

The image shows the A-9N hardware on the left and a system architecture diagram on the right. The diagram illustrates the device's connectivity to cloud services (AWS, Google Cloud, Azure) and databases (MariaDB, MOIIT). It also shows the device's role in industrial control systems, connecting to various sensors and actuators via protocols like Modbus TCP, OPC UA, and BACnet. The hardware features include a TI ARM Cortex-A8 processor, 512M RAM, 8GB eMMC, and various I/O ports.

- Built-in TI ARM Cortex-A8 Processor up to 1GHz
- 1 x RJ-45 for 10/100M Ethernet
- 3 x RS-485
- 1 x HDMI (Micro HDMI)
- 1 * USB 2.0 Host (Type A)
- Built-in 512M RAM
- Built-in 8GB eMMC
- Wide operating temperature -10°C ~ +55°C
- Wide range DC input from 24V ~ 36V

Product Overview

The A-9N provided by Yottacontrol is a Fanless Edge Computing Controller for Ethernet and serial port. Compared with traditional Industrial controllers, various interfaces help mutual data exchange, and shared program support various industrial projects.

The A-9N can be used for Ethernet data transmission and other functions through its third party 4G / 5G communication module. With the third party GPS function, the A-9N can also be used as a GPS tracking system for vehicle management or maritime system. It can be used in M2M application to transmit remote I/O, Modbus data or camera video.

Within the high-performance CPU, the A-9N can process large amounts of data and is suitable for harsh industrial environments.

Specifications

CPU

- TI Cortex-A8 ARM

Memory

- DDR3 512MB onboard

Storage

- eMMC 8GB onboard

Expansion

- 1 x USB 2.0 Host for Wi-Fi module / USB-HUB / KEY-board

I/O Interface-Front

- 1 x Power LED
- 1 x RJ-45 10/100M fast Ethernet with LED
- 1 x USB Host 2.0 type A
- 1 x Phoenix connector for power (24-36VDC)/GND/ignition input

I/O Interface-Rear

- 1 x HDMI for 1920 x 1080@60Hz output
- 3 x RS-485

Power Consumption

- Max 10W

Power Management

- Auto Boot

Operating System

- Linux (Debian 11.5)
- Built-in NODE-RED

Dimensions

- 72mm (W) x 118mm (D) x 34mm (H)

