

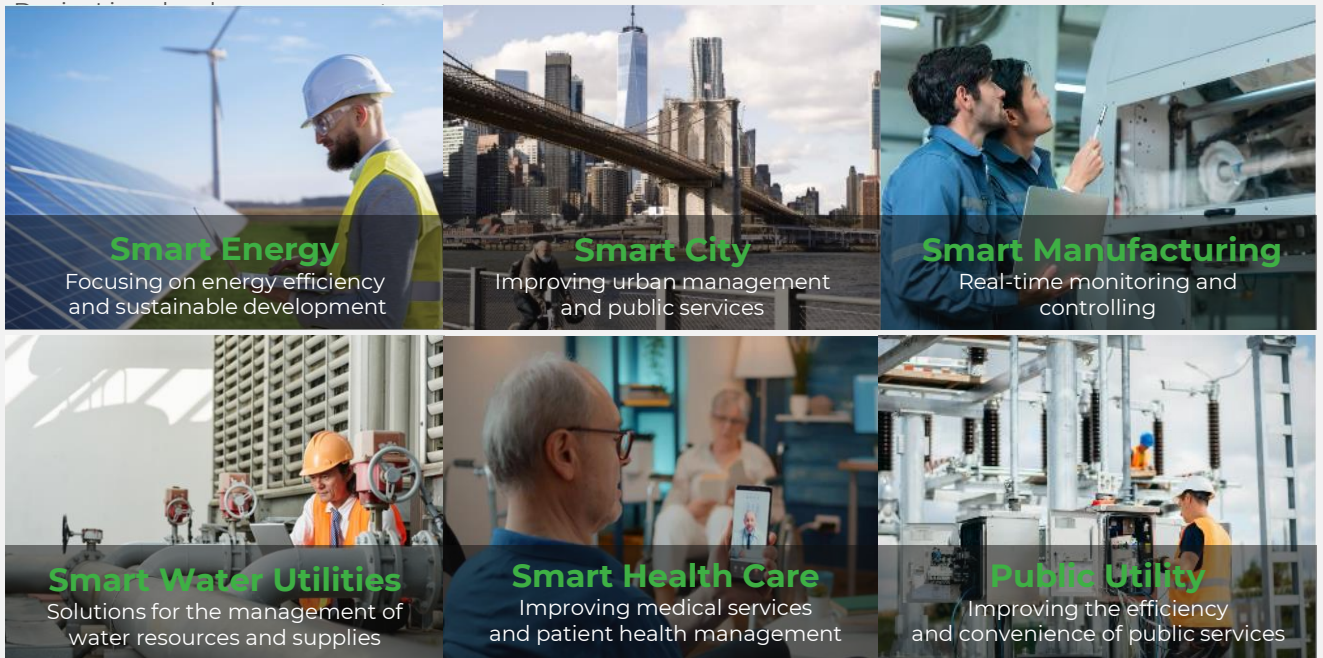
Embrace Edge AI,  
Empower Industrial Digitalization.

