JHCTECH

IoT Computer
Connecting the Dots

IoT Computer

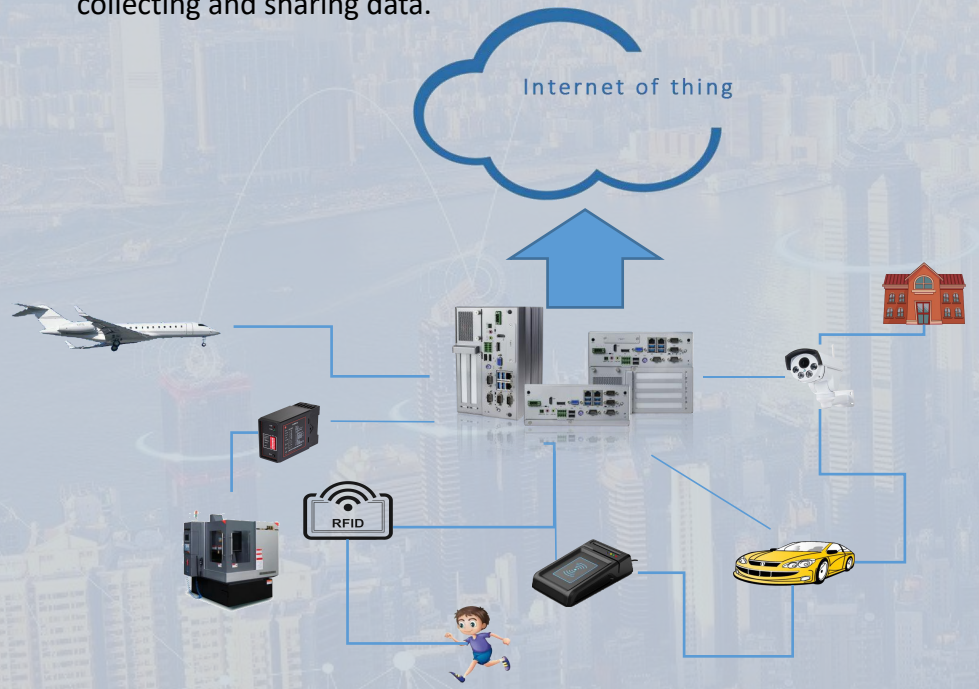
KMDA-3610/KMDA-3920/KMDA-3921

IoT Computer
Connecting the Dots

WHAT IS IoT ?

The Internet of Things, or “IoT” for short, refers to the billions of physical devices around the world that are now connected to the internet, is a interaction between the physical and digital worlds using sensors and actuators.

The purpose of the IoT is to make all objects have the computer intelligence , connecting smart objects with the network, all collecting and sharing data.

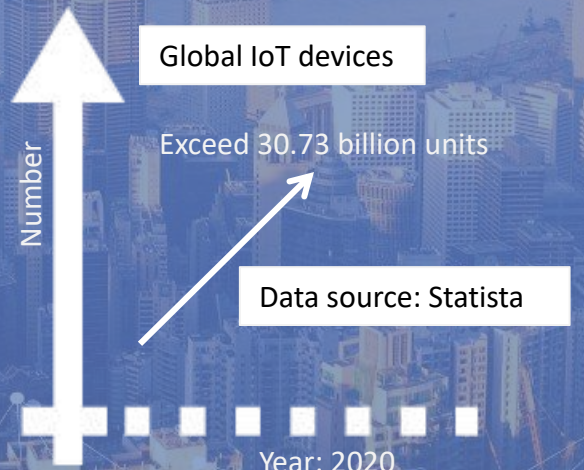


TREND

Roberto Barriga, professor of the Global MBA in Digital Business and specialist in Industrial Digital Transformation, describes the Internet of Things (IoT) as one of the driving forces of Industry 4.0.

Industry 4.0 /IA Digitalization
1.Data Collection
2.Edging Connection / Computing
3.Platform and Value drive

INDUSTRY 4.0
Internet of things and cloud technology automate complex tasks.



We will enter the next decade, accompanied by a new ecosystem driven by numbers.

IoT Powers Digital Transformation in transportation

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Transportation digitization includes two levels : infrastructure digitization and business process digitization.

Strong transportation network

Digitalization of infrastructure

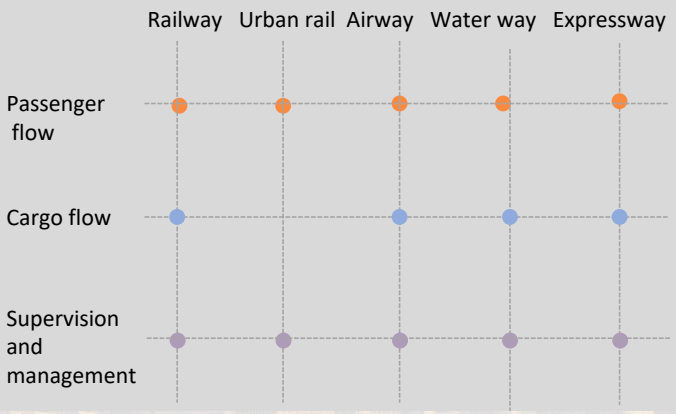
Delivery vehicle (Car Plane)

Intelligent equipment (Construction Operation)

Traffic Line (Railway, airway, road, expressway...)

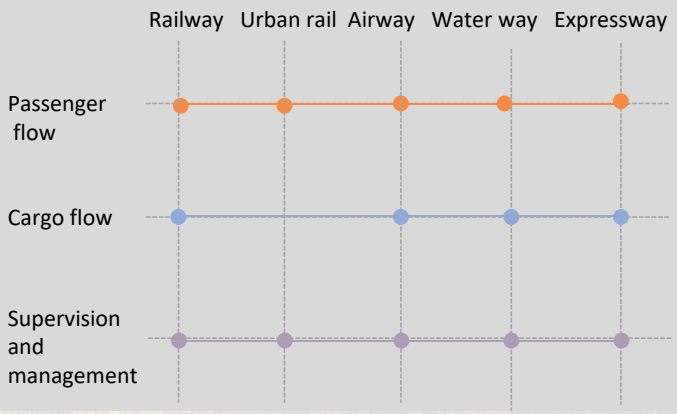
Traffic Hinge (Airport, high-speed rail station, bus station, urban rail station...)