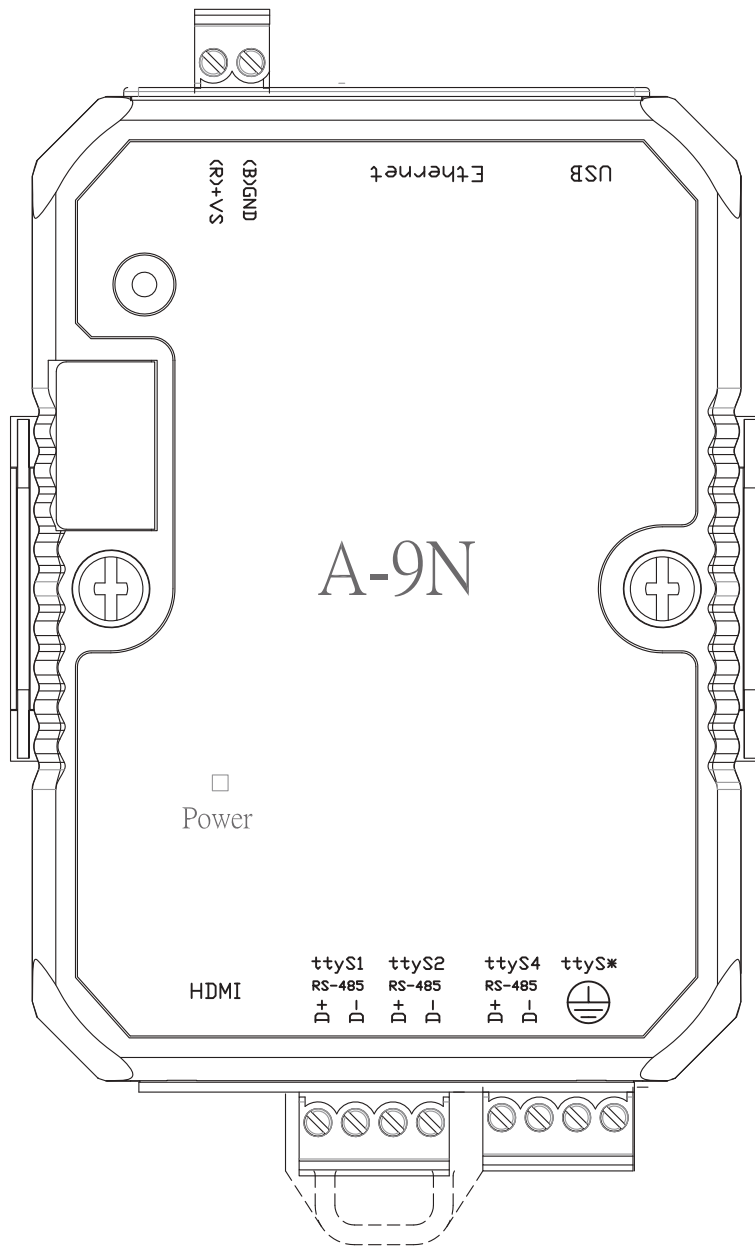
Weight

- 0.2kg

Environment

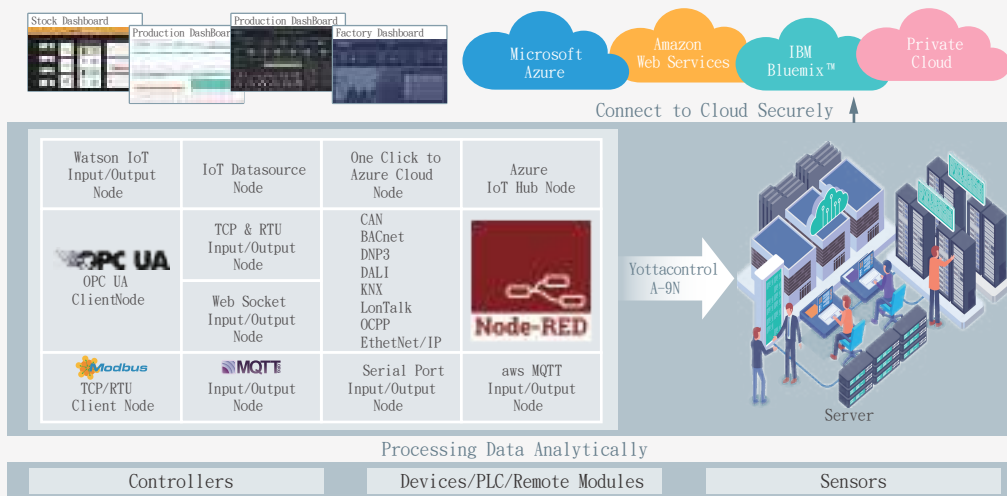
- Operating temperatures: -10°C to +55°C
- Storage temperatures: -20°C to +85°C
- Relative humidity: 90% (non-condensing)

Dimension Drawing



Ordering Information

- A-9N (P/N: YIPCA9N)



Main Features

- Ready-to-use IoT gateway to accelerate IoT project deployment
- Open architecture support both ARM-based IoT gateway
- One-click deployment to cloud
- Cloud SCADA presentation
- Real-time information response
- Support Modbus, OPC-UA, MQTT, SQL, BACNET.....

Available Apps (More than 7000+ Apps)

- | | | | |
|-------------------------------------|-------------------------------|-------------------------------|----------------|
| 802.1X Authenticator | NAT | Protocol MODBUS-TCP2RTU | CAN |
| AT Modem Emulator | NetFlow/IPFIX | Protocol NHRP | DALI |
| Azure IoT SDK Python3 API Version 2 | NMAP | Protocol OSPF | LonTalk |
| Backup APN | Node-RED | Protocol PIM-SM | OpenAI |
| Band Select | Node-RED AWS Node | Protocol RIP | ngsi |
| Bluetooth | Node-RED Azure Node | Python | Whatsapp-link |
| Bondix S. A. NE Enterprise | Node-RED Bluetooth Node | Python3 | GSI |
| Captive Portal | Node-RED Dashboard | Python3 with pip | Line-api |
| Cumulocity | Node-RED dnp3 Node | Samba | Skype-api |
| CURL | Node-RED Filesystem Node | Scalable AI Manager | google-apis |
| Customer Logo | Node-RED FTP Node | SCEP Client | text2speech |
| Daily Reboot | Node-RED GPSd Node | Secure Syslog | paypal |
| DHCP based on MAC OUI | Node-RED gzip Node | SendReport | shopify |
| DHCP Relay (over IPsec) | Node-RED KNX Node | Serial to network proxy | sony-audio |
| DNP3 Outstation | Node-RED LwM2M Node | Serial2TCP | visa-api |
| Docker | Node-RED Modbus Node | Service Access Limitation | ebay-api |
| EasyVPN Client | Node-RED OPC UA Node | Sleep Mode | Rest-API |
| Ethernet Mirroring | Node-RED PLC EtherNet/IP Node | SSHClient | line-pay |
| Ethernet Port Detector | Node-RED PLC Melsec Node | Stunnel | web-push |
| Event Notificator | Node-RED Splunk Node | TCP SYN Keep-Alive | zapier |
| Ext4_tools | Node.js | Technical Report 069 (TR-069) | pdf-to-png |
| File Uploader | npm | Transparent mode | ui-webcam |
| FOTA | NTP | UDP Communication Watchdog | pdf-red |
| FRR | NTRIP Client | URL Blocker | usb-camera |
| GDB (GNU Debugger) | OpenVPN Custom Config | USB over IP (Electronic Team) | line-image-api |
| GPS | Operating Hours Counter | USR LED Management | QR-Code |
| HMPCClient | Packet Splitter | Vim | opencv |
| HTTPS Login Banner | PduSMS | WebAccess/VPN (VPN Portal) | PID-controller |
| L2TP Pseudowire | Pinger | Web Terminal | Mydb |
| Layer 2 Firewall (L2FW) | PLMN Whitelist | WebAccess/DMP Client | splite |
| Loopback | pppGateway | WiFi SSID Switch | mysql |
| LUA | Protocol ALPHA-MODBUS | WiFi STA Relay | ODBC |
| Midnight Commander | Protocol BGP | wM-BUS CONCENTRATOR | mongoddb |
| Modbus logger | Protocol DF1-Ethernet | WoLGateway | . |
| Modbus to LwM2M | Protocol IEC101-104 | XC-CNT FW update | . |
| Modbus to MQTT | Protocol IS-IS | Zabbix Agent | . |
| MQTT Broker | Protocol MODBUS-RTU2TCP | BACnet | . |
| MQTT Manager | Protocol MODBUS-RTUMAP | OCPP | . |