# EC942 Series lite AI Edge Computer

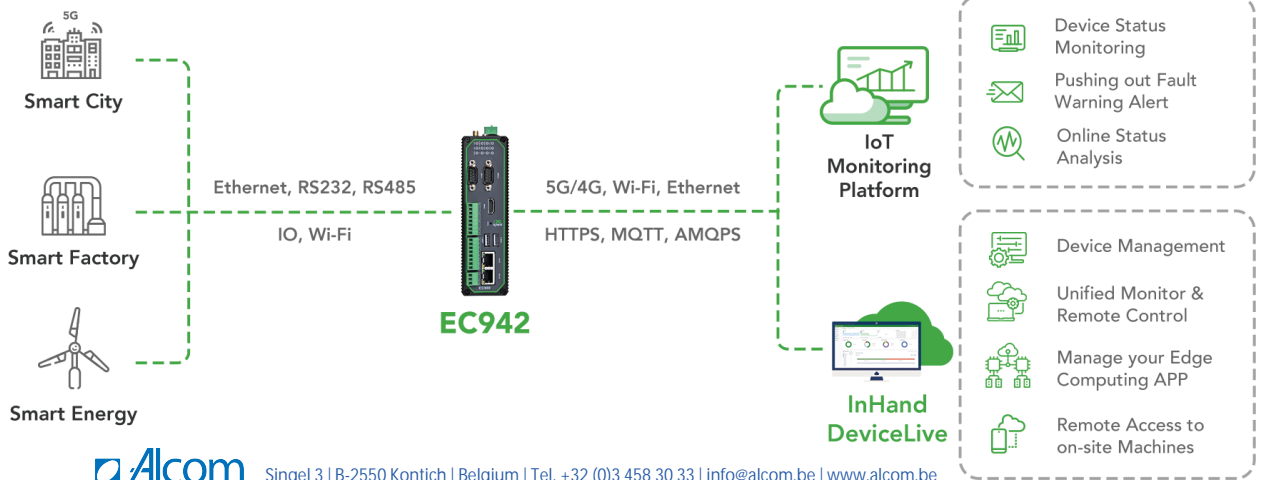


- Strong computing capability
- High security
- High reliability
- Cloud-Managed

EC942 series edge computer is a lightweight AI-accelerated edge computer launched by InHand for the industrial Internet of Things. It is equipped with an ARM Cortex-A55@2.0GHz quad-core processor, and comes standard with 4GB RAM and 16GB eMMC, providing a powerful computing platform. The product uses the Linux distribution system to provide users with flexible and diverse secondary development environment. Security features such as Secure Boot and TPM2.0 are supported to ensure software and data security. Built-in Device- Supervisor™ Agent (DSA) service, easy to achieve data collection, processing and cloud, and support



## Solution



## Feature and Advantage

### Performance and Platform

- CPU: ARM Quad Cortex-A55@2.0GHz
- GPU: Mali-G52 2EE
- NPU: RKNN, 1 TOPS
- Support customers to develop and install edge applications
- Docker
- \*IEOS

### Rich interfaces

- 2x 10/100/1000Mbps Ethernet interface
- 1x CAN BUS
- 2x USB2.0
- 1x mSATA
- 1x MicroSD
- 2x RS-232/RS-485/RS-422
- I/O, GPS, Wi-Fi and Bluetooth optional

### Stable communication

- 5G/4G/Wi-Fi/GbE, etc
- Wired, cellular, Wi-Fi mutual backup, dual SIM failover
- Independent hardware and software watchdog
- Multilevel link detection, communication self-healing
- fanless



### High-level security

- Linux system security patches and vulnerability remediation services
- Firewall, VPN
- Secure Boot
- TPM 2.0
- TrustZone

### DeviceSupervisor™ Agent Service

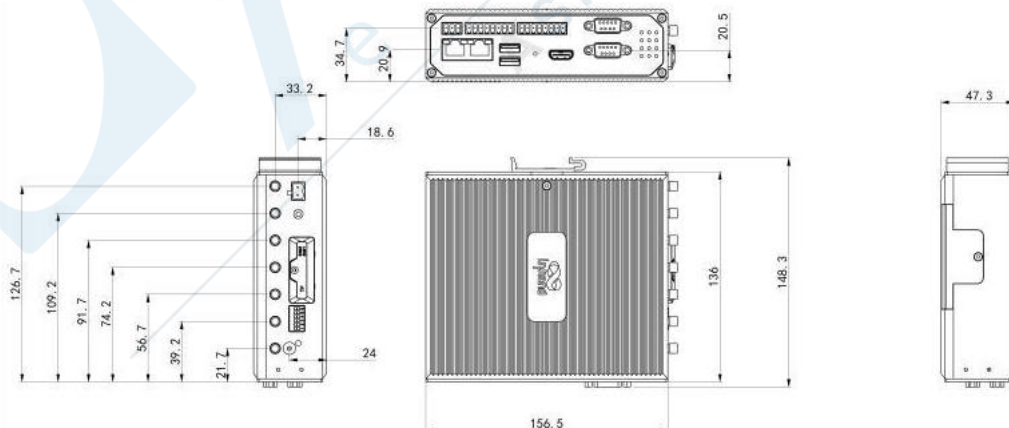
- Easy to achieve data acquisition on the cloud
- Integrate 80+ mainstream data acquisition protocols
- Support data preprocessing
- Integrated data publishing services, public/private cloud, local SCADA

