

Embedded Industrial Motherboard CATALOG



22 years+
Focus on Industrial
Computer Hardware

Best-selling Countries
30+

5000+
Partners and Clients

NODKA International

NO.5, Shenwang Rd, Minhang Dist, Shanghai, China

Email: vikki@nodka.com

Mobile: +86 136 7156 0856

NODKA Europe

Luchthavenweg 81.038 , 5657 EA Eindhoven , The Netherlands

Email: wuyong@nodka.com

Mobile: +31(0) 6 2029 2256



Scan code to follow Nodka

Innovative COMLAC Modular Computer Expert





Becoming the Global Leading IPC&HMI System Platform Manufacturer

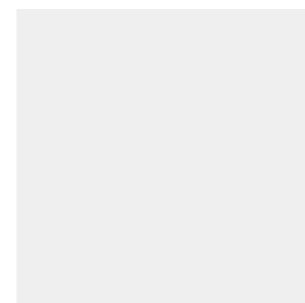
NODKA was founded in 2001 and is committed to the research and development of industrial PC and HMI system platforms. We provide comprehensive product solutions for customers in automation, measurement, communication, and other fields. Our product line includes X86/ARM motherboard COMLAC CPU Modules, embedded computers, industrial Panel PC, industrial displays, industrial operation panels, AutomationPC, EtherCAT slave I/O, network security hardware platforms, and more. These products are widely used in industries such as industrial automation, transportation, power, petrochemicals, steel, new energy, environmental protection, health-care, and commercial self-service terminals.

After years of industrial investment and experience accumulation, our company has established a X86/ARM motherboard R&D center, a system integration R&D center, and an automation I/O software and hardware R&D department. We have a comprehensive DQA testing laboratory equipped with facilities for high and low temperature testing, humidity testing, vibration testing, drop testing, EMC testing, ESD testing, EFT testing, lightning surge testing, and more. This ensures the reliability of our industrial product designs. Our company owns a factory that spans over 50,000 square meters. We have established an intelligent manufacturing center that covers the entire process, including system integration assembly, SMT/DIP (Surface Mount Technology/Dual In-line Package), precision sheet metal fabrication, CNC machining, baking paint, and anodizing surface treatment. Our factory processes and controls comply with ISO9001 and ISO14001 certification standards. This enables us to provide high-quality, small-batch, and large-scale production manufacturing services to our customers. We also have the capability to provide OEM/ODM customization services.

Nodka has successfully risen to become one of the most popular industrial computer solution providers through relentless efforts. We have collaborated with over 5,000 rapidly growing customers in more than 30 countries worldwide. In the future, we will continue to be your trusted automation partner through continuous innovation and excellent teamwork.

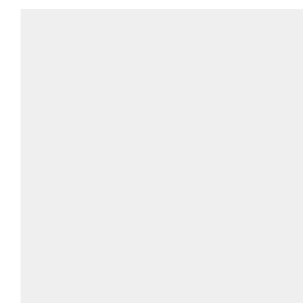
CONTENTS

01 COMLAC CPU Modules



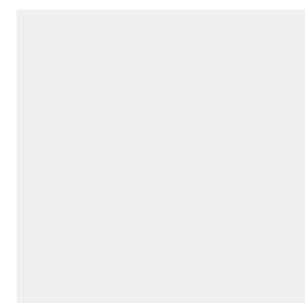
- NK-L312-J1900
- NK-L313-J3455
- NK-L314-5200U/5500U
- NK-L315-3855U/6200U/7200U/7600U
- NK-L316-4205U/8145U/8265U
- NK-L317-J6412
- NK-L510-H110
- NK-L520-H510
- NK-L530-H610
- NK-L601-D2000

02 Embedded Industrial Motherboard

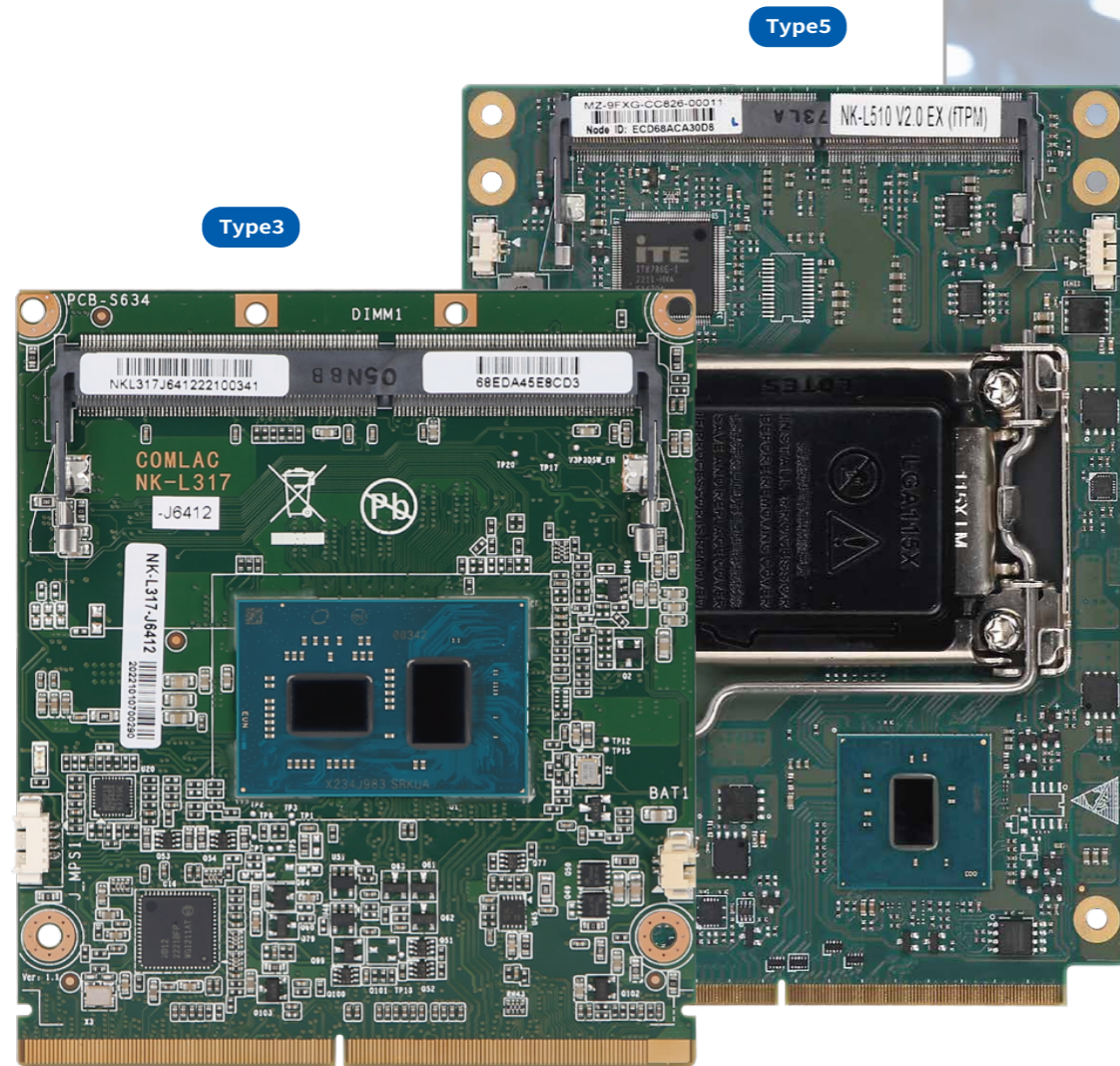


- NK-6120
- NK-6121
- NK-6170
- NK-6171
- NK-6172
- NK-6180
- NK-6181

03 ATX/Micro-ATX Motherboard



- NK-7106
- NK-7107
- NK-7205
- NK-7208
- NK-7305
- NK-7306
- NK-5105

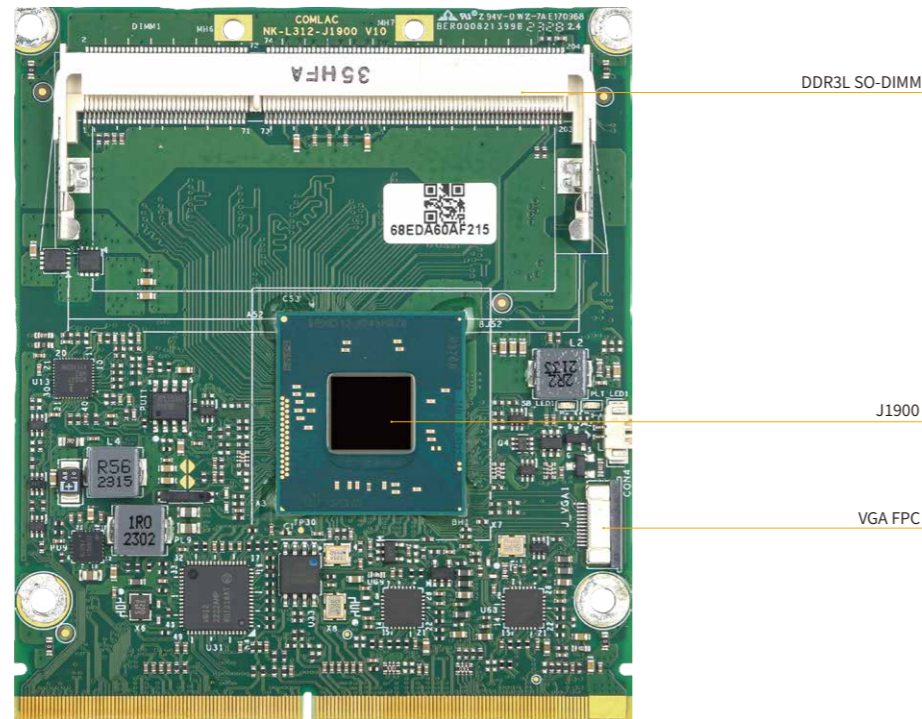


COMLAC CPU Modules

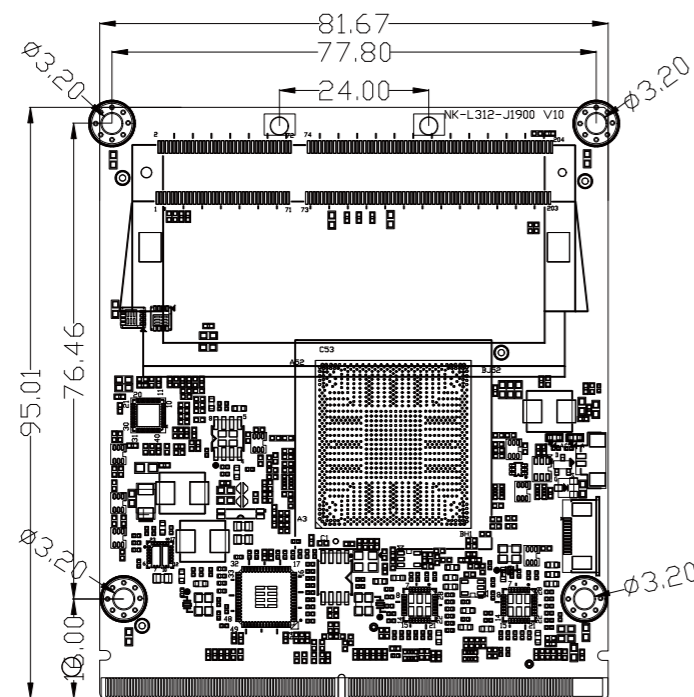
COMLAC is a small form factor computer module that integrates all the core components of a general-purpose X86 PC. It provides all I/O signals (graphics, audio, storage, PCIe, networking, serial ports, USB, etc.) through a 314-pin MXM3.0 high-speed connector and is installed on a specific carrier board. The COMLAC computer module enables X86 CPU solutions with power consumption ranging from 5W to 65W, meeting both high-performance and low-power CPU platform requirements. It is suitable for industries such as military, power, transportation, machine tools, robotics, motion vision controllers, and medical devices. Depending on performance and space requirements, the computer module comes in different form factors, namely COMLAC Type3 and COMLAC Type5.

NK-L312-J1900

Internal I/O



Dimension (Unit:mm)



Feature

- Intel® Celeron® J1900 processor, Quad-core, base frequency 2.0GHz, TDP 10W
- Support 1 x DDR3L-1333MHz SO-DIMM slot, up to 8GB
- Support 1 x VGA FPC Connector, 2 x DDI Independent dual display
- Type3 Interface Signals with MXM3.0 Gold Finger

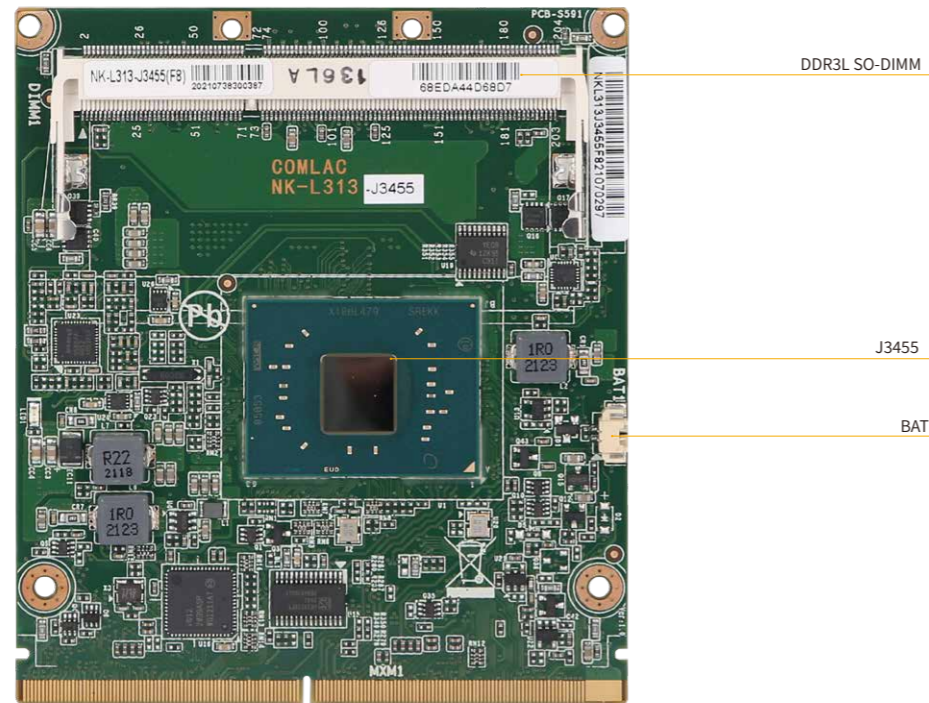
Specification

Model		NK-L312-J1900
Processor System	CPU	Intel® Celeron® J1900 processor 2.0GHz, TDP 10W
	Chipset	Intel® SoC integrated
	BIOS	AMI 64Mb UEFI BIOS
Memory	Technology	Single Channel(Non-ECC) DDR3L-1333MHz, up to 8GB
	Slot	1 x DDR3L 240-pin SO-DIMM slot
Graphic	Controller	Intel HD graphics integrated
Expansion Signals	Display	2 x DDI, 1 x VGA FPC Connector
	Serial Port	2 x Uart(9line), 4 x Uart(3line)
	USB	1 x USB 3.0(5Gbps), 8 x USB2.0 ^[1]
	SATA	2 x SATA 2.0
	PCIe	3 port 3 lanes (3 x 1)
	GPIO	1 x 4bit GPIO
	Audio	1 x Intel HDA Audio codec
	Fan	1 x Smart Fan
	Ethernet	Intel i210AT controller
	others	1 x I ² C, 1 x SMBus, 1 x LPC, 1 x Buzzer, 1 x KB/MS
	Watchdog Timer	Output&Interval
Power	Power input	5V
OS Support	MS Windows	Windows 7/8/10
	Linux	Linux
Mechanism	Dimensions	(L)95mm x (W)82mm
	Gross Weight	0.6kg
	Environment	Temperature
	Humidity	5~95% (Non-condensing)
	Vibration	5~500Hz, 3Grms operating

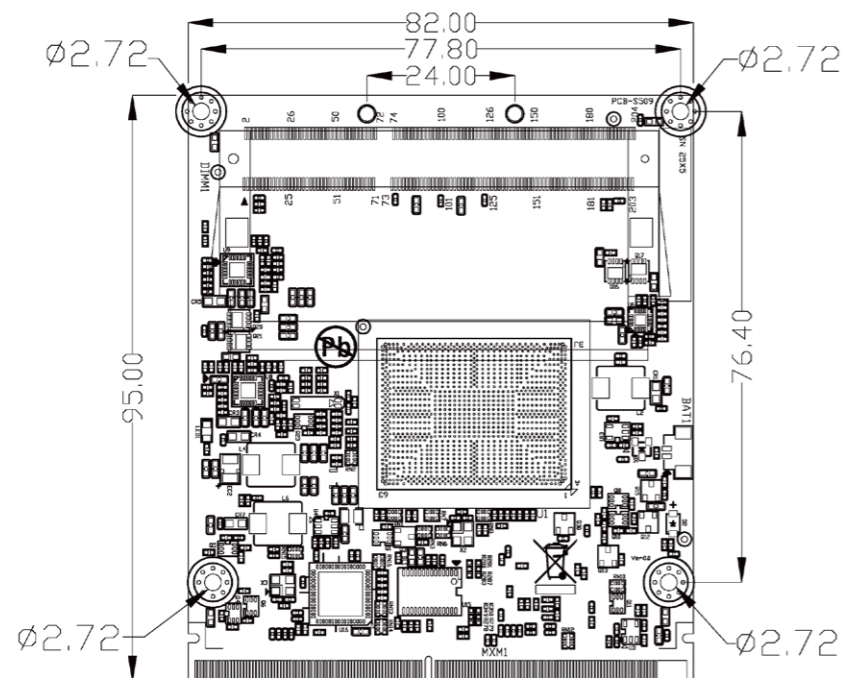
[1] 8/10*USB2.0 selected by resistor, 8*USB2.0 default.