Digitization of business processes in vertical areas (Dot)



Data fusion

Digitization of business processes in ITS(Line)



Perception Connection

5G, IP, IoT, Industrial internet, Machine vision

Fusion/integration Intelligence

Cloud, Big data, AI

Using digital governance, process change, and ICT innovation as a means to bridge the digital divide and connect the physical and digital parts

Source: ITS 114.com

IoT Ecosystem——4 Layer Architecture

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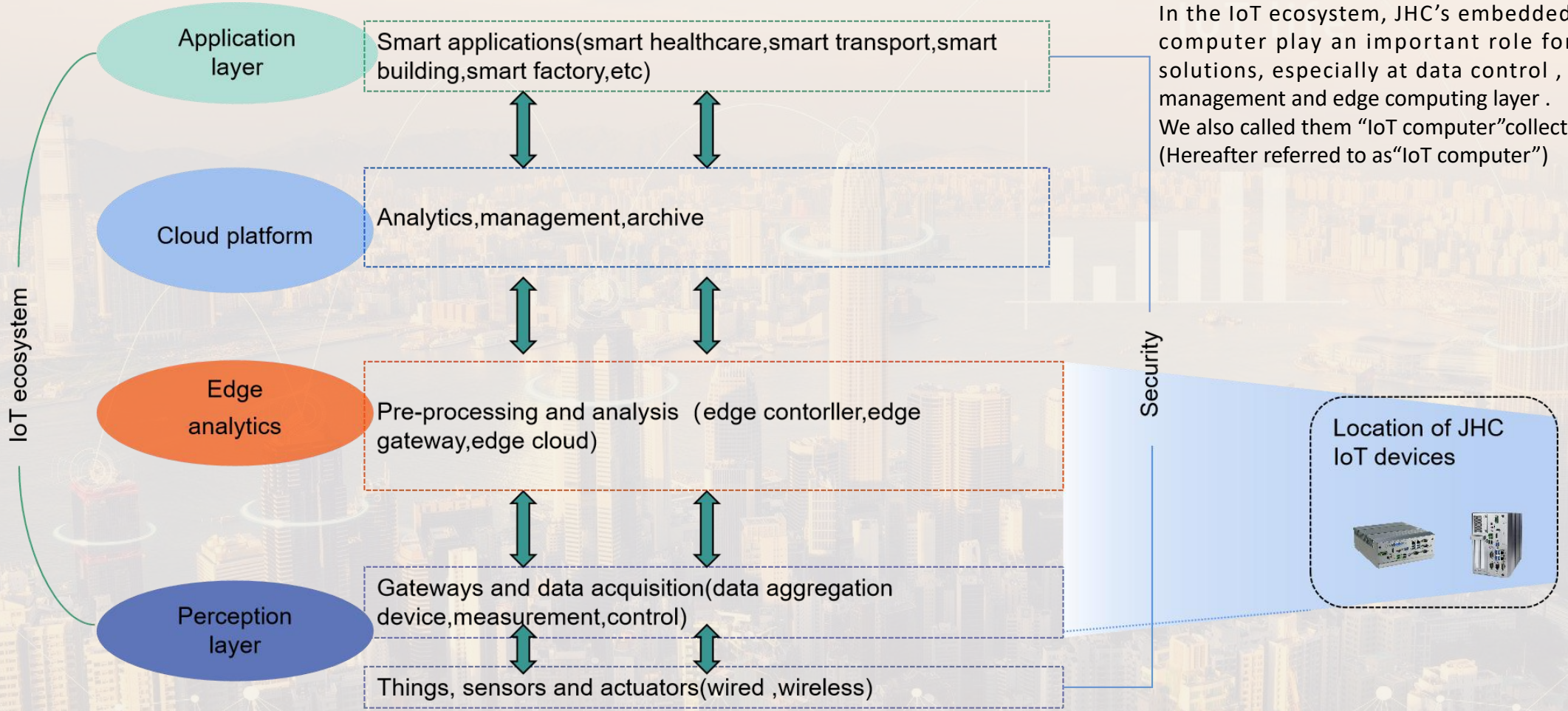

In the IoT ecosystem, JHC's embedded box computer play an important role for IoT solutions, especially at data control , data management and edge computing layer .
We also called them "IoT computer"collectively.
(Hereafter referred to as"IoT computer")

IoT application

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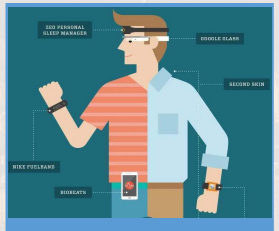
Under the wide background of economy globalization, IoT technology has spread to all walks of life in the information age. From the perspective of data analysis and real-time sensing needs, IoT is already being deployed extensively and actively, in various domains, such as:


Smart home


Wearables

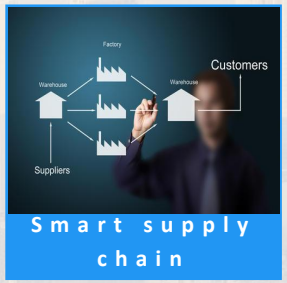

Smart health


Smart agriculture


Smart factory


Smart grids


Smart security



Smart supply chain


Smart retail

Smart transport

JHCTECH

JHCTECH has been settling down to IoT for many years, and covers various application filed. Smart transportation is one of our typical solutions.

www.jhctechnology.cn

IoT computer for ETC

Best solutions for Intelligent transportation system

IoT Computer
Connecting the Dots

IoT computer for ETC

Recommended models: KMDA-3610, KMDA-3920,KMDA-3921

Some time ago, Intel and JHC jointly create ETC solutions based on Intel® architecture. In the ETC system, JHC's IoT PC plays a vital role.

IoT Computer
Connecting the Dots

Advantages

- Strong processing power
- Low power consumption
- Scalable performance
- Ultra high security and reliability
- Remote management and so on

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Practical applications

Two examples

National Expressway G93 (Chengdu-Chongqing Ring Expressway):

The traffic flow of some sections of this expressway reaches about 30,000 vehicles per day2 during holidays, which poses a great challenge to the ETC system.

After using JHCTECH® ETC IoT PCs based on Intel® Architecture, the traffic management authorities can process the ETC billing data at very high speed, and meet the requirements of both stability and reliability, relieve the bottleneck effect caused by the MTC or province-border physical toll stations, and further improve the traffic efficiency of the expressway.

Practical applications

Two examples

National Expressway G65 (Baomao Expressway):

This expressway crosses the mountainous areas in Hunan Province, with frequent climate change, large elevation rise and fall, and harsh environment. Various models of JHCTECH® ETC IoT PCs, which are based on Intel® Architecture, have been widely deployed in the Province-Border Gantry Stations, Non-Border Gantry Stations and Non-Gantry Stations at various entrances and exits, fully satisfying the requirements of ETC users.

