

# EMBEDDED COMPUTING

## Embedded Computing

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# AI Edge Computing

## Overview

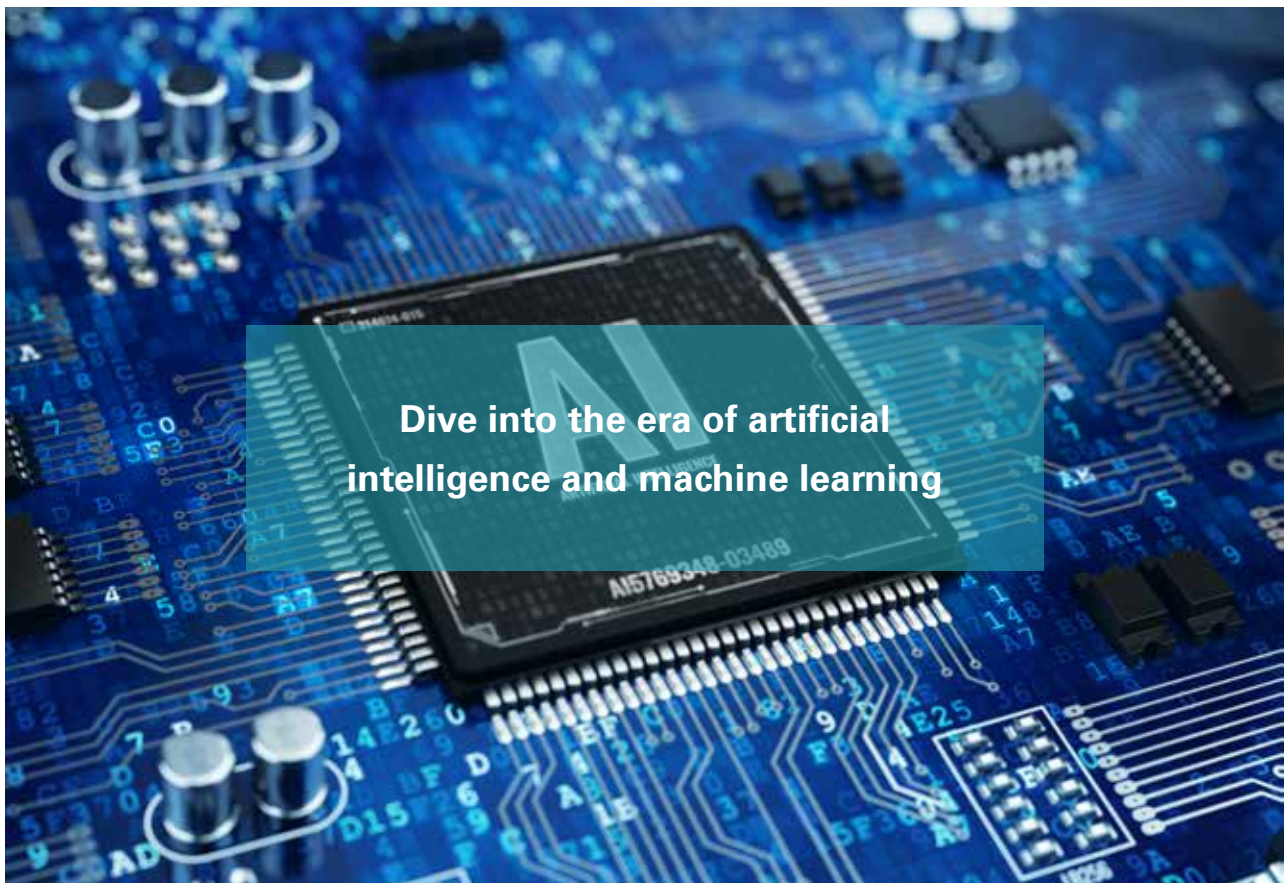
Winmate provides a full range of embedded platforms for you to build unique solutions for Industrial embedded systems. Our embedded computing solutions are designed to give developers the freedom to build fast and convenient solutions for industrial applications such as factory automation, machine control, transportation, IoT gateways and edge computing.

### Our embedded computing solutions include:

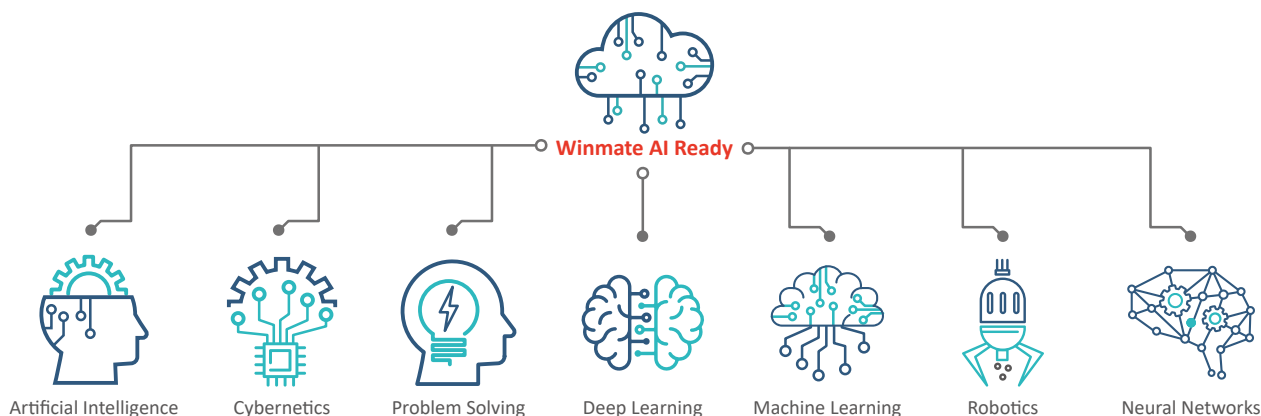
- AI-ready embedded hardware, IoT gateways, embedded box PCs, industrial servers and Single Board Computers
- The latest Android™, Windows® and Linux operating system
- Board development and production purpose-built for your needs

## Technology

**AI-ready solution-** Winmate IWAI series is AI hardware ready system ideal for deep learning inference computing to help users gain faster, deeper insights into their business. Containing 8th Gen. Intel® Processor and Intel® Movidius Video Processing Unit (VPU), the IWAI series are AI ready solutions that meet the high computation and low-latency requirements of deep learning on edge devices. With the Intel® OpenVINO™ toolkit, the series can help deploy your solutions faster than ever in factory automation, transportation, surveillance scenarios and more.



## Technology



The OpenVINO™ toolkit quickly deploys applications and solutions that emulate human vision. Based on Convolutional Neural Networks (CNN), the toolkit extends computer vision (CV) workloads across Intel® hardware, maximizing performance. The OpenVINO™ toolkit includes the Deep Learning Deployment Toolkit (DLDT).

The OpenVINO™ toolkit:

1. Enables CNN-based deep learning inference on the edge.
2. Speeds time-to-market via an easy-to-use library of computer vision functions and pre-optimized kernels.
3. Includes optimized calls for computer vision standards, including OpenCV\*, OpenCL™, and OpenVX\*.





## Product Guide- Featured Embedded Computing Device

Our product guide helps you to navigate and find the right product from our excessive product line.

### AI Edge Embedded Computing

Fanless Embedded Automation Computer	Fanless Embedded Surveillance Computer	Fanless Embedded In-Vehicle Computer	Modular Embedded Box PC
			
<b>IWAIAA</b> p.109	<b>IWAISHA</b> p.111	<b>IWAITA</b> p.113	<b>IKMH100-AI</b> p.115

### Edge Embedded Computing

IoT Gateway	EAC Pro Box PC	Standard Box PC	Embedded Computing
			
<b>EAC Mini</b> p.117	<b>EAC Pro Box PC</b> p.119	<b>Standard Box PC</b> p.131	<b>2U Rack Server</b> p.136

# Fanless Embedded Automation Computer

## IWAI-AA

NEW



### Custom configuration



Expansion Slot



Up to  
512 GB

Storage



Wi-Fi



Movidius  
VPU

### Application



### Predictive Maintenance System

“ BRIDGING THE GAP BETWEEN IT AND OT ”

Most predictive maintenance systems rely on machine learning to form late predictions. The advantages are numerous and can significantly reduce costs while eliminating the need for planned downtime in many cases.

## “ ARTIFICIAL INTELLIGENCE - THE DRIVING FORCE OF INDUSTRY 4.0 ”

- CE, FCC
- 8<sup>th</sup> Gen. Intel® Core™ i7/i5/i3
- Intel® Movidius VPU Card
- Windows 10 IoT Enterprise / Linux

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Fanless cooling system

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Wi-Fi, WWAN

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USB 3.0

---

COM Port

---

HDMI

---

4 x PoE (PSE) sharing 60W

---

Wide range DC 9~36V power input with Isolation and Ignition

---

Support 4 in/ 4 out DI/DO Isolated

---

### Accessories

#### Standard

Male Terminal Block(5 pin) for DIO

Driver CD

Open Wire for Power

Wifi Antenna

Male Terminal Block(5 pin) for Power

# Fanless Embedded Automation Computer

8<sup>th</sup> Gen. Intel® Core™ i7/i5/i3



Model Name	IWAI-AA
<b>System</b>	
<b>Processor</b>	Intel® Core™ i7-8665UE (8M Cache, up to 4.40 GHz) Intel® Core™ i5-8265U (6M Cache, up to 3.90 GHz)(Default) Intel® Core™ i3-8145UE (4M Cache, up to 3.90 GHz)
<b>BIOS</b>	Insyde H20 BIOS
<b>Memory</b>	260 pin DDR4-2400 Non-ECC/ECC SO-DIMM RAM(up to 32 GB)
<b>Graphic Interface</b>	Graphic resolution:HDMI Mode: 4096x2160@30/24Hz
<b>Audio</b>	Realtek HD Audio Codec
<b>TPM</b>	TPM2.0
<b>GPS</b>	NEO M8N
<b>OVP/OC</b>	Support
<b>Ethernet Controller</b>	PHY I219LM, 1000 Base-Tx Gigabit Ethernet Compatible
<b>POE Ethernet</b>	4 ports, sharing 60W of power budget for every four PoE (PSE) ports
<b>Expansion Slot</b>	PCIE by 4 (Default AI Core XM VPU x 4) (Optional VPU x 1, VPU x 2)
<b>Storage</b>	Internal M.2 SSD (Up to 512GB) x1, Removable 2.5" SATA HDD (1TB) or 2.5" SSD (Optional)
<b>Power</b>	
<b>Power Input</b>	DC 9-36 In with Isolation and Ignition
<b>Connectors</b>	
<b>Front Side I/O</b>	1 x Power Button with LED 1 x RJ45 10/100/1000 1 x Software LED 1 x headset jack(Line Out & Mic in) 1 x HDMI output 4 x USB 3.0 (Front*4) 4 x PoE (PSE) sharing 60W 2 x 5 pin two layer terminal block for 8-bit DIDO(4xDI, 4xDO) 1 x 5pin terminal block for DC input 2 x D-Sub9 with RS232/422/485 (Optional)
<b>Rear Side</b>	SMA connectors for WLAN, WWAN (Optional) 1 x Micro SIM Card Slot (Optional) 1 x Removable 2.5" HDD/ 2.5" SSD (Optional)
<b>Mechanical</b>	
<b>Dimensions</b>	85 x 215 x 192 mm
<b>Environment</b>	
<b>Operating Temp.</b>	-20°C to 70°C
<b>Humidity</b>	10% to 95% RH@40°C (Non-condensing, RH)
<b>Storage Temperature</b>	-20°C to 70°C
<b>Vibration</b>	MIL-STD-810G Method 516.6 Procedure I
<b>Shock</b>	MIL-STD-810G Method 516.6 Procedure I
<b>Wireless Communication</b>	
<b>WLAN</b>	Intel AC9260 802.11 a/b/g/n/ac (Optional)
<b>Bluetooth</b>	5.0 (Optional)
<b>Certifications</b>	
<b>Certification</b>	CE, FCC

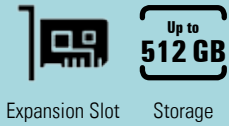
# Fanless Embedded Surveillance Computer

# IWAI-SHA

NEW



## Custom configuration



Expansion Slot

Storage



Wi-Fi



Movidius  
VPU

## Application



### Smart Surveillance

“MORE INTELLIGENT,  
MORE SECURE”

Surveillance is not simply video keeping track of people’s movements. It’s a lot more than that – it’s about tracking, trends and transitions and using artificial intelligence (AI) to make smart, informed decisions.