NK-L313-J3455

Internal I/O



Dimension (Unit:mm)



Feature

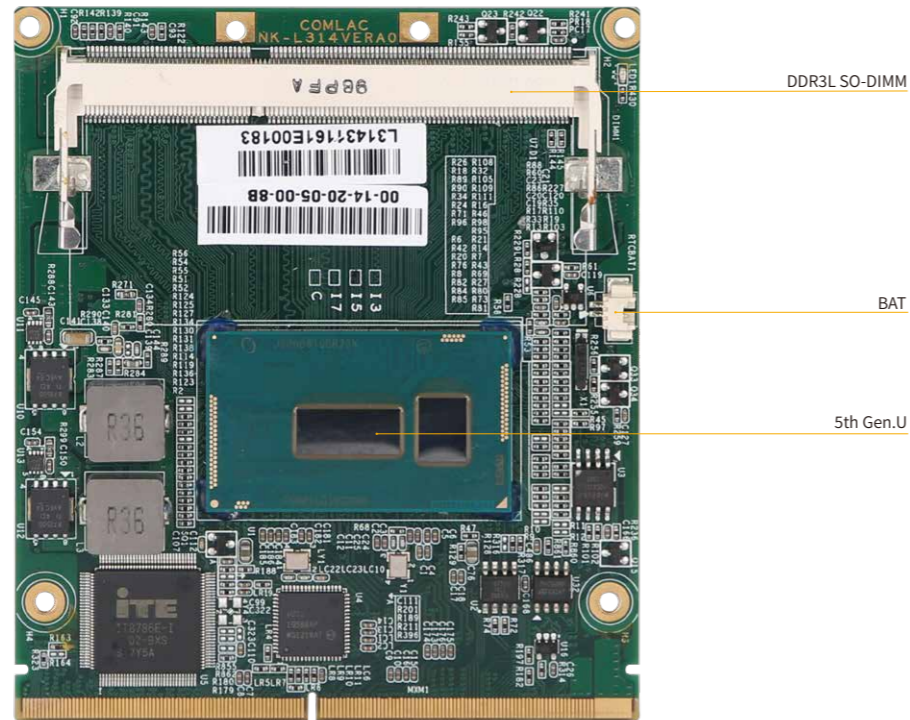
- Intel® Celeron® J3455 processor, Quad-core, base frequency 1.5GHz up to 2.3GHz, TDP 10W
- Support 1x DDR3L-1866MHz SO-DIMM slot, up to 8GB
- Support 2 x DDI, 1 x eDP, Dual-display
- NODKA Type3 Interface Signals with MXM3.0 Gold Finger

Specification

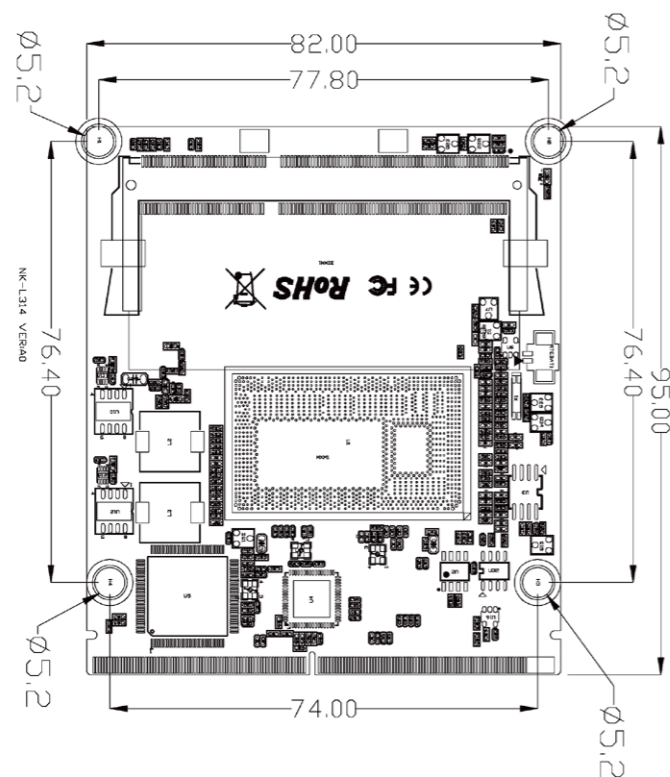
Model		NK-L313-J3455
Processor System	CPU	Intel® Celeron® J3455 processor 1.5GHz up to 2.3GHz, TDP 10W
	Chipset	Intel® SoC integrated
	BIOS	AMI 128Mb UEFI BIOS
Memory	Technology	Single Channel(Non-ECC) DDR3L-1866MHz, up to 8GB
	Slot	1 x DDR3L 240-pin SO-DIMM slot
Graphic	Controller	Intel HD graphics integrated
Expansion Signals	Display	2 x DDI, 1 x eDP
	Serial Port	2 x Uart(9line), 4 x Uart(3line)
	USB	2 x USB 3.0, 8 x USB2.0
	SATA	2 x SATA 3.0
	PCIe	5 port 5 lanes (1 X 2, 3 x 1)
	GPIO	1 x 4bit GPIO
	Audio	1 x Intel HDA Audio codec
	Fan	1 x Smart Fan
	Ethernet	Intel i210AT controller
	others	1 x I ² C, 1 x SMBus, 1 x LPC, 1 x Buzzer, 1 x KB/MS
Watchdog Timer	Output&Interval	System reset, programmable from 1~255 seconds
Power	Power input	5V
OS Support	MS Windows	Windows 7/10
	Linux	Linux
Mechanism	Dimensions	(L)95mm x (W)82mm
	Gross Weight	0.6kg
Environment	Temperature	Operating: 0°C~60°C with SSD Storage: -40°C~85°C
	Humidity	5~95% (Non-condensing)
	Vibration	5~500Hz, 3Grms operating

NK-L314-5005U/5300U/5500U

Internal I/O



Dimension (Unit:mm)



Feature

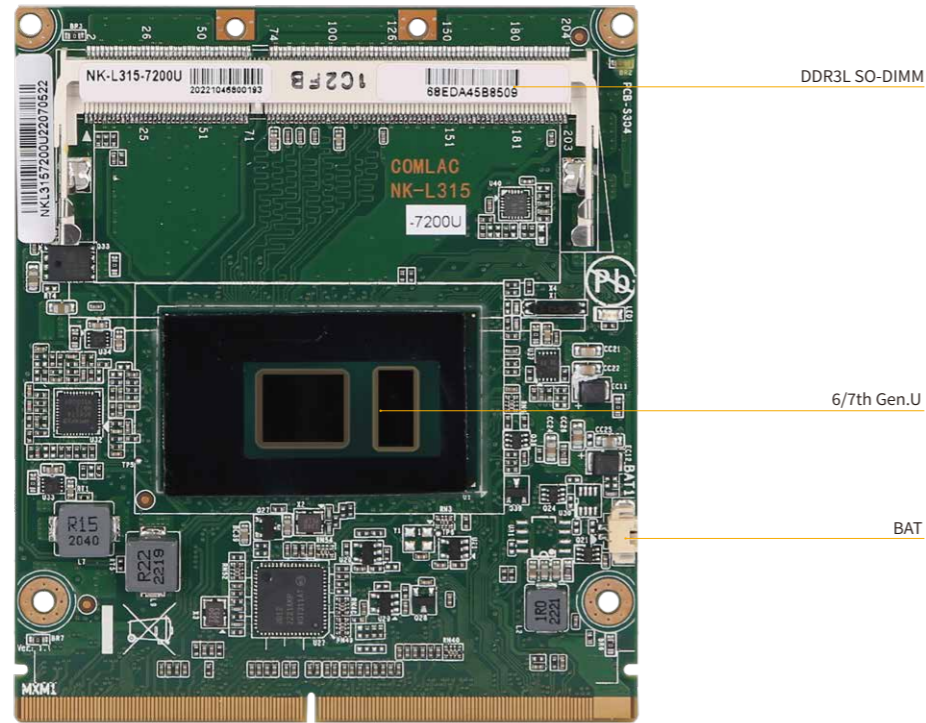
- Intel® 5th Gen. U Dual Core Processors i3-5005U ,base Frequency 2.0GHz up to 2.9GHz),TDP 15W
- Intel® 5th Gen. U Dual Core Processors i5-5300U ,base Frequency 2.3GHz up to 2.9GHz),TDP 15W
- Intel® 5th Gen. U Quad Core Processors i7-5500U ,base Frequency 2.4GHz up to 3.0GHz),TDP 15W
- Support 1 x DDR3L-1333/1600MHz SO-DIMM slot, up to 8GB
- Support 1 x eDP,2 x DDI Tri-display
- Type3 Interface Signals with MXM3.0 Gold Finger

Specification

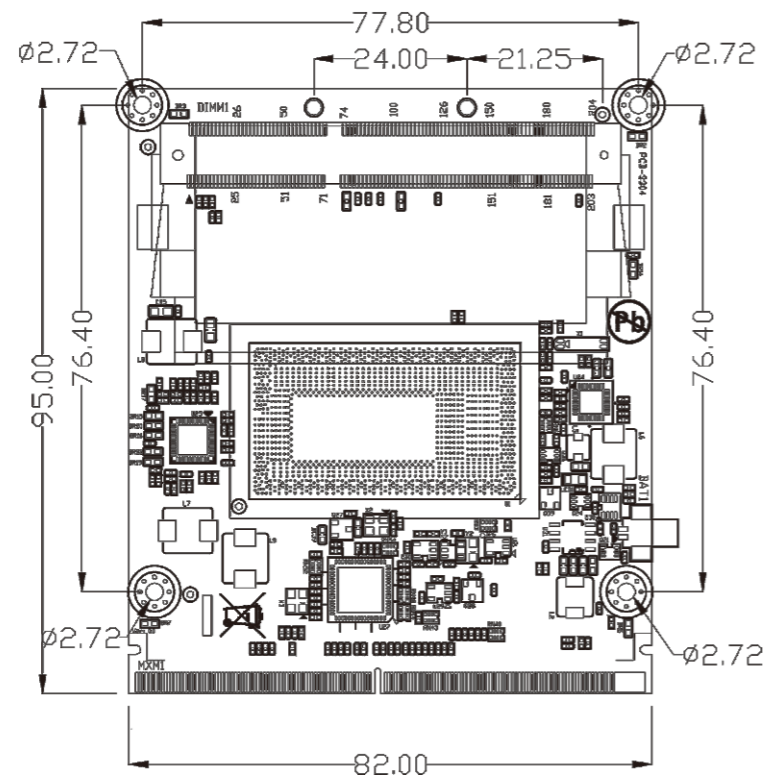
Model		NK-L314-5005U/5300U/5500U
Processor System	CPU	Intel® 5th Gen. U Core Processors, TDP 15W
	Chipset	Intel® SoC integrated
	BIOS	AMI 128Mb UEFI BIOS
Memory	Technology	Single Channel(Non-ECC) DDR3L-1600MHz, up to 8GB
	Slot	1 x DDR3L 240-pin SO-DIMM slot
Graphic	Controller	Intel HD graphics integrated
Expansion Signals	Display	2 x DDI,1 x eDP
	Serial Port	2 x Uart(9line),4 x Uart(3line)
	USB	2 x USB3.0,4x USB2.0
	SATA	2 x SATA 3.0
	PCIe	5 port 8 lanes (1 x 4,4 x 1)
	GPIO	1 x 4bit GPIO
	Audio	1 x Intel HDA Audio codec
	Fan	1 x Smart Fan
	Ethernet	Intel i210AT controller
	others	1 x I²C,1 x SMBus,1 x LPC,1 x Buzzer,1 x KB/MS
	Watchdog Timer	Output&Interval
Power	Power input	5V
OS Support	MS Windows	Windows 7/10
	Linux	Linux
Mechanism	Dimensions	(L)95mm x (W)82mm
	Gross Weight	0.8kg
Environment	Temperature	Operating:0°C~60°C with SSD Storage:-40°C~85°C
	Humidity	5~95% (Non-condensing)
	Vibration	5~500Hz, 3Grms operating

NK-L315-3855U/6200U/7600U

Internal I/O



Dimension (Unit:mm)



Feature

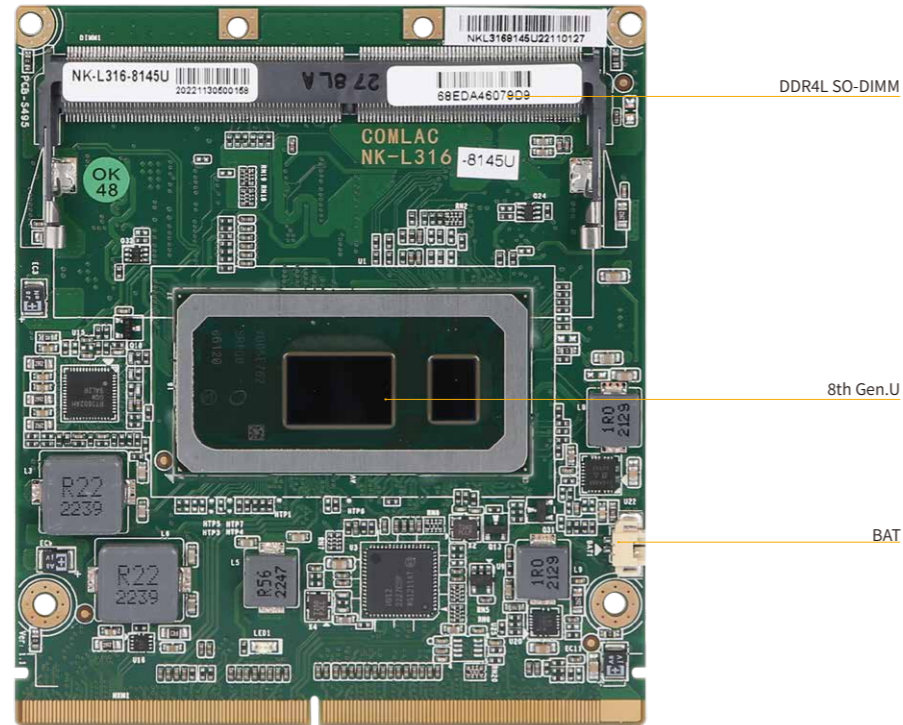
- Intel® Celeron® 3855U processor, Dual-core, base frequency 1.6GHz , TDP 15W
- Intel® Celeron® i5-6200U processor, Dual-core, base frequency 2.3GHz up to 2.8GHz , TDP 15W
- Intel® Core™ i7-7600U processor, Dual-core, base frequency 2.8GHz up to 3.9GHz , TDP 15W
- Support 1 x DDR3L-1600MHz SO-DIMM slot, up to 8GB
- Support eDP,2 x DDI Tri-display
- Type3 Interface Signals with MXM3.0 Gold Finger

