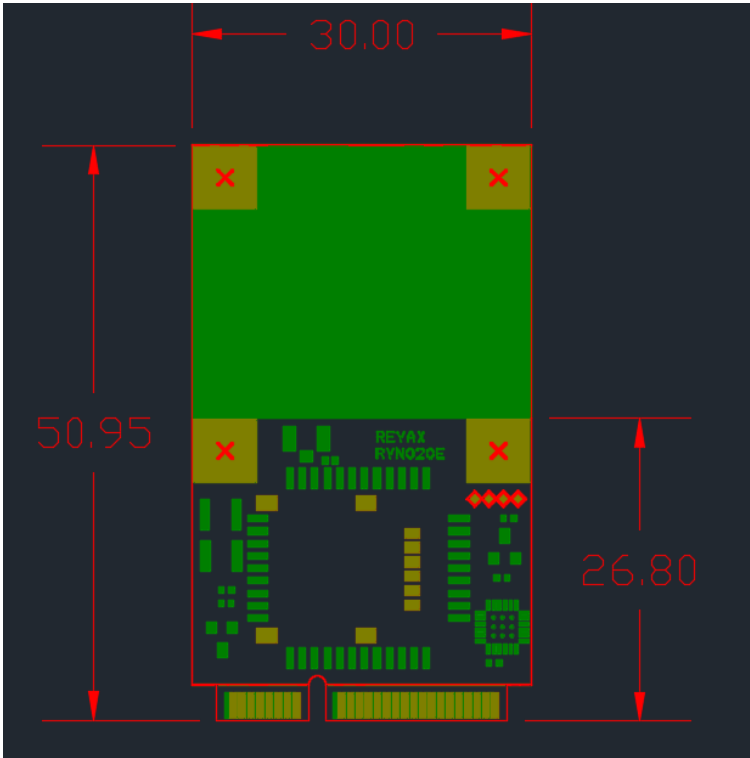
## FEATURES

- SIMCOM SIM7020E NB-IoT Engine.
- Bands = 1, 3, 5, 8, 20, 28.
- Build-in a nano SIM card holder.
- Standard mini PCIe full-size 30mm\*50.95mm / half-size 30mm\*26.8mm.
- Operating temperature: -40 to +85°C.