“ AI-based security solutions ”

- CE, FCC
- 8<sup>th</sup> Gen. Intel® Core™ i7/i5/i3
- Intel® Movidius VPU Card
- Windows 10 IoT Enterprise / Linux

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Fanless cooling system

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Wi-Fi

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USB 3.0

---

COM Port

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Compatible with Edge AI module: Intel Movidius VPU Card

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4 x PoE (PSE) sharing 60W

---

Wide range DC 9~36V power input with Isolation and Ignition

---

Support 4 in/ 4 out DI/DO Isolated

---

## Accessories

### Standard

Male Terminal Block(5 pin) for DIO

Driver CD

Open Wire for Power

Wifi Antenna

Male Terminal Block(5 pin) for Power

Wifi Antenna

WWAN Antenna

# Fanless Embedded Surveillance Computer

8<sup>th</sup> Gen. Intel® Core™ i7/i5/i3



Model Name	IWAI-SHA
<b>System</b>	
<b>Processor</b>	Intel® Core™ i7-8665UE (8M Cache, up to 4.40 GHz) Intel® Core™ i5-8265U (6M Cache, up to 3.90 GHz) (Default) Intel® Core™ i3-8145UE (4M Cache, up to 3.90 GHz)
<b>BIOS</b>	Insyde H20 BIOS
<b>Memory</b>	260 pin DDR4-2400 Non-ECC/ECC SO-DIMM RAM(up to 32 GB)
<b>Graphic Interface</b>	Graphic resolution:HDMI Mode: 4096x2160@30/24Hz
<b>Audio</b>	Realtek HD Audio Codec
<b>TPM</b>	TPM2.0
<b>GPS</b>	NEO M8N
<b>OVP/OCP</b>	Support
<b>Ethernet Controller</b>	PHY I219LM, 1000 Base-Tx Gigabit Ethernet Compatible
<b>POE Ethernet</b>	4 ports, sharing 60W of power budget for every four PoE (PSE) ports
<b>Expansion Slot</b>	PCIE by 4 (Default AI Core XM VPU x 4) (Optional VPU x 1, VPU x 2)
<b>Storage</b>	Internal M.2 SSD (Up to 512GB) x1, Removable 2.5" SATA HDD (1TB) or 2.5" SSD (Optional)
<b>Power</b>	
<b>Power Input</b>	DC 9-36 In with Isolation and Ignition
<b>Connectors</b>	
<b>Front Side I/O</b>	1 x Power Button with LED 1 x RJ45 10/100/1000 1 x Software LED 1 x headset jack(Line Out & Mic in) 1 x HDMI output 4 x USB 3.0 (Front*4) 4 x PoE (PSE) sharing 60W 2 x 5 pin two layer terminal block for 8-bit DIDO(4xDI, 4xDO) 1 x 5pin terminal block for DC input 2 x RS232/422/485 (Default RS232)
<b>Rear Side</b>	SMA connectors for WLAN, WWAN (Optional) 1 x Micro SIM Card Slot (Optional) 1 x Removable 2.5" HDD/ 2.5" SSD (Optional)
<b>Mechanical</b>	
<b>Dimensions</b>	85 x 215 x 192 mm
<b>Environment</b>	
<b>Operating Temp.</b>	-20°C to 70°C
<b>Humidity</b>	10% to 95% RH@40°C (Non-condensing, RH)
<b>Storage Temperature</b>	-20°C to 70°C
<b>Wireless Communication</b>	
<b>WLAN</b>	Intel AC9260 802.11 a/b/g/n/ac (Optional)
<b>Bluetooth</b>	5.0 (Optional)
<b>Certifications</b>	
<b>Certification</b>	CE, FCC

# Fanless Embedded In-Vehicle Computer

## IWAI-TA

NEW



### Custom configuration

4G

4G LTE



Expansion Slot

Up to  
512 GB

Removable  
Storage



GPS



Wi-Fi



Movidius  
VPU

### Application



### Traffic Management System

“COMPATIBLE WITH UPCOMING TECHNOLOGIES”

Assures safe and fluent traffic conditions for all travelers, manage traffic and incidents in line with legal regulations and contractual obligations, and reduce and eliminate congestions and increase safety on the roads.

## “ SMART TRANSPORTATION REDEFINED ”

- E-Mark, CE, FCC
- 8<sup>th</sup> Gen. Intel® Core™ i7/i5/i3
- Intel® Movidius VPU Card
- Windows 10 IoT Enterprise / Linux

Fanless cooling system

Wi-Fi, GPS, GLONASS, WWAN

USB 3.0

CAN Bus, COM Port

HDMI

4 x PoE (PSE) sharing 60W

Wide range DC 9~36V power input with Isolation and Ignition

Support 4 in/ 4 out DI/DO Isolated

### Accessories

#### Standard

Male Terminal Block(5 pin) for DIO

Driver CD

Open Wire for Power

GPS Antenna

Male Terminal Block(5 pin) for Power



# Fanless Embedded In-Vehicle Computer

8<sup>th</sup> Gen. Intel® Core™ i7/i5/i3



Model Name	IWAI-TA
<b>System</b>	
<b>Processor</b>	Intel® Core™ i7-8665UE (8M Cache, up to 4.40 GHz) Intel® Core™ i5-8265U (6M Cache, up to 3.90 GHz)(Default) Intel® Core™ i3-8145UE (4M Cache, up to 3.90 GHz)
<b>BIOS</b>	Insyde H20 BIOS
<b>Memory</b>	260 pin DDR4-2400 Non-ECC/ECC SO-DIMM RAM(up to 32 GB)
<b>Graphic Interface</b>	Graphic resolution:HDMI Mode: 4096x2160@30/24Hz
<b>Audio</b>	Realtek HD Audio Codec
<b>TPM</b>	TPM2.0
<b>GPS</b>	NEO M8N
<b>OVP/OC</b>	Support
<b>Ethernet Controller</b>	PHY I219LM, 1000 Base-Tx Gigabit Ethernet Compatible
<b>POE Ethernet</b>	4 ports, sharing 60W of power budget for every four PoE (PSE) ports
<b>Expansion Slot</b>	PCIE by 4 (Default AI Core XM VPU x 4) (Optional VPU x 1, VPU x 2)
<b>Storage</b>	Internal M.2 SSD (Up to 512GB) x1, Removable 2.5" SATA HDD (1TB) or 2.5" SSD (Optional)
<b>Power</b>	
<b>Power Input</b>	DC 9-36 In with Isolation and Ignition
<b>Connectors</b>	
<b>Front Side I/O</b>	1 x Power Button with LED 1 x RJ45 10/100/1000 1 x Software LED 1 x headset jack(Line Out & Mic in) 1 x HDMI output 4 x USB 3.0 (Front*4) 4 x PoE (PSE) sharing 60W 2 x 5 pin two layer terminal block for 8-bit DIDO(4xDI, 4xDO) 1 x 5pin terminal block for DC input 2 x D-Sub9 with RS232/422/485 (Optional) 1 x D-Sub9 with CAN BUS (Optional)
<b>Rear Side</b>	SMA connectors for WLAN, WWAN & GPS (Optional) 1 x Micro SIM Card Slot (Optional) 1 x Removable 2.5" HDD/ 2.5" SSD (Optional)
<b>Mechanical</b>	
<b>Dimensions</b>	85 x 215 x 192 mm
<b>Environment</b>	
<b>Operating Temp.</b>	-20°C to 70°C
<b>Humidity</b>	10% to 95% RH@40°C (Non-condensing, RH)
<b>Storage Temperature</b>	-20°C to 70°C
<b>Vibration</b>	MIL-STD-810G Method 516.6 Procedure I
<b>Shock</b>	MIL-STD-810G Method 516.6 Procedure I
<b>Wireless Communication</b>	
<b>WLAN</b>	Intel AC9260 802.11 a/b/g/n/ac (Optional)
<b>Bluetooth</b>	5.0 (Optional)
<b>GPS</b>	GPS, GLONASS
<b>WWAN</b>	4G/LTE (Optional)
<b>Certifications</b>	
<b>Certification</b>	CE, FCC, E-Mark

# Modular Embedded Box PC

## IKMH100-AI

NEW

### Custom configuration

Up to  
**16 GB**

Memory

Up to  
**512 GB**

Storage



DI/DO

Up to  
**512 GB**

Optional 2nd  
Storage



Optional Front  
Display



Movidius  
VPU



### Application



#### Production Line Control

“ENABLING AN EFFICIENT,  
SMOOTH OPERATION.”

By preempting a failure with a machine learning algorithm, systems can continue to function without unnecessary interruptions.

## “ FIT AI INTO MANUFACTURING ”

- Intel® Core™ i5-7200U
- Intel® Movidius X VPU Card
- Windows 10/Linux

---

Modular design

---

HDMI output

---

Four USB 3.0

---

Two RJ45 for Ethernet

---

PCIe x 4, DI/DO x 8 (4 in/4 out)

---

Desktop, wall mount

---

Operating temperature -10°C to 50°C

---

### Accessories

#### Standard

Male Terminal Block(5 pin) for DIO

Driver CD

Open Wire for Power

GPS Antenna

Male Terminal Block(5 pin) for Power

# Fanless Embedded In-Vehicle Computer

Intel® Core™ i5-7200U



Model Name	IKMH100-AI
<b>System</b>	
<b>Processor</b>	Intel® Core™ i5-7200U (3M Cache, up to 3.10 GHz)
<b>BIOS</b>	Insyde BIOS
<b>Memory</b>	DDR4-2133 SO-DIMM (Max 16GB)
<b>Ethernet</b>	1000 Base-Tx Gigabit Ethernet Compatible
<b>Audio</b>	Realtek ALC283 HD Audio Codec
<b>USB</b>	4 x USB 3.0
<b>Serial Port</b>	1 x RS232/422/485 (Default RS232)
<b>Expansion Slot</b>	1 x PCIe4
<b>Main Storage</b>	2.5" 64GB SSD (Optional up to 512GB)
<b>Second Storage (Optional)</b>	mSATA 64GB (Options up to 512GB)
<b>Module</b>	2 x Intel Movidius X VPU (Up to 4 VPU)
<b>OS</b>	Windows 10 IoT Enterprise, Linux
<b>Power</b>	
<b>Power Input</b>	9~29V DC with protection Fuse
<b>Power Adapter</b>	110~240AC to 12V DC out 80W power Adapter
<b>Connectors</b>	
<b>I/O Connectors</b>	1 x 9-24V Isolation DC in (Terminal Block 3pin) 2 x RJ45 10/100/1000 4 x USB3.0 1 x HDMI Output 1 x D-Sub15 (VGA) Output 1 x RS232/422/485 (Default RS232) 1 x Audio in Jack 1 x Audio out Jack 1 x Reset key 1 x Power Button 1 x 2.5" SSD indicators 8 x Isolation DIDO, In/4 Out (Optional)
<b>Mechanical</b>	
<b>Dimensions</b>	276 x 207 x 60 mm
<b>Mouting</b>	Desktop/Wall Mount (Optional Panel Mount with Front Display)
<b>Construction</b>	Aluminum housing
<b>Environment</b>	
<b>Operating Temp.</b>	-10°C to 60°C
<b>Humidity</b>	30%-95% at 40 (Non-condensing, RH)
<b>Storage Temperature</b>	-20°C to 70°C
<b>Vibration</b>	MIL-STD-810G Method 516.6 Procedure I
<b>Shock</b>	MIL-STD-810G Method 516.6 Procedure I
<b>Certifications</b>	
<b>Certification</b>	CE, FCC

# IoT Gateway

## EAC Mini

### Custom configuration



Memory



Storage

4G

4G LTE



mSATA  
Expansion



WiFi



Mounting  
Options



“ **CONNECT EVERYTHING,  
CONTROL EVERYWHERE.** ”

- Compact design
- Intel® Celeron® N3350
- Arm Cortex-A9
- Windows 10, Android, Linux 4.1.15 (QT 5.5), Ubuntu

---

Fanless cooling system

---

Expansion module for additional interfaces

---

Compact size

---

HDMI

---

USB 2.0, USB 3.0 or USB Type-C

---

Two RJ45 for Ethernet

---

Desk, wall, VESA, DIN-Rail

---

IP30 or IP67-rated water and dustproof

---

### Accessories

#### Standard

Terminal Block 2 pin to 2.5Ø  
Female Adapter Cable

Driver CD

Quick Start Guide

Mounting Kits

### Application



#### Renewable Energy Power Converter

“THE RIGHT AMOUNT OF  
I/O AND CONNECTIVITY”

Dual Layer EAC Mini IoT  
Gateway was used as the  
main system for an energy  
converter.