Specification

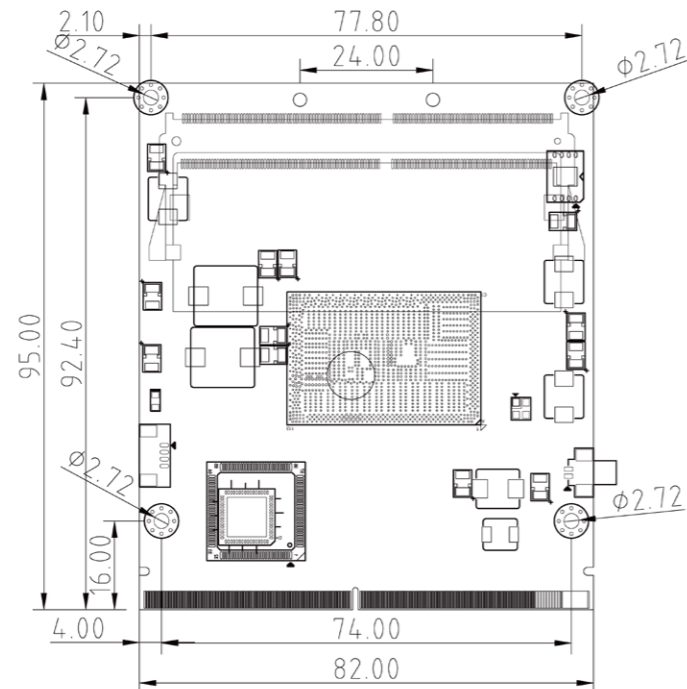
Model		NK-L315-3855U/6200U/7600U
Processor System	CPU	Intel® 6/7th Gen.U Celeron Core processor, TDP 15W
	Chipset	Intel® SoC integrated
	BIOS	AMI 128Mb UEFI BIOS
Memory	Technology	Single Channel(Non-ECC) DDR3L-1600MHz, up to 8GB
	Slot	1 x DDR3L 240-pin SO-DIMM slot
Graphic	Controller	Intel HD graphics integrated
Expansion Signals	Display	2 x DDI,1 x eDP
	Serial Port	2 x Uart(9line),4 x Uart(3line)
	USB	4 x USB3.0 ,8 x USB2.0
	SATA	2 x SATA 3.0
	PCIe	5 port 8 lanes (1 x 4,1 x 2,2 x 1)
	GPIO	1 x 4bit GPIO
	Audio	1 x Intel HDA Audio codec
	Fan	1 x Smart Fan
	Ethernet	Intel i210AT controller
	others	1 x I²C,1 x SMBus,1 x LPC,1 x Buzzer,1 x KB/MS
	Watchdog Timer	Output&Interval
Power	Power input	5V
OS Support	MS Windows	Windows 7(Only support with Intel 6th Gen. CPU)Windows 10
	Linux	Linux
Mechanism	Dimensions	(L)95mm x (W)82mm
	Gross Weight	0.3kg
Environment	Temperature	Operating:0°C~60°C with SSD Storage:-40°C~85°C
	Humidity	5~95% (Non-condensing)
	Vibration	5~500Hz, 3Grms operating

NK-L316-4205U/8145U/8265U

Internal I/O



Dimension (Unit:mm)



Feature

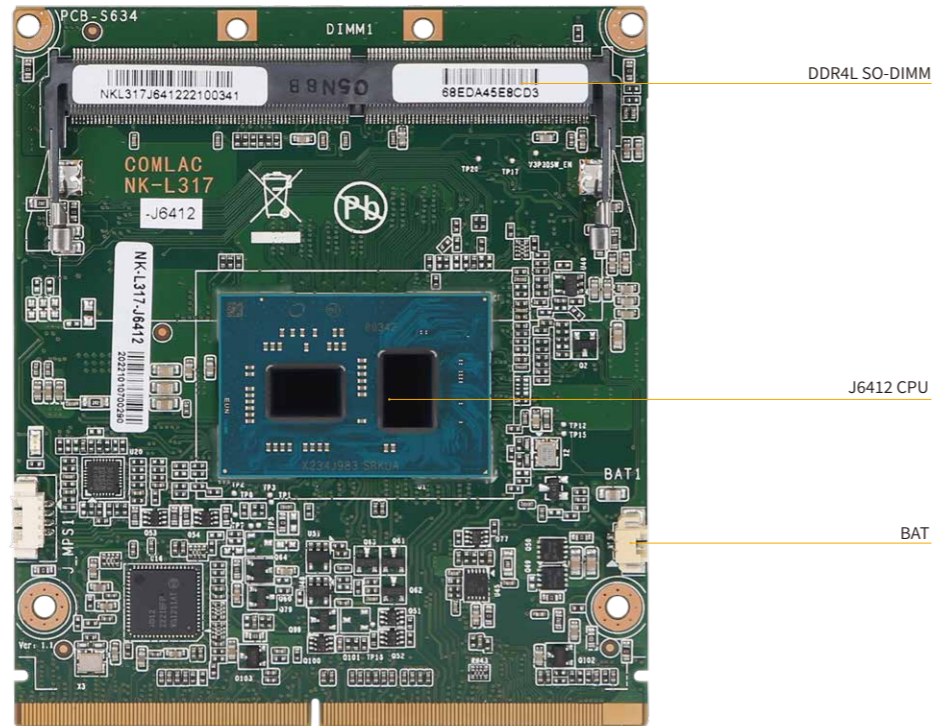
- Intel® Celeron®. 4205U processor, Dual-core, base frequency 1.8GHz , TDP 15W
- Intel® Core™. i3-8145U processor, Dual-core, base frequency 1.6GHz up to 3.9GHz , TDP 15W
- Intel® Core™. i5-8265U processor, Dual-core, base frequency 2.1GHz up to 3.9GHz , TDP 15W
- Support 1 x DDR4-2400MHz SO-DIMM slot, up to 32GB
- Support eDP, 2 x DDI Tri-display
- Type3 Interface Signals with MXM3.0 Gold Finger

Specification

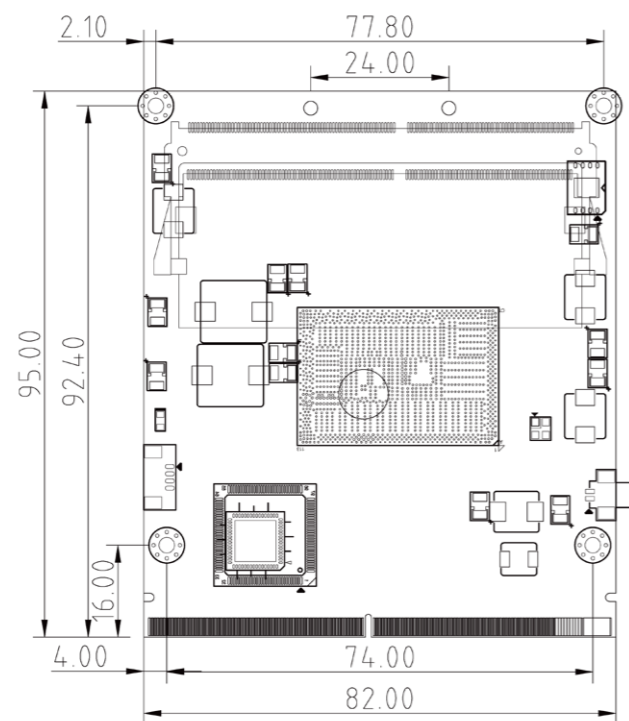
Model		NK-L316-4205U/8145U/8265U
Processor System	CPU	Intel® 8th Gen. U processor, TDP 15W
	Chipset	Intel® SoC integrated
	BIOS	AMI 128Mb UEFI BIOS
Memory	Technology	Single Channel(Non-ECC) DDR4-2400MHz, up to 32GB
	Slot	1 x DDR4 260-pin SO-DIMM slot
Graphic	Controller	Intel HD graphics integrated
Expansion Signals	Display	2 x DDI, 1 x eDP
	Serial Port	2 x Uart(9line), 4 x Uart(3line)
	USB	4x USB3.0, 8x USB2.0
	SATA	2 x SATA 3.0
	PCIe	5 port 8 lanes(1 x 4, 1 X2, 2 x 1)
	GPIO	1 x 4bit GPIO
	Audio	1 x Intel HDA Audio codec
	Fan	1 x Smart Fan
	Ethernet	Intel i210AT controller
	others	1 x I²C, 1 x SMBus, 1 x eSPI, 1 x Buzzer, 1 x KB/MS
Watchdog Timer	Output&Interval	System reset, programmable from 1~255 seconds
Power	Power input	5V
OS Support	MS Windows	Windows 10/11
	Linux	Linux
Mechanism	Dimensions	(L)95mm x (W)82mm
	Gross Weight	0.6kg
Environment	Temperature	Operating: 0°C~60°C with SSD Storage: -40°C~85°C
	Humidity	5~95% (Non-condensing)
	Vibration	5~500Hz, 3Grms operating

NK-L317-J6412

Internal I/O



Dimension (Unit:mm)



Feature

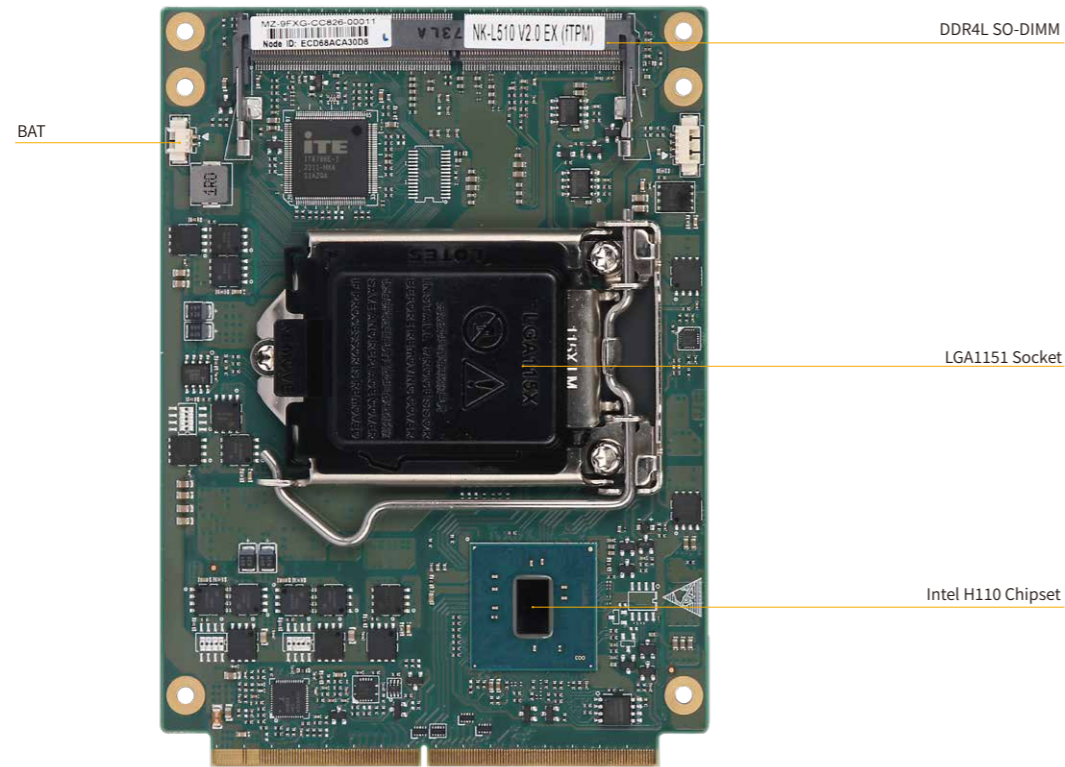
- Intel® Celeron® J6412 processor, Dual-core, base frequency 2.0GHz up to 2.6GHz , TDP 10W
- Support 1 x DDR4-3200MHz SO-DIMM slot, up to 32GB
- Support 2 x DDI,1 x eDP, Tri-Display
- Type3 Interface Signals with MXM3.0 Gold Finger

Specification

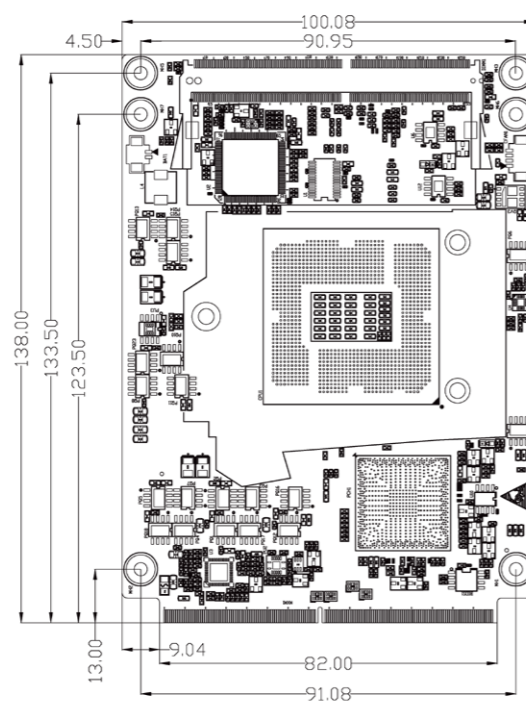
Model		NK-L317-J6412
Processor System	CPU	Intel® Celeron® J6412 processor, Dual-core, base frequency 2.0GHz up to 2.6GHz, TDP 10W
	芯片组 Chipset	Intel® SoC integrated
	BIOS	AMI 128Mb UEFI BIOS
Memory	Technology	Single Channel(Non-ECC) DDR4-3200MHz, up to 32GB
	Slot	1 x DDR4 260-pin SO-DIMM slot
Graphic	Controller	Intel HD graphics integrated
Expansion Signals	Display	2 x DDI,1 x eDP
	Serial Port	2 x Uart(9 line),2 x Uart(3 line)
	USB	2 x USB3.0 ,8 x USB2.0
	SATA	2 x SATA 3.0
	PCIe	5 port 5lanes (1 x 2,3 x 1)
	GPIO	1 x 4bit GPIO
	Audio	1 x Intel HDA Audio codec
	Fan	1 x Smart Fan
	Ethernet	Intel i210AT controller
	others	1 x eSPI,1 x I ² C,1 x SMBus,1 x Buzzer,1 x KB/MS
	Watchdog Timer	Output&Interval
Power	Power input	5V
OS Support	MS Windows	Windows 10/11
	Linux	Linux
Mechanism	Dimensions	(L)95mm x (W)82mm
	Gross Weight	0.6kg
Environment	Temperature	Operating: 0°C~60°C with SSD Storage: -40°C~85°C
	Humidity	10~95% (Non-condensing)
	Vibration	5~500Hz, 3Grms operating

NK-L510-H110

Internal I/O



Dimension (Unit:mm)



Feature

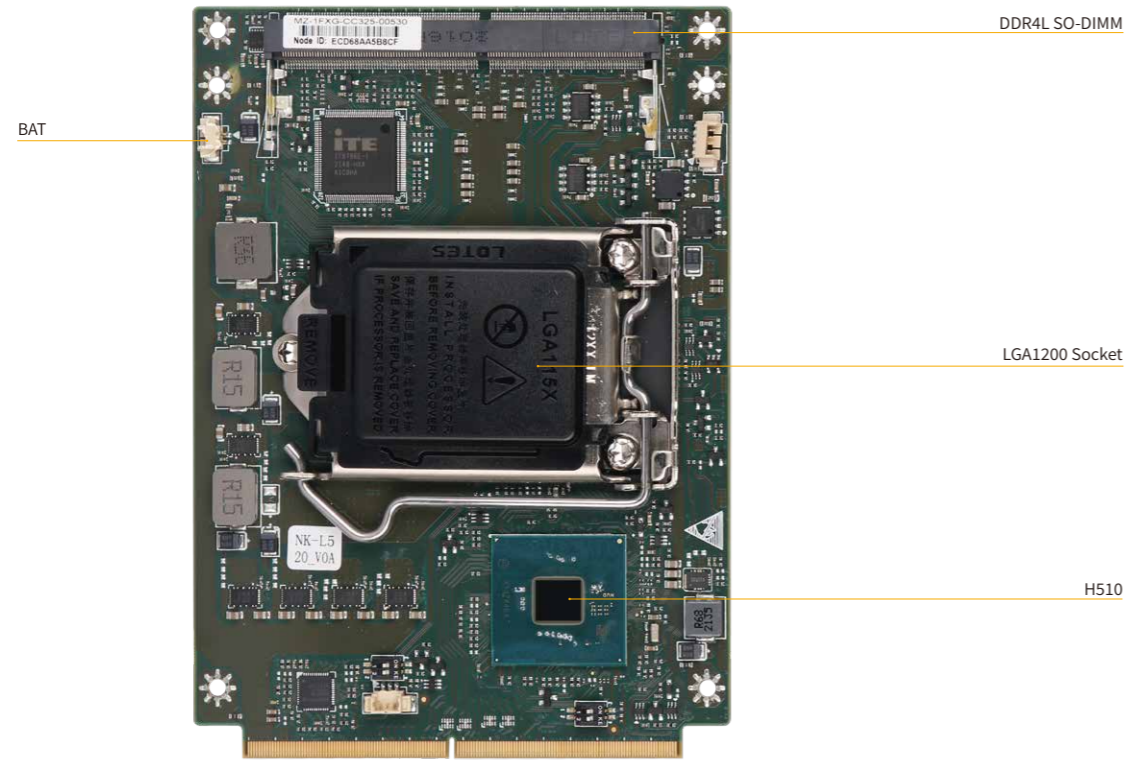
- Intel® 6/7/8/9th Generation Celeron/Pentium/Core-I series LGA1151 processor,TDP up to 65W
- Support dual channel(Non-ECC) DDR4-1866/2133/2400/2666MHz SO-DIMM slot, up to 64GB
- Support 2 x DDI, 1 x eDP,Tris-display
- Type5 Interface Signals with MXM3.0 Gold Finger