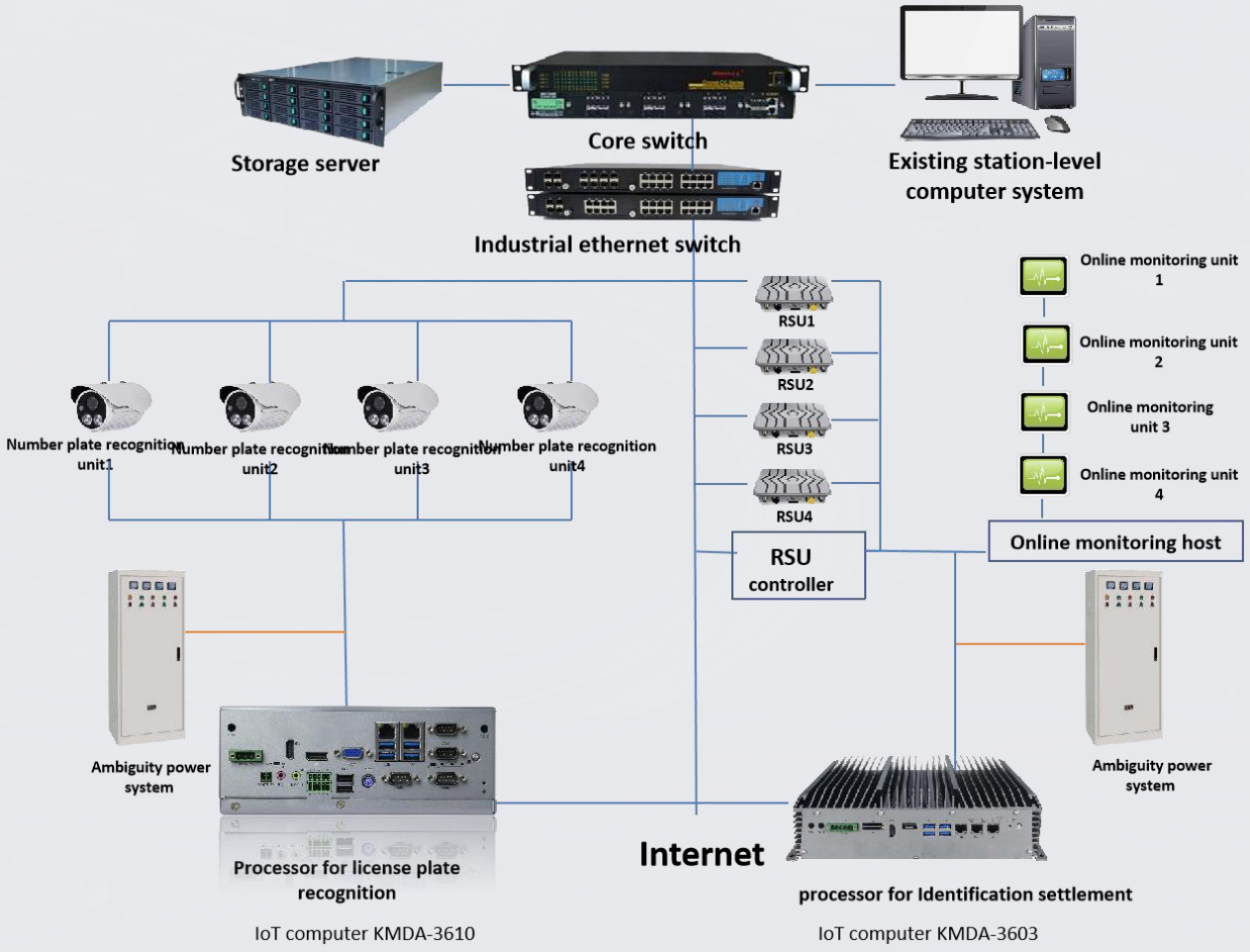
Principle of application

They are designed for industrial control.

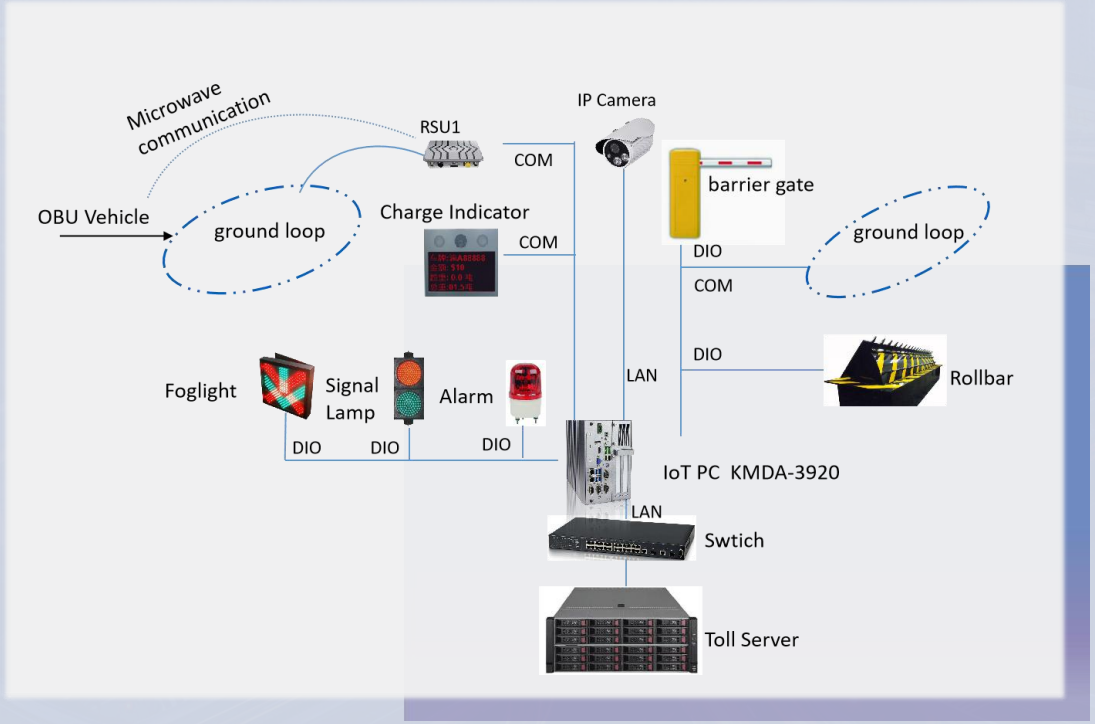
In the ETC system, JHC's IoT computer connects to external data collection devices through wired or wireless communication to obtain data sources, monitor and control vehicle and road conditions, performs data integration, data pre-processing, device management, and edge analysis on the edge, filters useful data, and aggregates these data to upload to implement predictive analysis, providing reliable real-time information for decision-making, so that intelligent transportation systems can respond quickly to events.

