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, Remote data processing and transmission control unit (RTU).

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.

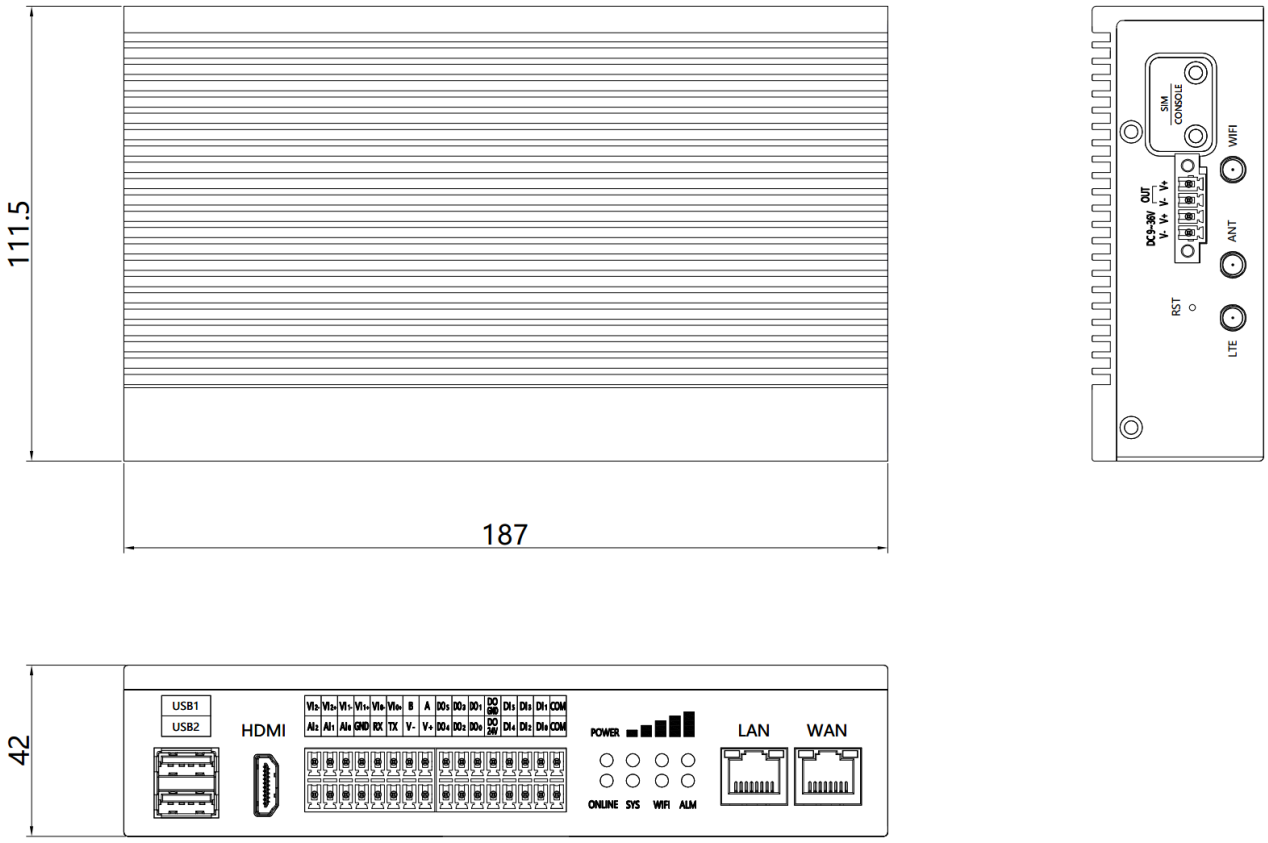
Specifications

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, 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) (0..24VDC, Configurable Status/Count mode)
	3-channel Analog input AI (0-10V DC, 4-20mA, 18-bit resolution)

	6-channel isolated DO (digital/pulse output) (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 FCC: CFR 47 Part 15 Subpart B (Class B), ANSI C63.4-2014 RCM: AS/NZS CISPR 32 (Class B) 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 / 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, PPP, PPPoE, SNMP v1/v2c/v3, TCP, UDP,

	DHCP, RIPv1/v2, OSPF, BGP, DNS, DDNS, 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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