Product Name	GAOTek Smart Linux Iot Gateway
Product SKU	GAOTek-IIT-165
Product URL	https://gaotek.com/product/gaotek-smart-linux-iot-gateway-2/

Contact us: sales@gaotek.com

Contents

GAOTek Smart Linux Iot Gateway

1 Product Overview

The 4G Smart Gateway designed for industrial environment, is equipped with quad-core 64-bit processor RK3308B dedicated to IoT. It fully supports 4G LTE, NB-IoT, and LoRa communications, and has dual 100M Ethernet ports, RS485, CAN, RS232 interfaces; it also supports Chinese commercial cryptography algorithms. The smart gateway can be widely used in industrial fields such as industrial 4G routers, IoT,and automation systems.

1.1 Low-power quad-core IoT processor

IoT processor, with quad-core 64-bit Cortex-A35 core and main frequency up to 1.3GHz, is high-performance and low-power. Compared with the traditional IoT processor's Soc architecture, this processor is smaller, with the power consumption reduced by 32% while the efficiency increased by 25%.

1.2 Wireless communication support

The smart gateway supports 4G LTE Cat1 wireless communication module, which can realize seamless connection to any operator's 4G network. Supporting NB-IOT communication, global frequency band B1/B3/B5/B8/B20/B28 and so on, it is fast and low-power. It also supports industrial-grade long-distance LoRa communication at 868MHz, and the outdoor line-of-sight communication distance is up to 8km, featuring long-distance communication and high stability, etc.

1.3 Dual RJ45 Ethernet Ports

Dual RJ45 Ethernet ports with speed up to 100Mbps, are suitable for industrial control equipment, industrial control and other uses.

1.4 Abundant interfaces

It provides multiple communication interfaces like RS485, CAN, RS232, and provides relay and opto-isolator I/O, which can meet the needs of different applications.

1.5 MQTT protocol supported

Modbus standard industrial protocol to MQTT protocol is possible; Alibaba Cloud and other private cloud are supported. The smart gateway is suitable for IoT PLC data acquisition and equipment control.

1.6 Chinese commercial cryptography algorithms

The onboard PSAM card slot is convenient for the system to integrate the PSAM card. It has type approval, powerful data encryption and decryption functions — providing excellent-performance DES/3DES, AES, SHA, RSA, ECC, and Chinese commercial cryptography algorithms SM1/SM2/ SM3/SM4 and others.

1.7 Build root and Ubuntu 18.04 supported

Supporting Build root (Linux) embedded system and Ubuntu 18.04 system, it has characteristics such as strong controllability, stability and reliability, continuous updates, openness and compatibility.

1.8 Various applications

It is widely used in industrial 4G routers, IoT, IoV, smart factories, industrial automationsystems, climate and geological monitoring, building access control systems, smart charging pile remote monitoring and other industrial fields.

2. Specifications

Basic Specifications

SoC	RK3308B (28 nm lithography process)
CPU	Quad-core 64-bit ARM Cortex-A35, frequency 1.3GHz
RAM	256 M DDR3 (128MB ~ 512MB optional)
Storage	4GB eMMC: Supports 4G/8G/16G/32G/64G/128GSPI Flash：Supports 16MB ~512 MB Supports MicroSD (TF) Card Slot expansion

Hardware Features	
Ethernet	Dual RJ45 Ethernet ports (100M bps)
Wi-Fi	Supports 2.4GHz WIFI, supports802.11/b/g/n protocol
Audio	Built-in CODEC, includes 8-channel ADC, integrated high-performance Codec and Hardware VAD
Interface	PSAM $\times$ 1 CAN $\times$ 1 SIM 4G $\times$ 1 RJ45 100M Ethernet port $\times$ 2RS232 $\times$ 1 RS485 $\times$ 3 DC IN (12V) $\times$ 1 Type - C (OTG) $\times$ 1DIN$\times$ 1 DOUT$\times$ 1 Phone $\times$ 1 TF-Card $\times$ 1 USB 2.0 $\times$ 1

OS/Software	
OS	Supports Build root (Linux) embedded system, Ubuntu 18.04

Wireless communication	Supports 4G LTE Cat1 wireless communication module, which can realize seamless connection to any operator's 4G network; Supports NB-IOT communication, global frequency band B1/B3/B5/B8/B20/B28 and so on, fast and low-power; Supports industrial-grade long-distance LoRa communication at 868MHz, and the outdoor line-of-sight communication distance is up to 8km, high stability.
MQTT Protocol	Supports Modbus standard industrial protocol to MQTT protocol; Supports Alibaba Cloud and other private cloud; Suitable for IoT PLC data acquisition and equipment control.
Cryptography Algorithms	The onboard PSAM card slot is convenient for the system to integrate the PSAM card; type approval, powerful data encryption and decryption functions — providing excellent-performance DES/3DES, AES, SHA, RSA, ECC, and Chinese commercial cryptography algorithms SM1/SM2/ SM3/SM4 and others.
General	
Size	99.4 mm x 84 mm x 35.2 mm
Operating Temperature	-10 °C to 60 °C (50 F to 140 F)
Operating Humidity	10 % to 90 %

3. Size

4. Interface Describe