# EAC Mini IoT Gateway

Intel® Celeron® N3350  
Arm® Cortex® -A9



Model Name	EACIL20	EACFA20	EACIL21	EACIL67
<b>System</b>				
<b>Processor</b>	Intel® Celeron® N3350 (2M Cache, up to 2.4 GHz)	Arm Cortex-A9 (1 GHz to 1.6 GHz)	Intel® Celeron® N3350 (2M Cache, up to 2.4 GHz)	Intel® Celeron® N3350 (2M Cache, up to 2.4 GHz)
<b>BIOS</b>	Insyde BIOS	-	Insyde UEFI	Insyde UEFI
<b>Graphic Interface</b>	Intel® HD Graphics	-	Intel® HD Graphics	Intel® HD Graphics
<b>Expansion Slot</b>	mPCIe:1 x Full-size mPCIe slot USB Wafer:2 x USB Wafer	mPCIe:1 x Full-size mPCIe slot USB Wafer:2 x USB Wafer	mPCIe:1 x Full-size mPCIe slot	mPCIe:1 x Full-size mPCIe slot
<b>Watchdog Timer</b>	Programmable 256 levels, timer interval 1 to 255 sec.	-	Programmable 256 levels, timer interval 1 to 255 sec.	Programmable 256 levels, timer interval 1 to 255 sec.
<b>Storage</b>	eMMC: Onboard 32GB (Default) mSATA: up to 1TGB (Option)	eMMC: Onboard 16GB (Default)	eMMC: Onboard 64GB (Default), mSATA: up to 1TGB (Option)	eMMC: Onboard 64GB (Default), mSATA: up to 1TGB (Option)
<b>OS</b>	Windows® 10 IoT Enterprise/ Linux 4.1.15 (QT 5.5)/Ubuntu	Android 6.0/ Linux 4.1.15 (QT 5.5)/Ubuntu	Windows® 10 IoT Enterprise/Linux 4.1.15 (QT 5.5)/ Ubuntu	Windows® 10 IoT Enterprise/Linux 4.1.15 (QT 5.5)/ Ubuntu
<b>Expansion Module</b>	<ul style="list-style-type: none"> <li>EACWSLT-222 WWAN Expansion Board (Single SIM Slot)</li> <li>EACWSLT-231 3-port RS232/422/485 w/ isolation</li> <li>EACWSLT-232 16-Channel Digital I/O w/ isolation</li> <li>EACWSLT-233 2-port CANBUS w/ isolation</li> <li>EACWLSL-234 3 -port USB 2.0</li> <li>EACWLSL-235 2-port RS232/422/485 w/ isolation</li> <li>EACWLSL-236 2-port Giga-LAN</li> <li>EACWLSL-237 WWAN Expansion Board (Dual SIM Slot)</li> </ul>	<ul style="list-style-type: none"> <li>EACWSLT-222 WWAN Expansion Board (Single SIM Slot)</li> <li>EACWSLT-231 3-port RS232/422/485 w/ isolation</li> <li>EACWSLT-232 16-Channel Digital I/O w/ isolation</li> <li>EACWSLT-233 2-port CANBUS w/ isolation</li> <li>EACWLSL-234 3-port USB 2.0</li> <li>EACWLSL-235 2-port RS232/422/485 w/ isolation</li> </ul>	-	-
<b>Power</b>				
<b>Power Input</b>	9~36V DC	9~36V DC	9~36V DC	9~36V DC
<b>Grounding Protection</b>	Chassis Grounding	Chassis Grounding	Chassis Grounding	-
<b>Connectors</b>				
<b>USB</b>	2 x USB3.0	2 x USB2.0	2 x USB 2.0	1 x USB2.0
<b>Ethernet</b>	2 x RJ45 10/100/1000	2 x RJ45 10/100/1000	2 x RJ45 10/100/1000	2 x RJ45 10/100/1000
<b>Video</b>	1 x HDMI, 1920 x 1080@60 Hz	1 x HDMI, 1920 x 1080@60 Hz	USB Type-C (Alt Mode)	USB Type-C (Alt Mode)
<b>User Controls</b>				
<b>LED Indicator</b>	1 x Power	1 x Power	1 x Power	1 x Power
<b>Buttons</b>	1 x Power Button, 1 x Reset Button	1 x Power Button, 1 x Reset Button	1 x Power Button, 1 x Reset Button	-
<b>Mechanical</b>				
<b>Dimensions</b>	100 x 70 x 31mm (One layer), 100 x 70 x 61mm (Double layer)	100 x 70 x 31mm (One layer), 100 x 70 x 61mm (Double layer)	100 x 115 x 31 mm (One layer)	100 x 115 x 31 mm (One layer)
<b>Housing</b>	Metal	Metal	Metal	Metal
<b>Cooling System</b>	Fanless design	Fanless design	Fanless design	Fanless design
<b>Net Weight</b>	0.4 kg (One layer), 0.5 kg (Double layer)	0.4 kg (One layer), 0.5 kg (Double layer)	0.8 kg	1 kg
<b>Mounting</b>	Desk Mount (Default), Wall Mount (Default), VESA Mount (Optional), DIN-Rail Mount (Optional)	Desk Mount (Default), Wall Mount (Default), VESA Mount (Optional), DIN-Rail Mount (Optional)	Desk Mount (Default), Wall Mounting (Default), VESA Mount (Optional)	Desk Mount (Default), Wall Mount (Default), VESA Mount (Optional)
<b>Environment</b>				
<b>Operating Temp.</b>	0°C to 55°C	0°C to 55°C	0°C to 55°C	-20°C to 60°C
<b>Humidity</b>	10% to 90% (Non-condensing, RH)	10% to 90% (Non-condensing, RH)	10% to 90% (Non-condensing, RH)	10% to 90% (Non-condensing, RH)
<b>Vibration</b>	Operating, IEC 60068-2-64	Operating, IEC 60068-2-64	Operating, IEC 60068-2-64	Operating, IEC 60068-2-64
<b>Shock</b>	Operating, IEC 60068-2-27	Operating, IEC 60068-2-27	Operating, IEC 60068-2-27	Operating, IEC 60068-2-27
<b>IP Rating</b>	IP30	IP30	IP30	IP67
<b>Certifications</b>				
<b>Safety</b>	CE, FCC	CE, FCC	CE, FCC	CE, FCC
<b>IoT</b>	Microsoft Azure IoT AWS IoT Greengrass	Microsoft Azure IoT AWS IoT Greengrass	-	-

# Embedded Computing

# EAC Pro Box PC

## Custom configuration

Up to  
**4 GB**

Memory

Up to  
**1 TB**

Storage



## Application



### Factory Control Room

“POWERFUL CENTRAL CONTROL COMPUTER”

The rich I/O capacity and powerful computing of the EAC Pro allows it to act as the central computer for a factory control center.

## “ ABUNDANT I/O CONNECTIVITY ”

- Flexibility, rich I/O capacity and multi-expansion
- Intel® Xeon® E3-1268L V5, 7<sup>th</sup> Gen. Intel® Core™ i7/i5/i3
- Windows 10 IoT Enterprise

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Fanless cooling system

---

64GB mSATA SSD

---

USB 3.0, USB 2.0

---

RS232/422/485, two RJ45 for Ethernet, HDMI 1.4a

---

HD 4K resolution

---

4U height design

---

Panel mount, VESA mount

---

Front IP65 waterproof and dustproof

---

Operating temperature 0°C to 50°C

### Accessories

#### Standard

Mounting Clips and Screws

2 pin Terminal Block

AC Adapter

Power Cord

Driver CD

# EAC Pro Box PC

Intel® Xeon® E3-1268L V5  
7<sup>th</sup> Gen. Intel® Core™ i7/i5/i3

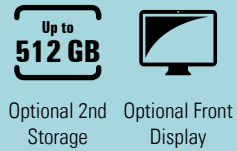


Model Name	EAC PRO - IK90
<b>System</b>	
<b>Processor</b>	Intel® Xeon® E3-1268L V5 (8M Cache, 2.4 GHz up to 3.40 GHz) Intel® Core™ i7-7700T (8M Cache, 2.9 GHz up to 3.80 GHz) Intel® Core™ i5-7500T (6M Cache, 2.7GHz up to 3.30 GHz) Intel® Core™ i3-7100T (4M Cache, 3.34 GHz)
<b>BIOS</b>	Insyde BIOS
<b>Chipset</b>	Intel® C236 PCH
<b>Memory</b>	2 x DDR4 2133/2400 MHz with ECC, UP to 32GB or 2 x DDR4 2133/2400 MHz without ECC, UP to 32GB
<b>Expansion Slot</b>	SKU 1: 1 PCIe x 16, 1 PCIe x 4, 1 PCI SKU 2: 2 PCIe x 8, 1 PCIe x 4, 1 PCI Window: Expansion I/O module
<b>Ethernet Controller</b>	2 x Intel® I210 and 1 x I219 PHY, Intel® iAMT 11.0, Wake On LAN
<b>Watchdog Timer</b>	Supported
<b>Mechanical</b>	
<b>Dimensions</b>	195 x 177 x 225 mm
<b>Net Weight</b>	5.54 kg
<b>Mounting</b>	Panel Mount, Table Mount, Rack Mount
<b>Audio Specification</b>	
<b>Audio Codec</b>	Realtek Audio Codec
<b>Audio Connectors</b>	Line Out, Mic in (3.5mm Jack)
<b>Environment</b>	
<b>Operating Temp.</b>	0° to 40°C (32° to 104°F) (With HDD), 0° to 50°C (32° to 122°F) (With SSD/CFast), -15° to 55°C (-5° to 131°F) (w/Industrial SSD)
<b>Vibration</b>	IEC60068-2-64
<b>Shock</b>	EC60068-2-278
<b>Storage Temp.</b>	-20°C to 60°C (-4°F to 140°F)
<b>Power Management</b>	
<b>Power Input</b>	9V~36V DC-in (4-pin Terminal Block) or Din 4P DC Jack External 12V /200W AC Adaptor for External PCI express cards (Option) Max : 220W (Either one)
<b>Power Consumption</b>	Max : 50W (Without external I/O and PCI/PCIe Cards)
<b>Power Adapter</b>	AC 110~240V, Universal, ±10%
<b>Video Output</b>	
<b>VGA</b>	1 x VGA, 1080P at 60 Hz D-Sub 15pin
<b>DP</b>	2 x Display Ports 1.2, up to 4096 x 2304@60Hz, female connector with lock
<b>Active Three Display</b>	VGA + DP + DP
<b>Connectors</b>	
<b>USB</b>	6 x USB3.0, USB 2.0 (1A/5W)
<b>Serial Port</b>	2 x COM ports (RS232/422/485) w/Isolation D-Sub 9, switch by SW (RS232/422/485)
<b>Ethernet</b>	3 x RJ45 10/100/1000
<b>Digital Input</b>	8ch dry contact DI0~DI7, 1.5kV Isolation Logic 1 : Open ; Logic 0 : close to GND
<b>Digital Output</b>	8ch DO0~DO7, 1.5kV Isolation 20mA max/channel by internal com 12V or 5V
<b>Physical Button &amp; Indicators</b>	
<b>LED Indicator</b>	4 x HDD, 1 x Wifi/3G (LTE)
<b>Button</b>	1 x Power Button w/LED, 1 x Clean CMOS Button, 1 x Reset Button
<b>Certifications</b>	
<b>Safety</b>	CE, FCC

# Embedded Computing

# M Series Box PC

## Custom configuration



## Application



### Assembly Line Controller

“EFFICIENT AND SMOOTH OPERATION.”

