Embrace Edge AI,

Empower Industrial Digitalization.

EC3320 Series AI Edge Computer
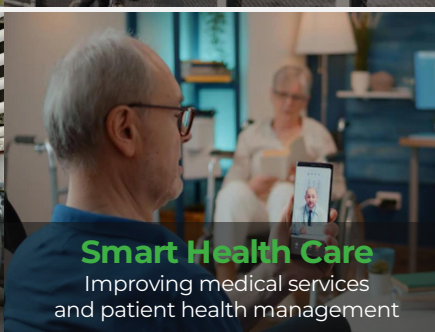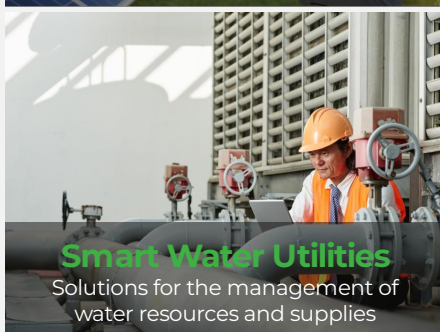
- · **Strong computing capability**
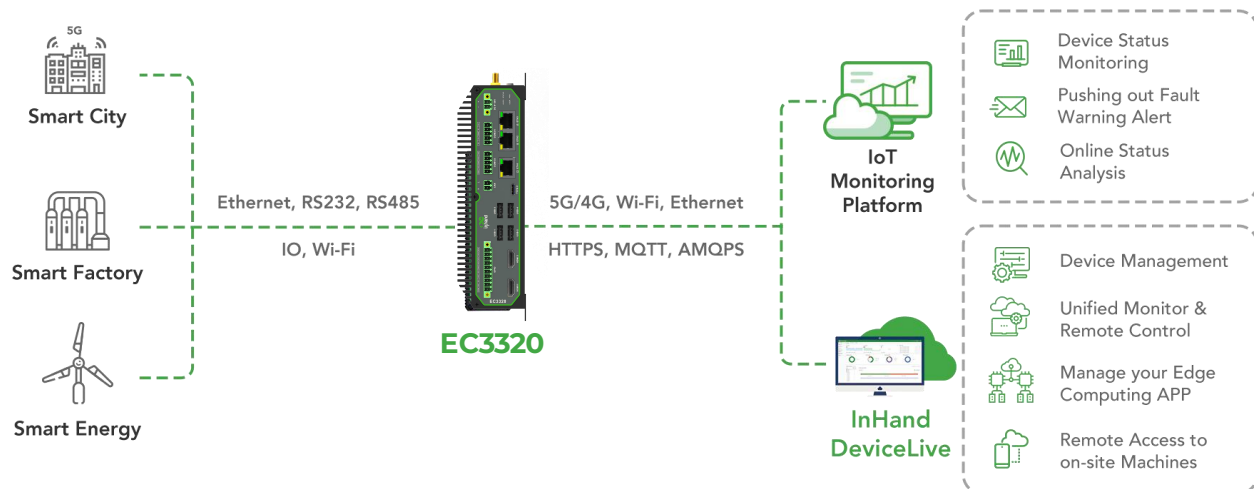- · **High security**
- · **High reliability**
- · **Cloud-Managed**

With technology advancements, demand for local computing is on the rise, especially in manufacturing, security, and healthcare. Traditional cloud solutions may not meet the need for fast processing and data security. InHand Networks offers the EC3320 AI edge computer, delivering high performance, real-time decision-making, and enhanced data privacy for improved efficiency in manufacturing, security, and healthcare

Smart Energy
Focusing on energy efficiency
and sustainable development

Smart City
Improving urban management
and public services

Smart Manufacturing
Real-time monitoring and controlling

Smart Water Utilities
Solutions for the management of
water resources and supplies

