SPECIFICATION

MODEL:Gateway-GTW361

Confirmation

REVISION HISTORY					
VERSION	DATE	BOARD ID	PAGE	DESCRIPTION	AUTHOR
V1.0	2022-08-05	RCB220419_V1.0	11	specification	

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CONTENT

1.General Description 1

2.Product Pictures 2

3. Board View 3

4. Hardware block diagram 4

5. Features 5

6.Extension I/O definition 7

7.Precautions for use 8

1.General Description

GTW361 adopts NXP i.MX6ULLSoC solution. The SoC frequency is 792MHz~900MHz, with 512MB（256MB/1GB optional）memory， 8GB eMMC Flash (4GB optional), and the product can be configured as required. GTW361 has a 10/100M LAN port, Wifi 2.4G / 5G dual-band and LTE functions. It can expand ZigBee, Z-Wave, BLE, and other wireless functions by adding Geniatech standard IoT daughter boards, can also support LoRa remote transmission protocol,which is very convenient and flexible for different applications. GTW361 is widely used in industrial 4.0 and industrial IoT and smart homes, smart city and other fields. Because SOC is from NXP , the industrial temperature range is wide, and it is also used in some industrial fields. The product can be customized on hardware functions, software kernel,case and packaging .

Using NXP i.MX6ULL scheme, the frequency up to 792MHz~900MHz.

512MB（256MB/1GB optional）memory , 8GB eMMC Flash (4GB optional)

Support IEEE802.11 a/b/g/n and 802.11ac standards

Integration of ZigBee,WiFi,BLE,Z-Wave wireless network protocols

Dual LAN network interface for network connection and industrial control

The mature, stable and extensible Yocto system is adopted

Unique software algorithms ensure network security

USB2.0 data port for connecting USB storage devices and for connecting new RF modules.

Provides RS485,RS232,GPIO interfaces for industrial use

Support for LoRa long-distance transmission, ModBus and other common protocols.

Support LoRaWAN communication specification

Support 8 channel downlink, 1 channel uplink at the same time. Full duplex / half duplex, same frequency / different frequency working mode

Customization for special applications, open API interface.

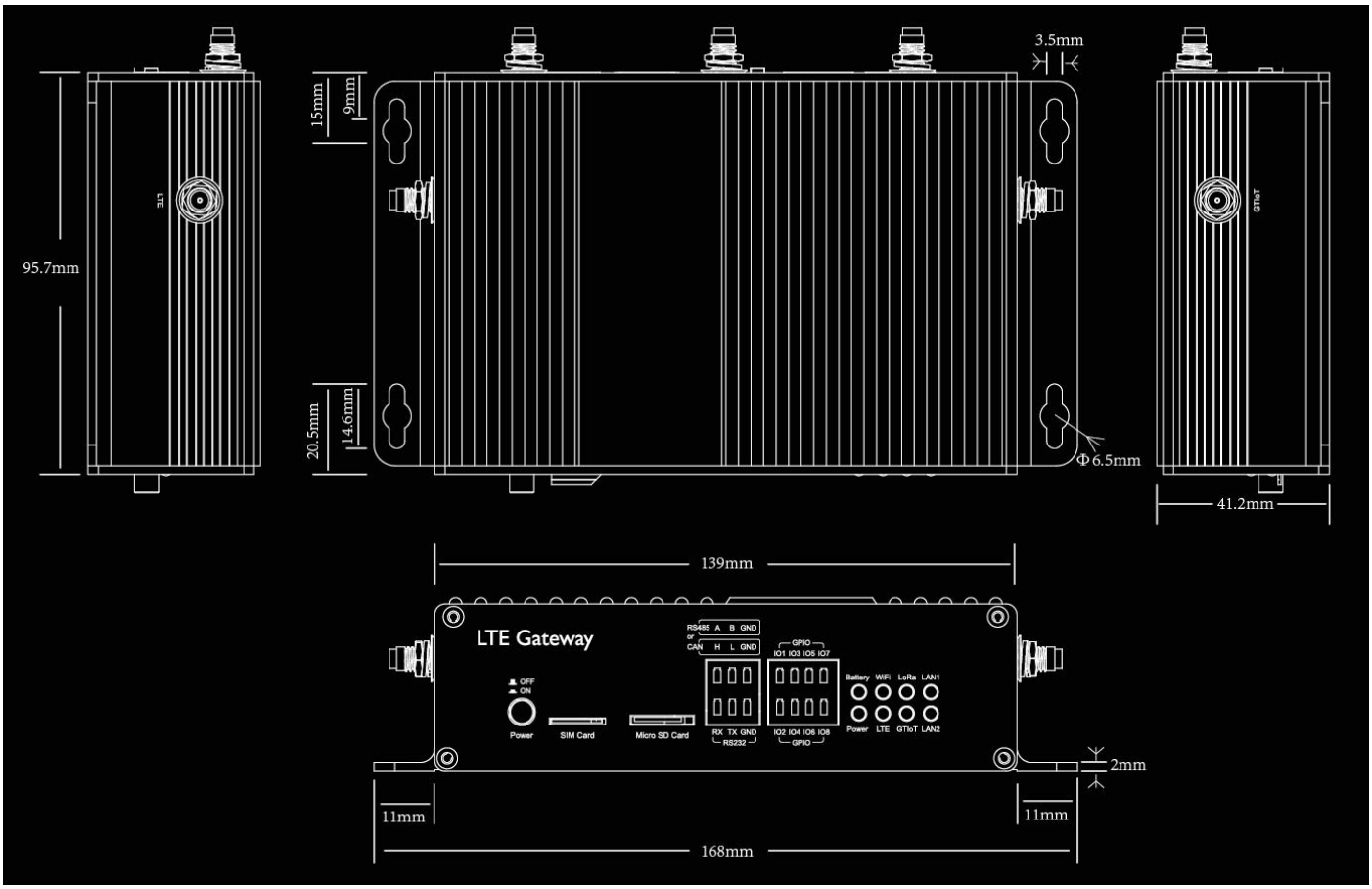
Commercial grade operating temperature: 0℃ to +60℃