The M-Series Box PC with the optional Front modular Display was used as an assembly line controller for a plastic bottle production facility.

“**MODULAR DESIGN.**”

- Intel Atom® E3845
- Intel® Core™ i5-7200U
- Windows 10

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Fanless cooling system

---

Modular design

---

HDMI output

---

Four USB 3.0

---

Two RJ45 for Ethernet

---

PCIe x 4, DI/DO x 8 (4 in/4 out)

---

Desktop, wall mount

---

Front IP65 waterproof and dustproof

---

Operating temperature 0°C to 50°C

---

## Accessories

### Standard

---

2 pin Terminal Block

AC Adapter

Power Cord

Driver CD



# M Series Box PC

Intel Atom® E3845 Processor

Intel® Core™ i5-7200U Processor



Model Name	IBMH100	IKMH100
<b>System</b>		
<b>Processor</b>	Intel Atom® E3845 (2M Cache, 1.91 GHz)	Intel® Core™ i5-7200U (3M Cache, up to 3.10 GHz)
<b>BIOS</b>	AMI BIOS	Insyde BIOS
<b>Memory</b>	SODIMM DDR3L-1600 4GB (Optional up to 8GB with 2 slots)	SODIMM DDR4-2133 4GB, (Optional up to 32GB with 2 slots)
<b>Storage</b>	Main Storage : Default 2.5" 64GB SSD Second Storage (Optional) : mSATA SSD, up to 512GB	Main Storage : Default 2.5" 64GB SSD Second Storage (Optional) : mSATA SSD, up to 512GB
<b>Expansion Slot</b>	N/A	1 x PCIe x4
<b>Ethernet Controller</b>	1000 Base-Tx Gigabit Ethernet Compatible	1000 Base-Tx Gigabit Ethernet Compatible
<b>Audio Codec</b>	Realtek Audio Codec	Realtek Audio Codec
<b>OS</b>	Windows 10 IoT Enterprise	Windows 10 IoT Enterprise
<b>Connectors</b>		
<b>Power</b>	1 x Terminal Block 3pin	1 x Terminal Block 3pin
<b>Ethernet</b>	2 x RJ45 10/100/1000	2 x RJ45 10/100/1000
<b>Serial Interface</b>	1 x RS232/422/485 (Default RS232)	1 x RS232/422/485 (Default RS232)(isolation)
<b>USB</b>	4 x USB 2.0	4 x USB 3.0
<b>HDMI</b>	1 x HDMI Output	1 x HDMI Output
<b>VGA</b>	1 x D-Sub15 (VGA) Output	1 x D-Sub15 (VGA) Output
<b>Audio</b>	1 x Audio In Jack 1 x Audio Out Jack	1 x Audio In Jack 1 x Audio Out Jack
<b>Control Buttons</b>	1 x Reset Key 1 x Power Button	1 x Reset Key 1 x Power Button
<b>LED Indicators</b>	1 x 2.5" SSD Indicator	1 x 2.5" SSD Indicator
<b>Power</b>		
<b>Power Input</b>	12~24V DC with protection fuse	9~29V DC with protection fuse
<b>Power Adapter</b>	AC 110~240V, Universal, ±10%	AC 110~240V, Universal, ±10%
<b>Mechanical</b>		
<b>Dimensions</b>	276.18 x 228.8 x 45.20 mm	274.66 x 206.8 x 60.2 mm
<b>Mounting</b>	Desktop, Wall Mount, Panel Mount with front display (Optional)	Desktop, Wall Mount, Panel Mount with front display (Optional)
<b>Color</b>	Black	Black
<b>Construction</b>	Aluminum	Aluminum
<b>Environment</b>		
<b>Operating Temp.</b>	0°C to 50°C	0°C to 50°C
<b>Humidity</b>	30% to 95% at 40°C (Non-condensing, RH)	30% to 95% at 40°C (Non-condensing, RH)
<b>Certifications</b>		
<b>Safety</b>	CE, FCC	CE, FCC

# Embedded Computing

# EAC Box PC

## Custom configuration



Memory



Storage



NMEA 0183



DI/DO



## Application



### Ship Bridge Embedded System

“WITHSTANDS ALL THAT  
THE SEAS GIVE.”

The Marine EAC Box PC was used as the embedded system for the bridge on a ship. Withstands all the roughness at sea while controlling the ship's systems.

“ **MARINE CERTIFIED.  
FOR HEAVY DUTY APPLICATIONS** ”

- Marine certified IEC 60945, DNV
- Intel® Core™ i5-7200U
- Intel Atom® D2550
- Windows 10

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Fanless cooling system

---

Four USB 3.0

---

RS232/422/485, two RJ45 for Ethernet

---

HDMI, VGA

---

Shock, vibration resistant

---

Aluminum housing

---

VESA mount, wall mount, Desktop

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## Accessories

### Standard

---

AC Adapter

Power Cord

Driver CD

# EAC Box PC

Intel® Core™ i5-7200U

Intel Atom® D2550



Model Name	I330EAC-IKW	I330EAC-IK3	I330EAC-ID3
<b>System</b>			
<b>Processor</b>	Intel® Core™ i5-7200U (3M Cache, up to 3.10 GHz)	Intel® Core™ i5-7200U (3M Cache, up to 3.10 GHz)	Intel Atom® D2550 (1M Cache, 1.86 GHz)
<b>BIOS</b>	Insyde BIOS	Insyde BIOS	AMI BIOS
<b>Chipset</b>	Intel® SoC Integrated	Intel® SoC Integrated	Intel® NM10
<b>Memory</b>	1 x SODIMM DDR4L-2133 4GB (Max up to 16GB)	1 x SODIMM DDR4L-2133 4GB (Max up to 16GB)	1 x SODIMM, Max 4GB DDR3L 1600 (2GB Default)
<b>Storage</b>	1 x mSATA SSD 64GB (Default) 2 x 2.5" Removable SSD/HDD	1 x 64GB M.2 B Key SATA III (Options up to 512GB)	1 x mSATA SSD 32G (Default) 1 x 2.5" SATA HDD (Optional)
<b>Ethernet Controller</b>	1000 Base-Tx Gigabit Ethernet Compatible	Intel® I211 + I219LM Gigabit-LAN PHY	1000 Base-Tx Gigabit Ethernet Compatible
<b>Connectors</b>			
<b>Power</b>	1 x 3 pin Terminal Block	1 x 3 pin Terminal Block	1 x 3 pin Terminal Block
<b>Ethernet</b>	2 x RJ45 10/100/1000	2 x RJ45 10/100/1000	2 x RJ45 10/100/1000
<b>Serial Interface</b>	1 x RS232/422/485 (Default RS232)	1 x RS232/422/485 (Default RS232) 3 x RS422/485 (isolation)	1 x RS232/422/485 (Default RS232) 3 x RS422/485 (isolation)
<b>USB</b>	4 x USB 3.0	2 x USB 3.0	2 x USB
<b>GPIO</b>	8 x Isolated DI/DO, 4 In/4out (Optional)	8 Channel GPIO by Phoenix type Terminal Block 5V/12mA	1 x GPIO 8 in/out by Phoenix type Terminal Block
<b>NMEA 0183 Port</b>	8 x NMEA 0183 (Optional)	-	-
<b>Display output</b>	1 x HDMI 1 x VGA 1 x DVI	1 x HDMI 1 x VGA	1 x VGA
<b>Audio</b>	1 x Audio in Jack 1 x Audio out Jack	1 x Audio in Jack 1 x Audio out Jack 1 x Mic in	1 x Mic in, Line out Line in Jack
<b>User Interfaces</b>	1 x Power Button 1 x Reset Button	1 x Power Button 1 x Reset Button	1 x Power Button 1 x Reset Button
<b>Power</b>			
<b>Power Input</b>	24V DC In with 1.5KV DC Isolation Resistance (9~36V DC Input Acceptable)	24V DC In with 1.5KV DC Isolation Resistance (9~36V DC Input Acceptable)	24V DC In with 1.5KV DC Isolation Resistance (9~36V DC Input Acceptable)
<b>Power Consumption</b>	50 W (Typ.)	45 W (Typ.)	40 W (Typ.)
<b>Power Adapter</b>	AC 110~240V, Universal, ±10%	AC 110~240V, Universal, ±10%	AC 110~240V, Universal, ±10%
<b>Mechanical</b>			
<b>Dimensions</b>	316.44 x 206.8 x 62.1 mm	296 x 169 x 66 mm	296 x 169 x 66 mm
<b>Mounting</b>	VESA Mount (100 x 100 mm), Wall Mount, Desktop	VESA Mount (100 x 100 mm), Wall Mount, Desktop	VESA Mount (100 x 100 mm), Wall Mount, Desktop
<b>Color</b>	Black	Silver	Silver
<b>Housing</b>	Aluminum	Aluminum	Aluminum
<b>Environment</b>			
<b>Operating Temp.</b>	-15°C to 55°C	-15°C to 55°C	-15°C to 55°C
<b>Humidity</b>	5% to 95% (Non-condensing, RH)	5% to 95% (Non-condensing, RH)	5% to 95% (Non-condensing, RH)
<b>Vibration</b>	0.7g@DNVGL CG-0339 (Class A)	0.7g@DNVGL CG-0339 (Class A)	0.7g@DNVGL CG-0339 (Class A)
<b>Shock</b>	15G, 11ms	15G, 11ms	15G, 11ms
<b>Certifications</b>			
<b>Marine</b>	IEC 60945 4 <sup>th</sup> Edition (Test Report Available)	-	IEC60945, DNV GL-CG-0339, IACS-E10
<b>Safety</b>	CE, FCC	CE, FCC	CE, FCC

# Embedded Computing

# DIN Rail Box PC

## Custom configuration

Up to  
**8 GB**

Memory

Up to  
**512 GB**

Storage

Up to  
**215 GB**

2nd Storage



WiFi

**4G**

4G LTE



“ **COMPACT.  
POWERFUL.  
VERSATILE.** ”

- DIN Rail mounting for industrial automation
- Intel® Celeron® N2930
- Intel® Pentium® N4200
- Windows 10/8/7

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Fanless cooling system

---

64GB mSATA /M.2 SSD

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One USB 3.0, three USB 2.0

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RS232/422/485, VGA

---

Four RJ45 for Ethernet

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20 Pin DI/DO

---

9~36V DC power input with isolation

---

Operating temperature -20°C to 60°C

## Accessories

### Standard

Open Wire Power Cable	10 pin Terminal Block female connector for DI/DO	3 Pin Terminal Block to 2.5 female adapter	Power Cord	Driver CD
Cable Holder Clip	DIN Rail Mounting Clip			

## Application



### Factory Automation

“STABLE PERFORMANCE IN A COMPACT RUGGED DESIGN.”

This DIN Rail Box PC was integrated as the system controller for a beverage production line.

