# Multiple Networks Industrial Edge Computing Gateway

- Powered by Raspberry Pi Compute Module 4 Cortex-A72 @ 4x1.5GHz
- Global 4G LTE/3G/2G/NB-IoT Cellular network
- 2.4G/5G WiFi, Bluetooth, LoRaWAN,

  WiFi HaLow (802.11ah WiFi) Supported
- Dual Gigabit Ethernet ports for configurable WAN / LAN
- Isolated RS485, RS232, DI, AI & DO ports for industrial
- 35mm DIN-Rail and wall mount Supported
- Fanless design with full aluminum heatsink enclosure
- -25°C to +70°C Operating Temperature for harsh environment
- Fully Compatible with Raspbian, OpenWRT, Ubuntu OS, Winows 10 IoT, etc.

The Elastel EG500 is a high-performance IoT Edge computing Gateway with multiple networks supported for industrial applications. Powered by Raspberry Pi CM4 with rugged, fanless design. Up to Quad-core Cortex-A72 1.5GHz CPU, 8GB RAM, 32GB eMMC computing capability, makes EG500 as an edge computing gateway for any kinds applications like AI, IoT Gateway, Edge Computing Device, Automation Controller…

# Industrial Edge Computing Gateway EG500

With 4G LTE/3G/2G/CAT M1(eMTC) and NB-IoT cellular network, Dual-band 2.4GHz/5GHz Wi-Fi, dual Gigabit Ethernet, and reserved LPWAN LoRa, Sub 1GHz WiFi (802.11ah WiFi HaLow) network connectivity, makes EG500 can perform a centralized gateway for most kind of IoT connectivity.

Expanded isolated I/O connectivity options for industry needs, working temperature from -25 ~ 70°C, IP30, wide range power input, DIN Rail installation… all these industrial grade design makes EG500 working in harsh environment rugged and stability.

Powerful and Optimized Linux based OS, allows user configure and develop any kinds of industrial applications freely.