Specification

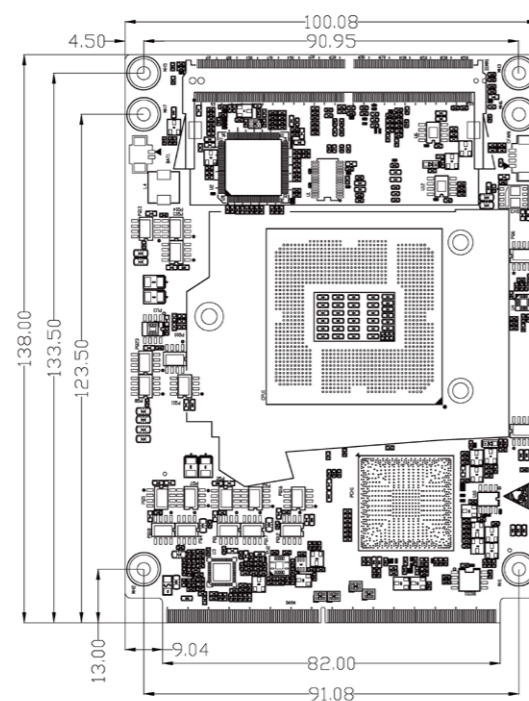
Model		NK-L510-H110	
Processor System	CPU	Intel® 6/7/8/9th Generation Celeron/Pentium/Core-I series LGA1151 processor,TDP up to 65W	
	Chipset	Intel® SoC integrated	
	BIOS	AMI 128Mb UEFI BIOS	
Memory	Technology	Dual Channel(Non-ECC) DDR4--1866/2133/2400/2666MHz, up to 64GB	
	Slot	2 x DDR4 260-pin SO-DIMM slot	
Graphic	Controller	Intel HD graphics integrated	
	Display	2 x DDI, 1 x eDP	
Expansion Signals	Serial Port	2 x Uart(5line),4 x Uart(3line)	
	USB	4 x USB3.0 Gen2,8 x USB2.0	
	SATA	2 x SATA 3.0	
	PCIe	7 port 6 lanes (1x4, 2x1, 1xGBE (Only support Intel i219-V controller))	
	PCIe x 16	1 x PCIe X 16	
	GPIO	1 x 2bit GPIO	
	Audio	1 x Intel HDA Audio codec	
	Fan	1 x Smart Fan	
	others	1 x I²C,1 x SMBus,1 x LPC,1 x Buzzer,1 x KB/MS	
	Watchdog Timer	Output&Interval	System reset, programmable from 1~255 seconds
	Power	Power input	12V
OS Support	MS Windows	Windows 6/7 (Only support with Intel 6th Gen. CPU), Windows 10/11	
	Linux	Linux	
Mechanism	Dimensions	(L)138mm x (W)100.1mm	
	Gross Weight	0.6kg	
Environment	Temperature	Operating: 0°C~60°C with SSD Storage: -40°C~85°C	
	Humidity	10~95% (Non-condensing)	
	Vibration	5~500Hz, 3Grms operating	

NK-L520-H510

Internal I/O



Dimension (Unit:mm)



Feature

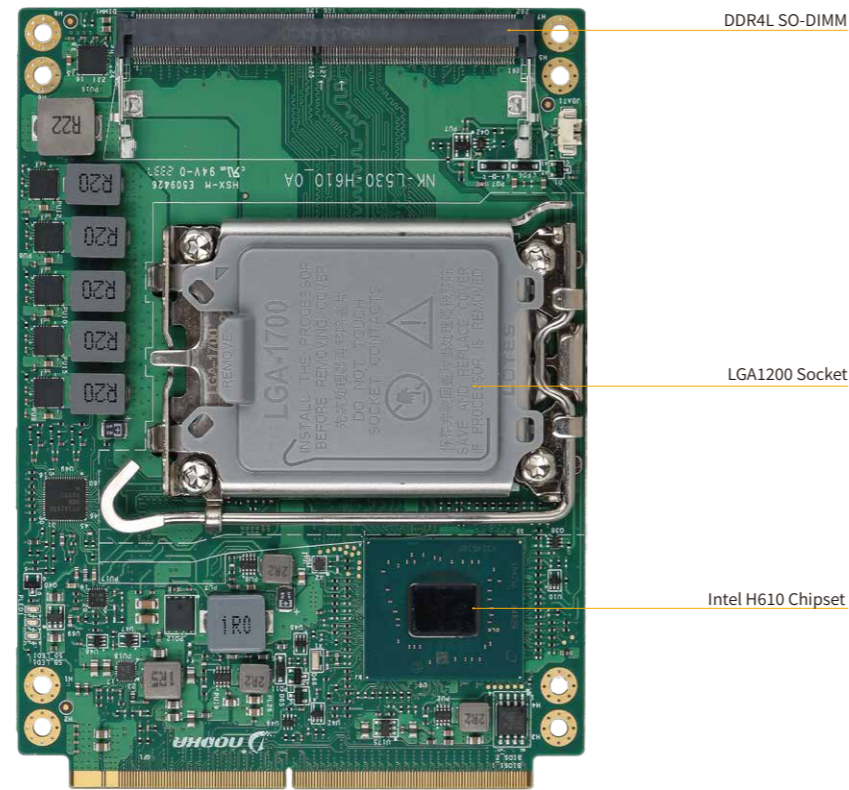
- Intel® 10/11 th Generation Celeron/Pentium/Core-I series LGA1200 processor,TDP up to 65W
- Support dual channel(Non-ECC) DDR4-3200MHz SO-DIMM slot, up to 64GB
- Support 2 x DDI, 1 x eDP,Dual-display
- Type5 Interface Signals with MXM3.0 Gold Finger

Specification

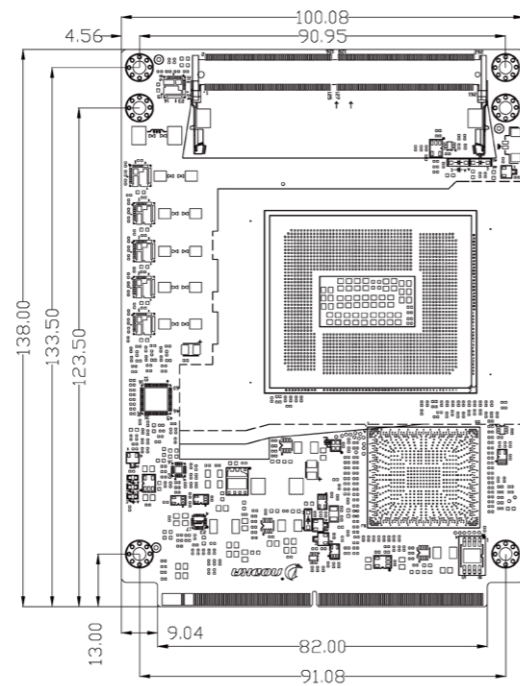
Model		NK-L520-H510	
Processor System	CPU	Intel® 10/11 th Generation Celeron/Pentium/Core-I series LGA1200 processor,TDP up to 65W	
	Chipset	Intel® SoC integrated	
	BIOS	AMI 256Mb UEFI BIOS	
Memory	Technology	Dual Channel(Non-ECC) DDR4-3200MHz, up to 64GB	
	Slot	2x DDR4 260-pin SO-DIMM slot	
Graphic	Controller	Intel HD graphics integrated	
	Display	2x DDI, 1xeDP	
Expansion Signals	Serial Port	2x Uart(5line),4x Uart(3line)	
	USB	4x USB3.0,8x USB2.0	
	SATA	2x SATA 3.0	
	PCIe	6 port 6 lanes (1x4、2x1、1xGBE (Only support Intel i219-V controller))	
	PCIe x 16	1x PCIe x 16	
	GPIO	1x 2bit GPIO	
	Audio	1x Intel HDA Audio codec	
	Fan	1x Smart Fan	
	others	1x I²C,1x SMBus,1x LPC,1x Buzzer	
	Watchdog Timer	Output&Interval	System reset, programmable from 1~255 seconds
	Power	Power input	12V
OS Support	MS Windows	Windows 10/11	
	Linux	Linux	
Mechanism	Dimensions	(L)138mm x (W)100.1mm	
	Gross Weight	0.6kg	
Environment	Temperature	Operating: 0°C~60°C with SSD Storage: -40°C~85°C	
	Humidity	10~95% (Non-condensing)	
	Vibration	5~500Hz, 3Grms operating	

NK-L530-H610

Internal I/O



Dimension (Unit:mm)



Feature

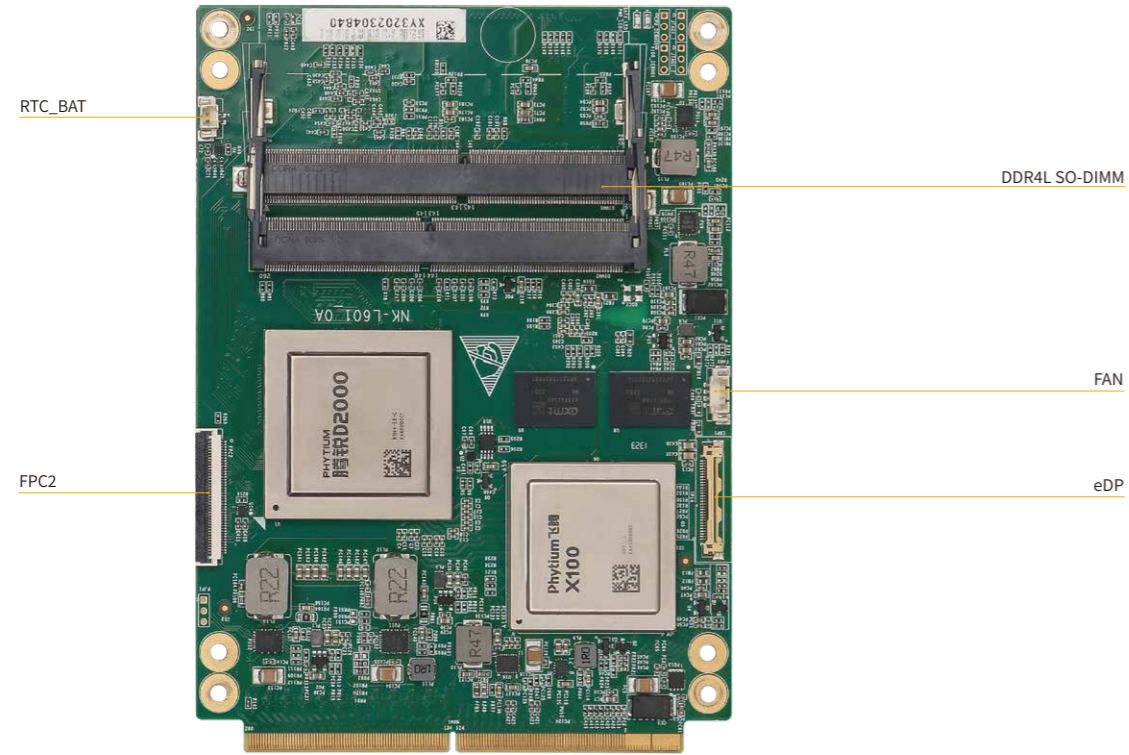
- Intel® 12/13 th Generation Celeron/Pentium/Core-I series LGA1700 processor,TDP up to 65W
- Support dual channel(Non-ECC) DDR5-4800MHz SO-DIMM slot, up to 64GB
- Support 2 x DDI, 1 x eDP,Dual-display
- Type5 Interface Signals with MXM3.0 Gold Finger

Specification

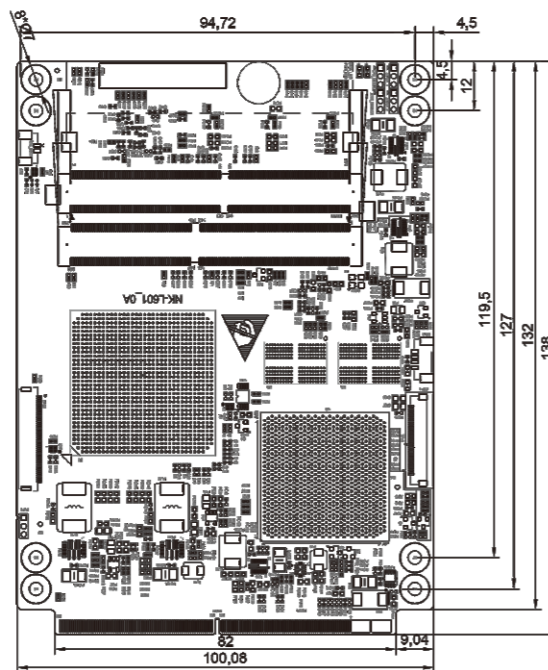
Model		NK-L530-H610	
Processor System	CPU	Intel® 12/13th Generation Celeron/Pentium/Core-I series processor, TDP up to 65W	
	Socket	LGA1700	
	Chipset	Intel H610	
	BIOS	AMI 256Mb UEFI BIOS	
Memory	Technology	Dual Channel(Non-ECC) DDR5-4800MHz, up to 64GB	
	Slot	2 x DDR5 262-pin SO-DIMM slot	
Graphic	Controller	Intel® UHD Graphics integrated	
	Display	2 x DDI, 1 x eDP	
Expansion Signals	Serial Port	2 x UART(5 line), 4 x UART(3 line)	
	USB	4 x USB3.0, 8 x USB2.0	
	PCIE X16	1 x PCIeX16 lane(Gen4)	
	PCIE	6 port 6 lanes (1 x PCIe X4, up to 2 x PCIe)	
	Audio	1 x Intel HDA Audio codec	
	GPIO	1 x 2bit GPIO (1in & 1out)	
	I ² C	1 x I ² C	
	LPC	1 x LPC/ eSPI	
	Smbus	1 x Smbus	
	Smart Fan	1 x FAN	
	SATA	2 x SATA 3.0	
	Buzzer	1 x Buzzer	
	Watchdog Timer	Output&Interval	System reset, programmable from 1~255 seconds
	Power	Power input	12V
Power Consumption		TBD	
OS Support	MS Windows	Windows10/11	
	Linux	Linux	
Mechanism	Dimensions	(L)138mm x (W)100.1mm	
	Gross Weight	0.8kg	
	Temperature	Operating: -20°C~70°C with SSD Storage: -40°C~85°C	
Environment	Humidity	5~95% (Non-condensing)	
	Vibration	5~500Hz, 3Grms operating	

NK-L601-D2000

Internal I/O



Dimension (Unit:mm)



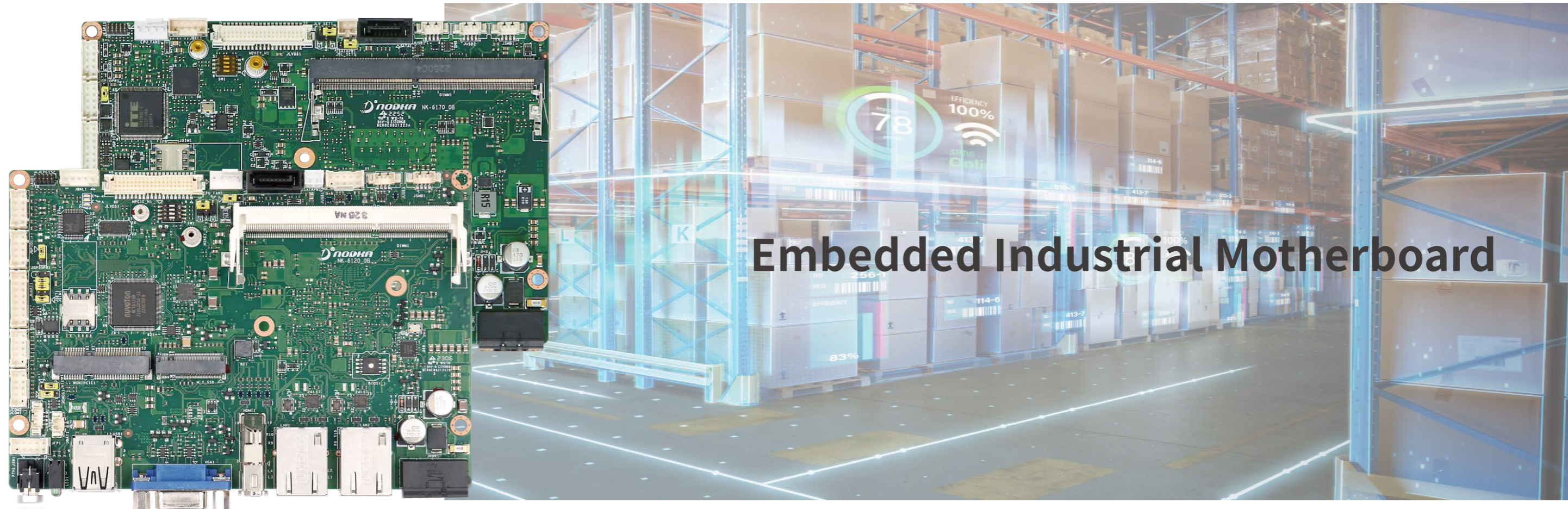
Feature

- Phytium D2000 Processor, 8-core, base frequency 2.0GHz up to 2.6GHz , TDP 25W;
- Support 2 x DDR4-2666MHz SO-DIMM slot, up to 64GB;
- Support 1 x eDP, Can be displayed by extension on the board;
- NODKA Type6 Interface Signals with MXM3.0 Gold Finger