Industrial grade operating temperature: -10℃ to +85℃(optional)

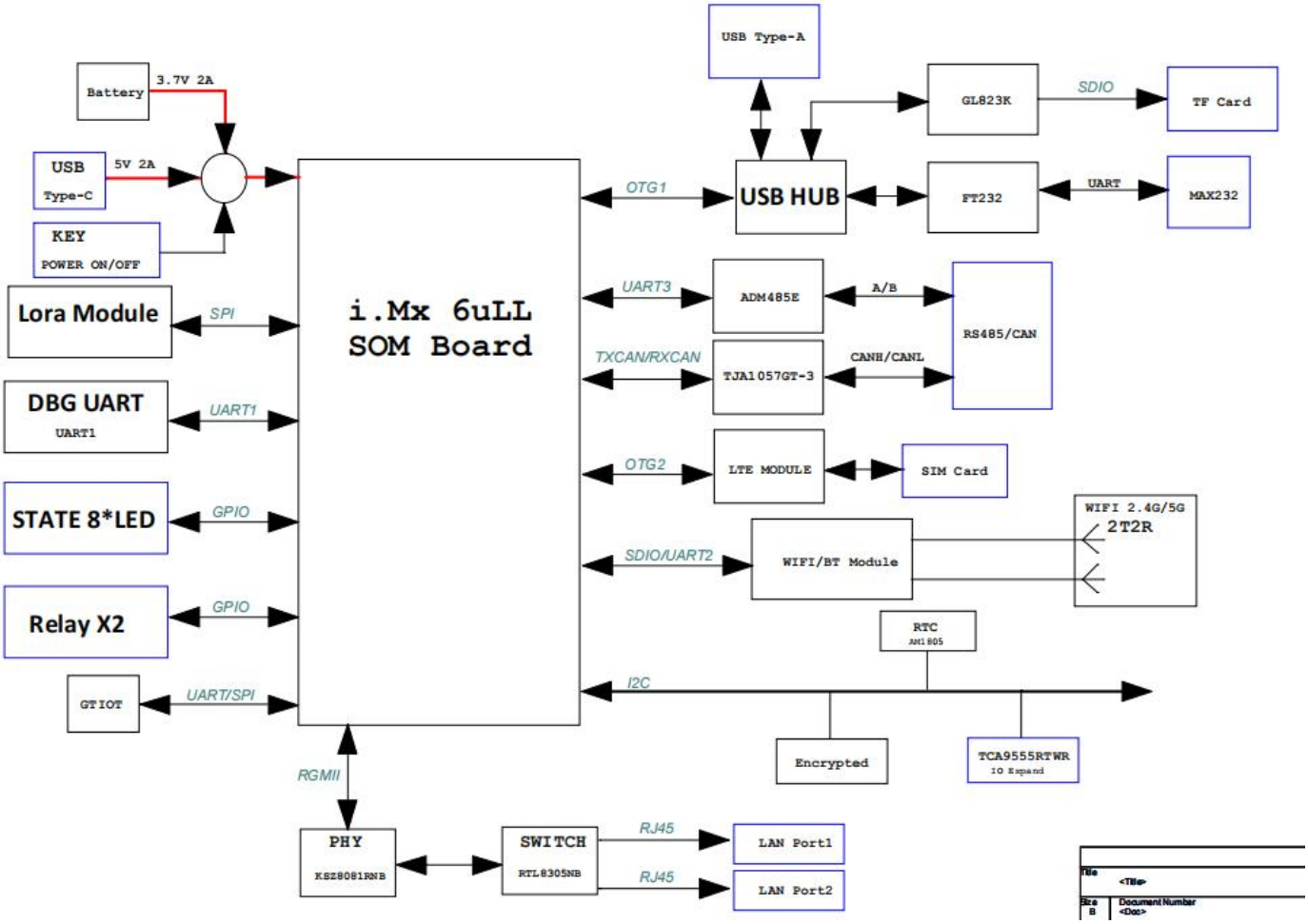
2.Product Pictures

Below pictures are for reference only:

3. Board View


3.5mm
15mm
9mm
95.7mm
20.5mm
14.6mm
Φ6.5mm
41.2mm
139mm
LTE Gateway
RS485 A B GND