### InHand DeviceLive Cloud Service

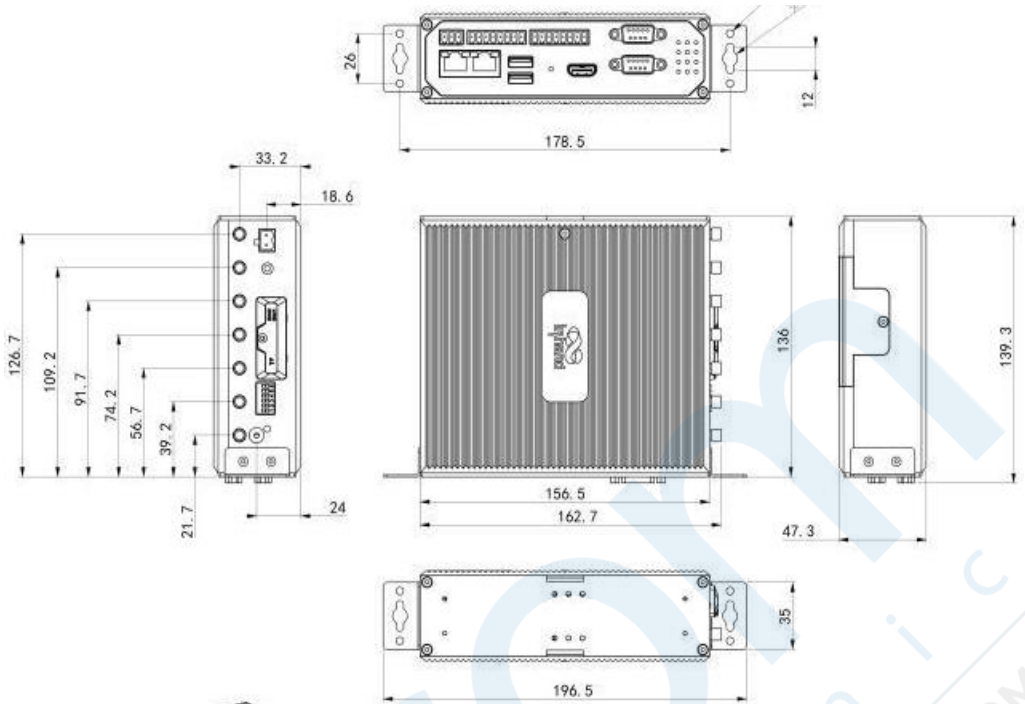
- Remote device access
- Remote device batch management
- Remote batch management of edge AI applications
- Remote container management



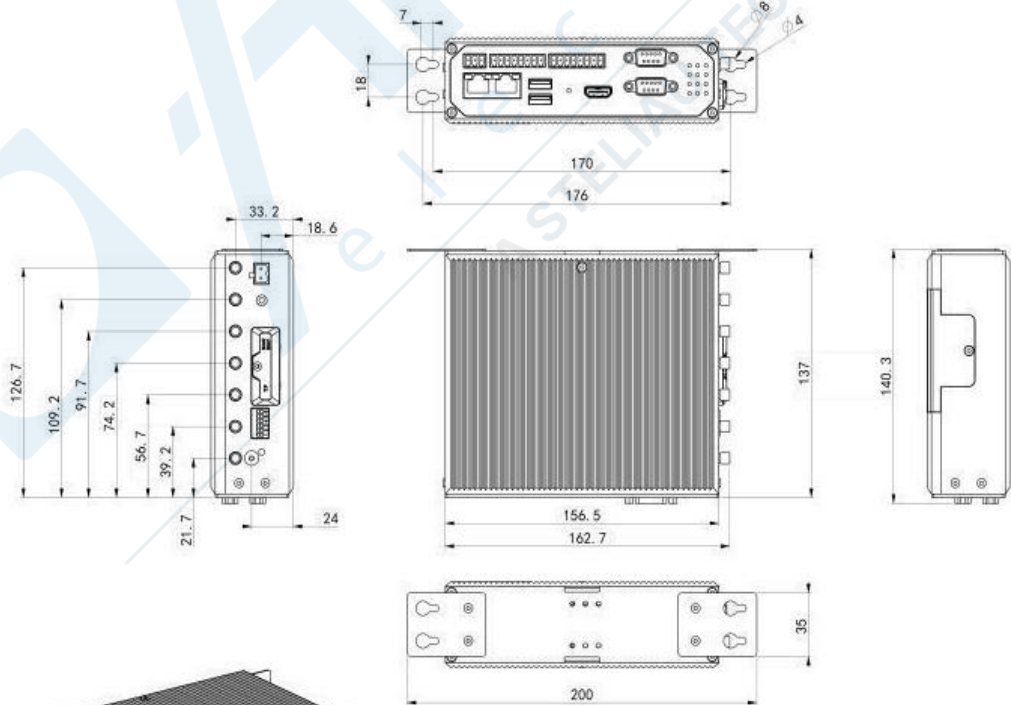
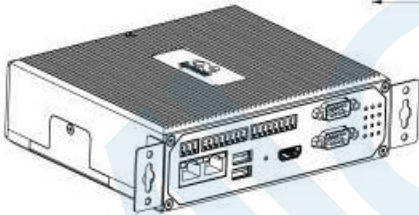
## Dimensions (mm)