Specification

Model		NK-L601-D2000	
Processor System	CPU	Phytium D2000 Processor, 8-core, base frequency 2.0GHz up to 2.6GHz , TDP 25W	
	Chipset	Phytium X100	
	BIOS	UEFI	
Memory	Technology	Dual-Channel(Non-ECC/ECC)DDR4-2666MHz,up to 64GB	
	Slot	2 x DDR4 260-pin SO-DIMM slot	
Graphic	Controller	Independent video memory with CXMT 4GB LPDDR4	
MXM I/O	Display	3 x DDI	
	PCIE		1*PCIEx16
			1*PCIEx4
			2*PCIEx2
			2*PCIEx1
	SATA		2 x SATA 3.0 (6Gpbs)
	USB		4 x USB3.0 (5Gb/s) 2 x USB2.0 (480Mbps)
	DP		2 x DP
	Serial Port		1 x Uart for debug
	Serial Port		6 x Uart ¹
FPC1 Connect	CAN	2 x CAN	
	GPIO	8 x GPIO	
	USB	2 x USB2.0	
FPC2 Connect	GPIO	12 x GPIO	
	HDA	1 x HDA	
	OS Support	Linux	KylinOS, UOS
Mechanism	Dimensions	(L)138mm x(W)100mm	
	Gross Weight	0.095kg	
Environment	Temperature		Operating: -20°C~50°C with industrial environment
			-40°C~60°C with wide temperature
	Humidity		Storage: -25°C~55°C with Industrial
			-45°C~65°C with wide temperature
Vibration		5~95% (Non-condensing)	
			5~500Hz, 3Grms operating

[1]COM1~2 is full line signal. COM3~6 only have TX and RX signal.



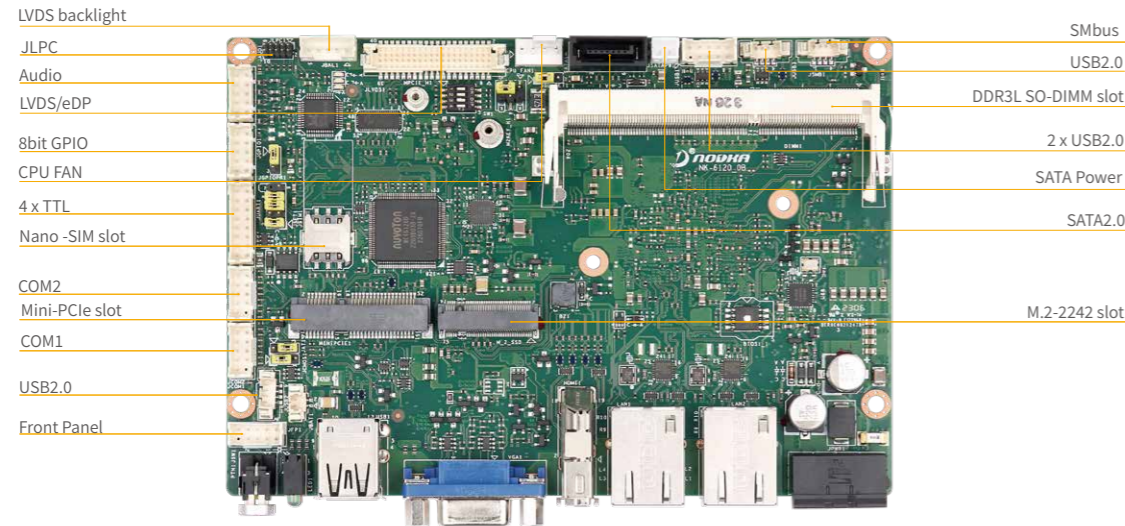
Embedded Industrial Motherboard

The 3.5 inch embedded single board supports wide temperature and wide voltage. It is designed for various embedded applications and system integration, which uses Intel low-power processors, and has rich I/O interfaces. It can flexibly expand optional modules according to industrial application requirements.

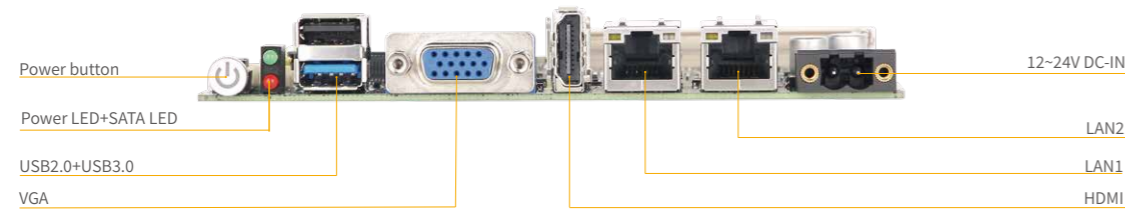
NK-6120

Intel® Celeron® J1900 processor, Quad-core, base frequency 2.0GHz, TDP 10W

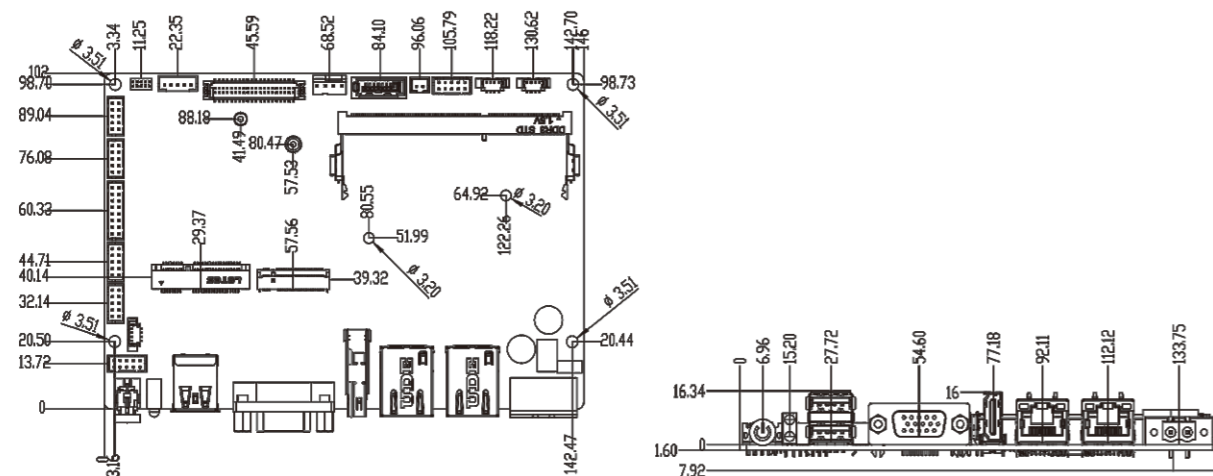
Internal I/O



Rear I/O



Dimension (Unit: mm)



Feature

- Intel® Celeron® J1900 processor, Quad-core, base frequency 2.0GHz, TDP 10W
- Support 1x DDR3L-1333MHz SO-DIMM slot, up to 8GB
- Support VGA, HDMI, LVDS/eDP Dual-display
- 2 x Giga-bit Ethernet
- 1 x USB3.0 port, 5 x USB2.0 ports
- 1 x RS232/485, 1 x RS232, 4 x TTL
- 1 x M.2-2242 and 1 x Mini-PCIe slot with nano-SIM card socket
- 12~24V power input, lockable DC-IN phoenix terminal block

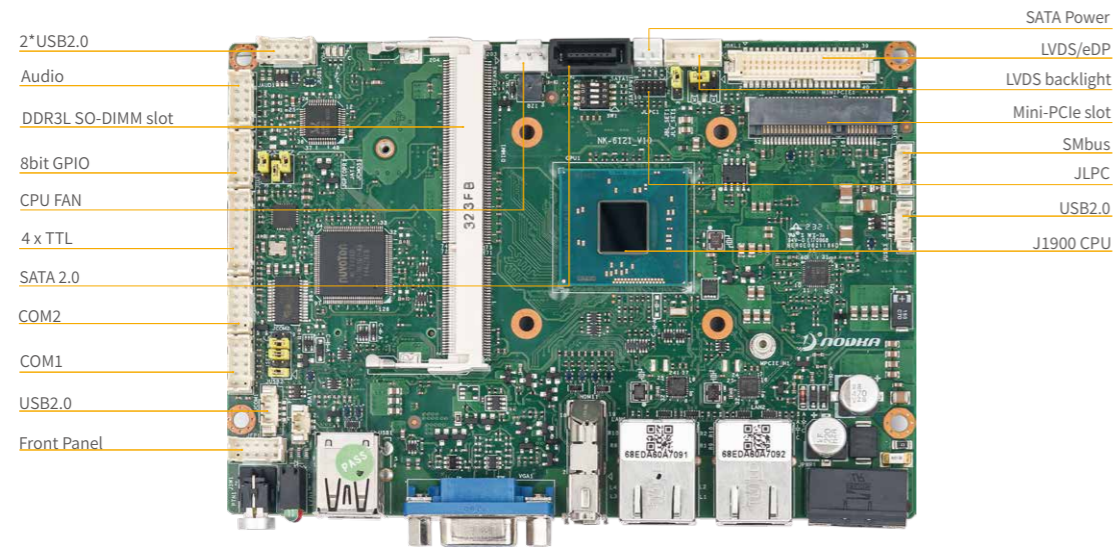
Specification

Model		NK-6120
Processor System	CPU	Intel® Celeron® J1900 processor 2.0GHz, TDP 10W
	Chipset	Intel® SoC integrated
	BIOS	AMI 64Mb UEFI BIOS
Memory	Technology	Single Channel(Non-ECC) DDR3L 1333MHz, up to 8GB
	Slot	1 x DDR3L 240-pin SO-DIMM slot
Storage	SATA	1 x SATA2.0 port
	M.2	1 x M.2-2242 M Key SSD slot(SATA2.0)
Graphic	Controller	Intel HD graphics integrated
Audio	Codec	Realtek ALC897codec
Rear I/O	Display	1 x VGA, resolution up to 2560x1600@60Hz 1 x HDMI, resolution to 1920x1080@60Hz
	Ethernet	2 x GbE(RJ45), Realtek 8111H controller
	USB	1 x USB3.0(5Gbps), 1 x USB2.0(480Mbps)
	Button	1 x Power Button(White for power on,Blink for sleep mode,Off for power off)
	Indicators	1 x SATA LED(Red), 1 x Power LED(Green)
Internal I/O	Display	1 x LVDS, dual channel 18/24bit, resolution up to 1920x1200@60Hz 1 x eDP1.3, max resolution up to 3840x2160@60Hz(share connector with LVDS)
	Audio	1 x Audio wafer(Mic-in/Line-out, 2*5pin)
	USB	2 x USB2.0 wafer(1*4pin), 2 x USB2.0 wafer(1 x 2*5pin)
	Serial Port	1 x RS232/485 wafer(2*5pin), 1 x RS232 wafer(2*5pin),4 x TTLwafer(2*8pin)
	Fan	1 x Smart Fan wafer(1*4pin)
	SMBus	1 x SMBus wafer(1*4pin)
	LPC	1 x LPC header for debug
	Others	1 x Front panel wafer(2*5pin)(Power LED, HDD LED, Power button, Reset button)
Expansion Slots	Mini-PCIe slot	1 x Mini-PCIe slot with Nano-SIM socket (PCIe/USB2.0)
Watchdog Timer	Output&Interval	System reset, programmable from 1~255 seconds
Power	Type	12~24V DC input, +/-10% tolerance
	Interface	1 x 2-pin phoenix terminal block
	Power Consumption	16.3W (Idle mode), 17.5W(Typical mode)
O.S Support	MS Windows	Windows7/10
	Linux	Linux
Mechanism	Dimensions	(L)146mm x (W)102mm
	Gross Weight	0.8kg
Environment	Temperature	Operating: -10°C~60°C with SSD Storage: -40°C~85°C
	Humidity	5~95% (Non-condensing)
	Vibration	5~500Hz, 3Grms operating

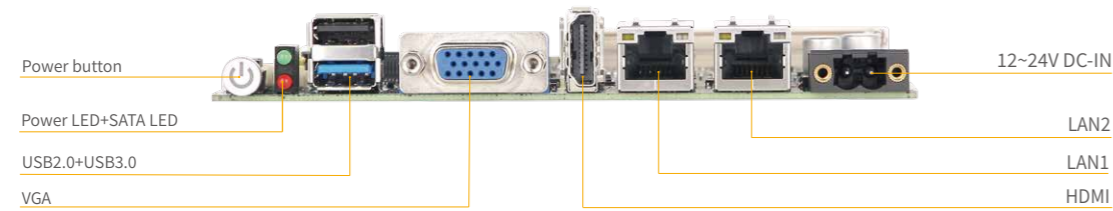
NK-6121

Intel® Celeron® J1900 processor, Quad-core, base frequency 2.0GHz, TDP 10W

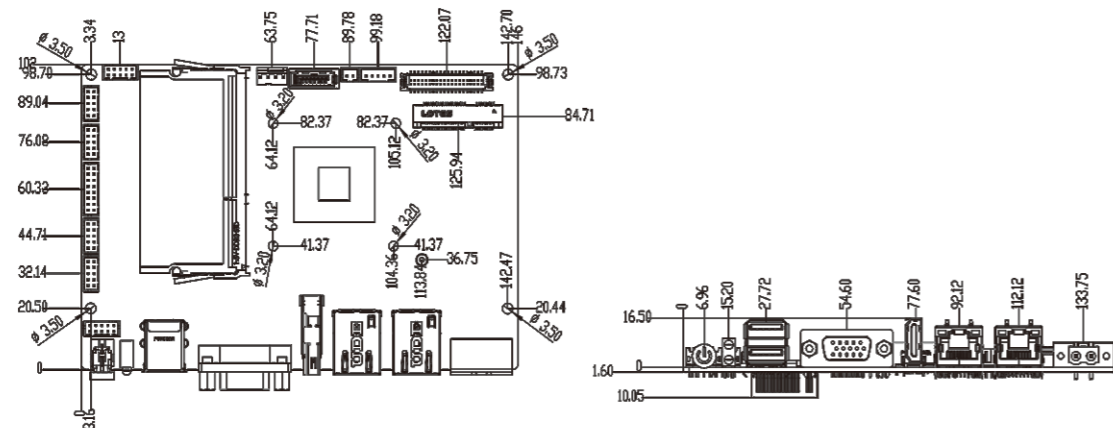
Internal I/O



Rear I/O



Dimension (Unit: mm)



Feature

- Intel® Celeron® J1900 processor, Quad-core, base frequency 2.0GHz, TDP 10W
- Support 1xDDR3L-1333MHz SO-DIMM slot, up to 8GB
- Support VGA, HDMI, LVDS/eDP Dual-display
- 2xGiga-bit Ethernet
- 1xUSB3.0 port, 5xUSB2.0 ports
- 1xRS232/485, 1xRS232, 4xTTL
- 1 x M.2-2242 and 1 x Mini-PCIe slot with nano-SIM card socket
- 12~24V power input, lockable DC-IN phoenix terminal block

