CaxGate600-G

Open-Source Gateway Controller & ARM Embedded Industrial Computer





- 1×100M WAN port, 1×100M LAN port,
- 2×RS232, 2×RS485, 1×CAN, 2×USB
- 4×AI, 2×DO (relay), 4×DI
- Support global LTE 4G Cat-4 cellular network, failover with WAN
- Support 2.4GHz WiFi, Wi-Fi 802.11b/g/n
- Support GPS function
- Rockchip RK3568, quad-core 64-bit ARM Cortex-A55, up to 2.0 GHz
- Ubuntu 20.04 Linux OS with Node-RED, Docker, and visual development for fast deployment
- Support multi-industrial protocols, including Modbus, OPCUA, and BACnet
- DC12V power input
- -10℃~+ 70℃ operating temperature

Product Description

CaxGate600-G is a high-performance open-source industrial gateway controller designed for advanced edge computing and industrial control applications. Powered by the Rockchip RK3568 quad-core 64-bit ARM Cortex-A55 processor running at up to 2.0 GHz, and integrated with a 1.0 TOPS AI NPU, it delivers strong general-purpose computing and AI processing capabilities.

Running on Linux Ubuntu 20.04 with a graphical desktop environment, CaxGate600-G supports rapid development and deployment. It comes with Node-RED and supports Docker, enabling flexible application development, protocol integration, and secondary development using standard Linux tools.

This industrial gateway offers rich connectivity options, including LTE 4G, dual Ethernet, and Wi-Fi, ensuring stable and versatile networking. Abundant hardware interfaces such as HDMI, USB 3.0, CAN, RS232/RS485 serial ports, and expandable I/O (AI, DI, DO) allow seamless integration with industrial equipment and sensors.

With powerful edge gateway functions, extensive industrial protocol support, including Modbus, OPC UA, and BACnet, and flexible installation options such as DIN-rail and wall mounting, the CaxGate600-G is well-suited for applications in smart medical systems, smart agriculture, and smart buildings.

Product Features

- Powered by RK3568 quad-core 64-bit ARM CPU running at up to 2.0 GHz for high-performance operation
- Dual networking with LTE 4G and Ethernet failover, plus Wi-Fi support, ensuring stable and flexible connectivity
- Rich interfaces including HDMI output, 2 × USB 3.0, and 1 × CAN
- Multiple serial ports: 2 × RS485 and 2 × RS232 for broad device compatibility
- I/O interfaces: 4 × AI, 2 × DO (relay), 4 × DI
- Linux Ubuntu OS with graphical interface for easy operation and management
- Embedded Node-RED graphical programming for fast development with extended protocol libraries
- Powerful edge gateway functions, supporting edge data collection, edge computing, and grouped reporting with up to 2000 real-time points
- Rich acquisition protocols, including standard Modbus, mainstream PLC, and other industrial protocols
- Advanced linkage control, supporting multi-point linkage, SMS and platform alarms, point control, and DO control
- Multiple protocol conversions, integrating Modbus, OPC UA, and BACnet