CAN H L GND
GPIO
IO1 IO3 IO5 IO7
IO2 IO4 IO6 IO8
RX TX GND
RS232
Power
SIM Card
Micro SD Card
Battery WiFi LoRa LAN1
Power LTE GTIoT LAN2
2mm
11mm
11mm
168mm

4. Hardware block diagram



5. Features

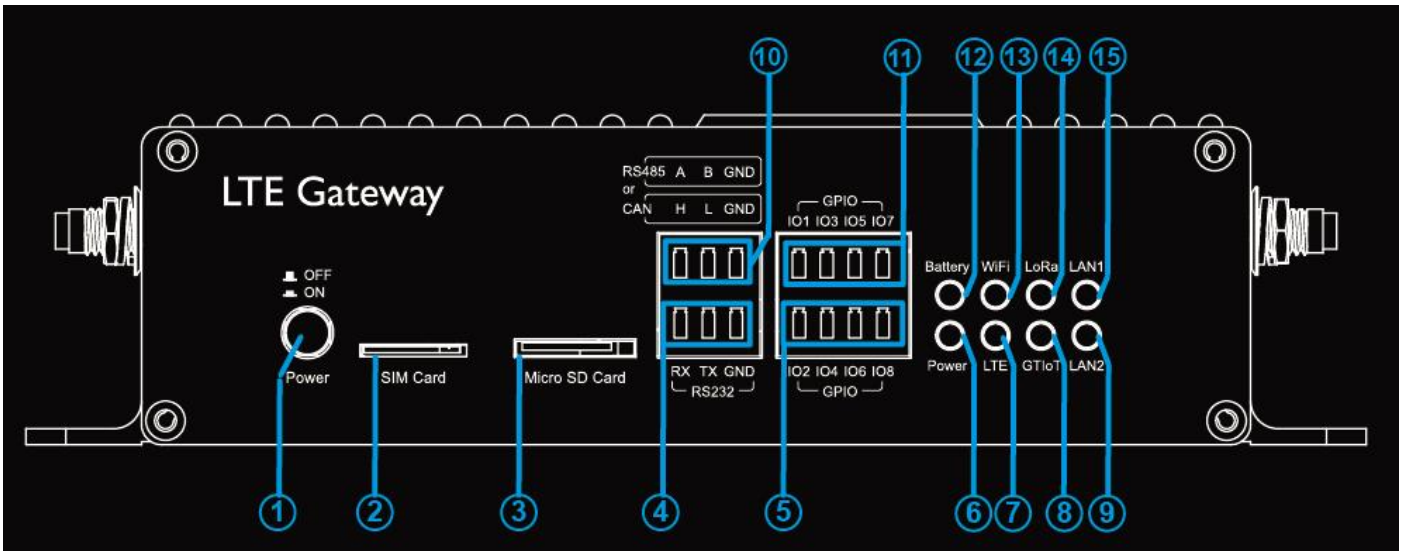
Models:

Difference	2G/3G/4G/LTE(I)	Zigbee Module(Z)	PoE(P)	LoRawan(L)
GTW361	None	None	None	None
GTW361-I	Support			
GTW361-F		Support		
GTW361-L				Support
GTW361-P			Support	
GTW361-IF	Support	Support		
GTW361-IP	Support		Support	
GTW361-IL	Support			Support
GTW361-ALL	Support	Support	Support	Support

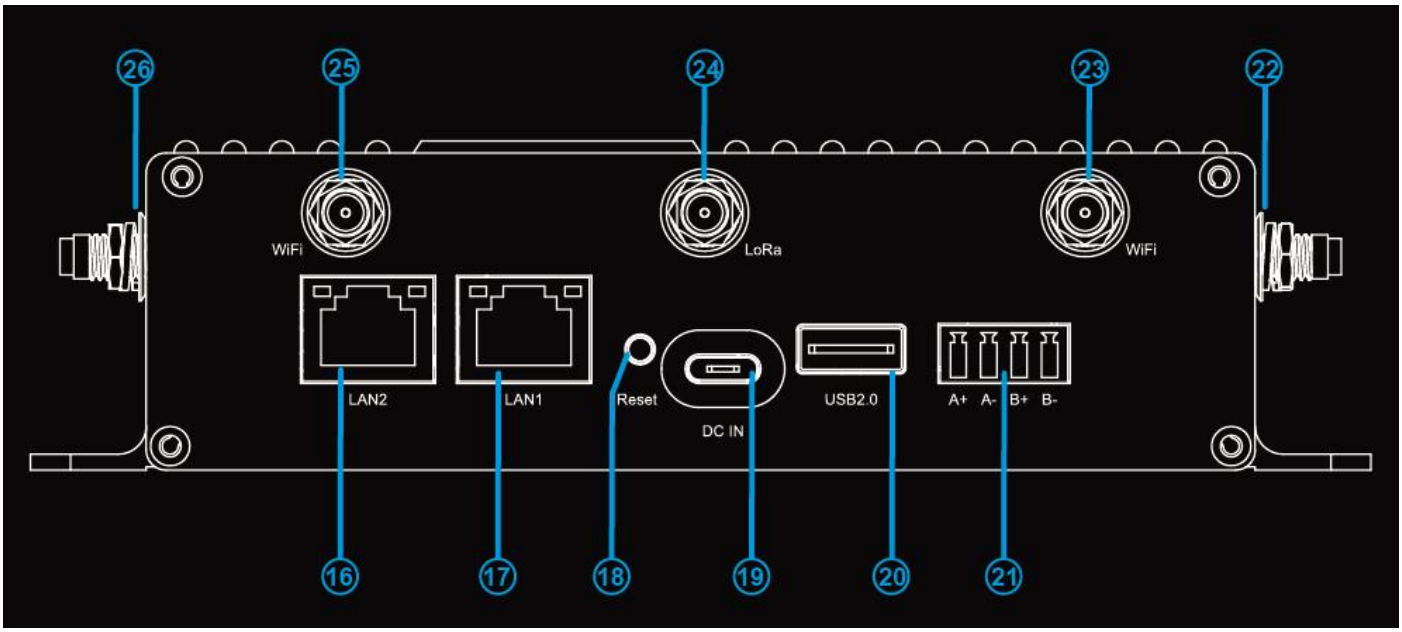
CPU	Chip	NXP i.MX6ULL
	CPU Frequency	Single ARM Cortex-A7 792MHz~900MHz
Storage	Internal Memory	512MB(256MB/1GB optional) DDR3
	Internal Storage	8GB(4GB optional) EMMC
Network	2G/3G/4G/LTE	LTE for EU、LTE for AU、LTE for US(Optional)
	Built-in WiFi	802.11 a/b/g/n/ac
	WiFi 2.4G Frequency Range	2.400~2.497GHz
	WiFi 5G Frequency Range	5.15~5.925GHz
	Ethernet port(LAN)	2*RJ45 10/100Mbps LAN
	PoE	IEEE802.3af standard，PoE PD with TVS protection（optional）
I/O interface	USB	USB-A 2.0 x 1
	Type C	for Power Supply
	RS232	3P 15EDGK-3.81mm
	RS485/CAN	3P 15EDGK-3.81mm (Choose one of the two functions)
	GPIO	4P*2 15EDGK-3.81mm
	Relay*2	4P 15EDGK-3.81mm
Protocol	ZigBee	3.0 (optional)
	Bluetooth/BLE	4.1
	RS485	TIA485/EIA-485-A -7~+12V
	CAN	ISO11898-2:2016 and SAE J2284-1 to SAE J2284-5 ESD Protection(8kV IEC and HBM) 5Mbit/s