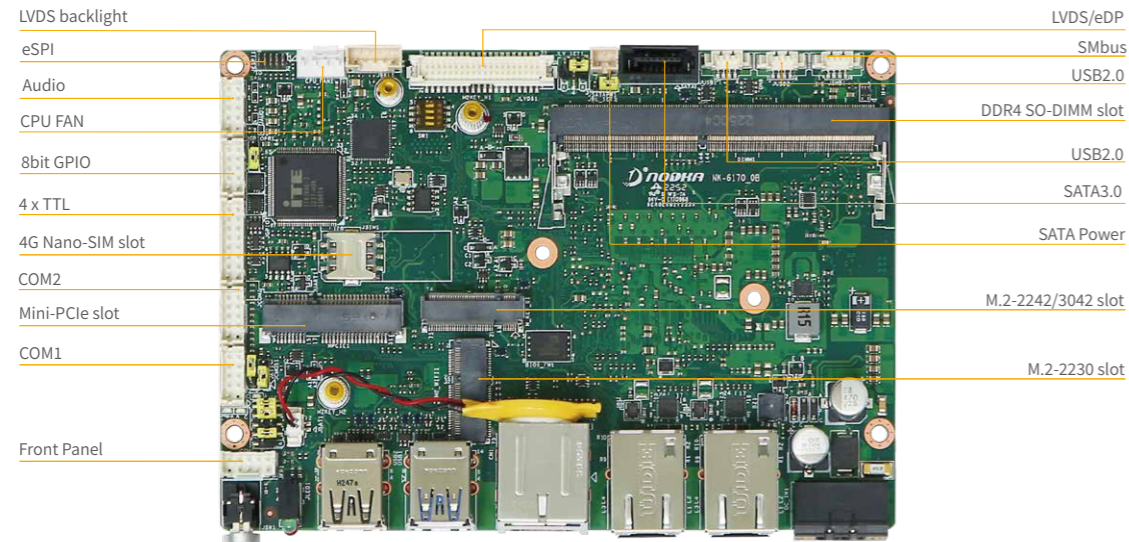
Specification

Model		NK-6121
Processor System	CPU	Intel® Celeron® J1900 processor 2.0GHz
	Chipset	Intel® SoC integrated
	BIOS	AMI 64Mb UEFI BIOS
Memory	Technology	Single Channel(Non-ECC) DDR3L-1333MHz, up to 8GB
	Slot	1 x DDR3L 240-pin SO-DIMM slot
Storage	SATA	1 x SATA2.0 port
	M.2	1 x M.2-2242 M Key SSD slot(SATA2.0)
Graphic	Controller	Intel HD graphics integrated
Audio	Codec	Realtek ALC897 codec
Rear I/O	Display	1 x VGA, resolution up to 2560x1600@60Hz 1 x HDMI, resolution to 1920x1080@60Hz
	Ethernet	2 x GbE(RJ45), Realtek 8111H controller
	USB	1 x USB3.0(5Gbps), 1 x USB2.0(480Mbps)
	Button	1 x Power Button(White for power on,Blink for sleep mode,Off for power off)
	Indicators	1 x SATA LED(Red), 1 x Power LED(Green)
Internal I/O	Display	1 x LVDS, dual channel 18/24bit, resolution up to 1920x1200@60Hz 1 x eDP1.3, max resolution up to 3840x2160@60Hz(share connector with LVDS)
	Audio	1 x Audio wafer(Mic-in/Line-out, 2*5pin)
	USB	2 x USB2.0 wafer(1*4pin), 2 x USB2.0 wafer(1 x 2*5pin)
	Serial Port	1 x RS232/RS485 wafer(2*5pin), 1 x RS232 wafer(2*5pin),4 x TTLwafer(2*8pin)
	Fan	1 x Smart Fan wafer(1*4pin)
	SMBus	1 x SMBus wafer(1*4pin)
	LPC	1 x LPC header for debug
	Others	1 x Front panel wafer(2*5pin)(Power LED, HDD LED, Power button, Reset button)
	Expansion Slots	Mini-PCIe slot
Watchdog Timer	Output&Interval	System reset, programmable from 1~255 seconds
Power	Type	12~24V DC input, +/-10% tolerance
	Interface	1 x 2-pin phoenix terminal block
	Power Consumption	16.3W(Idle mode), 17.5W(Typical mode)
O.S Support	MS Windows	Windows7/10
	Linux	Linux
Mechanism	Dimensions	(L)146mm x (W)102mm
	Gross Weight	0.8kg
Environment	Temperature	Operating: -10°C~60°C with SSD
	Humidity	Storage: -40°C~85°C
	Vibration	5~95% (Non-condensing) 5~500Hz, 3Grms operating

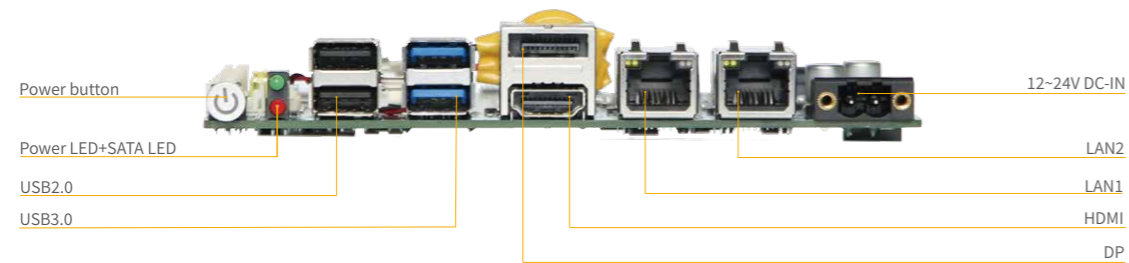
NK-6170

Intel® Celeron® J6412 processor, Quad-core, base frequency 2.0GHz up to 2.6 GHz, TDP 10W

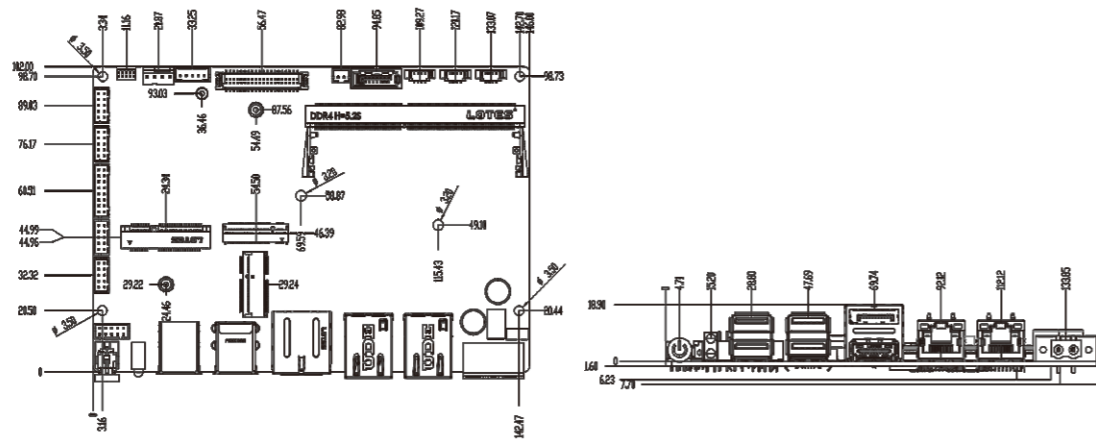
Internal I/O



Rear I/O



Dimension



Feature

- Intel® Celeron® J6412 processor, Quad-core, base frequency 2.0GHz up to 2.6 GHz, TDP 10W
- Support 1x DDR4-3200MHz SO-DIMM slot, up to 32GB
- Support DP, HDMI, LVDS/eDP Tri-display
- 2 x Giga-bit Ethernet
- 2 x USB3.0ports, 4 x USB2.0 ports
- 1 x RS232/485, 1 x RS232, 4 x TTL
- 1 x M.2-2230, 1 x M.2-2242/3042 and 1 x Mini-PCIe slot with nano-SIM card socket
- 12~24V power input, lockable DC-IN phoenix terminal block

Specification

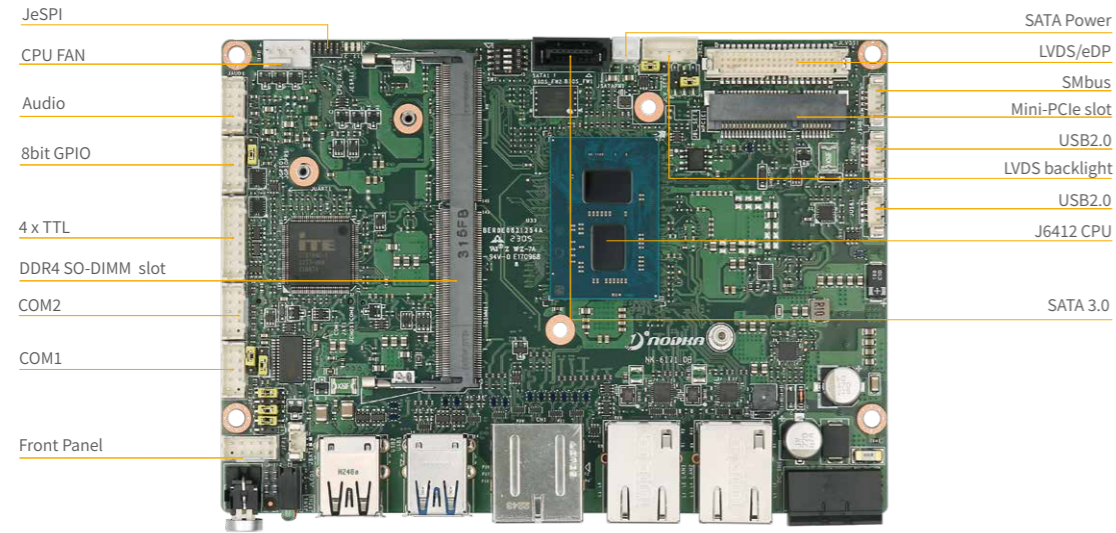
Model		NK-6170
Processor System	CPU	Intel® Celeron® J6412 processor (2.0GHz, up to 2.6GHz),TDP 10W
	Chipset	Intel® SoC integrated
	BIOS	AMI 128Mb UEFI BIOS
Memory	Technology	Single Channel(Non-ECC) DDR4 3200MHz, up to 32GB
	Slot	1 x DDR4 260-pin SO-DIMM slot
Storage	SATA	1 x SATA3.0 port
	M.2	1 x M.2-2242 M Key SSD slot(SATA3.0)
Graphic	Controller	Intel® UHD graphics integrated
Audio	Codec	Realtek ALC897 codec
Rear I/O	Display	1 x DP1.4, resolution up to 4096x2160@60Hz 1 x HDMI, resolution to 4096 x 2160@30Hz
	Ethernet	2 x GbE(RJ45), Realtek 8111H controller
	USB	2 x USB3.0(5Gbps), 2 x USB2.0
	Button	1 x Power Button(White for power on,Blink for sleep mode,Off for power off)
	Indicators	1 x SATA LED(Red), 1 x Power LED(Green)
Internal I/O	Display	1 x LVDS, dual channel 18/24bit, resolution up to 1920x1200@60Hz 1 x eDP1.3, resolution up to 4096x2160@60Hz(share connector with LVDS)
	Audio	1 x Audio wafer(Mic-in/Line-out, 2*5pin)
	USB	2 x USB2.0 wafer(1*4pin)
	Serial Port	1 x RS232/RS485 wafer(2*5pin), 1 x RS232 wafer(2*5pin), 4 x TTLwafer(2*4pin)
	Fan	1 x Smart Fan wafer(1*4pin)
	SMBus	1 x SMBus wafer(1*4pin)
	eSPI	1 x eSPI header for debug
	Others	1 x Front panel wafer(2*5pin)(Power LED, HDD LED, Power button, Reset button)
Expansion Slots	M.2 slot	1 x M.2-3042 B Key slot ^{Note1} with Nano-SIM socket for 5G communication module (USB3.0) 1 x M.2-2230 E key slot for wifi module(PCIe/USB2.0)
	Mini-PCIe slot	1 x Mini-PCIe slot with Nano-SIM socket
Security	TPM	fTPM2.0 supported
Watchdog Timer	Output&Interval	System reset, programmable from 1~255 seconds
Power	Type	12~24V DC input, +/-10% tolerance
	Interface	1 x 2-pin phoenix terminal block
O.S Support	Power Consumption	16.3W(Idle mode), 17.5(Typical mode)
	MS Windows	Windows10/11
Mechanism	Linux	Linux
	Dimensions	(L)146mm x (W)102mm
Environment	Gross Weight	0.8kg
	Temperature	Operating: -10°C~60°C with SSD Storage: -40°C~85°C
	Humidity	5~95% (Non-condensing)
	Vibration	5~500Hz, 3Grms operating

[Note1]: M.2-3042 B Key slot co-lay M.2-2242 M Key slot.

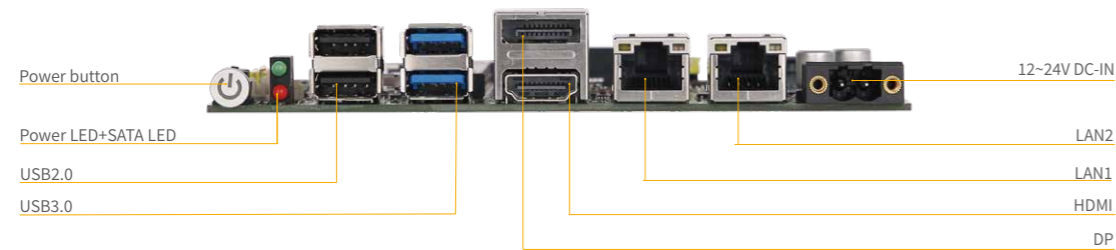
NK-6171

Intel® Celeron® J6412 processor, Quad-core, base frequency 2.0GHz up to 2.6 GHz, TDP 10W

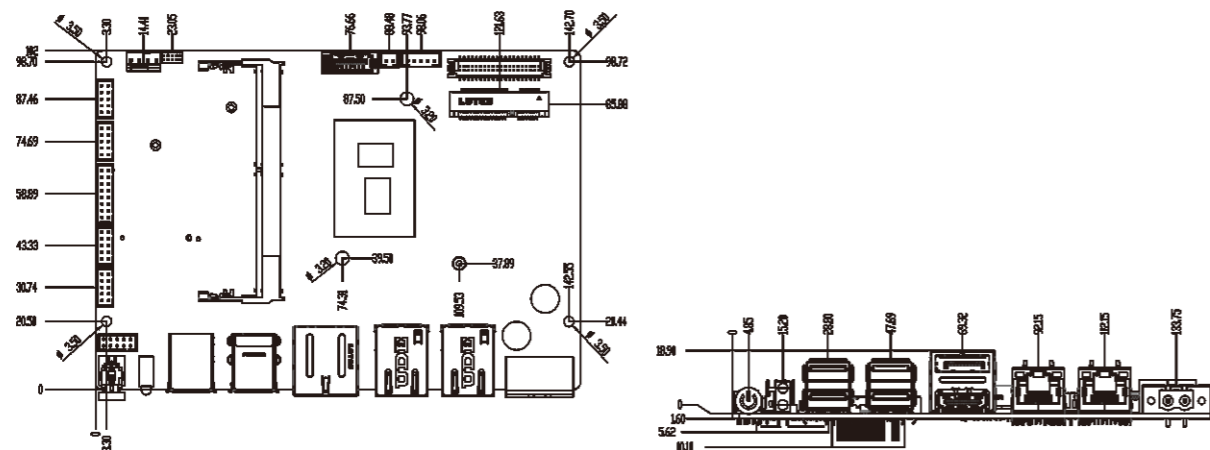
Internal I/O



Rear I/O



Dimension (Unit: mm)



Feature

- Intel® Celeron® J6412 processor, Quad-core, base frequency 2.0GHz up to 2.6 GHz, TDP 10W
- Support 1x DDR4-3200MHz SO-DIMM slot, up to 32GB
- Support DP, HDMI, LVDS/eDP Tri-display
- 2 x Giga-bit Ethernet
- 2 x USB3.0 ports, 4 x USB2.0 ports
- 1 x RS232/485, 1 x RS232, 4 x TTL
- 1 x M.2-2242, 1 x M.2-2230 and 1 x Mini-PCIe slot with nano-SIM card socket
- 12~24V power input, lockable DC-IN phoenix terminal block