Smart Health Care
Improving medical services
and patient health management

Public Utility
Improving the efficiency
and convenience of public services

Solution

5G

Smart City

Smart Factory

Smart Energy

Ethernet, RS232, RS485

IO, Wi-Fi

EC3320

5G/4G, Wi-Fi, Ethernet

HTTPS, MQTT, AMQPS

IoT Monitoring Platform

Device Status Monitoring

Pushing out Fault Warning Alert

Online Status Analysis

InHand DeviceLive

Device Management

Unified Monitor & Remote Control

Manage your Edge Computing APP

Remote Access to on-site Machines

Feature and Advantage

Performance and Platform

- CPU：ARM 4*Cortex-A76 + 4*Cortex-A55，up to2.4GHz
- GPU：Mali-G610 MC4
- NPU：6TOPS
- Compatible with various AI frameworks
- Support Hailo-8 M.2 module, up to 26TOPs computing power

Rich interfaces

- 3x 10/100/1000Mbps Ethernet interface
- 1x CAN BUS
- 4x USB3.0
- 2x RS-232 and 2x RS-485
- 2x HDMI
- 4DI+4DO
- MIC、SPK

Stable communication

- 4G/Wi-Fi/GbE, etc
- Wired, cellular, Wi-Fi mutual backup, dual SIM failover
- Independent hardware and software watchdog
- EMC Level 3
- Fanless

High-level security

- Linux system security patches and vulnerability remediation services
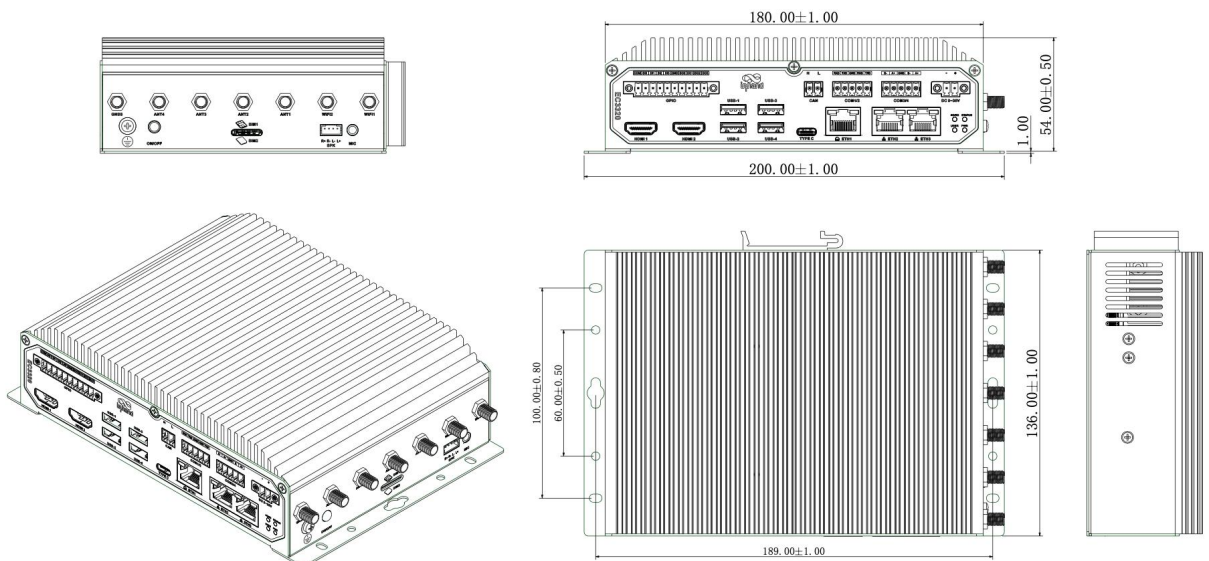- Secure Boot
- TPM 2.0

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
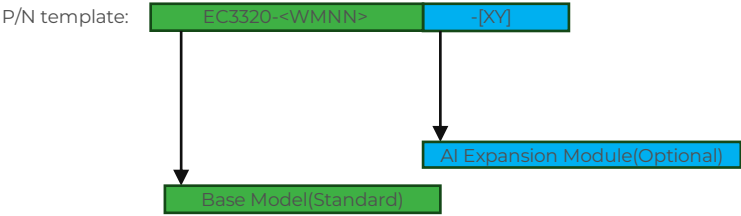- Remote container management