EC900 DIN Rail Mounting



EC900 Wall Mounting Ax



EC900 Wall Mounting Bx



# Product Specifications

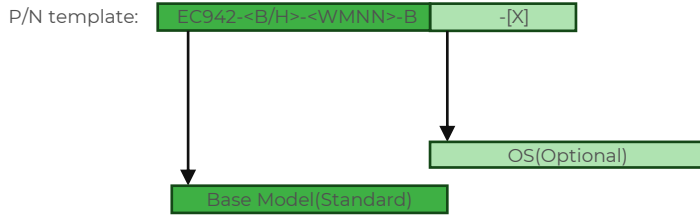
Hardware Specifications			
Item	EC942		
Hardware Platform			
CPU	Quad-core Cortex-A55@2.0GHz		
RAM	4GB		
FLASH	16GB eMMC		
Interfaces			
EtherNet Port	2x 10/100/1000Mbps Ethernet port		
Serial Port	2x RS-232/485/422, DB9		
I/O (Optional)	4x DI, 4x DO		
CAN (Optional)	CAN 2.0A/B		
Wi-Fi (Optional)	STA, 802.11ac/a/b/g/n, 2.4G/5G dual band		
Bluetooth (Optional)	BLE 4.2		
GPS (Optional)	Supports GPS, Beidou, and GLONASS positioning		
USB	USB 2.0, 2x TypeA, 1x TypeC		
HDMI	1x HDMI2.0		
Expansion Interface	1x mSATA		
Reset Button	Pinhole reset button		
SIM Card	2x MicroSIM		
TF Card	Supports Micro SD		
Security			
TPM (Optional)	Integrated TPM chip, TPM2.0		
Mechanical Feature			
Installation	DIN-rail, wall mounting	Protection Rating	IP30
Housing	Metal	Weights	810g
Dimensions	47.3x 162.7x 148.3mm		
Power Supply			
Power Input	DC 12-48V, polarity reversal protection		
Power Interface	Industrial terminal block		
Power Consumption	8W		
Ambient Temperature and Humidity			
Working Temperature	-20~ 70℃	Storage Temperature	-40 ~ 85℃
Ambient Humidity	5 ~ 95% (non-condensing)		
Indicator			
LED	4G/5G, Signal Strength(L1, L2, L3), SIM1, SIM2, User1, User2, PWR, STATUS, WARN, ERR		
EMC Index			
Electrostatic Discharge	EN61000-4-2, level 3		
Radiation RFI Immunity	EN61000-4-3, level 3		
Electrical Fast Transients	EN61000-4-4, level 3		
Surge	EN61000-4-5, level 3		
Conducted RFI	EN61000-4-6, level 3		
Ring Wave Immunity	EN61000-4-12, level 3		
Power Frequency Magnetic Field Resistance	EN61000-4-8, horizontal / vertical 400A/m (>level 2)		
Physical Features			
Shock	IEC60068-2-27	Vibration	IEC60068-2-6
Free Fall	IEC60068-2-32		
Certification			
CE, FCC, PTCRB, Verizon Wireless, AT&T			