Gantry Station

Topography



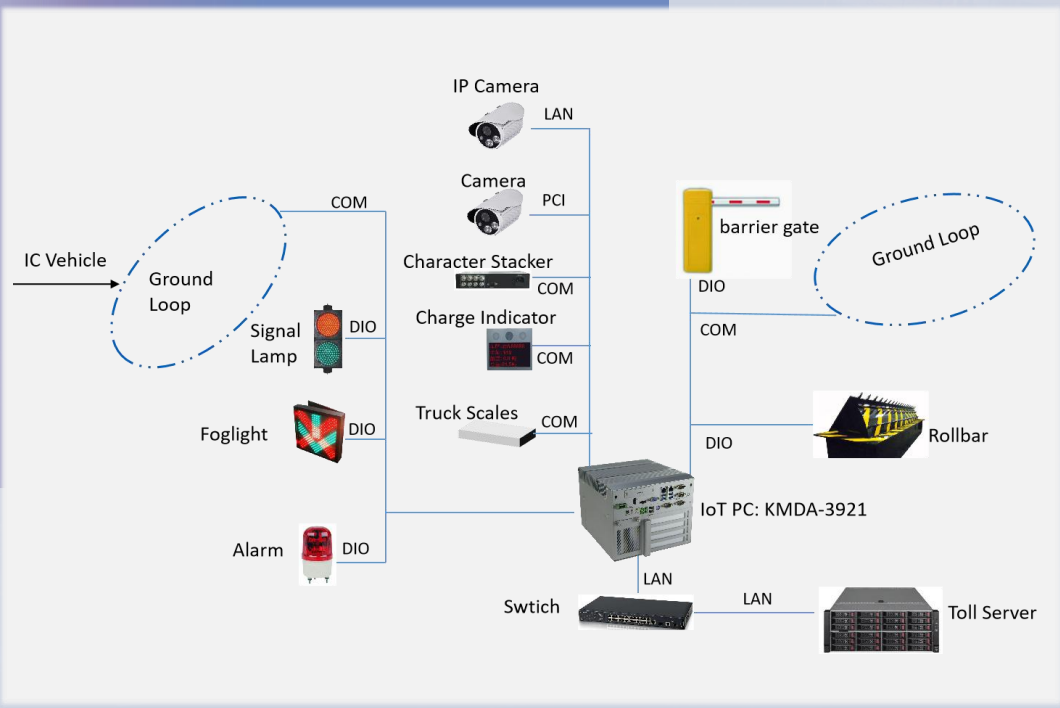
Principle of application



ETC/MTC Mixed Lane(Non-Gantry Station)

ETC Lane(Non-Gantry Station)

Topography



Highlight

Multiple communications
(wireless and wired)

Support 4G/Wifi/BT wireless communication, all are equipped with COM (RS-232/422/485) interface, VGA/HDMI/DP interface, USB3.0 and miniPCIe extension port, gigabit LAN, support common industrial protocol.
Can well meet various network requirements.

Reliability and security

Rugged fanless design
Wide temperature: -20℃~65℃
Wide range power input: DC 12~24V
TPM2.0 secure encrypted transmission
Dust-proof, corrosion-resistant, anti-shock and anti-electromagnetic-interference → can operate stably under the harsh environmental conditions

Real-time

Online mornitor and control in real time, and quickly respond to changes in operating conditions, self-reset in distress, to ensure the normal operation of the system.

Expandability

With strong input and output functions(rich I/O interfaces), it can be connected to various peripherals, channel controllers, video monitoring systems, vehicle testers and etc to complete various tasks. And support individual customization to meet diverse elastic needs.

Compatibility

Support various operating systems, multi-language assembly, multi-task operating system

key feature
competitive advantages

IoT computer for ETC

The various models, application scenarios and technical parameters of the above ETC IoT computer are shown in Table 1.

Model	KMDA-3610	KMDA-3920	KMDA-3921
Picture			
Type of ETC station/Lane	Gantry Station	ETC Lane(Non-Gantry Station)	ETC/MTC Mixed Lane(Non-Gantry Station)
CPU	Intel® Skylake-S Pentium G4400/ Core I3-6100/ Core I5-6500 CPU		
Chipset	Intel®H110		
Memory	2*DDR4 2400/2133MHz SODIMM, Up to 32GB		
Extension Slots	1*Mini PCIe	1*PClex16,1*PClex4 1*Mini PCIe	1*PClex16, 1*PClex1， 2*PCl, 1*Mini PCIe
Ethernet Controller	1*Intel I211AT,1*Intel I219LM,2*RJ45		
RAID	Support		
SATA	2*SATA3.0, 1*M.2，1*mSATA		
Display	1*DP, 1*HDMI,1*VGA		
COM	2*RS232,2*RS485	8*RS232,2*RS485	2*RS232,2*RS485
Audio	Line out, Microphone		
DIO	8-bit		
Operating Temperature	-20°C~65°C		
Storage Temperature	-40°C~85°C		

Table 1

Thank you

More products and technical solutions

Website

Youtube

Fanless IOT Computer, KMDA Series

KMDA-3610/S011

JHCTECH IoT Computer

Intel® Skylake-S CPU, 2*LAN, 4*USB3.0, HDMI, DP, VGA, 3 displays, 2*SATA3, DC-IN 12~24V.

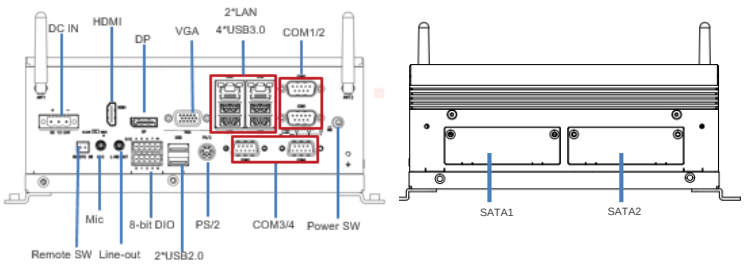
RoHS CE FCC

Fanless -20~65°C 4K Ultra HD 4G LTE RAID Wide 12-24V DC Power

Key Features

- Aluminum chassis, fanless design
- Intel® Skylake-S CPU
- 2*DDR4 2400/2133MHz SODIMM, Up to 32GB
- DP+ HDMI+ VGA
- 2*LAN, 4*USB3.0, 3*USB2.0, 4*COM,8-bit DIO
- 1*Mini PCIe(PCIe+ USB),1*M.2 2242 B-Key
- 1*mSATA, 2*2.5" SATA
- DC 12~24V Wide Power Input

KMDA-3610/S011 is a high-performance, fanless IOT Computer. It powered by Intel® Skylake-S CPU, 2*DDR4 2133/2400MHz dual channel memory, up to 32GB. DP1.2+ HDMI1.4b + VGA. 2*GbE LAN, 4*USB3.0, 1*Mini PCIe supports 4G and Wifi/BT. 2*2.5" SATA HDD/SSD, 1*mSATA, 1*M.2, used for storage. With DC 12~24V wide power input, high performance, multi IO, widely used for Intelligent transportation, Video Security and Machine Vision.



SPEC.