Dimensions (mm)

180.00±1.00
54.00±0.50
1.00
200.00±1.00

100.00±0.80
60.00±0.50
136.00±1.00
189.00±1.00

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Product Specifications

Hardware Specifications	
Item	EC3320
Hardware Platform	
CPU	Quad Cortex-A76 + Quad Cortex-A55@ up to2.4GHz
GPU	Quad-core Mali-G610 MC4 high-performance GPU
NPU	Up to 6 TOPS (INT8) Support INT4/INT8/INT16 mixed operations and framework switching of TensorFlow / MXNet / PyTorch / Caffe
RAM	8GB
FLASH	64GB eMMC
Interfaces	
EtherNet Port	3x 10/100/1000Mbps Ethernet port
Serial Port	2x RS-232+2x RS-485, industrial terminal
I/O	10pin industrial green terminal (4IN, 4OUT, 2GND)
CAN	1x CAN 2.0
Wi-Fi	STA, 802.11ac/a/b/g/n, 2.4G/5G dual band
Bluetooth	BLE 5.0
GPS	GPS (cellular module support required)
USB	4x USB 3.0
HDMI	2x HDMI 2.0
Expansion Interface	1x M.2(Supports SATA3.0 SSD, supports 2242 size) 1x M.2(Supports Hailo-8 M.2 module, up to 26TOPs computing power)
Power Button	1x Power, 1x Reset
SIM Card	2x Nano SIM Slot
MIC	1x MIC
SPK	1x SPeaker
Security	
TPM (Optional)	Integrated TPM chip, TPM2.0

Mechanical Feature			
Installation	DIN-rail, wall mounting	Protection Rating	IP40
Dimensions	180x 136x 54mm	Housing	Metal

Power Supply	
Power Input	9~36V DC-input (2pin green industrial terminal, with flange)
Power Interface	Industrial terminal block

Ambient Temperature and Humidity			
Working Temperature	-20~ 60℃	Storage Temperature	-40 ~ 85℃
Ambient Humidity	5 ~ 95% (non-condensing)		

Indicator	
Power	Power supply indicator light, always on after power on;
Status	The status indicator light flashes during normal operation;
4G	4G connection indicator light is always on when connected normally;
USER	User-definable

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		

Software Specifications	
Item	EC3320
OS	
OS	Linux
Network Interconnection	
Network Type	5G NR, LTE Cat6(Different models for different networks)
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,
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 visit the official website to obtain the DSA software package.

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Ordering Guide

Description of selection

P/N template:　EC3320-<WMNN>　　-[XY]

AI Expansion Module(Optional)

Base Model(Standard)

Base Model

Model	Cellular Type &Frequency Band: <WMNN>	Memory	Storage	Ethernet Port	Serial Port	Wi-Fi/BT/CAN/MIC/SPK/DI/DO	GPS
EC3320-NRQ3	Gloable 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	8 GB	64 GB	3x 1000Mbps	2x RS232+2x RS485	YES	YES
EC3320-FQ09	Gloable 4G CAT6 LTE FDD: B1/ 2/ 3/ 4/ 5/ 7/ 8/ 12/ 13/ 14/ 17/ 18/ 19/ 20/ 25/ 26/ 28/ 29/ 30/ 32/ 66/ 71 LTE TDD: B34/ 38/ 39/ 40/ 41/ 42/ 43/ 46(LAA)/ 48 (CBRS)	8 GB	64 GB	3x 1000Mbps	2x RS232+2x RS485	YES	YES
EC3320-EN00	No Cellular	8 GB	64 GB	3x 1000Mbps	2x RS232+2x RS485	YES	NO

Hailo AI Module(Optional)

[XY]	
P/N Code	Feature
—	None
H8	Hailo-8, M.2 Key B+M 2280

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.

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