Arm-based Embedded Computer for Industrial Cellular DTU

- ARM Cortex-A7 @1.1GHz, 64MB RAM +256MB Flash

- 2 x isolated RS232/485 COM ports, 1x 10/100 Mbps Ethernet port

- Supports 4G LTE/3G/2G/NB-IoT and Wi-Fi options connectivity

- Compact enclosure support 35mm DIN-Rail and wall mount installation

- Open Linux OS for secondary development and customization

- Preloaded ElastPro software ready for OT-to-IT integration

- -40 °C to +85 °C operating range, EMI/Surge protection, industrial-grade design

Introduction

Elastel EC212 is an ARM-based **Industrial Computer** designed as a compact, cost-effective industrial DTU for edge connectivity, data acquisition and communication, and other applications.
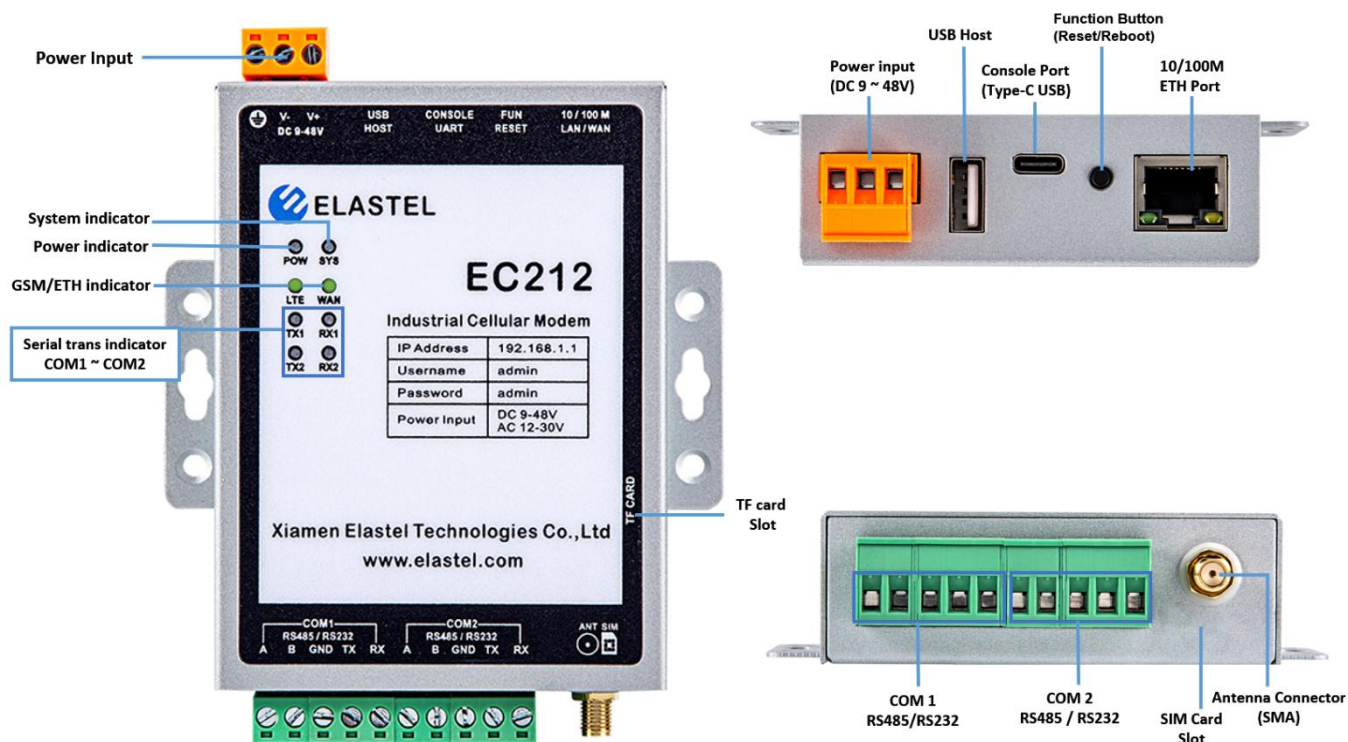
It provides **2 × RS485/232**, **1 × 10/100 Mbps Ethernet port**, 1 × USB, 1 × SD slot, and a Mini PCIe socket for **4G LTE/3G/2G/NB-IoT/Cat M1 and Wi-Fi** modules.

Running on **Linux OS**, EC212 enables flexibly develop your customized applications. With the preloaded **ElastPro software**, it supports multiple industrial protocols data collection and conversion, providing a ready-to-use for OT-to-IT integration.

With its full industrial-grade design, ensures this compact DTU reliably working on variety scenarios like **Modbus Gateway, Industrial Protocols Conversion, Remote Access management**, and other applications.

Appearance

Specifications

System	
CPU	ARM Cortex-A7 @1.1GHz
RAM	64MB DDR2
Storage	256MB SLC Nand Flash
Storage Expansion	1x TF slot (up to 128GB)
Serial Interface	
Serial Port (Isolated)	2 x RS-485/232
Protection	Surge 4KV ESD ±15kV IEC61000-4-2 Air Discharge ESD ±15kV Human Body Model
Ethernet Interface	
Ethernet Port	1 x Auto-sensing 10/100 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 miniPCIe socket for Cellular module or Wi-Fi module
SIM Format	1x Micro SIM (12mm*15mm)
Antenna Connector	1x SMA Female connector for Cellular or Wi-Fi antenna
Cellular Band Options	**NA:** 4G LTE-FDD@ B2/B4/B5/B12/B13/B14/B66/B71; 3G WCDMA@ B2/B4/B5; **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; **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; Other options please contact Elastel representative.
Wi-Fi Band Options	2.4～2.4835GHz or 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 ~ 36 VDC, 9 ~ 24 VAC, recommended DC 12V/1.5A
Power Consumption	Average: 5 W Peak: 10 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, ETH x1, COM<x> trans x 4 (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 with Backup CR2032 button battery
Watchdog	Built-in WDT for auto recovery
Physical Characteristics	
Dimension	108.7mm×103mm×27mm(L×W×H)
Housing	IP30 Metal
Installation	DIN-rail mounting
	Wall mounting
Weight	340 g (0.75 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
	ANS1C63.4:2014
RoHS	IEC62321-3/4/5/6/7/8
Software Features	
Pre-installed OS	Linux 5.10.160
OT-to-IT Integration	Modbus RTU/ASCII/TCP Master/Slave, BACnet MSTP/IP
	IEC104, DNP3, OPC UA, EtherNet/IP, PLC protocols,
	MQTT, Sparkplug B…data collect and conversion Powered by ElastPro
Secondary Development	Python, C, C++, Go
Package Contents	
Device	1 x EC212 device with Terminal Block preinstalled
Antenna	Mag-mount Antenna (SMA Male, 1 meter, 12dBi).
	Only for cellular or Wi-Fi version.
Installation Kit	1 x DIN-rail kit
Warranty Period	1 year

Dimensions

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-touse IIoT devices like **Industrial Raspberry Pi**, **Arm-based industrial computer** for 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.

Elastel leverages its independent R&D innovation to pursue its core mission: "Streamline IoT communication development, shorten and simplify the process of system implementation" The company's high-quality industrial Computer & Gateway hardware and software service enhance the IoT communication efficiency and competitive advantages of its customers all over the world.

Copyright

Copyright © 2025 ELASTEL (XIAMEN) TECHNOLOGIES CO., LTD.

Technical Support

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