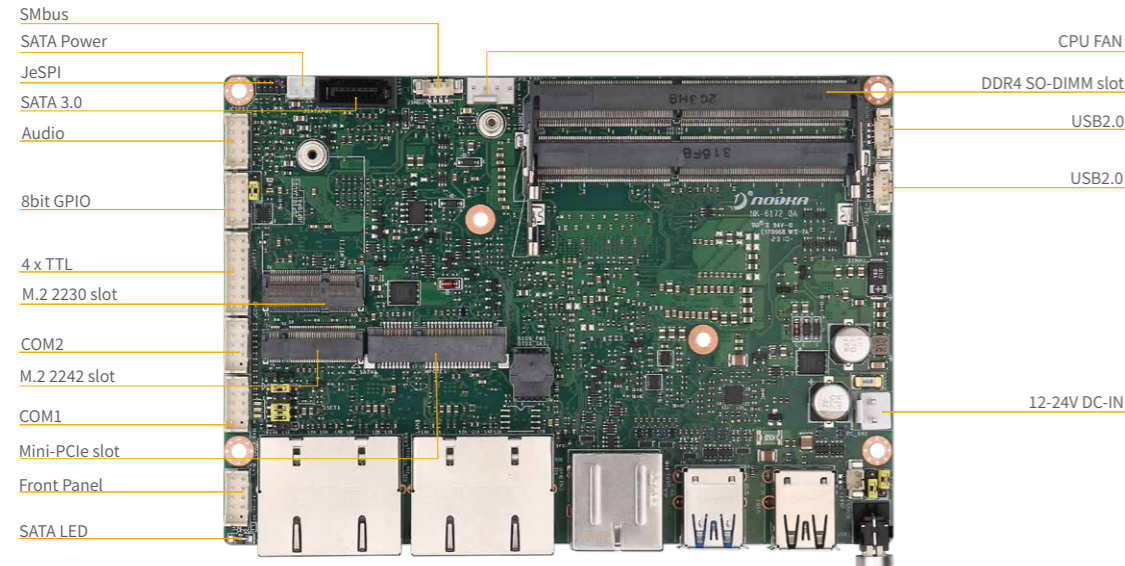
Specification

Model		NK-6171	
Processor System	CPU	Intel® Celeron® J6412 processor 2.0GHz, up to 2.6GHz, TDP 10W	
	Chipset	Intel® SoC integrated	
	BIOS	AMI 128Mb UEFI BIOS	
Memory	Technology	Single Channel(Non-ECC) DDR4 3200MHz, up to 32GB	
	Slot	1 x DDR4 260-pin SO-DIMM slot	
Storage	SATA	1 x SATA3.0 port	
	M.2	1 x M.2-2242 M Key SSD slot(SATA3.0)	
Graphic	Controller	Intel® UHD graphics integrated	
Audio	Codec	Realtek ALC897 codec	
Rear I/O	Display	1 x DP1.4, resolution up to 4096x2160@60Hz 1 x HDMI, resolution to 3840x2160@30Hz	
	Ethernet	2 x GbE(RJ45), Realtek 8111H controller	
	USB	2 x USB3.0(5Gbps), 2 x USB2.0(480Mbps)	
	Button	1 x Power Button(White for power on, Blink for sleep mode, Off for power off)	
	Indicators	1 x SATA LED(Red), 1 x Power LED(Green)	
Internal I/O	Display	1 x LVDS, dual channel 18/24bit, resolution up to 1920x1200@60Hz 1 x eDP1.3, resolution up to 4096x2160@60Hz(share connector with LVDS)	
	Audio	1 x Audio wafer(Mic-in/Line-out, 2*5pin)	
	USB	2 x USB2.0 wafer(1*4pin)	
	Serial Port	1 x RS232/485 wafer(2*5pin), 1 x RS232 wafer(2*5pin), 4 x TTLwafer(2*4pin)	
	Fan	1 x Smart Fan wafer(1*4pin)	
	SMBus	1 x SMBus wafer(1*4pin)	
	eSPI	1 x eSPI header for debug	
	Others	1 x Front panel wafer(2*5pin)(Power LED, HDD LED, Power button, Reset button)	
	Expansion Slots	M.2 slot	1 x M.2-2230 E key slot for wifi module (PCIe/USB2.0)
		Mini-PCIe slot	1 x Mini-PCIe slot with Nano-SIM socket (PCIe/USB2.0)
Security	TPM	fTPM2.0 supported	
Watchdog Timer	Output&Interval	System reset, programmable from 1~255 seconds	
	Power	Type: 12~24V DC input, +/-10% tolerance Interface: 1 x 2-pin phoenix terminal block Power Consumption: 16.3W(idle mode), 17.5W(Typical mode)	
O.S Support	MS Windows	Windows10/11	
	Linux	Linux	
Mechanism	Dimensions	(L)146mm x (W)102mm	
	Gross Weight	0.8kg	
Environment	Temperature	Operating: -10°C~60°C with SSD Storage: -40°C~85°C	
	Humidity	5~95% (Non-condensing)	
	Vibration	5~500Hz, 3Grms operating	

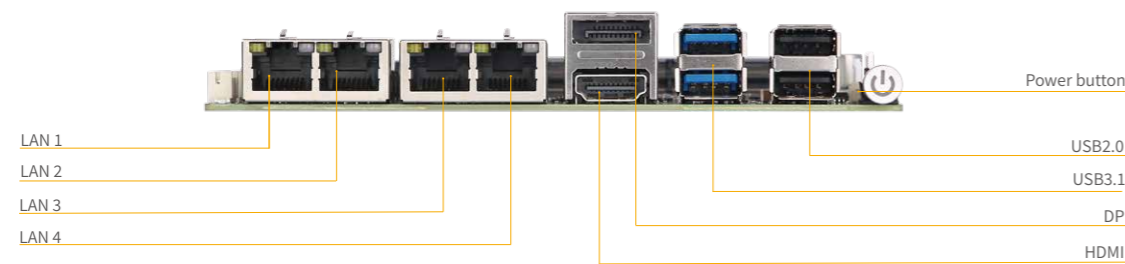
NK-6172

Intel® Celeron® J6412 processor, Quad-core, base frequency 2.0GHz up to 2.6 GHz, TDP 10W

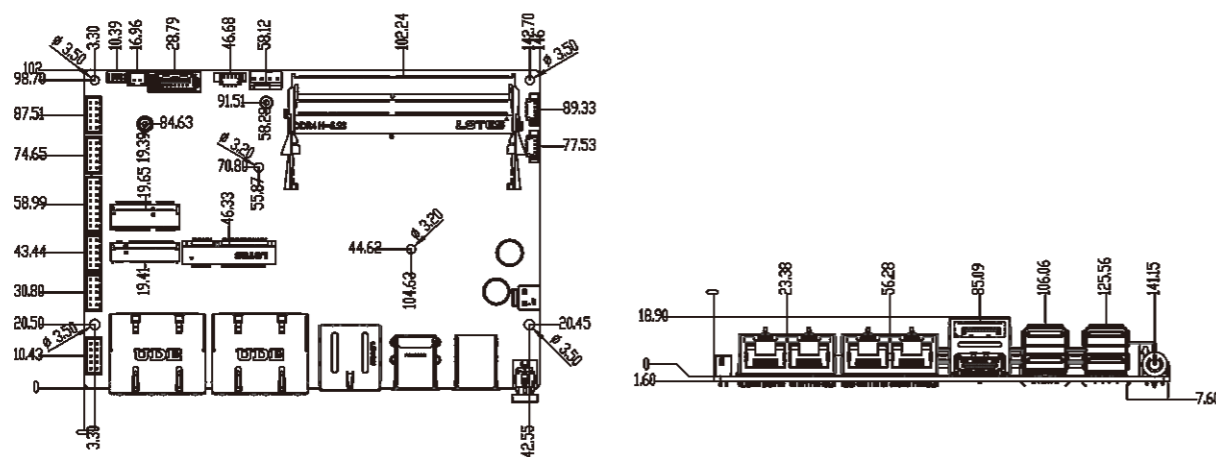
Internal I/O



Rear I/O



Dimension (Unit: mm)



Feature

- Intel® Celeron® J6412 processor, Quad-core, base frequency 2.0GHz up to 2.6 GHz, TDP 10W
- Support 2 x DDR4-3200MHz SO-DIMM slot, up to 32GB
- Support DP, HDMI, Dual-display
- 2 x Giga-bit Ethernet
- 2 x USB3.0 ports, 4 x USB2.0 ports
- 1 x RS232/485, 1 x RS232, 4 x TTL
- 1 x M.2-2242, 1 x M.2-2230 and 1 x Mini-PCIe slot with nano-SIM card socket
- 12~24V power input, lockable DC-IN phoenix terminal block

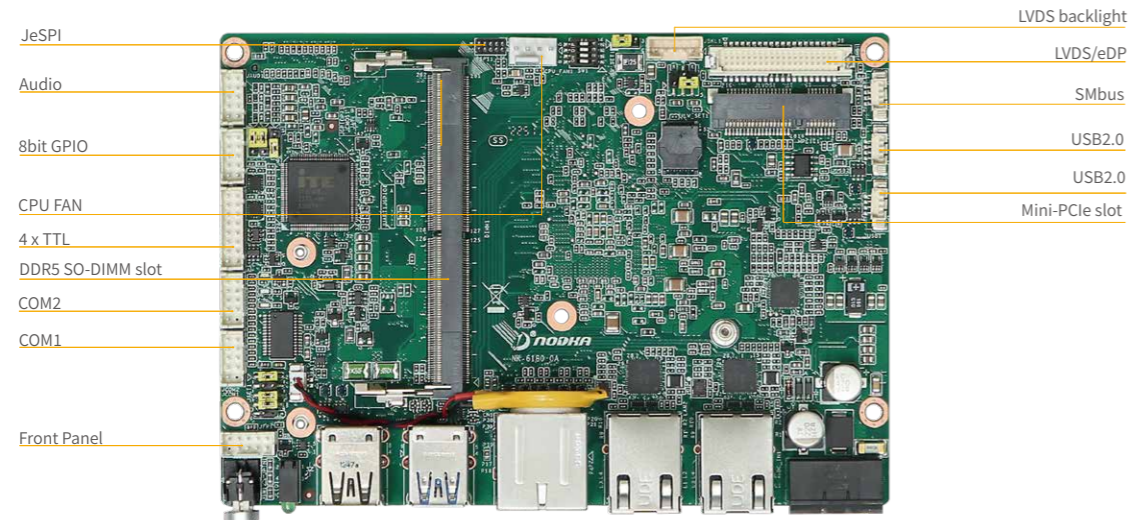
Specification

Model		NK-6172
Processor System	CPU	Intel® Celeron® J6412 processor (2.0GHz, up to 2.6GHz)
	Chipset	Intel® SoC integrated
	BIOS	AMI 128Mb UEFI BIOS
Memory	Technology	Dual Channel(Non-ECC) DDR4 3200MHz, up to 32GB
	Slot	2 x DDR4 260-pin SO-DIMM slot
Storage	SATA	1 x SATA3.0 port
	M.2	1 x M.2-2242 M Key SSD slot (SATA3.0)
Graphic	Controller	Intel® UHD graphics integrated
Audio	Codec	Realtek ALC897 codec
Rear I/O	Display	1 x DP1.4, resolution up to 4096x2160@60Hz 1 x HDMI, resolution to 4096x2160@30Hz
	Ethernet	4 x GbE(RJ45), Intel i210AT colay i211AT controller
	USB	2 x USB3.0(5Gbps), 2 x USB2.0(480bps)
	Button	1 x Power Button(White for power on,Blink for sleep mode,Off for power off)
	Indicators	1 x SATA LED(Red), 1 x Power LED(Green)
Internal I/O	USB	2 x USB2.0 wafer(1*4pin)
	Serial Port	1 x RS232/485 wafer(2*5pin), 1 x RS232 wafer(2*5pin), 4 x TTLwafer(2*4pin)
	Audio	1 x Audio wafer(Mic-in/Line-out, 2*5pin)
	Fan	1 x Smart Fan wafer(1*4pin)
	GPIO	1 x 8bit GPIO(2*5pin)
	SMBus	1 x SMBus wafer(1*4pin)
	eSPI	1 x eSPI header for debug
	Others	1 x Front panel wafer(2*5pin)(Power LED, HDD LED, Power button, Reset button)
Expansion Slots	M.2 slot	1 x M.2-2230 E key slot for wifi module (PCIe/USB2.0)
	Mini-PCIe slot	1 x Mini-PCIe slot with Nano-SIM socket(PCIe/USB2.0)
Security	TPM	fTPM2.0 supported
Watchdog Timer	Output&Interval	System reset, programmable from 1~255 seconds
Power	Type	12~24V DC input, +/-10% tolerance
	Interface	1 x 2-pin phoenix terminal block
	Power Consumption	16.3(Idle mode), 17.5(Typical mode)
O.S Support	MS Windows	Windows10/11
	Linux	Linux
Mechanism	Dimensions	(L)146mm x (W)102mm
	Gross Weight	0.8kg
Environment	Temperature	Operating:-10°C~60°C with SSD Storage: -40°C~85°C
	Humidity	5~95% (Non-condensing)
	Vibration	5~500Hz, 3Grms operating

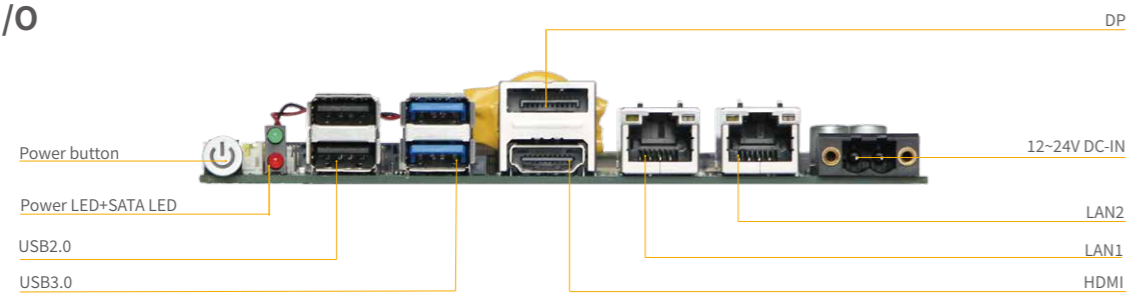
NK-6180

Intel® Core™ i3-N305 processor, Quad-core, base frequency 2.0GHz up to 3.8GHz, TDP 15W

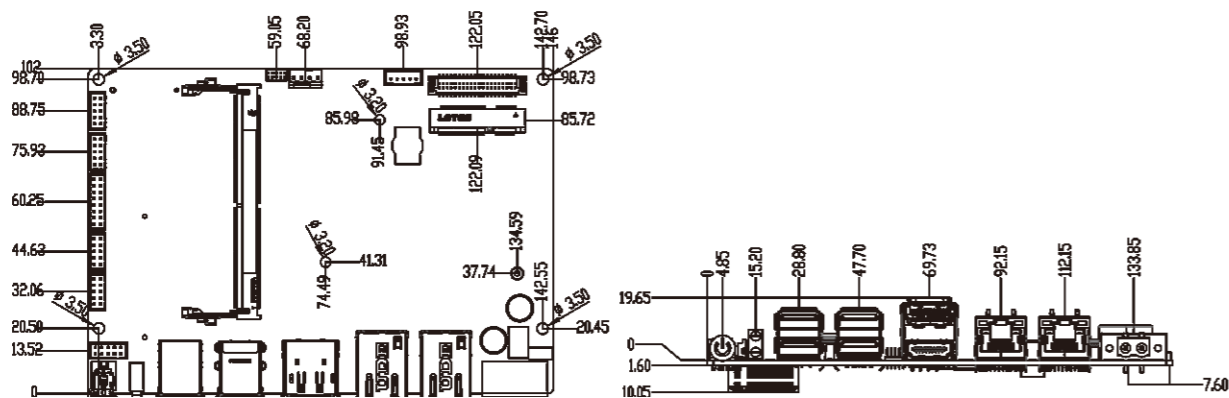
Internal I/O



Rear I/O



Dimension (Unit: mm)