# DIN Rail Box PC

Intel® Celeron® N2930  
Intel® Pentium® N4200



NEW



Model Name	IBDRW100	IBDRW100-P
<b>System</b>		
<b>Processor</b>	Intel® Celeron® N2930 (2M Cache, up to 2.16 GHz)	Intel® Pentium® N4200 (2M Cache, up to 2.5 GHz)
<b>Chipset</b>	Bay Trail SoC	Intel® SoC Integrated
<b>Memory</b>	1 x DDR3L 1333MHz SO-DIMM (Default 4GB, up to 8GB)	1 x DDR3L 1333MHz SO-DIMM (Default 4GB, up to 8GB)
<b>Storage</b>	Main Storage : Default : 64GB mSATA SSD, up to 512GB Optional Second Storage : 2.5" SSD 64GB to 512GB	Main Storage : Default : 64GB M.2 SSD, up to 512GB Optional Second Storage : 2.5" SSD 64GB to 512GB
<b>Ethernet Controller</b>	Intel® I210-AT GbE LAN	Intel® I210-AT Gigabit-LAN Controller
<b>OS</b>	Windows 10 IoT Enterprise / Windows Embedded 8.1 Industry Pro / Windows Embedded Standard 7 / Windows 7 Pro for Embedded System	Windows 10 IoT Enterprise
<b>Connectors</b>		
<b>Power</b>	1 x 3 Pin Terminal Block	1 x 3pin Terminal Block
<b>Ethernet</b>	4 x RJ45 10/100/1000 (LAN3 disabled if WLAN Module is added)	4 x RJ45 10/100/1000
<b>Serial Interface</b>	1 x RS232/422/485 (Default RS232) 1 x RS422 (Default RS485)(isolation)	1 x RS232/422/485 (Default RS232) 1 x RS422/485 (isolation)
<b>USB</b>	1 x USB3.0, 3 x USB2.0	3 x USB 3.0, 1 x USB 2.0
<b>VGA</b>	1 x VGA	1 x VGA
<b>DI/DO</b>	1 x 20 pins terminal block DI/DO (9in/9out)	1 x 20 pins terminal block DI/DO (9in / 9out)
<b>Audio</b>	1 x Line Out, Line In, Mic In	1 x Line Out, Line In, Mic In
<b>Power</b>		
<b>Power Input</b>	9~36V DC with isolation	9~36V DC with isolation
<b>Power Consumption</b>	25W	25W
<b>Power Adapter</b>	AC 110~240V, Universal, ±10%	AC 110~240V, Universal, ±10%
<b>Mechanical</b>		
<b>Dimensions</b>	139 x 65 x 152 mm	139 x 65 x 152 mm
<b>Mounting</b>	DIN Rail	DIN Rail
<b>Color</b>	Dark Silver	Dark Silver
<b>Housing</b>	Aluminum	Aluminum
<b>Cooling System</b>	Fanless design	Fanless design
<b>Environment</b>		
<b>Operating Temp.</b>	-20°C to 60°C	-20°C to 60°C
<b>Storage Temp.</b>	-40°C to 80°C	-40°C to 80°C
<b>Humidity</b>	5% to 95% (Non-condensing, RH)	5% to 95% (Non-condensing, RH)
<b>Vibration</b>	5Hz~500Hz/1Grms/3 Axis	5Hz~500Hz / 1Grms/3 Axis
<b>Shock</b>	15G, 11ms duration	15G, 11ms duration
<b>Certifications</b>		
<b>Safety</b>	CE, FCC, AWS, IoT Greengrass	CE, FCC
<b>HazLoc</b>	-	-

# Embedded Computing Arm Series

## Custom configuration



Memory



PoE



Micro SD



DI/DO



RS232



CPU



## Application



### Ticketing Machine Kiosk

“LOW POWER CONSUMPTION ARM SOLUTION.”

A public transportation operator needed an Arm-based solution for their automatic ticketing kiosks. The fanless Arm Box PC with RS232 and DI/DO ports was provided as a low power solution.

“**ARM BASED PC SOLUTION.**”

- Aluminum housing
- Arm Cortex-A9
- Arm Cortex-A72 + Arm Cortex-A53
- Android 6.0/ Linux 4.1.15 (QT 5.5)/ Ubuntu 16.04

---

Fanless cooling system

---

16GB eMMC

---

USB 2.0, USB OTG

---

RS232/422/485, RJ45 for Ethernet

---

Micro SD/SDHC card slot

---

Aluminum profile with fin housing

---

Desktop, wall mounting

---

Operating temperature -20°C to 60°C

## Accessories

### Standard

---

2 pin Terminal Block

AC Adapter

Power Cord

Driver CD

# Arm Series

Arm Cortex-A9

Arm Cortex-A72 + Arm Cortex-A53



NEW



Model Name	FA30SB3-210	RK30SBS-100
<b>System</b>		
<b>Processor</b>	Arm Cortex-A9 (1 GHz to 1.6 GHz)	Arm Cortex-A72 (up to 2.0 GHz) + Arm Cortex-A53 (up to 1.5 GHz)
<b>Memory</b>	eMMC 16GB 1GB LPDDR3 (Max 2GB)	eMMC 16GB 2GB LPDDR3 (Max 4GB)
<b>Serial</b>	1 x RS232/422/485 (Default RS232)	1 x RS232/422/485 (COM1), HW select
<b>USB</b>	1 x USB 2.0	2 x USB 3.0 1 x USB 2.0 OTG 1 x RS232/422/485 (Default RS232)
<b>Expansion Slot</b>	Micro SD/SDHC card slot	MicroSD/SDHC card slot
<b>OS</b>	Android 6.0 Ubuntu 16.04	Android 7.1 Debian 9.0
<b>Connectors</b>		
<b>Front Side Connectors</b>	1 x RS232/422/485 (Default RS232) 1 x USB 2.0 1 x RJ45 10/100/1000 LAN Support PoE function 1 x Micro SD/SDHC Card Slot 1 x CANBus 1 x USB OTG 1 x Micro HDMI	1 x RJ45 LAN 1 x RJ45 10/100/1000 LAN Support PoE function 2 x USB 3.0 1 x USB 2.0 OTG 1 x RS232/422/485 (Default RS232) 1 x 12V DC Terminal Block
<b>Mechanical</b>		
<b>Dimensions</b>	224 x 47 x 127 mm	224 x 47 x 127 mm
<b>Color</b>	Gray	Gray
<b>Construction</b>	Aluminum profile with fin housing	Aluminum profile with fin housing
<b>Power</b>		
<b>Power Input</b>	9~24V DC	12V DC Terminal Block/PoE 48V DC
<b>Power Adapter</b>	AC 110~240V, Universal, ±10%	AC 110~240V, Universal, ±10%
<b>Environment</b>		
<b>Operating Temp.</b>	-20°C to 60°C	-20°C to 60°C
<b>Humidity</b>	10% to 90% (Non-condensing, RH)	10% to 95% @30°C (Non-condensing, RH)
<b>Mounting</b>	Desktop, Wall Mount	Desktop, Wall Mount
<b>Certifications</b>		
<b>Safety</b>	CE, FCC	CE, FCC

# Embedded Computing Fanless Series

## Custom configuration



Memory



WiFi

4G

3G/4G LTE



DI/DO



DVI



## Application



### Assembly Line Machine Controller

“STABLE INDUSTRIAL  
COMPUTING IN A SEALED  
BOX”

This fanless Box PC was used as part of an industrial assembly line that needed a solution that was low maintenance and reliable as the assembly line needed constant uptime.

“ **WITHSTANDS HARSH  
ENVIRONMENTS. FANLESS.** ”

- Intel® Celeron® N2930
- Windows 10/8/7

---

Fanless cooling system

---

2.5" HDD, Mini PCIe SSD

---

USB 3.0, five USB 2.0

---

Two RS232, one RS232/422/485 (Default RS232)

---

Two RJ45 for Ethernet

---

DVI, VGA, HDMI

---

Desktop, wall mount

---

Operating temperature 0°C to 50°C

---

## Accessories

### Standard

Wall Mount Kit

Driver CD



# Fanless Box PC

Intel® Celeron® N2930



<b>Model Name</b>	<b>IB70SB7-101</b>
<b>System</b>	
<b>Processor</b>	Intel® Celeron® N2930 (2M Cache, up to 2.16 GHz)
<b>Memory</b>	Dual DDR3L 1600 MHz SO-DIMM Slot, Max. 8GB
<b>Expansion Slot</b>	2 x Mini PCIe (1 for WiFi, 1 for WWAN Module)
<b>Ethernet Controller</b>	1000 Base-Tx Gigabit Ethernet Compatible
<b>Audio Codec</b>	Realtek Audio Codec
<b>OS</b>	Windows 10 IoT Enterprise / Windows Embedded 8.1 Industry Pro / Windows Embedded Standard 7 / Windows 7 Pro for Embedded System
<b>Connectors</b>	
<b>Power</b>	1 x Power Jack
<b>Ethernet</b>	2 x RJ45 10/100/1000
<b>Serial Interface</b>	2 x RS232
	1 x RS232/422/485 (Default RS232)
	1 x RS232 (Optional)
<b>USB</b>	1 x USB 3.0, 3 x USB 2.0, 2 x USB 2.0
<b>VGA</b>	1 x VGA
<b>DVI</b>	1 x DVI (Optional)
<b>HDMI</b>	1 x HDMI (Optional)
<b>Keyboard/Mouse</b>	2 x PS/2
<b>Audio</b>	
<b>Audio</b>	1 x Mic In/Line In/Line Out
<b>User Controls</b>	
<b>LED Indicator</b>	1 x Power/HDD LED
<b>Control Buttons</b>	1 x Power Reset Button
	1 x Power on Button
<b>Power</b>	
<b>Power Input</b>	12V DC
<b>Power Consumption</b>	40 W (Typ.)
<b>Power Adapter</b>	AC 110V~240V, Universal, ±10%
<b>Mechanical</b>	
<b>Dimensions</b>	298 x 192 x 60 mm
<b>Mounting</b>	Desktop, Wall Mount
<b>Color</b>	Silver
<b>Construction</b>	Aluminum
<b>Environment</b>	
<b>Operating Temp.</b>	0°C to 50°C
<b>Humidity</b>	10% to 90% (Non-condensing, RH)
<b>Certifications</b>	
<b>Safety</b>	CE, FCC

# Embedded Computing Standard Box PC

## Custom configuration



Memory



Storage



WiFi



## Application



### Control Room Server PC

“FAST SPEED AND STABLE  
PERFORMANCE.”

The box PC was configured to  
be a control room embedded  
computer as a server PC.

“ **VERSATILE COMPUTING  
FOR ANY NEEDS.** ”

- Thermal solution with system fan
- 7<sup>th</sup> Gen. Intel® Core™ i7/i5/i3
- Windows 10