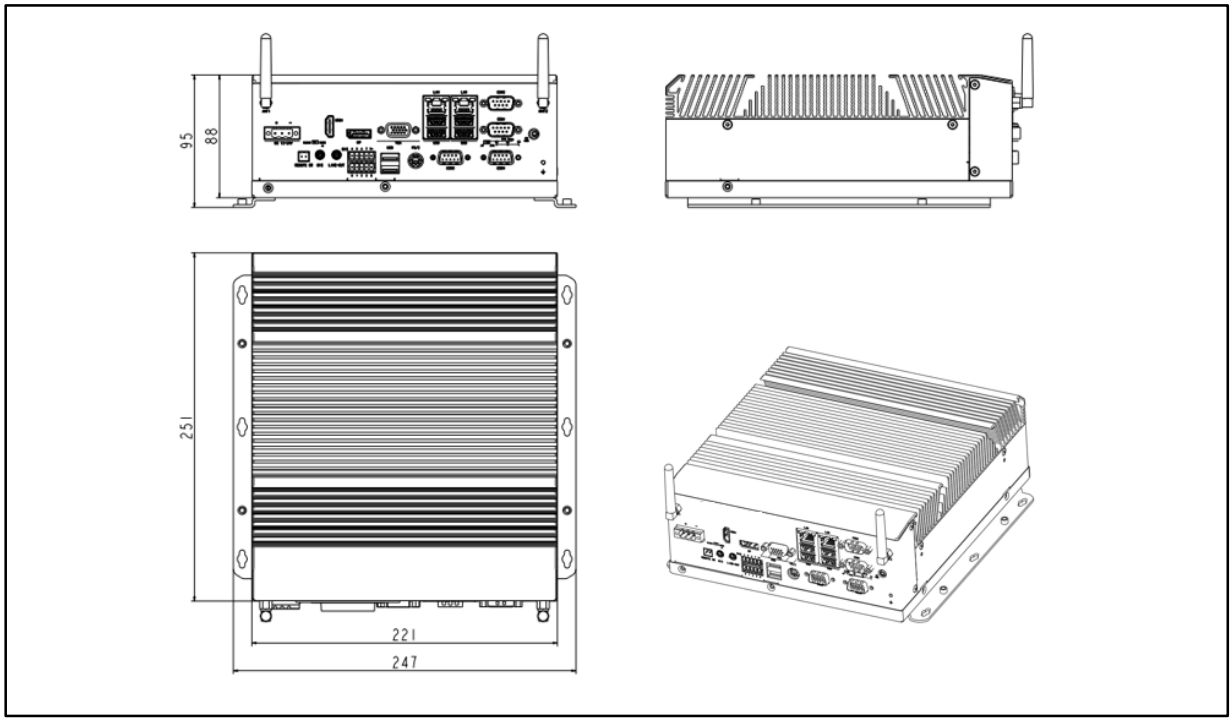
System	CPU	Intel® Skylake-S Pentium G4400/ Core I3-6100/ Core I5-6500 CPU
	Chipset	Intel® H110
	System Memory	2*260-Pin SODIMM, dual channel DDR4 2133/2400MHz, up to 32GB
	Expansion	1*Full size Mini PCIe with PCIe + USB signal and SIM slot, support 4G LTE/Wifi/BT wireless module
	Intel Graphics	Gen. 9th Intel®HD Graphics, HEVC/H265 HW HD en/decoder, DP1.2 max. res. 4096*2304@60Hz, HDMI1.4b max. res. 3840*2160@30Hz, VGA max. res. 1920*1200@60Hz
	Audio	Realtek ALC662VD controller, Audio out and MIC
	LAN	1*Intel I211AT+ 1*Intel I219LM PCIe Gig. Ethernet, 10/100/1000Mbps
	Storage	2*2.5" HDD/SSD bay 1*mSATA(SATA); 1*M.2 2242 B-key(SATA&USB)
	DIO	8-bit DIO,TTL signal, programmable input and output
	I/O ports	2*RJ45 Gig-LAN(Front) 4*USB3.0 Type A (Front); 2*USB2.0 Type A(Front); 1*USB2.0 Type A(inside) 8-bit DIO, 2*10-pin terminal, 1*PS/2(Front) 2*RS232/422/485 DB9(Front), 2*RS232 DB9 (Front), Audio-out and 1*MIC (Front) 1*HDMI + 1*DP+ 1*VGA(Front)
	LED	1*Power LED, 1*HDD LED, 3*CPU temp. LED (Red is warning , Yellow is high, Green is normal)
	Control SW	1*Power button, 1*2pin ter. power-on signal, 1*AT/ATX Select SW, 1*Clear CMOS Select SW
	Power Supply	DC 12~24V Input, 3-pin ter. connector(Front), Consumption: TBD
	Watchdog Timer	Watchdog timeout programmable via software 1 to 255 second
	OS Support	Windows 7, Windows 10, Linux Fedora, Ubuntu

*All specifications and photos are subject to change without notice.

Mechanical	Structure	Aluminum chassis, SGCC frame
	Color	Silver grey
	Mounting	Desktop Mounting
	Dimension	(W*H*D):221*251*88mm
	Net weight	TBD
Environ-mental	Operating temperature	-20°C~65°C – Fanless, 35W CPU with wide operating temp. SSD, airflow -10°C~55°C – Fanless, 35W CPU with HDD, airflow
	Storage Temperature	-40°C~85°C
	Storage Humidity	10~90%@40°C, Non-condensing
	Vibration	5grms/5~500Hz/random/in working(SSD); 1grms/5~500Hz/random/in working(HDD)
	Shock	50g peak acceleration(11ms duration)(SSD); 20g peak acceleration(11ms duration)(HDD)
	Certification/EMC	CE/FCC Class B

Dimension

Unit:mm



Ordering Info.

Modol No.	Introduction
KMDA-3610/S011-G4	Fanless IOT Computer, Intel® SKL-S G4400 CPU, H110 Chipset, 4G DDR4, 128G SSD, 2*LAN, 4*USB3.0, 3*USB2.0, 4*COM, 1*Mini PCIe, 1*HDMI, 1*DP, 1*VGA, Audio out, Mic, 8-bit DIO, 1*PS/2, 2*2.5 " SATA bay, 1*M.2, 1*mSATA, DC 12~24V, DC19V/6.32A 120W power adapter
KMDA-3610/S011-I3	Fanless IOT Computer, Intel® SKL-S Core I3-6100 CPU, H110 Chipset, 8G DDR4, 128G SSD, 2*LAN, 4*USB3.0, 3*USB2.0, 4*COM, 1*Mini PCIe, 1*HDMI, 1*DP, 1*VGA, Audio out, Mic, 8-bit DIO, 1*PS/2, 2*2.5 " SATA bay, 1*M.2, 1*mSATA, DC 12~24V, DC19V/6.32A 120W power adapter
KMDA-3610/S011-I5	Fanless IOT Computer, Intel® SKL-S Core I5-6500 CPU, H110 Chipset, 8G DDR4, 256G SSD, 2*LAN, 4*USB3.0, 3*USB2.0, 4*COM, 1*Mini PCIe, 1*HDMI, 1*DP, 1*VGA, Audio out, Mic, 8-bit DIO, 1*PS/2, 2*2.5 " SATA bay,1*M.2, 1*mSATA, DC 12~24V, DC19V/6.32A 120W power adapter

*All specifications and photos are subject to change without notice.

