

High-performance Arm-based Industrial AIoT Gateway

Designed for edge AI, industrial connectivity, and scalable IIoT deployment

- High-performance Arm quad-core Cortex-A55 @2.0GHz with 1 TOPS NPU
- 1GB DDR4 RAM + 8GB eMMC (Optional 2GB+16GB)
- 4 x isolated RS485/232 COM ports, 2x 10/100/1000 Mbps Ethernet port
- Supports 5G RedCap/4G LTE/3G/NB-IoT and Wi-Fi options connectivity
- Compact enclosure supports 35mm DIN-Rail and wall mount installation
- Open Debian OS for easy configuration and programmability
- Preloaded ElastPro software ready for OT-to-IT integration
- -40 °C to +85 °C operating range, EMI/Surge protection, industrial-grade design



Introduction

Elastel EG324 Pro is a high-performance Arm-based industrial AIoT gateway designed for reliable edge computing and seamless data acquisition and communication in IIoT applications. Powered by a quad-core Cortex-A55 CPU and an integrated 1 TOPS NPU, it enables efficient edge AI processing and real-time data handling.

With 4 x RS485/232 serial, 2x 10/100/1000 Mbps Ethernet, and a mini-PCIe socket to support 5G RedCap/4G LTE/3G/NB-IoT cellular and Wi-Fi wireless connectivity options, enabling seamless OT-to-IT and cloud integration for applications such as data acquisition, edge AI, remote monitoring, and more.



Its **industrial-grade design** ensures stable operation in harsh environments, featuring -40°C to +85°C wide temperature range, EMI/surge resistance, backed by global **CE, FCC, RoHS... certifications**.



Preloaded with **Debian12 OS** and **ElastPro software**, EG324 Pro provides an **open and programmable platform** with built-in industrial protocols support, enabling rapid deployment and flexible customization of your IIoT solutions like Smart manufacturing, energy monitoring, remote equipment management, and industrial automation.

Appearance



Specifications

System	
CPU	Armv8 Quad-core Cortex-A55 @2.0 GHz
NPU	1 TOPS
RAM	1GB DDR4 (2GB optional)
Storage	8GB eMMC (16GB optional)
Storage Expansion	1x TF slot (up to 128GB)
Serial Interface	
Serial Port (Isolated)	2 x RS485 + 2 x RS-232/485
Protection	Surge 4KV ESD ±15kV IEC61000-4-2 Air Discharge ESD ±15kV Human Body Model
Ethernet Interface	
Ethernet Port	2 x Auto-sensing 10/100/1000 Mbps Ethernet port
Protection	Surge 2KV ESD ±15kV IEC61000-4-2 Air Discharge ESD ±15kV Human Body Model
Wireless Interface	
Wireless Module Slot	1 x mini-PCIe socket for Cellular module or Wi-Fi module
SIM Format	1x Micro SIM (12x15 mm)
Antenna Connector	1 × SMA female connector (shared for Cellular/Wi-Fi module)
Cellular Band Options	<p>NA: 4G LTE-FDD@ B2/B4/B5/B12/B13/B14/B66/B71; 3G WCDMA@ B2/B4/B5;</p> <p>EMEA/APAC: 4G LTE-FDD@ B1/B3/B7/B8/B20/B28A; 4G LTE-TDD@ B38/B40/B41; 3G WCDMA@ B1/B8; 2G GSM@ B3/B8;</p> <p>ANZ/LATAM: 4G LTE-FDD@ B1/B2/B3/B4/B5/B7/B8/B28; 4G LTE-TDD@ B40; 3G WCDMA@ B1/B2/B4/B5/B8; 2G GSM@ B2/B3/B5/B8;</p> <p>Other options please contact Elastel representative.</p>
Wi-Fi Band Options	2.4~2.4835GHz / 5.15~5.85GHz IEEE802.11a/b/g/n/ac
USB Host	
USB 2.0	1 x USB 2.0, support peripheral devices (like USB Wi-Fi adaptor)
Power output	5V@500mA (switch on/off programmable)

Protection	Output Over Load protection ESD ±8kV IEC61000-4-2 Air Discharge ESD ±6kV Human Body Model
Other Interface	
Console Port	1 x UART type-C connector
Button	1x Button for Reset and Reboot
Power Parameters	
Power Input	9 ~ 48 VDC, 12 ~ 30 VAC, recommended DC 12V/1.5A
Power Consumption	Average: 10 W Peak: 12 W
Protection	Overvoltage & polarity reverse protection Surge 4KV ESD ±15kV IEC61000-4-2 Air Discharge ESD ±15kV Human Body Model
Indicators	
LED Indicator	Power x 1, System (programmable) x1, Cellular WAN x1, WAN x1, COM<x> trans x 8 (TX + RX)
Cellular LED status	Searching network: Slow flashing (200ms ON/1800ms OFF) Idle Status: Slow flashing (1800ms ON/200ms OFF) Transmission: Fast flashing (125ms ON/125ms OFF)
Buzzer	Built-in buzzer x 1, for warning alarm (programmable)
Reliability	
RTC	Built-in RTC inside with Backup CR2032 button battery
Watchdog	Built-in WDT inside for auto recovery
Physical Characteristics	
Dimension	128.8mm×117mm×28mm (L×W×H)
Housing	IP30 Metal
Installation	DIN-rail mounting Wall mounting
Weight	470 g (1.04 lb)
Environmental Limits	
Ambient Relative Humidity	5 to 95% (non-condensing)
Operating Temperature	-40 to 85°C (-40 to 185°F)
Storage Temperature (package included)	-40 to 85°C (-40 to 185°F)
Certifications	
CE	EN55032/35 IEC61000-4-2/3/4/5/6 IEC 62368-1 IEC 62311
FCC	FCC PART 15B ANSI C63.4:2014
RoHS	IEC62321-3/4/5/6/7/8

About Elastel

Elastel is a technology-driven company providing IIoT products and services globally. With 10+ years of industry experience, Elastel has developed series Open, High-performance, Reliable, and Easy-to-use IIoT devices like **Industrial Raspberry Pi**, **Arm-based IIoT Gateway**, **Industrial Cellular Router**, etc. Besides, to simplify users IIoT solutions deployment, Elastel also provide software services including the IIoT Gateway software “**ElastPro**” to easy data collection and communication, and the “**ThingsWing**” SaaS platform for secure remote access and management.

The company’s high-quality hardware and software solutions enhance the IoT communication efficiency and competitive advantages of its customers all over the world.

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Technical Support

Send email to Elastel Support center (support@elastel.com) for firmware upgrade, product documents, FAQ, technical support and more.