---

M.2 SSD, Mini PCIe SSD, 2.5" HDD

---

Intel® chipset

---

Four USB 3.0, two USB 2.0

---

RS232, two RJ45 for Ethernet

---

HDMI 1.4, DP 1.2

---

Desktop, wall mount

---

Operating temperature 0°C to 50°C

---

## Accessories

---

AC Adapter

Power Cord

Driver CD

# Standard Box PC

7<sup>th</sup> Gen. Intel® Core™ i7/i5/i3

4<sup>th</sup> Gen. Intel® Core™ i5

3<sup>rd</sup> Gen. Intel® Core™ i5



Model Name	IK70SB7-111	IH70SB7-111	IV70SB7-111
<b>System</b>			
<b>Processor</b>	Intel® Core™ i7-7700T (8M Cache, 2.9 GHz up to 3.80 GHz) Intel® Core™ i5-7500T (6M Cache, 2.7GHz up to 3.30 GHz) Intel® Core™ i3-7100T (4M Cache, 3.34 GHz)	Intel® Core™ i5-4200M (3M Cache, up to 3.10 GHz)	Intel® Core™ i5-3230M (3M Cache, up to 3.20 GHz)
<b>BIOS</b>	Insyde BIOS	AMI BIOS	AMI BIOS
<b>Chipset</b>	Intel® H170	Intel® 8 series (QM87)	Intel® 7 series (HM76)
<b>Memory</b>	1 x SODIMM, Max 32GB DDR4 2400 MHz, default 4GB	1 x SODIMM, Max 8GB DDR3L 1600 MHz	1 x SODIMM, Max 8GB DDR3L 1600 MHz
<b>Storage</b>	2 x SATA III	2 x SATA III	1 x SATA III, 1 x SATA II
<b>SSD Interface</b>	1 x M.2 SSD slot (B Key), Max 512GB	1 x mSATA SSD slot Max 512GB	1 x mSATA SSD slot
<b>Expansion Slot</b>	1 x M.2 slot for Wi-Fi (E key)	2 x Mini PCIe (1 for WiFi, 1 for 3G Module), 1 x Mini PCIe Slot (for mSATA SSD), 1 x PCIe (x16)	2 x Mini PCIe (1 for WiFi, 1 for 3G Module), 1 x Mini PCIe Slot (for mSATA SSD), 1 x PCIe (x4) 1 x PCIe (x16)
<b>Ethernet Controller</b>	Intel® I211IT Gigabit + I219LM Gigabit-LAN PHY	Intel® I210IT Gigabit + I218LM Gigabit-LAN PHY	Dual Broadcom BCM57780 GbE
<b>Audio</b>	Realtek Audio Codec	Realtek Audio Codec	Realtek Audio Codec
<b>Connectors</b>			
<b>Power</b>	1 x Power Jack (Lockable)	1 x Power Jack (Lockable)	1 x Power Jack (Lockable)
<b>Ethernet</b>	2 x RJ45 10/100/1000	2 x RJ45 10/100/1000	2 x RJ45 10/100/1000
<b>Serial Interface</b>	1 x RS232/422/485 (Default RS232) 1 x RS232	3 x RS232 (Optional) 1 x RS232/422/485 (Default RS232)	3 x RS232 (Optional) 1 x RS232/422/485 (Default RS232)
<b>USB</b>	4 x USB 3.0	4 x USB 3.0, 2 x USB 2.0	4 x USB 3.0, 2 x USB 2.0
<b>VGA</b>	-	1 x VGA (male)	1 x VGA (male)
<b>DVI</b>	-	1 x DVI (Optional)	1 x DVI (Optional)
<b>HDMI</b>	1 x HDMI 1.4a	-	-
<b>DP 1.2</b>	1 x DP 1.2	-	-
<b>Keyboard/Mouse</b>	-	2 x PS/2	2 x PS/2
<b>User Controls</b>			
<b>LED Indicators</b>	1 x Power/HDD LED	1 x Power/HDD LED	1 x Power/HDD LED
<b>Control Buttons</b>	1 x Power Reset Button 1 x Power on Button	1 x Power Reset Button 1 x Power on Button	1 x Power Reset Button 1 x Power on Button
<b>Audio</b>			
<b>Audio</b>	1 x Line out, Mic in	1 x Line in, Line out, Mic in	1 x Line in, Line out, Mic in
<b>Power</b>			
<b>Power Input</b>	12V DC	12V DC	12V DC
<b>Power Consumption</b>	80W (Typ.)	80W (Typ.)	80W (Typ.)
<b>Power Adapter</b>	AC 110~240V, Universal, ±10%	AC 110~240V, Universal, ±10%	AC 110~240V, Universal, ±10%
<b>Mechanical</b>			
<b>Dimensions</b>	301 x 192 x 58 mm	298 x 192 x 60 mm	298 x 192 x 60 mm
<b>Mounting</b>	Desktop, Wall Mount	Desktop, Wall Mount	Desktop, Wall Mount
<b>Color</b>	Silver	Silver	Silver
<b>Housing</b>	Aluminum	Aluminum	Aluminum
<b>Environment</b>			
<b>Operating Temp.</b>	0°C to 50°C	0°C to 50°C	0°C to 50°C
<b>Humidity</b>	10% to 95% (Non-condensing, RH)	10% to 90% (Non-condensing, RH)	10% to 90% (Non-condensing, RH)
<b>Certifications</b>			
<b>Safety</b>	CE, FCC	CE, FCC	CE, FCC

# Standard Box PC

Intel® Pentium® N4200  
9<sup>th</sup> Gen. Intel® Core™ i7/i5/i3



Model Name	IP70	IF70
<b>System</b>		
<b>Processor</b>	Intel® Pentium® N4200 (2M Cache, up to 2.5 GHz)	Intel® Core™ i7-9700TE (12M Cache, up to 3.80 GHz) Intel® Core™ i5-9500TE (9M Cache, up to 3.60 GHz) Intel® Core™ i3-9100TE (6M Cache, up to 3.20 GHz)
<b>BIOS</b>	Insyde BIOS	Insyde BIOS
<b>Chipset</b>	Intel® SoC Integrated	Intel® H310
<b>Memory</b>	2 x SO-DIMM socket DDR3L-1866, Max. 8GB	2 x SO-DIMM socket DDR4-2666, max 64GB
<b>Storage</b>		
<b>SSD Interface</b>	Default 1 x 2.5" HDD 500GB 1 x M.2 2242 B-key SSD slot 2 x SATA III, up to 512GB (SATA2 support is only available when M.2 SATA is not in use.)	Default 1 x 2.5" HDD 500GB 1 x M.2 2242 B-key SSD slot 2 x SATA III support RAID 0,1
<b>Expansion Slot</b>	1 x M.2 2242 B-key Slot (for SSD) 1 x M.2 2232 E-Key Slot (for half size Wifi module) 1 x PCIe Gen2 (x1) slot (Optional)	1 x M.2 2242 B-key Slot (for SSD) 1 x M.2 2232 E-Key Slot (for half size Wifi module) 1 x mini PCIe(PCle x 1 + USB2.0) 1 x PCIe Gen3 (x16) slot (Optional)
<b>Ethernet Controller</b>	Intel® I210-AT Gigabit-LAN Controller	Intel® I210-IT Gigabit-LAN Controller
<b>Audio</b>	Realtek Audio Codec	Realtek Audio Codec
<b>Connectors</b>		
<b>Power</b>	1 x 12V DC, Din4 pin connector	1 x 12V DC, Din4 pin connector
<b>Ethernet</b>	2 x RJ45 10/100/1000	2 x RJ45 10/100/1000
<b>Serial Interface</b>	1 x RS232/422/485 (Default RS232) 1 x RS232	1 x RS232/422/485 (Default RS232) 1 x RS232
<b>USB</b>	4 x USB 3.0	4 x USB 3.0
<b>VGA</b>	1 x VGA	1 x VGA
<b>DVI</b>	N/A	N/A
<b>HDMI</b>	1 x HDMI 1.4b	1 x HDMI 1.4b
<b>DP 1.2</b>	1 x DP 1.2	1 x DP 1.2
<b>Keyboard/Mouse</b>	N/A	N/A
<b>User Controls</b>		
<b>LED Indicators</b>	1 x LED Indicator for power 1 x LED Indicator for storage	1 x LED Indicator for power 1 x LED Indicator for storage
<b>Control Buttons</b>	1 x Power Button 1 x Reset Button	1 x Power Button 1 x Reset Button
<b>Audio</b>		
<b>Audio</b>	1 x Audio Jack (Mic-in, Line-out)	1 x Audio Jack (Mic-in, Line-out)
<b>Power</b>		
<b>Power Input</b>	12V DC input	12V DC input
<b>Power Consumption</b>	12W (Typ.)	50W (Typ.)
<b>Power Adapter</b>	100~240V AC to DC Adapter	100~240V AC to DC Adapter
<b>Mechanical</b>		
<b>Dimensions</b>	264 x 192 x 57 mm (W/O Deskmount Bracket) 298 x 192 x 57 mm (W/I Deskmount Bracket)	283.2 x 192 x 58.6 mm (W/O Deskmount Bracket) 301.2 x 192 x 58.6 mm (W/I Deskmount Bracket)
<b>Mounting</b>	Desk Mount	Desk Mount
<b>Color</b>	Silver	Silver
<b>Housing</b>	Alumium	Alumium
<b>Environment</b>		
<b>Operating Temp.</b>	0~50°C	0~50°C
<b>Humidity</b>	30% to 90% (Non-condensing, RH)	30% to 90% (Non-condensing, RH)
<b>Certifications</b>		
<b>Safety</b>	CE, FCC	CE, FCC

# Embedded Computing

# Full IP65 Box PC



“ **WATERPROOF FOR HARSH ENVIRONMENTS.** ”

- Full IP65 enclosure
- Intel® Core™ i5-7200U
- Intel® Core™ i7-3517UE
- Windows 10

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Intel® chipset

---

Three USB 2.0

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RS232

---

Two RJ45 for Ethernet

---

VGA

---

9~36V DC power input with isolation

---

Vibration, shock resistance

---

Desktop, wall mount

---

Operating temperature 0°C to 50°C

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## Accessories

### Standard

Mounting Clips and Screws	Power Cable with Adapter	DC Power Cable	Serial Cable	USB Cable
VGA Cable	LAN Cable	Driver CD		

## Custom configuration



Memory



Storage



Expansion Slot



1 x Optional



Wide Temp.  
-20~60°C

## Application



### Beverage Bottling Plant

“ABLE TO WITHSTAND ANY ENVIRONMENTS.”

The Full IP65 Box PC was configured to be a machine controller in a beverage bottling line. The operator wanted to ensure constant uptime, and required waterproof interface for protection against spills.

# Full IP65 Box PC

Intel® Core™ i5-7200U

Intel® Core™ i7-3517UE



Model Name	F65EAC-1K32	F65EAC-1V32
<b>System</b>		
<b>Processor</b>	Intel® Core™ i5-7200U (3M Cache, up to 3.10 GHz)	Intel® Core™ i7-3517UE (4M Cache, up to 2.80 GHz)
<b>BIOS</b>	Insyde BIOS	AMI BIOS
<b>Watchdog Timer</b>		
<b>Chipset</b>	Intel® SoC Integrated	Intel® Express Chipset HM76
<b>Memory</b>	DDR4-2133 SO-DIMM (Max. 16GB)	SO-DIMM DDR3 1600 (Max. 8GB)
<b>Expansion Slot</b>		
<b>Ethernet</b>	Intel® Gigabit-LAN Controller I211AT + PHY I219LM	Intel® 82579-LM GbE PHY + Intel® WG82574L GbE LAN
<b>OS</b>	Windows 10 IoT Enterprise	Windows 10 IoT Enterprise Windows Embedded 8.1 Industry Pro Windows Embedded Standard 7 Windows 7 Pro for Embedded System
<b>Connectors</b>		
<b>USB</b>	1 x USB 2.0 Type-A Female	1 x USB 2.0 Type-A Female
<b>Audio</b>	1 x Line in/Line out (Optional)	1 x Line in/Line out (Optional)
<b>Power</b>	1 x Power Input (9~36V DC)	1 x Power Input (9~36V DC)
<b>Ethernet</b>	2 x LAN	2 x LAN
<b>Serial Interface</b>	1 x RS232 1 x RS232/422/485 (Default RS232)(Optional)	1 x RS232 1 x RS232/422/485 (Default RS232) (Optional)
<b>USB</b>	2 x USB2.0	2 x USB2.0
<b>Video putout</b>	1 x VGA 1 x HDMI (Optional)	1 x VGA 1 x DVI (Optional)
<b>Other</b>	1 x Micro SD Card Slot (Optional) 1 x SIM card socket (Optional) 1 x 8 Channels GPIO/CAN Bus (Optional)	1 x Micro SD Card Slot (Optional) 1 x SIM card socket (Optional) 1 x 8 Channels GPIO/CAN Bus (Optional)
<b>User Controls</b>		
<b>Control Buttons</b>	1 x Power Button	1 x Power Button
<b>Power</b>		
<b>Power Input</b>	9~36V DC with isolation	9~36V DC with isolation
<b>Power Adapter</b>	AC 110~240V, Universal, ±10%	AC 110~240V, Universal, ±10%
<b>Mechanical</b>		
<b>Dimensions</b>	260.4 x 168 x 50 mm	260.4 x 168 x 50 mm
<b>Mounting</b>	Wall Mount, Desktop	Wall Mount, Desktop
<b>Color</b>	Silver	Silver
<b>Housing</b>	Aluminum	Aluminum
<b>Environment</b>		
<b>Operating Temp.</b>	0°C to 50°C (Default), -20°C to 60°C (Optional)	0°C to 50°C (Default), -20°C to 60°C (Optional)
<b>Humidity</b>	5% to 95% (Non-condensing, RH)	5% to 95% (Non-condensing, RH)
<b>Vibration</b>	5Hz~500Hz/1Grms/3 Axis	5Hz~500Hz/1Grms/3 Axis
<b>Shock</b>	15G, 11ms duration	15G, 11ms duration
<b>Certifications</b>		
<b>Safety</b>	CE, FCC	CE, FCC

# Embedded Computing 2U Rack Server



“**SERVER ROOM  
COMPUTING.**”

- Intel® Core™ i7-7700T
- Fanless, custom cooling system
- Windows 10

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Supports Intel® Active Management Technology II

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Two 2.5" SSD/HDD, m.2 SSD

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Four USB 3.0, two USB 2.0, three serial ports, two RJ45

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HDMI 1.4, display port

---

Rack mount

---

IEC 61850-3, IEC60068-2-64, IEC 60068-2-2, CE, FCC compliant

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Electroplated steel housing

---

Operating temperature -10°C to 60°C

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## Accessories

### Standard

1 x 3 Pin Acrylic protect connector

AC Adapter

Power Cord

Driver CD

## Custom configuration

Up to  
**32 GB**

Memory

Up to  
**1 TB**

Storage

2 x

PCI Slot

GPS Antenna

## Application



### Electrical Substation Server Room

“FAST SPEED AND STABLE  
PERFORMANCE.”