Updated Jul, 9th, 2020

Embedded IOT Computer, KMDA Series

KMDA-3920/S011

JHCTECH IoT Computer

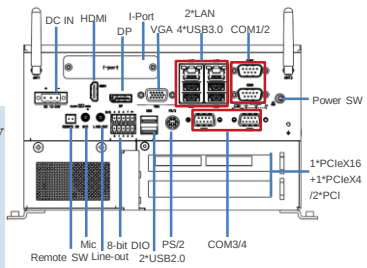
Intel® Skylake-S CPU, 2*LAN, 4*USB3.0, HDMI, DP, VGA, 3 displays, PCIeX16+PCIeX4 or 2*PCI expansion slot, DC-IN 12~24V.

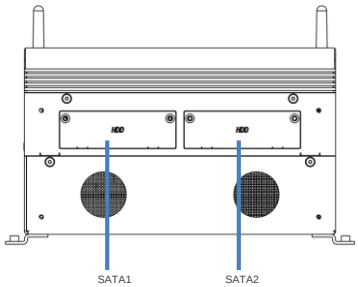
RoHS CE FCC

Key Features

- Aluminum chassis, SGCC frame
- Intel® Skylake-S CPU
- 2*DDR4 2400/2133MHz SODIMM, Up to 32GB
- DP+ HDMI+ VGA, Optional 3 independent displays
- 2*LAN, 4*USB3.0, 3*USB2.0, 4*COM, 8-bit DIO
- PCIeX16+ PCIeX4 or 2*PCI expansion
- 1*Mini PCIe(PCIe+ USB), 1*M.2 2242 B-Key
- 1*mSATA, 2*2.5" SATA,
- DC 12~24V Wide Power Input

KMDA-3920/S011 is a high-performance IOT Computer. It powered by Intel® Skylake-S CPU, 2*DDR4 2133/2400MHz dual channel memory, up to 32GB. DP1.2+ HDMI1.4b + VGA. 2*GbE LAN, 4*USB3.0, 1*Mini PCIe supports 4G and Wifi/BT. 2*2.5" SATA HDD/SSD, 1*Msata, 1*M.2, used for storage. With DC 12~24V wide power input, high performance, multi IO, multi expansion slots, easy to disassemble and install function card or HDD/SSD, widely used for Intelligent AI, Video Security and Machine Vision.





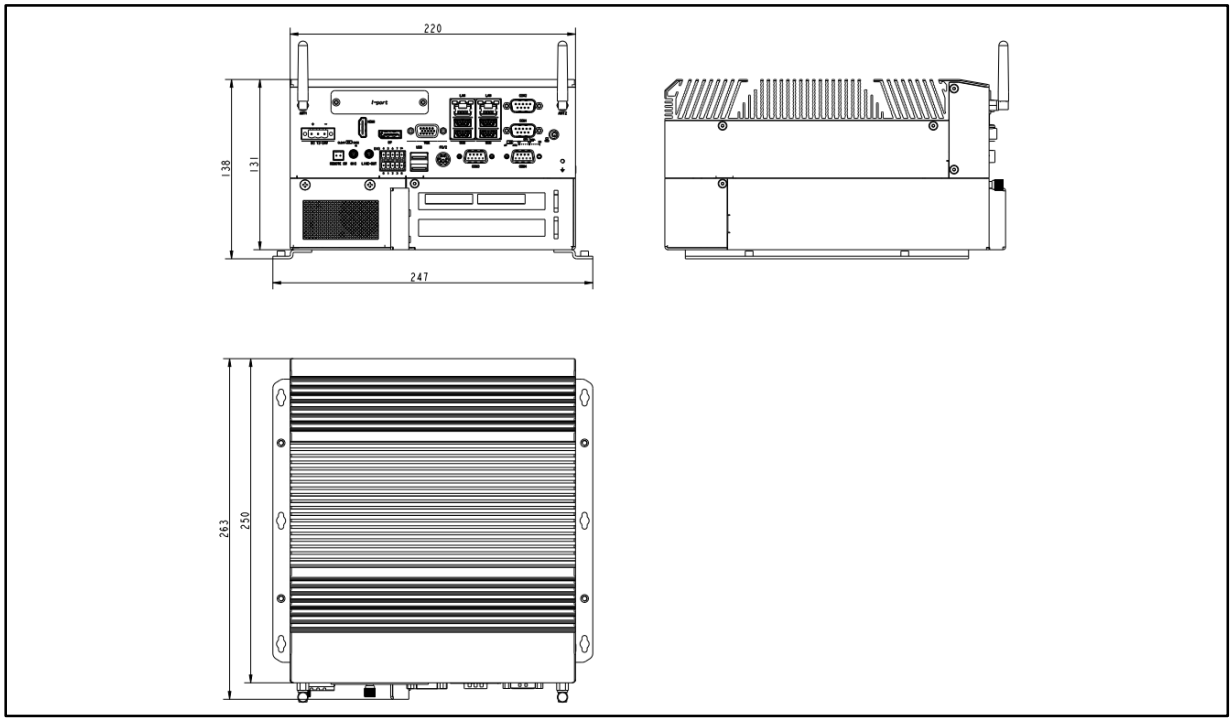
SPEC.

System	CPU	Intel® Skylake-S Pentium G4400/ Core I3-6100/ Core I5-6500 CPU
	Chipset	Intel® H110
	System Memory	2*260-Pin SODIMM, dual channel DDR4 2133/2400MHz, up to 32GB
	Expansion	1*Full size Mini PCIe with PCIe + USB signal and SIM slot, support 4G LTE/Wifi/BT wireless module 1*PCIe X16+ 1*PCIe X4 slots, support GTX 1660Ti GPU(Length is less than 225mm) Optional 2*PCI Expansion, Support for installation of multiple function modules
	Intel Graphics	Gen. 9th Intel®HD Graphics, HEVC/H265 HW HD en/decoder, DP1.2 max. res. 4096*2304@60Hz, HDMI1.4b max. res. 3840*2160@30Hz, VGA max. res. 1920*1200@60Hz
	Audio	Realtek ALC662VD controller, Audio out and MIC
	LAN	1*Intel I211AT+ 1*Intel I219LM PCIe Gig. Ethernet, 10/100/1000Mbps
	Storage	2*2.5" HDD/SSD bay 1*mSATA(SATA); 1*M.2 2242 B-key(SATA&USB)
	DIO	8-bit DIO(Front),TTL signal, programmable input and output
	I/O ports	2*RJ45 Gig-LAN(Front) 4*USB3.0 Type A (Front); 2*USB2.0 Type A(Front); 1*USB2.0 Type A(inside) 8-bit DIO, 2*5-pin terminal, 1*PS/2(Front) 2*RS232/422/485 DB9(Front), 2*RS232 DB9 (Front), Audio-out and 1*MIC (Front) 1*HDMI + 1*DP+ 1*VGA(Front)
	LED	1*Power LED, 1*HDD LED, 3*CPU temp. LED (Red is warning , Yellow is high, Green is normal)
	Control SW	1*Power button, 1*2pin ter. power-on signal, 1*AT/ATX Select SW, 1*Clear CMOS Select SW
	Power Supply	DC 12~24V Input, 3-pin ter. connector(Front) Consumption: 19V/2A (I5-6500 CPU , 8GB DDR4)
	Watchdog Timer	Watchdog timeout programmable via software 1 to 255 second
	OS Support	Windows 7, Windows 10, Linux Fedora Ubuntu (Note: Gen.7th Intel® Kabylake-S processors don't support Windows 7)