Technical Specifications

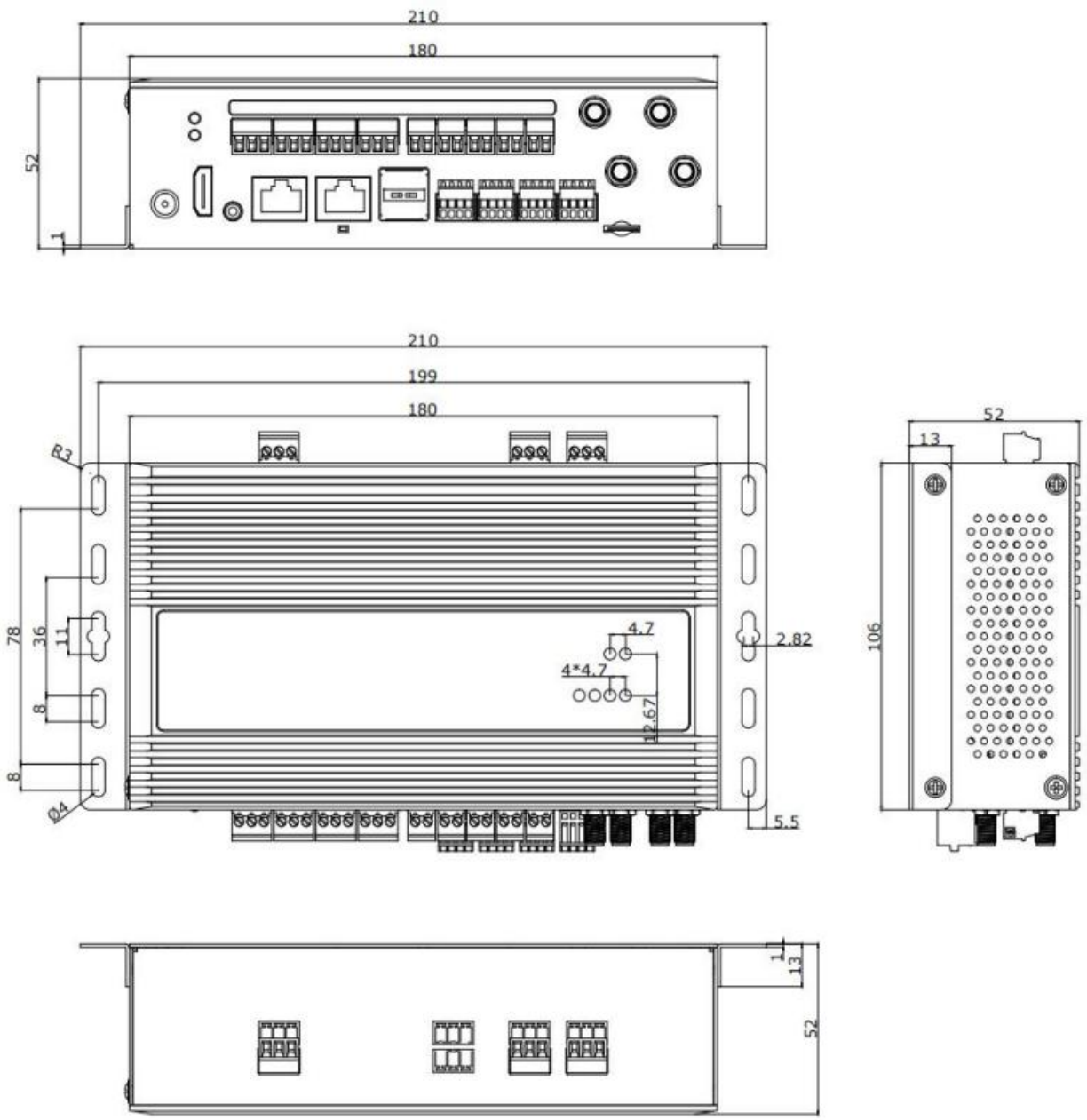
CPU	Rockchip RK3568, quad-core 64-bit ARM Cortex-A55 CPU, up to 2.0 GHz	
GPU	ARM G52 2EE GPU Support OpenGLES 1.1 / 2.0 / 3.2, OpenCL 2.0, Vulkan 1.1, with embedded high-performance 2D acceleration	
NPU	Built-in NPU, 1.0 TOPS @ INT8 Support Caffe, MXNet, TensorFlow, TFLite, ONNX, Darknet	
Operating System	Linux Ubuntu 20.04	
RAM	4 GB DDR4	
Storage	32 GB eMMC	
Network	Ethernet	Dual 10/100 Mbps Ethernet ports
	Wi-Fi	2.4 GHz Wi-Fi, IEEE 802.11 b/g/n
	Cellular	4G mobile network
GPS	GPS / GLONASS / BDS / Galileo / QZSS Protocol: NMEA 0183 Data update rate: 1 Hz (default) Sensitivity: -162 dBm Receive frequency: 1575.42 MHz Acquisition Autonomous: -146 dBm Tracking Autonomous: -157dBm Accuracy: 10 m (open sky)	
SIM	1 × Nano SIM slot (4FF)	
Display	1 × HDMI 2.0 output, supports up to 4K @ 60 fps	
Audio	1 × headphone output	
RTC	Built-in RTC battery, supports scheduled power on/off	

USB	1 × USB 3.0 HOST 1 × USB 3.0 OTG	
LED Indicators	1 × Power LED (Red) 1 × System LED (Blue, blinking) 2 × DO status LEDs 4 × DI status LEDs	
Buttons	1 × OTA upgrade button (REC)	
Serial Ports	2 × RS232 2 × RS485	
IO	Digital Input (DI)	4 × DI, dry/wet contact Voltage range: 0~36 V (max 36 V) Logic low: 0~2 V Logic high: 5~36 V
	Digital Output (DO)	2 × relay outputs NO: 10 A @ 277 VAC / 28 VDC NC: 5 A @ 250 VAC
	Analog Input (AI)	4 × AI Voltage range: 0~10 V Current range: 4~20 mA
Power Input	DC 12 V / 2 A (max 15 V) Connector: DC jack 5.5 × 2.1 mm	
Operating Temperature	-10℃ to +70℃	
Storage Temperature	-20℃ to +70℃	
Operating Humidity	10%~80% (non-condensing)	

Dimensions	160 × 85 × 28 mm
Multimedia	Support for 4K 60fps H.265/H.264 Video decoding Support for 1080P 100fps H.265/H.264 Video decoding Support for 8 MISP, and support for HDR
Language	Default: English Other languages available for online download
Input Method	Standard Android keyboard; optional third-party input methods (Chinese, Korean, Japanese, etc.)

Dimensions

Unit: mm



Ordering Information

Standard Model	100M Copper Port	RS232	RS485	CAN	USB	DI	DO	AI
CaxGate600-G	12	2	2	1	2	4	2	4

Cellular	Area	Band
LTE 4G Cat-4+	Global	LTE-FDD: B1/B2/B3/B4/B5/B7/B8/B12/B13/B18/B19/B20/B25/B26/B28/B66 LTE-TDD: B34/B38/B39/B40/B41 WCDMA: B1/B2/B4/B5/B6/B8/B19 GSM: B2/B3/B5/B8

WiFi Band	WiFi Standard	GPS
2.4GHz	IEEE 802.11 b/g/n	GPS/GLONASS/BDS/Galileo/QZSS

Antenna	Power Input
1×WiFi, 2×4G, 1×GPS	DC12V

Contact Us

COME-STAR COMMUNICATION(WUHAN) CO., LTD.

Address: Puneng Industrial Park, Fenghuang Garden 1st Road, East Lake High-Tech Development Zone, Wuhan, China.

Tel: +86-027-59257958

Mail: info@come-star.com

Official site: www.come-star.com

Copyright © Come-Star All rights reserved