The Rack PC was placed in the substation server room for a smart grid network. Allowed for data to be collected and transmitted on smart grid information.

# 2U Rack Server

Intel® Core™ i7-7700T



Model Name	IK7T-RK2U
<b>System</b>	
<b>Processor</b>	Intel® Core™ i7-7700T (8M Cache, 2.9 GHz up to 3.80 GHz)
<b>BIOS</b>	Insyde BIOS
<b>Chipset</b>	Intel® C236
<b>Memory</b>	Support Two 204-pin DDR4-2400 SO-DIMM RAM Up to 64GB
<b>Storage</b>	Max. 4 x 2.5" SATAIII HDD (Up to 1TB), Max. 4 x 2.5" SATAIII SSD (Up to 512GB) 1 x M.2 Key B SSD 128GB (Up to 512GB)
<b>Watchdog Timer</b>	10 level
<b>Ethernet Controller</b>	Intel® I211IT Gigabit + I219LM Gigabit-LAN PHY
<b>OS</b>	Windows 10 IoT Enterprise
<b>Connectors</b>	
<b>Power</b>	1 x 3 Pin Acrylic Protected Connector
<b>Ethernet</b>	2 x RJ45 10/100/1000
<b>Serial Interface</b>	2 x R-232 1 x RS232/422/485 (Default RS232)
<b>USB</b>	4 x USB 3.0, 2 x USB 2.0
<b>Audio</b>	1 x Mic in, Line out
<b>GPS Antenna</b>	Optional
<b>PCI Slot</b>	2 x PCI Slot (Optional)
<b>HDD Slot</b>	1 x Dual HDD Slot
<b>User Control</b>	
<b>Control Buttons</b>	1 x Power On/Off 1 x Reset Button
<b>Power</b>	
<b>Power Input</b>	110~240V DC/AC Input with ±20% range
<b>Mechanical</b>	
<b>Dimensions</b>	482.6 x 88 x 356 mm
<b>Mounting</b>	19" rack with 2U height
<b>Color</b>	Black
<b>Cooling System</b>	Fanless design
<b>Housing</b>	Electroplated steel
<b>Environment</b>	
<b>Operating Temp.</b>	-10°C to 60°C
<b>Humidity</b>	10% to 90% (Non-condensing, RH)
<b>Certifications</b>	
<b>Safety</b>	IEC 61850-3, IEC60068-2-64, IEC 60068-2-2, CE, FCC



## Embedded Computing

# 3.5" Form Factor SBC



“ **SMALL, EFFICIENT,  
POWERFUL** ”

- Fully integrated small-sized single board computer
- Intel® Core™ i5-7200U
- Intel® Celeron® N2930
- Intel® Core™ i7-3517UE
- Intel® Pentium® N4200
- Windows 10

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3.5" Form Factor (146 mm x 102 mm)

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Fanless cooling system

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SATA III

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Up to three RS232

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USB 3.0, USB 2.0

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Two RJ45 for Ethernet, VGA, HDMI

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Operating temperature -20°C to 60°C

---

## Accessories

### Standard

User Manual

Driver CD

## Custom configuration



Memory



Storage



Expansion Slot

## Application



## Embedded Industrial Automation

“SMALL BUT POWERFUL  
AND EFFICIENT”

The 3.5" Embedded boards are suited for fanless applications where the computing device will be embedded in a range of challenging scenarios.

# 3.5" SBC

Intel® Core™ i5-7200U  
 Intel® Celeron® N2930  
 Intel® Core™ i75-3517UE  
 Intel® Pentium® N4200



Model Name	IK32	IB32	IV32	IP32S
<b>System</b>				
<b>Processor</b>	Intel® Core™ i5-7200U (3M Cache, up to 3.10 GHz)	Intel® Celeron® N2930 (2M Cache, up to 2.16 GHz)	Intel® Core™ i7-3517UE (4M Cache, up to 2.80 GHz)	Intel® Pentium® N4200 (2M Cache, up to 2.5 GHz)
<b>BIOS</b>	Insyde BIOS	AMI BIOS	AMI BIOS	Insyde BIOS
<b>Chipset</b>	Intel® SoC Integrated	Intel® SoC Integrated	Intel® Express Chipset HM76	Intel® SoC Integrated
<b>Memory</b>	260 pin DDR4-2133, Non-ECC SO-DIMM RAM (max to 16GB)	1 x SODIMM DDR3L 1600, max. 8GB	1 x SODIMM DDR3L 1600, max. 8GB	1 x SODIMM DDR3L 1600/1866 MHz, Max. 8GB
<b>Expansion Slot</b>	1 x M.2 E Key for Wifi 1 x M.2 B Key for SATAIII SSD	1 x Mini PCIe for Wifi 1 x Mini PCIe for SATA SSD	1 x Mini PCIe for Wifi 1 x Mini PCIe for SATA SSD	1 x M.2 E Key for Wifi 1 x M.2 B Key for SATAIII SSD
<b>Ethernet Controller</b>	Integrated Intel® I210 I219 GbE LAN	Integrated Intel® I210 GbE LAN	Integrated Intel® 82579-LM + WG82574L	Integrated Intel® I210 GbE LAN
<b>Audio Codec</b>	Realtek HD Audio Codec	Realtek HD Audio Codec	Realtek HD Audio Codec	Realtek HD Audio Codec
<b>SATA</b>	2 x SATA III	1 x SATA II	1 x SATA II, 1 x SATA III	1 x SATA III
<b>Connectors</b>				
<b>Power</b>	1 x Power Jack	1 x Power Jack	1 x Power Jack	1 x Power Jack
<b>Ethernet</b>	2 x RJ45 10/100/1000	2 x RJ45 10/100/1000	2 x RJ45 10/100/1000	1 x RJ45 10/100/1000 1 x RJ45 10/100/1000 LAN Support PoE function
<b>Serial Interface</b>	1 x RS232/422/485 (Default RS232)	1 x RS232/422/485 (Default RS232)	1 x RS232/422/485 (Default RS232)	1 x RS232/422/485 (Default RS232)
<b>USB</b>	2 x USB 3.0	1 x USB3.0, 1 x USB2.0	2 x USB3.0	2 x USB3.0
<b>HDMI</b>	1 x HDMI	1 x HDMI	1 x HDMI	1 x Micro HDMI
<b>DVI</b>	N/A	N/A	1 x DVI or HDMI	N/A
<b>LVDS</b>	1 x LVDS	1 x LVDS	1 x LVDS	1 x LVDS
<b>Digital I/O</b>	1 x Digital I/O	1 x Digital I/O	1 x Digital I/O	1 x Digital I/O
<b>VGA</b>	1 x VGA	1 x VGA	1 x VGA	1 x VGA
<b>Audio</b>				
<b>Audio</b>	1 x Audio (Mic in/Line in/Line out)	1 x Audio (Mic in/Line in/Line out)	1 x Audio (Mic in/Line in/Line out)	1 x Audio (Line-in/Line-out/analog Mic in/digital Mic in)
<b>Power</b>				
<b>Power Input</b>	12V DC	12V DC	12V DC	12V DC
<b>Mechanical</b>				
<b>Dimensions</b>	146 x 102 mm	146 x 102 mm	146 x 102 mm	146 x 102 mm
<b>Environment</b>				
<b>Operating Temp.</b>	-10°C to 50°C	-20°C to 60°C	-20°C to 60°C	-20°C to 60°C
<b>Storage Temp.</b>	-20°C to 60°C	-30°C to 70°C	-30°C to 70°C	-30°C to 70°C
<b>Humidity</b>	10% to 95% (Non-condensing, RH)	10% to 95% (Non-condensing, RH)	10% to 95% (Non-condensing, RH)	10% to 95% (Non-condensing, RH)
<b>Certifications</b>				
<b>Safety</b>	CE, FCC	CE, FCC	CE, FCC	CE, FCC

# Embedded Computing Mini-ITX SBC

NEW



“ **POWERFUL COMPUTING.** ”

- Fully integrated Mini-ITX single board computer
- Intel® Celeron® N2930
- Intel® Pentium® N4200
- 7<sup>th</sup> Gen. Intel® Core™ i7/i5/i3
- 9<sup>th</sup> Gen. Intel® Core™ i7/i5/i3
- Windows 10

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Mini-ITX form factor (170mm x 170mm)

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Intel® chipset and integrated HD graphics

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SATA III, COM, USB 3.0, USB 2.0

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Two RJ45 for Ethernet, video input, RS232/422/485

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Digital I/O

---

Expansion slot capabilities

---

12V DC power input

---

Operating temperature -20°C to 60°C

## Accessories

### Standard

User Manual

Driver CD

## Custom configuration

Up to  
**16 GB**

Memory

Up to  
**512 GB**

Storage



Expansion Slot

## Application



## Industrial Automation

“POWERFUL INTEL  
CORE PROCESSING IN A  
COMPACT EMBEDDED  
BOARD”

The Mini-ITX embedded boards are perfectly suited for powerful industrial automation applications with multiple interface.

# Mini-ITX SBC

Intel® Celeron® N2930  
 7<sup>th</sup> Gen. Intel® Core™ i7/i5/i3  
 4<sup>th</sup> Gen. Intel® Core™ i5  
 3<sup>rd</sup> Gen. Intel® Core™ i5