Mechanical	Structure	Aluminum chassis, SGCC frame
	Color	Silver grey
	Mounting	Desktop Mounting，Wall Mounting
	Dimension	(W*H*D):220*250*131mm
	Net weight	5.27Kg
Environ-mental	Operating temperature	-20°C~65°C – Fanless, 35W CPU with wide operating temp. SSD, airflow -10°C~55°C – Fanless, 35W CPU with HDD, airflow
	Storage Temperature	-40°C~85°C
	Storage Humidity	10~90%@40°C, Non-condensing
	Vibration	5grms/5~500Hz/random/in working(SSD); 1grms/5~500Hz/random/in working(HDD)
	Shock	50g peak acceleration(11ms duration)(SSD); 20g peak acceleration(11ms duration)(HDD)
	Certification/EMC	CE/FCC Class B

Dimension

Unit:mm



Ordering Info.

Modol No.	Introduction
KMDA-3920/S011-G4	Embedded IOT Computer, Intel® SKL-S G4400 CPU, H110 PHC, 4G DDR4, 128G SSD, 2*LAN, 4*USB3.0, 3*USB2.0, 4*COM, 1*Mini PCIe, PCIe X16+PCIe X4/2*PCI, 1*HDMI, 1*DP, 1*VGA, Audio out, Mic, 8-bit DIO, 1*PS/2, 1*I-port, 2*2.5" SATA bay, 1*M.2, 1*mSATA, DC 12~24V, DC19V/6.32A.120W power adapter
KMDA-3920/S011-I3	Embedded IOT Computer, Intel® SKL-S Core I3-6100 CPU, H110 PHC, 8G DDR4, 128G SSD, 2*LAN, 4*USB3.0, 3*USB2.0, 4*COM, 1*Mini PCIe, PCIe X16+PCIe X4/2*PCI, 1*HDMI, 1*DP, 1*VGA, Audio out, Mic, 8-bit DIO, 1*PS/2, 1*I-port, 2*2.5" SATA bay, 1*M.2, 1*mSATA, DC 12~24V, TPM2.0
KMDA-3920/S011-I5	Embedded IOT Computer, Intel® SKL-S Core I5-6500 CPU, H110 PHC, 8G DDR4, 256G SSD, 2*LAN, 4*USB3.0, 3*USB2.0, 4*COM, 1*Mini PCIe, PCIe X16+PCIe X4/2*PCI, 1*HDMI, 1*DP, 1*VGA, Audio out, Mic, 8-bit DIO, 1*PS/2, 1*I-port, 2*2.5" SATA bay, 1*M.2, 1*mSATA, DC 12~24V, TPM2.0

*All specifications and photos are subject to change without notice.

Updated Jul., 9th, 2020

Embeded IOT Computer, KMDA Series

KMDA-3921/S011

JHCTECH IoT Computer

Intel® Skylake-S CPU, 2*LAN, 4*USB3.0, HDMI, DP, VGA, 3 displays, PCIe X16+PCIe X1+2*PCI expansion, DC-IN 12~24V.

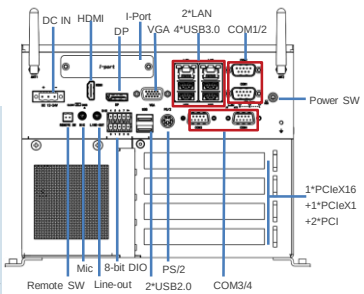
RoHS CE FCC

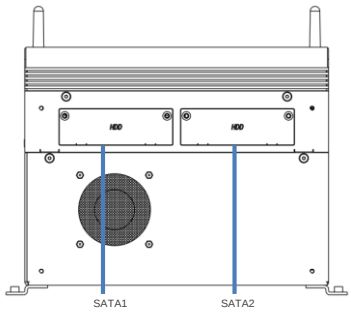
PCIe/PCI Expansion | -20~65°C | 4K Ultra HD | 4G LTE | RAID | Wide 12-24V DC Power

Key Features

- Aluminum chassis, SGCC frame
- Intel® Skylake-S CPU
- 2*DDR4 2400/2133MHz SODIMM, Up to 32GB
- DP+ HDMI+ VGA
- 2*LAN, 4*USB3.0, 3*USB2.0, 4*COM,8-bit DIO
- 1*PCIe X16+ 1*PCIeX1+ 2*PCI expansion
- 1*Mini PCIe(PCIe+ USB),1*M.2 2242 B-Key
- 1*mSATA, 2*2.5" SATA
- DC 12~24V Wide Power Input

KMDA-3921/S011 is a high-performance IOT Computer. It powered by Intel® Skylake-S CPU, 2*DDR4 2133/2400MHz dual channel memory, up to 32GB. DP1.2+ HDMI1.4b + VGA. 2*GbE LAN, 4*USB3.0, 1*Mini PCIe supports 4G and Wifi/BT. 2*2.5" SATA HDD/SSD, 1*mSATA, 1*M.2, used for storage,. With DC 12~24V wide power input, high performance, multi IO, multi expansion, easy to disassemble and install function card or HDD/SSD, widely used for Intelligent AI, Video Security and Machine Vision.





SPEC.