## BLOCK DIAGRAM



# DIMENSIONS

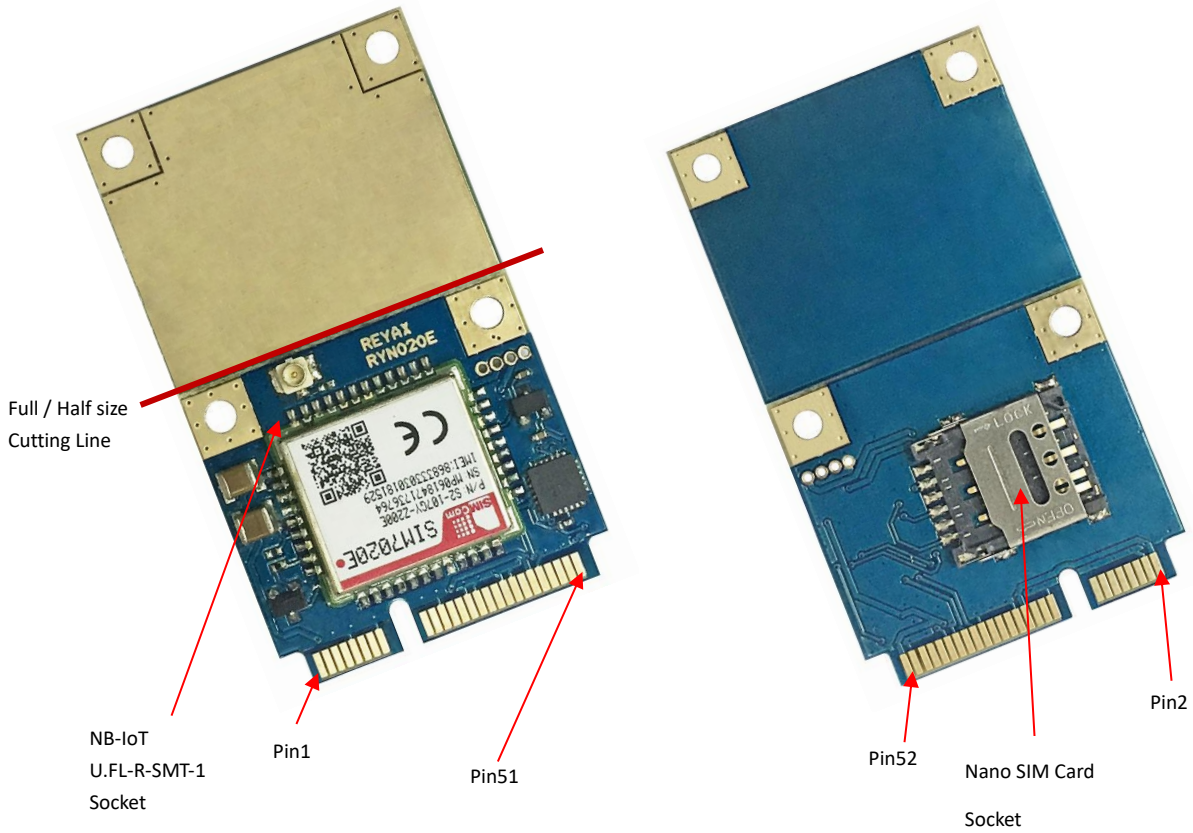


nano SIM card holder

NB-IoT Engine

unit: mm  
PCB Thickness 1mm  
Tolerance  $\pm 0.5$  mm

# PIN CONNECTOR



## PIN DESCRIPTION

Pin	Name	Input/Output	Description
1	NC		Not connected
2	VCC_3V3	Power	Power Input
3	NC		Not connected
4	GND		Power Ground
5	NC		Not connected
6	NC		Not connected
7	NC		Not connected
8	NC		Not connected
9	GND		Power Ground
10	NC		Not connected
11	NC		Not connected
12	NC		Not connected
13	NC		Not connected
14	NC		Not connected
15	GND		Power Ground
16	NC		Not connected
17	NC		Not connected
18	GND		Power Ground
19	NC		Not connected
20	NC		Not connected
21	GND		Power Ground
22	NC		Not connected
23	NC		Not connected
24	VCC_3V3	Power	Power Input
25	NC		Not connected
26	GND		Power Ground
27	GND		Power Ground
28	NC		Not connected
29	GND		Power Ground
30	NC		Not connected
31	NC		Not connected
32	NC		Not connected
33	NC		Not connected
34	GND		Power Ground

35	GND		Power Ground
36	USB_DN	Input/Output	Not connected
37	GND		Power Ground
38	USB_DP	Input/Output	Not connected
39	VCC_3V3	Power	Power Input
40	GND		Power Ground
41	VCC_3V3	Power	Power Input
42	NC		Not connected
43	GND		Power Ground
44	NC		Not connected
45	NC		Not connected
46	NC		Not connected
47	NC		Not connected
48	NC		Not connected
49	NC		Not connected
50	GND		Power Ground
51	NC		Not connected
52	VCC_3V3	Power	Power Input

## SPECIFICATION

Item	Min.	Typ	Max.	Unit	Description
<b>SIMCOM SIM7020E NB-IoT</b>					
FDD bands		6		Ch.	1, 3, 5, 8, 20, 28
Downlink Speed		26.15		kb/s	Cat NB1 Half-duplex
Uplink Speed		62.5		kb/s	Cat NB1 Half-duplex
Operating Voltage Power Input VCC_3V3	3.0	3.3	3.6	V	
Current			500	mA	
Baud rate		115200		bps	
USB Interface					V2.0
Operating temperature	-40		+85	℃	
Antenna Connector		1			U.FL-R-SMT-1
Weight		6		g	

## DRIVER AND CONFIGURATION TOOLS

Complete software along with host driver for various operating systems such as Windows, WinCE, Linux, Android, Mac OSX, please download the driver of CP2102N from [www.silabs.com](http://www.silabs.com)

The free Hyper-terminal software for Windows, Access Port, please download by the following link.  
<http://www.sudt.com/en/ap/>