Model Name	IB70	IK70	IH70	IV70
<b>System</b>				
<b>Processor</b>	Intel® Celeron® N2930 (2M Cache, up to 2.16 GHz)	Intel® Core™ i7-7700T (8M Cache, 2.9 GHz up to 3.80 GHz) Intel® Core™ i5-7500T (6M Cache, 2.7GHz up to 3.30 GHz) Intel® Core™ i3-7100T (4M Cache, 3.34 GHz)	Intel® Core™ i5-4200M (3M Cache, up to 3.10 GHz)	Intel® Core™ i5-3230M (3M Cache, up to 3.20 GHz)
<b>BIOS</b>	AMI BIOS	Insyde BIOS	AMI BIOS	AMI BIOS
<b>Chipset</b>	Intel® SoC Integrated	Intel® H170	Intel® QM87	Intel® HM76
<b>Memory</b>	2 x SODIMM DDR3L 1600, max. 8GB	1 x SODIMM DDR4 2400 max. 32GB	2 x SODIMM DDR3L 1600 max 16GB	2 x SODIMM DDR3L 1600 max 16GB
<b>Expansion Slot</b>	<ul style="list-style-type: none"> <li>· 2 x Mini PCIe (1 for WiFi, 1 for 3G Module)</li> <li>· 1 x Mini PCIe Slot (for mSATA SSD)</li> </ul>	<ul style="list-style-type: none"> <li>· 1 x M.2 Slot (for SSD)</li> <li>· 1 x M.2 Slot (for half size Wifi)</li> </ul>	<ul style="list-style-type: none"> <li>· 2 x Mini PCIe (1 for WiFi, 1 for 3G Module)</li> <li>· 1 x Mini PCIe Slot (for mSATA SSD)</li> <li>· 1 x PCIe (x4) or 1 x PCIe (x16)</li> </ul>	<ul style="list-style-type: none"> <li>· 2 x Mini PCIe (1 for WiFi, 1 for 3G Module)</li> <li>· 1 x Mini PCIe Slot (for mSATA SSD)</li> <li>· 1 x PCIe (x4) or 1 x PCIe (x16)</li> </ul>
<b>Ethernet Controller</b>	Intel® I210IT	Intel® I211IT + I219LM	Intel® I210IT Gigabit-LAN Controller+ I218LM Gigabit-LAN PHY	Broadcom BCM57780
<b>Audio</b>	Realtek Audio Codec	Realtek Audio Codec	Realtek Audio Codec	Realtek Audio Codec
<b>SATA</b>	1 x SATA II	2 x SATA III	2 x SATA III	1 x SATA III, 1 x SATA II
<b>Connectors</b>				
<b>Power</b>	1 x Power Jack	1 x Power Jack	1 x Power Jack	1 x Power Jack
<b>Ethernet</b>	2 x RJ45 10/100/1000	2 x RJ45 10/100/1000	2 x RJ45 10/100/1000	2 x RJ45 10/100/1000
<b>Serial Interface</b>	2 x RS232 1 x RS232/422/485 (Default RS232)	4 x RS232 1 x RS232/422/485 (Default RS232)	2 x RS232 1 x RS232/422/485 (Default RS232)	2 x RS232 1 x RS232/422/485 (Default RS232)
<b>USB</b>	1 x USB 3.0 3 x USB 2.0	4 x USB 3.0	4 x USB 3.0	4 x USB 3.0
<b>Display output</b>	1 x VGA	1 x HDMI, 1 x DP	1 x VGA	1 x VGA
<b>Keyboard/Mouse</b>	2 x PS/2	-	2 x PS/2	2 x PS/2
<b>Audio</b>	1 x Audio Jack (Mic in/Line in/Line Out) (Optional)	1 x Audio Jack (Mic in/Line in/Line Out)	1 x Audio Jack (Mic in/Line in/Line Out) (Optional)	1 x Audio Jack (Mic in/Line in/Line Out) (Optional)
<b>HDMI</b>	1 x HDMI by FFC connector	1 x HDMI	1 x DVI or HDMI	1 x DVI or HDMI
<b>DVI</b>	1 x DVI by FFC connector	N/A	1 x DVI or HDMI	1 x DVI or HDMI
<b>LVDS</b>	1 x LVDS	1 x LVDS	1 x LVDS	1 x LVDS
<b>Other</b>	1 x eDP, 1 x LPT 1 x Digital I/O	1 x eDP 1 x Digital I/O 1 x Clear CMOS + Reset Button	1 x eDP, 1 x LPT 1 x Digital I/O	1 x Digital I/O
<b>Power</b>				
<b>Power Input</b>	12V DC	12V DC	12V DC	12V DC
<b>Mechanical</b>				
<b>Dimensions</b>	170 x 170 mm	170 x 170 mm	170 x 170 mm	170 x 170 mm
<b>Environment</b>				
<b>Operating Temp.</b>	-20°C to 60°C	-20°C to 60°C	-20°C to 60°C	-20°C to 60°C
<b>Storage Temp.</b>	-30°C to 70°C	-30°C to 70°C	-30°C to 70°C	-30°C to 70°C
<b>Humidity</b>	10% to 95% (Non-condensing, RH)	10% to 95% (Non-condensing, RH)	10% to 95% (Non-condensing, RH)	10% to 95% (Non-condensing, RH)
<b>Certifications</b>				
<b>Safety</b>	CE, FCC	CE, FCC	CE, FCC	CE, FCC

# Mini-ITX SBC

Intel® Pentium® N4200  
9<sup>th</sup> Gen. Intel® Core™ i7/i5/i3

NEW



NEW



Model Name	IP70	IF70
<b>System</b>		
<b>Processor</b>	Intel® Pentium® N4200 (2M Cache, up to 2.5 GHz)	Intel® Core™ i7-9700TE (12M Cache, up to 3.80 GHz) Intel® Core™ i5-9500TE (9M Cache, up to 3.60 GHz) Intel® Core™ i3-9100TE (6M Cache, up to 3.20 GHz)
<b>BIOS</b>	Insyde BIOS	Insyde BIOS
<b>Chipset</b>	Intel® SoC Integrated	Intel® H310
<b>Memory</b>	2 x SODIMM DDR3L-1866, max. 8GB	2 x SODIMM DDR4-2666, max 64GB
<b>Expansion Slot</b>		
<b>Ethernet Controller</b>	Intel® I210-IT Gigabit-LAN Controller	Intel® I210-IT Gigabit-LAN Controller
<b>Audio</b>	Realtek Audio Codec	Realtek Audio Codec
<b>SATA</b>	2 x SATA III (SATA2 support is only available when M.2 SATA is not in use.)	2 x SATA III
<b>Connectors</b>		
<b>Power</b>	1 x (12V) Power Input Din 4pin connector	1 x (12V) Power Input Din 4pin connector
<b>Ethernet</b>	2 x RJ45 10/100/1000	2 x RJ45 10/100/1000
<b>USB</b>	4 x USB 3.0	4 x USB 3.0
<b>Display output</b>	1 x DP 1.2	1 x DP 1.2
<b>Audio</b>	1 x Audio Jack (Mic-in, Line-out)	1 x Audio Jack (Mic-in, Line-out)
<b>HDMI</b>	1 x HDMI 1.4	1 x HDMI 1.4
<b>LVDS</b>	LVDS wafer	LVDS wafer
<b>Other</b>	1 x eDP 1 x Digital I/O 1 x Clear CMOS + Reset Button	1 x eDP 1 x Digital I/O 1 x Clear CMOS + Reset Button
<b>Power</b>		
<b>Power Input</b>	12V DC	12V DC
<b>Mechanical</b>		
<b>Dimensions</b>	170 x 170 mm	170 x 170 mm
<b>Environment</b>		
<b>Operating Temp.</b>	-20°C ~ 60°C	-20°C ~ 60°C
<b>Storage Temp.</b>	-40°C ~ 70°C	-40°C ~ 70°C
<b>Humidity</b>	10% ~ 95% (Non-condensing, RH)	10% ~ 95% (Non-condensing, RH)
<b>Certifications</b>		
<b>Safety</b>	CE, FCC,	CE, FCC

# Embedded Computing

# Arm Series SBC

## Custom configuration



Memory



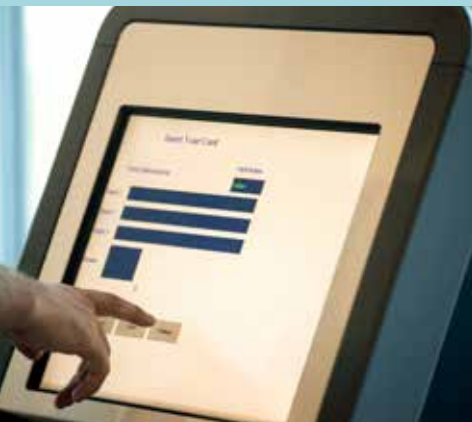
Micro SD Card  
Slot



PoE



## Application



### Self-Service Kiosks

“EASY INTEGRATION”

An interactive Kiosk manufacturer was looking for an Android based solution for their smart kiosks. Winmate provided Arm Box PC with Android 6.0 with multiple interface.

“ **ENDLESS SOFTWARE DEVELOPMENT POSSIBILITIES.** ”

- Fully integrated small-sized Arm SBC
- Arm Cortex-A9
- Arm Cortex-A72 + Arm Cortex-A53
- Android/Ubuntu/Linux 4.1.15 (QT 5.5)

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3.5" form factor

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Onboard 16GB eMMC/mSATA

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USB 3.0, USB OTG

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RJ45 for Ethernet

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Micro HDMI

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RS232/422/485, CANBus

---

9~24V DC power input

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Operating temperature -20°C to 60°C

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## Accessories

### Standard

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User Manual

Driver CD

# Arm Series SBC

Arm Cortex-A9

Arm Cortex-A72 + Arm Cortex-A53

MS-01 SoM (SDA660 designed by USI)



NEW



Q2, 2020

Model Name	FA30	RK30	QM30
<b>System</b>			
<b>Processor</b>	Arm Cortex-A9 (1 GHz to 1.6 GHz)	Arm Cortex-A72 (up to 2.0 GHz) + Arm Cortex-A53 (up to 1.5 GHz)	MS-01 SoM (SDA660 designed by USI)
<b>Memory</b>	1GB DDR3	LPDDR3 2GB	3GB LPDDR4 (Optional 4GB)
<b>Expansion Slot</b>	Micro SD/SDHC card slot	Micro SD/SDHC card slot	Micro SD/SDHC card slot
<b>Ethernet Controller</b>	IEEE 802.3/802.3u 10/100 Base-T	IEEE 802.3/802.3u 10/100 Base-T	IEEE 802.3/502.3u10/100 Base-T
<b>OS</b>	Android 6.0 (Default) Linux Ubuntu 16.04 (Optional) Linux 4.1.15 QT 5.5 (Optional)	Android 7.1 Debian 9	Android 9.0
<b>Storage</b>	Onboard 16GB eMMC	Onboard 16GB eMMC	32GB MLC (Optional 64GB)
<b>Connectors</b>			
<b>Power</b>	1 x Terminal Block 2-pin (DC In)	1 x Terminal Block 3-pin (DC In)	1 x Terminal Block 3-pin (CD In)
<b>Ethernet</b>	1 x RJ45 10/100/1000 LAN Support PoE function	1 x RJ45 10/100/1000 LAN Support PoE function	1 x RJ45 10/100/1000 LAN Support PoE function
<b>Serial Interface</b>	1 x RS232/422/485 (Default RS232)	1 x RS232/422/485 (Default RS232)	1 x RS232/422/485 (Default RS232)
<b>USB</b>	1 x USB 2.0 1 x Mini USB for Debug 1 x USB OTG 4 x USB by 2 pin-header (4 pin)	2 x USB 3.0 1 x USB 2.0 OTG	2 x USB 2.0 1 x USB Type-C
<b>HDMI</b>	1 x Micro HDMI	1 x Micro HDMI	-
<b>Micro SD Card Slot</b>	1 x Micro SD/ SDHC card slot	1 x Micro SD/ SDHC card slot	1 x Micro SD Card Slot
<b>CANBus</b>	1 x CANBus	-	-
<b>I2C Touch</b>	1 x I2C Touch by pin-header	1 x Touch Connector/1x6-pin (CN7 for 7") 1 x Touch Connector/1x6-pin (CN8 for 10.1")	1 x USB Touch by pin header
<b>LVDS</b>	1 x LVDS by pin-header	1 x LVDS Connector (CON4 for 10.1" 1920 x 1200) 1 x LVDS Connector (CON3 for 7") 1x LVDS Connector (LVDS1 for 10.1" and 15")	1 x LVDS Connectors
<b>Digital I/O</b>	1 x Digital I/O with 3.3V (6-pin GPIO)	1 x Digital I/O/2x7-pin (DI/DO1)	1 x Digital I/O/2x7-pin
<b>Power</b>			
<b>Power Input</b>	9~24V DC	12V DC Terminal Block/ PoE 48V DC in	12V DC Terminal Block
<b>Mechanical</b>			
<b>Dimensions</b>	146 x 91.6 mm	146 x 102 mm	-
<b>Environment</b>			
<b>Operating Tempe.</b>	-20°C to 60°C	-20° to 60°C	-20 to 60
<b>Storage Temp.</b>	-40°C to 70°C	-40° to 70°C	-40 to 70
<b>Humidity</b>	10% to 95% (Non-condensing, RH)	10% to 95% @30°C (Non-condensing, RH)	10% to 95% @30C (Non-condensing, RH)
<b>Certifications</b>			
<b>Safety</b>	CE, FCC	CE, FCC	CE, FCC