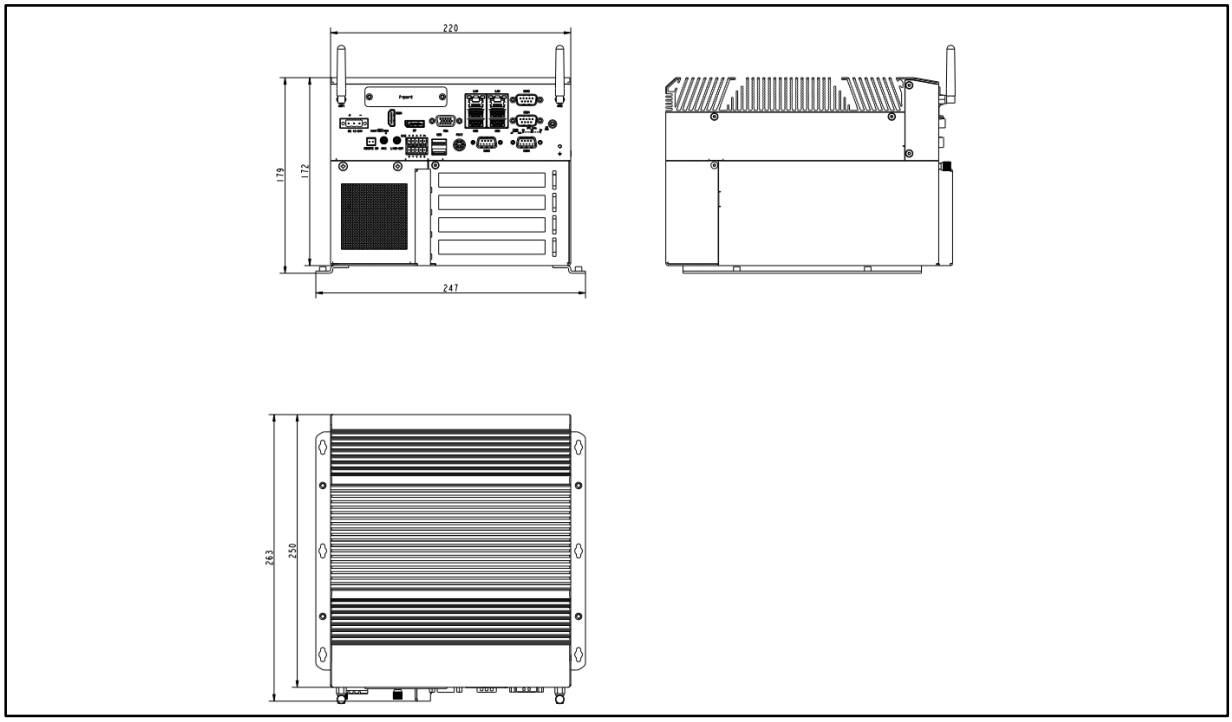
System	CPU	Intel® Skylake-S Pentium G4400/ Core I3-6100/ Core I5-6500 CPU
	Chipset	Intel® H110
	System Memory	2*260-Pin SODIMM, dual channel DDR4 2133/2400MHz, up to 32GB
	Expansion	1*Full size Mini PCIe with PCIe + USB signal and SIM slot, support 4G LTE/Wifi/BT wireless module 1*PCIe X16, support GTX 1660 Mini Graphics card, Graphics length is less than 225mm 1*PCIe X1+ 2*PCI Expansion
	Intel Graphics	Gen. 9th Intel®HD Graphics, HEVC/H265 HW HD en/decoder, DP1.2 max. res. 4096*2304@60Hz, HDMI1.4b max. res. 3840*2160@30Hz, VGA max. res. 1920*1200@60Hz
	Audio	Realtek ALC662VD controller, Audio out and MIC
	LAN	1*Intel I211AT+ 1*Intel I219LM PCIe Gig. Ethernet, 10/100/1000Mbps
	Storage	2*2.5" HDD/SSD bay 1*mSATA(SATA); 1*M.2 2242 B-key(SATA&USB)
	DIO	8-bit DIO(Front) TTL signal,programmable input and output
	I-port	Optional 1*LPT, USB2.0, Mini PCIe and M.2 I/O ports(such as serial ports)
	I/O ports	2*RJ45 Gig-LAN(Front) 4*USB3.0 Type A (Front); 2*USB2.0 Type A(Front); 1*USB2.0 Type A(inside) 8-bit DIO, 2*5-pin terminal, 1*PS/2(Front) 2*RS232/422/485 DB9(Front), 2*RS232 DB9 (Front), Audio-out and 1*MIC (Front) 1*HDMI + 1*DP+ 1*VGA(Front)
	LED	1*Power LED, 1*HDD LED, 3*CPU term. LED (Red is warning , Yellow is high, Green is normal)
	Control SW	1*Power button, 1*2pin ter. power-on signal, 1*AT/ATX Select SW, 1*Clear CMOS Select SW
	Power Supply	DC 12~24V Input, 3-pin ter. (Front), Consumption: 19V/2A (I5-6500 CPU , 8GB DDR4)
	Watchdog Timer	Watchdog timeout programmable via software 1 to 255 second
	OS Support	Windows 7, Windows 10, Linux Fedora Ubuntu

*All specifications and photos are subject to change without notice.

Mechanical	Structure	Aluminum chassis, SGCC frame
	Color	Silver grey
	Mounting	Desktop Mounting
	Dimension	(W*H*D):220*250*172mm
	Net weight	5.58kg
Environ-mental	Operating temperature	-20°C~65°C – Fanless, 35W CPU with wide operating temp. SSD, airflow -10°C~55°C – Fanless, 35W CPU with HDD, airflow
	Storage Temperature	-40°C~85°C
	Storage Humidity	10~90%@40°C, Non-condensing
	Vibration	5grms/5~500Hz/ random/in working(SSD); 1grms/5~500Hz/random/in working(HDD)
	Shock	50g peak acceleration(11ms duration)(SSD); 20g peak acceleration(11ms duration)(HDD)
	Certification/EMC	CE/FCC Class B

Dimension

Unit:mm



Ordering Info.

Modol No.	Introduction
KMDA-3921/S011-G4	Embeded IOT Computer, Intel® SKL-S G4400 CPU, H110 PHC, 4G DDR4, 128G SSD, 2*LAN, 4*USB3.0, 3*USB2.0, 4*COM, 1*Mini PCIe, 1*PCIe X16, 1*PCIe X1, 2*PCI, 1*HDMI, 1*DP, 1*VGA, Audio out, Mic, 8-bit DIO, 1*PS/2, 1*I-port, 2*2.5" SATA bay, 1*M.2, 1*mSATA, DC 12~24V, DC19V/6.32A.120W power adapter
KMDA-3921/S011-I3	Embeded IOT Computer, Intel® SKL-S Core I3-6100 CPU, H110 PHC, 8G DDR4, 128G SSD, 2*LAN, 4*USB3.0, 3*USB2.0, 4*COM, 1*Mini PCIe, 1*PCIe X16, 1*PCIe X1, 2*PCI, 1*HDMI, 1*DP, 1*VGA, Audio out, Mic, 8-bit DIO, 1*PS/2, 1*I-port, 2*2.5" SATA bay, 1*M.2, 1*mSATA, DC 12~24V, DC19V/6.32A.120W power adapter
KMDA-3921/S011-I5	Embeded IOT Computer, Intel® SKL-S Core I5-6500 CPU, H110 PHC, 8G DDR4, 256G SSD2, 2*LAN, 4*USB3.0, 3*USB2.0, 4*COM, 1*Mini PCIe, 1*PCIe X16, 1*PCIe X1, 2*PCI, 1*HDMI, 1*DP, 1*VGA, Audio out, Mic, 8-bit DIO, 1*PS/2, 1*I-port, 2*2.5" SATA bay, 1*M.2, 1*mSATA, DC 12~24V, DC19V/6.32A.120W power adapter

*All specifications and photos are subject to change without notice.

Updated Jul, 9th, 2020