Software Specifications	
Item	EC942
OS	
OS	Yocto/Linux(Debian10, Kernel 4.19)
File System	Debian core root filesystem
Package Manager	Debian Package Manager
Network Interconnection	
Network Type	5G, LTE Cat4, LTE Cat6(Different models for different networks)
Network Access	APN, VPDN
Access Authentication	CHAP/PAP
LAN Protocol	ARP, Ethernet
WAN Protocol	Static IP, DHCP
Security	
Secure Boot	Support
Reliability	
Backup	Dual SIM
Link Detection	Multi-Level link detection, auto-redials once disconnected
Embedded Watchdog	Device self-diagnosing, auto-recovers from operation faults
Data Acquisition Protocol(*DSA)	
Industrial Protocol	Modbus RTU Master/Slave, Modbus TCP Master/Slave, EtherNet/IP, ISO on TCP, OPC UA Client/Server, Mitsubishi MC 3C/3E/3C OverTCP, Mitsubishi CPU Port, FINSUDP, HostLink, PPI
Electricity Protocol	DLT645-2007, IEC101/104, DNP3.0
Other Protocol	BACnet, CNC
Maintenance and Management	
Upgrade Method	Supports patent upgrade mechanism, local or remote firmware upgrade
Log	Support local system logs, remote logs, and important log power-off preservation
Remote Management	InHand DeviceLive, HTTP, HTTPS, SSH, etc.
DeviceLive Cloud	Supports cloud-based parameter configuration, container management, application and firmware management

\*DSA: The DeviceSupervisor Agent (DSA), developed by InHand Networks, is a cutting-edge intelligence software designed to operate on Edge Computer products. It enables clients to quickly implement data collection, processing, protocol conversion, and cloud connectivity through a "zero code/low code" approach. If you need the DSA application on the EdgeComputer product, please contact us to obtain the DSA software package.

# Ordering Guide

## Description of selection



## Base Model

Base Model	Cellular Type & Frequency Band: <WMNN>	Memory	FLASH	Ethernet Port	Serial Port	WiFi/GPS/ CAN/TPM	I/O
EC942-B-LQA8-B	China LTE CAT4 LTE-FDD: B1/B3/B5/B8 LTE-TDD: B34/B38/B39/B40/B41 WCDMA: B1/B8 TD-SCDMA: B34/B39 CDMA: BC0 GSM: 900/1800MHz	4 GB	16 GB	2x 1000Mbps	2x RS232/RS485/ RS422 configurable	NO	NO
EC942-H-LQA8-B	China LTE CAT4 LTE-FDD: B1/B3/B5/B8 LTE-TDD: B34/B38/B39/B40/B41 WCDMA: B1/B8 TD-SCDMA: B34/B39 CDMA: BC0 GSM: 900/1800MHz	4 GB	16 GB	2x 1000Mbps	2x RS232/RS485/ RS422 configurable	YES	YES
EC942-B-NRQ1-B	China 5G NR 5G NR NSA: n1/3/5/8/28/41/77/78/79 LTE-FDD: B1/B3/B5/B8 LTE-TDD: B34/B38/B39/B40/B41 WCDMA: B1/B8	4 GB	16 GB	2x 1000Mbps	2x RS232/RS485/ RS422 configurable	NO	NO
EC942-H-NRQ1-B	China 5G NR 5G NR NSA: n1/3/5/8/28/41/77/78/79 LTE-FDD: B1/B3/B5/B8 LTE-TDD: B34/B38/B39/B40/B41 WCDMA: B1/B8	4 GB	16 GB	2x 1000Mbps	2x RS232/RS485/ RS422 configurable	YES	YES
EC942-B-NRQ3-B	Global (excluding China) 5G NR 5G NR NSA : n1/n2/n3/n5/n7/n8/n12/n20/n25/n28/n38/n40 /n41/n48/n66/n71/n77/n78/n79 5G NR SA : n1/n2/n3/n5/n7/n8/n12/n20/n25/n28/n38/n40 /n41/n48/n66/n71/n77/n78/n79 LTE FDD: B1/B2/B3/B5/B7/B8/B12(B17)/B13/B14/B18/B19 /B20/B25/B26/B28/B29/B30/B32/B66/B71 LTE TDD: B34/B38/B39/B40/B41/B42/B48 LAA:B46 WCDMA Bands: B1/B2/B3/B4/B5/B6/B8/B19	4 GB	16 GB	2x 1000Mbps	2x RS232/RS485/ RS422 configurable	NO	NO
EC942-H-NRQ3-B	Global (excluding China) 5G NR 5G NR NSA : n1/n2/n3/n5/n7/n8/n12/n20/n25/n28/n38/n40 /n41/n48/n66/n71/n77/n78/n79 5G NR SA : n1/n2/n3/n5/n7/n8/n12/n20/n25/n28/n38/n40 /n41/n48/n66/n71/n77/n78/n79 LTE FDD: B1/B2/B3/B5/B7/B8/B12(B17)/B13/B14/B18/B19 /B20/B25/B26/B28/B29/B30/B32/B66/B71 LTE TDD: B34/B38/B39/B40/B41/B42/B48 LAA:B46 WCDMA Bands: B1/B2/B3/B4/B5/B6/B8/B19	4 GB	16 GB	2x 1000Mbps	2x RS232/RS485/ RS422 configurable	YES	YES
EC942-B-FQ58-B	EMEA LTE CAT4 LTE-FDD: Band1/3/7/8/20/28A LTE-TDD: Band38/40/41 WCDMA: Band1/8 GSM: Band3/8	4 GB	16 GB	2x 1000Mbps	2x RS232/RS485/ RS422 configurable	NO	NO
EC942-H-FQ58-B	EMEA LTE CAT4 LTE-FDD: Band1/3/7/8/20/28A LTE-TDD: Band38/40/41 WCDMA: Band1/8 GSM: Band3/8	4 GB	16 GB	2x 1000Mbps	2x RS232/RS485/ RS422 configurable	YES	YES