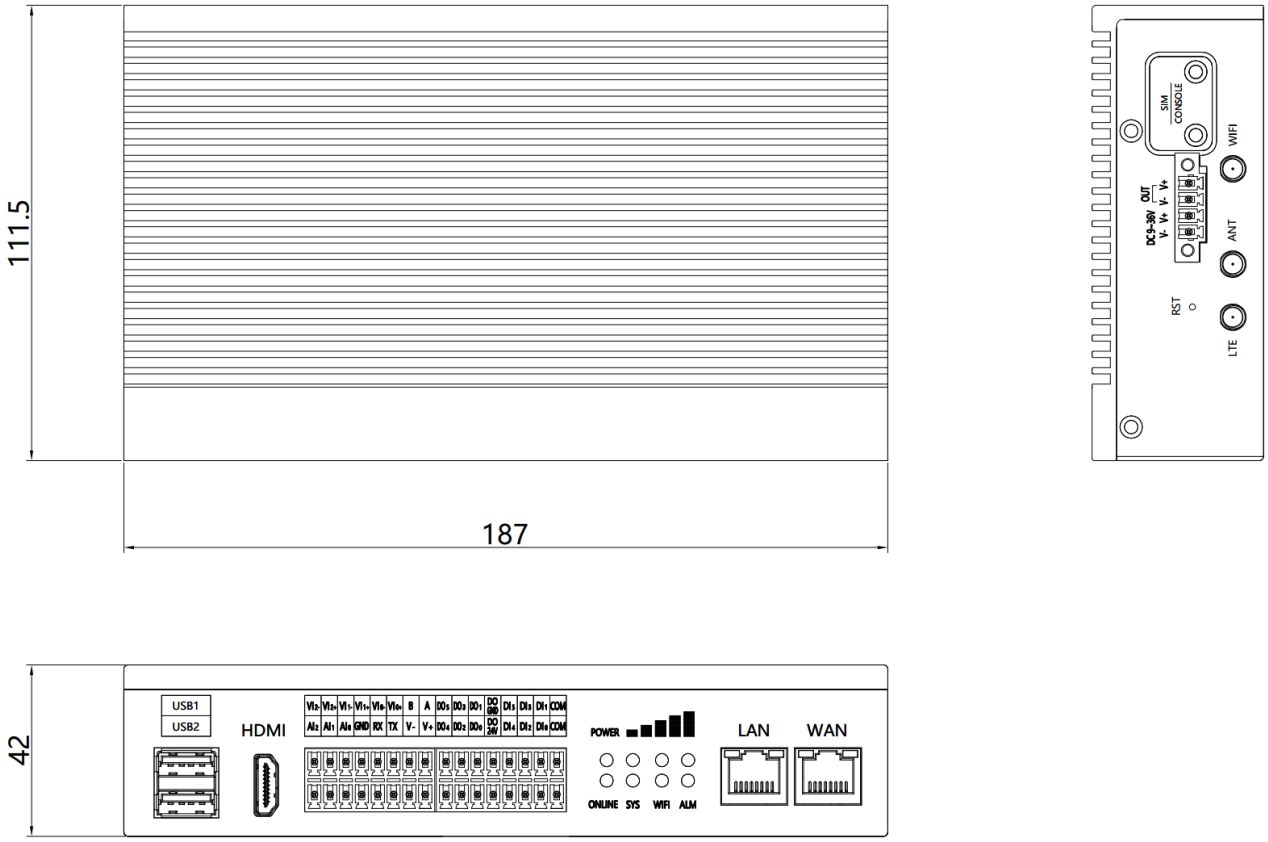
## Specifications

| | |
|---|---|
| Hardware platform | |
| CPU | Broadcom BCM2711, Quad-core A72 (ARM v8)@ 1.5 GHz |
| Memory | 2GB (2GB/4GB/8GB optional) LPDDR4 |
| FLASH | 8GB (16GB/32GB optional) eMMC |
| Network & Interfaces | |
| Ethernet | 2x Gigabit Ethernet, (1-WAN+1-LAN or 2-LAN Configurable) |
| Cellular | 4G LTE, 3G, 2G, NB-IoT, CAT-M1 |
| Wi-Fi | Dual Band 2.4GHz & 5GHz + Bluetooth 5.0 |
| LoRaWAN | Supported (Optional) |
| WiFi HaLow (802.11ah WiFi) | Supported (Optional) |
| GPS | Cellular Module built-in supported (Optional) |
| SIM | 1.8 V/3 V; drawer-type Nano card holder × 1 |
| | 15KV ESD Protection |
| Antenna | LTE: inside SMA x 1, WiFi/Buletooth: inside SMA x 1,<br>LoRa/WiFi Halow: inside SMAx1 (Reserved) |
| Industrial Serial Port | RS-232 x 1， RS-485 x 1; |
| | RS-232 signal: TXD, RXD, GND; RS-485 signal: A, B, GND; ESD protection: 15KV |
| I/O | 6-channel isolated DI (digital input)<br>(0..24VDC, Configurable Status/Count mode) |
| | 3-channel Analog input AI<br>(0-10V DC, 4-20mA, 18-bit resolution) |

| | |
|---|---|
| | 6-channel isolated DO (digital/pulse output)<br>(0..60V, Max. power efficiency: 500 mA) |
| USB | USB 2.0 x 2 for peripherals, |
| | USB-C x 1 for debug Console |
| HDMI | HDMI 2.0 x 1, (Up to 4kp60 video & audio output) |
| Reset Button | Supported |
| Power | |
| Power supply | Wide Range Voltages 9~36V DC/1A, recommended 24V/1.5A |
| Power Terminal | Unpluggable industrial 4-PIN terminal connection |
| Power consumption | Less than 10 W (system) |
| Power Output | 2-channel power supply for slave devices, same value as Power input |
| Mechanical features | |
| Protection | IP30 |
| Housing | Aluminum Heatsink |
| Cooling | Fanless cooling |
| Dimensions (cm) | 187mm x 112mm x 42mm |
| Installation | DIN-rail, wall mounting |
| Ambient temperature and humidity | |
| Storage temperature | -30 ~ 75°C |
| Ambient humidity | 5 ~ 95% (non-condensing) |
| Operating temperature | -25 ~ 70°C (industrial grade) |
| Certifications | |
| Certifications | CE, FCC, RCM, NBTC, RoHS |
| Standards | CE: EN 55032:2015+A1:2020, EN 55035:2017+A11:2020, EN IEC 61000-3-2:2019+A1:2021, EN 61000-3-3:2013+A2:2021, EN IEC 62368-1:2024+A11:2024, EN IEC 62311:2020<br>FCC: CFR 47 Part 15 Subpart B (Class B), ANSI C63.4-2014<br>RCM: AS/NZS CISPR 32 (Class B)<br>RoHS: IEC 62321-3-1 / -4 / -5 / -6 / -7-1 / -7-2 / -8 |
| Others | |
| LED Indicator | 1-POWER, 1-WiFi, 1-SYSTEM, 1-ALARM,1-ONLINE, 3-Signal Strength |
| Watchdog | Standalone Hardware Watchdog |
| Warranty | Standard 12 Months |
| MTFB | ⩾100,000 Hours |
| Software Features | |
| OS | Optimized OpenWRT V21 with SDK / Raspbian /Ubuntu /<br>Windows 10 IoT/ BalenaOS |
| Configuration | WebUI, Local CLI, Remote configuration |
| Upgrade operate | Local USB upgrade and remote upgrade (optional) |
| Timed startup and shutdown | Supported |
| Application features | Prebuilt IIoT Gateway software ElastPro for serval applications |
| Network Features | WWAN and WAN Failover, Load Balance,<br>PPP, PPPoE, SNMP v1/v2c/v3, TCP, UDP, |

| | |
|---|---|
| | DHCP, RIPv1/v2, OSPF, BGP, DNS, DDNS,<br>Modbus RTU/TCP, Siemens S7, OPC UA, HTTP, MQTT, ARP, QoS, SNTP, Telnet, SSH |

## Dimensions




## About Elastel

Elastel is a technology-driven company providing IIoT hardware and software services worldwide, with 10+ years of industry experience. Its portfolio includes industrial Raspberry Pi, Arm-based gateways and computers, and industrial cellular routers. It also provides software services, including ElastPro and ThingsWing, to simplify IIoT application development and deployment.

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