	LoRa	LoRaWAN communication specification, 8 channel downlink, 1 channel uplink at the same time（optional）.
	RS232	±5~±15V
Control interface	GPIO	3.3V level ±15KV(air) ±10KV(contact)
	Relay	2*3A 250VAC
Extended interface	LEDs	4G,LAN1,LAN2,IoT,Power,Wi-Fi,Battery,LoRa
	SIM Slot	Micro SIM Card
	SD Card	Micro SD Card
	GTIoT	2*5P 1.27 socket
	Debug	4P 2.0 ranking
	I2C	4P 2.0 ranking
	Button	Reset
Power pack	Supply voltage	DC5V 2A
	Battery voltage	3.7V 1000mAH~5000mAH（optional）
	Energy	Within 5W(for reference only)
	RTC&Watchdog	3V 5mA
Environment	Operating temperature	0~60℃/-10-85℃
	Operating humidity	10%~90%
	IP protection levels	IP30
Mechanical properties	Size (mm)	168*95.7*41.2
	Net Weight (g)	425
Operating system(OS)	Linux/Yocto	
Other	WiFi/BT antenna*2,LoRa antenna（optional）,LTE antenna,GTIoT antenna（optional）.	
Certification	-	

6.Extension I/O definition



Item No.	Default function	Item No.	Default function
1	Power ON/OFF	2	SIM Card Socket
3	Micro SD Card Socket	4	RS232 interface
5	GPIO interface	6	Power LED
7	LTE LED	8	GTIoT LED
9	LAN2 LED	10	RS485 or CAN interface
11	GPIO interface	12	Baterry LED
13	Bluetooth/WLAN LED	14	LoRa LED
15	LAN1 LED		



Item No.	Default function	Item No.	Default function
16	LAN2 RJ45	17	LAN1 RJ45
18	Reset button	19	Micro USB Type C and DC IN
20	USB2.0 A type	21	Relay control interface
22	LTE Antenna	23	WiFi/Bluetooth Antenna
24	LoRa Antenna	25	WiFi/Bluetooth Antenna
26	GTIoT Antenna		

RS485 or CAN interface			
1	A or CANH	2	B or CANL
3	GND		

RS232 interface			
1	RX	2	TX
3	GND		

GPIO interface					
1	IO1	TCA9555R_P0_1	2	IO3	TCA9555R_P0_3
3	IO5	TCA9555R_P0_5	4	IO7	TCA9555R_P0_7
5	IO2	TCA9555R_P0_0	6	IO4	TCA9555R_P0_2
7	IO6	TCA9555R_P0_4	8	IO8	TCA9555R_P0_6

Relay control interface			
1	A+	2	A-
3	B+	4	B-

7.Precautions for use

1. Relative humidity: 10% ~ 90% .
2. Storage temperature: -10 ~ 125℃
3. Operation temperature: 0℃ to +60℃
4. Do not squeeze、distort or disassemble the board.
5. Keep the board away from static electricity .
6. Keep the board away from water and other liquid.
7. Clean the board with soft and clean dry cloth when it’s dirty.
8. Don’t use long connect wires which may affect performance and image quality.