Model	Cellular Type & Frequency Band: <WMNN>	Memory	FLASH	Ethernet Port	Serial Port	WiFi/GPS/ CAN/TPM	I/O
EC942-B-FQ38-B	North America LTE CAT4 LTE-FDD:Band2/4/5/12/13/14/66/71 WCDMA:Band 2/4/5	4 GB	16 GB	2x 1000Mbps	2x RS232/RS485/ RS422 configurable	NO	NO
EC942-H-FQ38-B	North America LTE CAT4 LTE-FDD:Band2/4/5/12/13/14/66/71 WCDMA:Band 2/4/5	4 GB	16 GB	2x 1000Mbps	2x RS232/RS485/ RS422 configurable	YES	YES
EC942-B-EN00-B	Global No Cellular	4 GB	16 GB	2x 1000Mbps	2x RS232/RS485/ RS422 configurable	NO	NO
EC942-H-EN00-B	Global No Cellular	4 GB	16 GB	2x 1000Mbps	2x RS232/RS485/ RS422 configurable	YES	YES

## OS(Optional)

[X]	
P/N Code	Feature
—	*IEOS
D	*Debian Linux OS

- **IEOS(InHand Edge Operating System)** is InHand Networks' operating system based on distribution Linux for IoT ARM platform edge computers, helping customers achieve safe and stable industrial edge intelligent applications. IEOS contains InHand applications such as web configuration, dialing, routing, firewall, VPN, cloud management etc.
- **Debian Linux OS:** Debian OS without InHand application.

## About Us

InHand Networks is a leading IoT solutions provider founded in 2001, dedicated to driving digital transformation across industries and empowering customers to unlock their full potential and achieve accelerated growth.

We specialize in delivering industrial-grade connectivity solutions for diverse sectors, such as enterprise networks, industrial and building IoT, digital energy, smart commerce, and mobility. Our comprehensive product portfolio and services cater to various applications worldwide, including smart manufacturing, smart grid, intelligent transportation, smart retail, etc. With a global footprint spanning over 60 countries, we serve customers in China, the United States, France, Germany, the United Kingdom, Italy, and beyond.



3650 Concorde Pkwy, Suite 200  
Chantilly, VA 20151, USA  
T: +1 (703) 348-2988  
E: info@inhand.com  
www.inhand.com