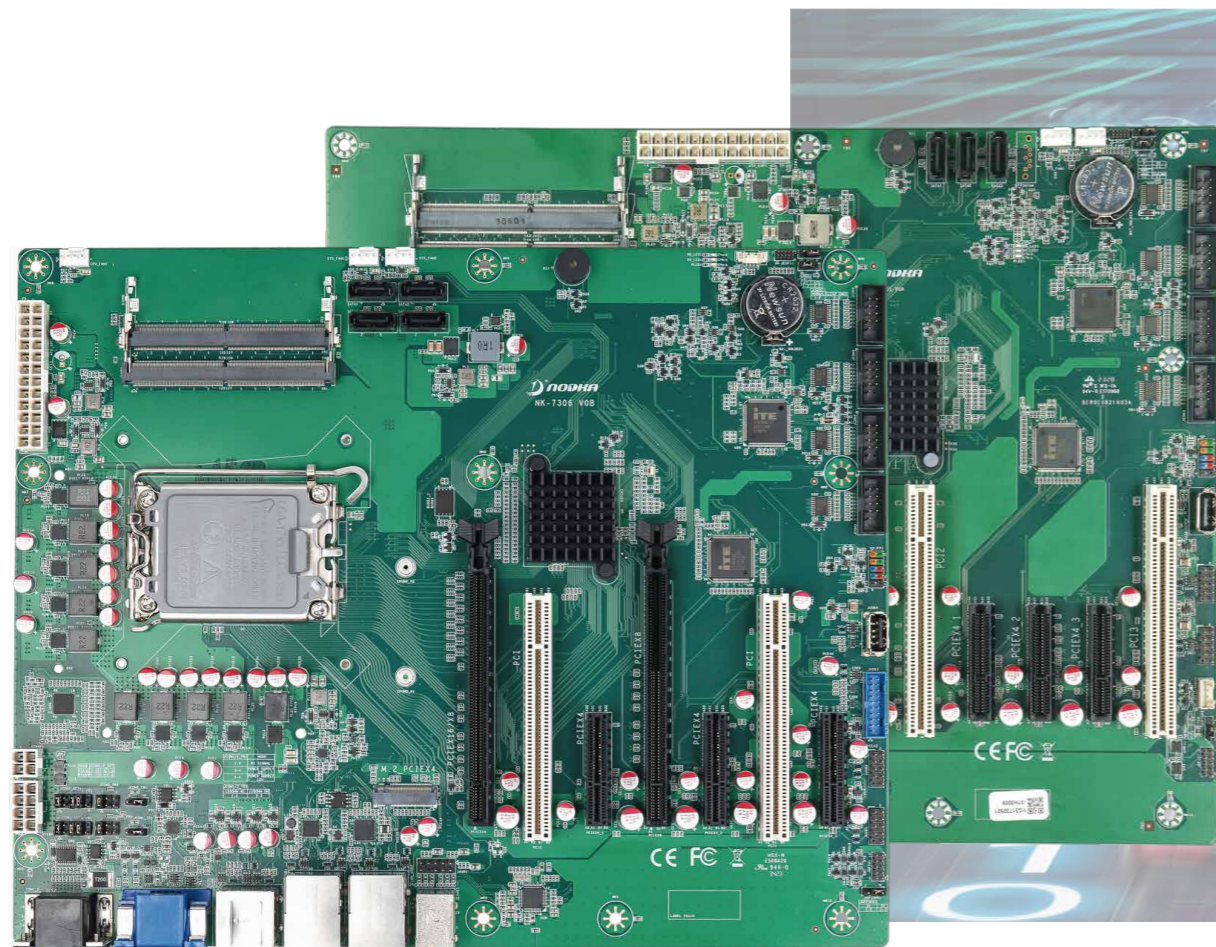


Feature

- Intel® Core™ i3-N305 processor, Quad-core, base frequency 2.0GHz up to 3.8GHz, TDP 15W
- Support 1 x DDR5-4800MHz SO-DIMM slot, up to 16GB
- Support DP, HDMI, LVDS/eDP Tri-display
- 2 x Giga-bit Ethernet
- 2 x USB3.2 ports, 4 x USB2.0 ports
- 1 x RS232/485, 1 x RS232, 4 x TTL
- 1 x M.2-2242/2280 and 1 x Mini-PCIe slot with nano-SIM card socket
- 12~24V power input, lockable DC-IN phoenix terminal block

Specification

Model		NK-6180
Processor System	CPU	Intel® Core™ i3-N305 processor GHz, up to 3.8GHz, TDP 15W
	Chipset	Intel® SoC integrated
	BIOS	AMI 256Mb UEFI BIOS
Memory	Technology	Single Channel(Non-ECC) DDR5-4800MHz, up to 16GB
	Slot	1 x DDR5 262-pin SO-DIMM slot
Storage	M.2	1 x M.2-2242/2280 M Key SSD slot(PCIe4.0)
Graphic	Controller	Intel® UHD graphics integrated
Audio	Codec	Realtek ALC897 codec
Rear I/O	Display	1 x DP1.4, resolution up to 4096x2160@60Hz 1 x HDMI, resolution to 4096 x 2160@30Hz
	Ethernet	2 x GbE(RJ45), Intel i225-V Colay i226-V controller
	USB	2 x USB3.2(10Gbps), 2 x USB2.0(480Mbps)
	Button	1 x Power Button(White for power on,Blink for sleep mode,Off for power off)
	Indicators	1 x SATA LED(Red), 1 x Power LED(Green)
Internal I/O	Display	1 x LVDS, dual channel 18/24bit, resolution up to 1920x1200@60Hz 1 x eDP1.3, resolution up to 4096x2160@60Hz(share connector with LVDS)
	Audio	1 x Audio wafer(Mic-in/Line-out, 2*5pin)
	USB	2 x USB2.0 wafer(1*4pin)
	Serial Port	1 x RS232/485 wafer(2*5pin), 1 x RS232 wafer(2*5pin), 4 x TTLwafer(2*4pin)
	Fan	1 x Smart Fan wafer(1*4pin)
	SMBus	1 x SMBus wafer(1*4pin)
	GPIO	1 x8bit GPIO wafer(2*5pin)
	eSPI	1 x eSPI header for debug
	Others	1 x Front panel wafer(2*5pin)(Power LED, HDD LED, Power button, Reset button)
	Expansion Slots	Mini-PCIe slot
Security	TPM	fTPM2.0
Watchdog Timer	Output&Interval	System reset, programmable from 1~255 seconds
Power	Type	12~24V DC input, +/-10% tolerance
	Interface	1 x 2-pin phoenix terminal block
	Power Consumption	TBD
O.S Support	MS Windows	Windows10/11
	Linux	Linux
Mechanism	Dimensions	(L)146mm x (W)102mm
	Gross Weight	0.8kg
Environment	Temperature	Operating: -10°C~60°C with SSD Storage: -40°C~85°C
	Humidity	5~95% (Non-condensing)
	Vibration	5~500Hz, 3Grms operating



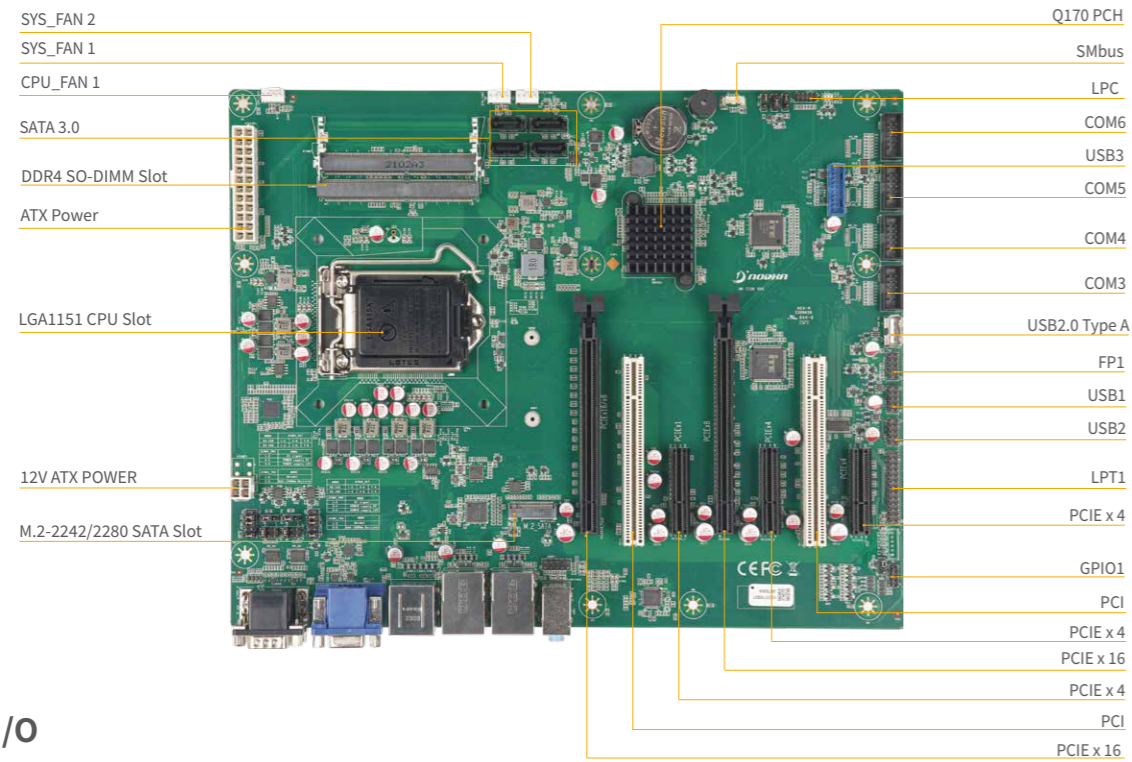
ATX/Micro-ATX Industrial Motherboard

Nodka ATX/Micro-ATX industrial motherboard is equipped with Intel desktop processors, with rich I/O interfaces and flexible expansion slots, and supports various computing platforms to meet the different industrial applications.

NK-7106

Intel® 6/7/8/9th Generation Celeron/Pentium/Core-I series LGA 1151 processor,TDP 95W

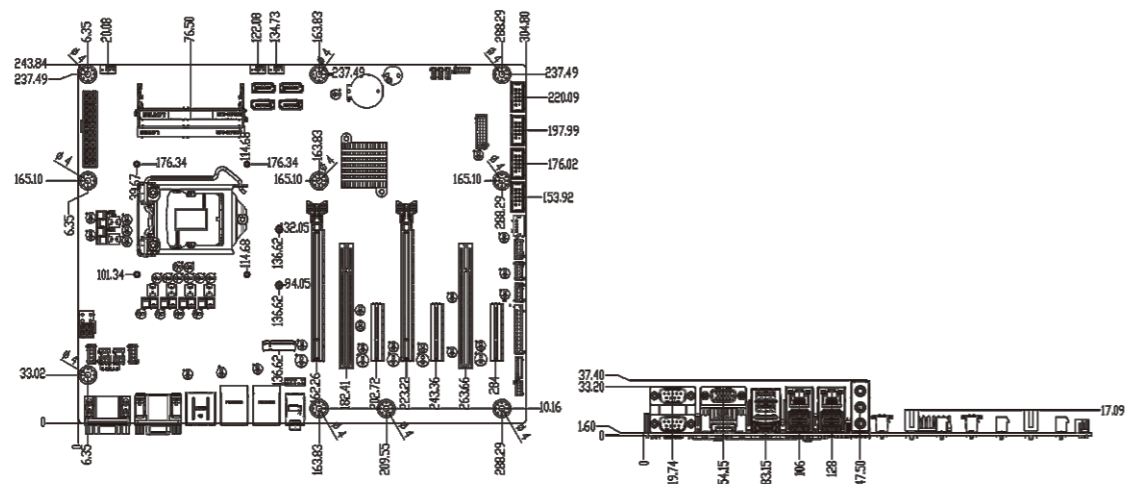
Internal I/O



Rear I/O



Dimension (Unit: mm)



Feature

- Intel® 6/7/8/9th Generation Celeron/Pentium/Core-I series LGA 1151 processor,TDP up to 95W
- Support dual channel(Non-ECC) DDR4-1866/2133/2400/2666MHz SO-DIMM slot , up to 64GB
- Support VGA,HDMI,DP Tri-display
- 2 x Giga-bit Ethernet,
- 8x USB3.0 ports,5 x USB2.0 ports
- 1 x RS232/RS485, 5 x RS232
- 4x SATA3.0 support software RAID 0,1,5,10, 1x SATA M.2-2242/2280 Slot
- 2x PCIeX16(1x 16 or 2x 8 link), 2x PCIeX4, 1x PCIeX4(x1link), 2x PCI slots

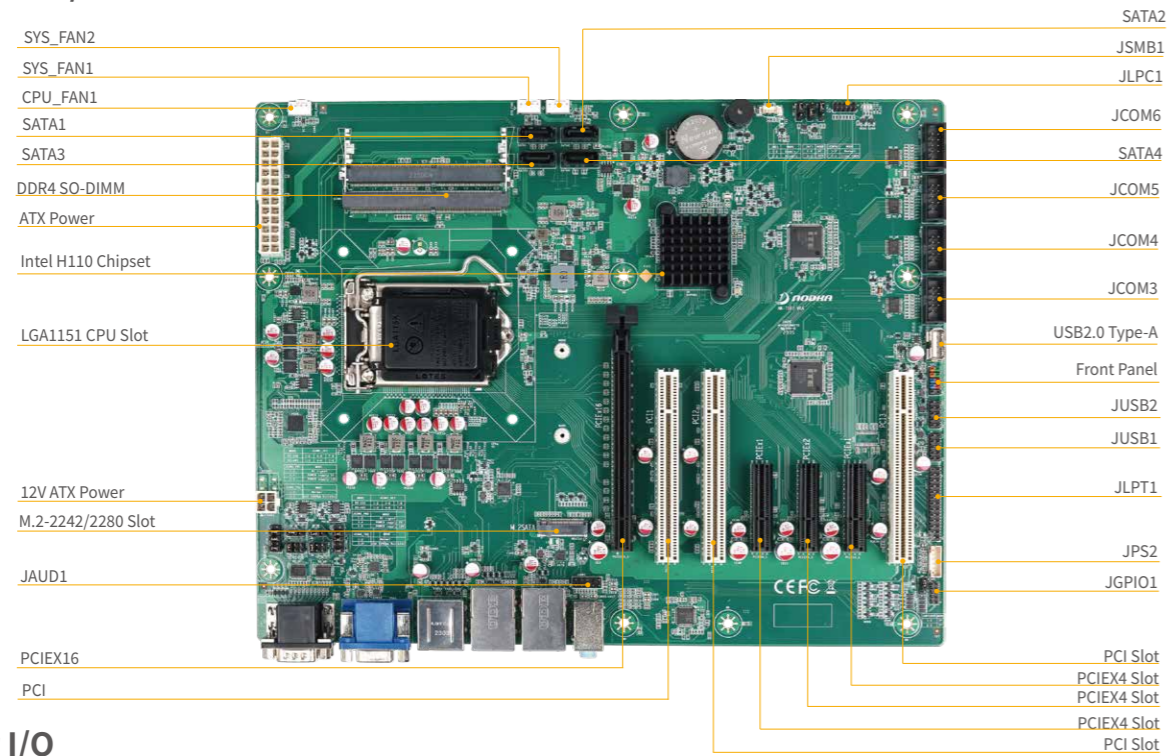
Specification

Model		NK-7106
Processor System	CPU	Intel® 6/7/8/9th generation Celeron/Pentium/Core-I series processor, TDP up to 95W
	Socket	LGA1151
	Chipset	Intel Q170/C236
	BIOS	AMI 128Mb UEFI BIOS
Memory	Technology	Dual Channel(Non-ECC) DDR4-1866/2133/2400/2666MHz, up to 32GB
	Slots	2 x DDR4 260-pin SO-DIMM slots
Storage	M.2	1 x M.2-2242/2280 Key M slot (SATA3.0 Signal)
	SATA	4 x SATA3.0 (up to 6Gb/s), support raid 0/1/5/10
Graphics	Controller	Intel HD graphics integrated
Audio	Codec	Realtek ALC 897 codec
Rear I/O	Display	1 x VGA, resolution up to 1920x1200@60Hz 1 x DP, resolution up to 4096x2160@60Hz 1 x HDMI, resolution up to 4096 x 2160@30Hz
	Ethernet	2 x GbE(RJ45), LAN1: Intel i219-V, LAN2: Intel I210AT
	USB	6 x USB3.0(5Gpbs)
	Serial	1 x RS232/485(DB9)
	Audio	1 x Line-out, 1 x Mic-in, 1 x Line-in
Internal I/O	USB	2 x USB3.0wafer (1 x 2*10pin) , 4 x USB2.0 Wafer, (2 x 2*10pin) , 1 x vertical USB2.0 type-A connect
	Serial	4 x RS232 wafer
	PS/2	1 x PS/2 wafer
	LPT	1 x LPT header
	LPC	1 x LPC header
	SMBus	1 x SMBus wafer
	GPIO	1 x 8bit GPIO
	FP	1 x FP(Power LED, HDD LED, Power button, Reset button)
FAN	2 x System FAN /1 x CPU FAN	
Expansion Slots	PCIe X 16	2 x PCIeX16(Gen3) slots (1 x 16 or 2 x 8 link (default))
	PCIe X 4	2 x PCIeX4(Gen3) slots, 1 x PCIeX4(Gen3, x 1 link) slot
	PCI	2 x PCI slots
Watchdog Timer	Output & Interval	System reset, programmable from 1~255 sec
Security	TPM	fTPM2.0
Power	Type	ATX Power Input :24-Pin ATX + 4/8-Pin ATX 12V
	Consumption	TBD
OS Support	Microsoft Windows	Windows 7/8.1(Only support with Intel 6th Gen. CPU), Windows 10
	Linux	Linux
Mechanism	Dimensions	(L)305mm x (W)244mm
	Gross Weight	TBD
Environment	Operating	0°C~60°C
	Storage	-40°C ~ 85°C
	Humidity	5~95% (Non-condensing)

NK-7107

Intel® 6/7/8/9th Generation Celeron/Pentium/Core-I series LGA 1151 processor, TDP 95W

Internal I/O



Rear I/O



Dimension (Unit: mm)

Feature

- Intel® 6/7/8/9th Generation Celeron/Pentium/Core-I series LGA 1151 processor, TDP up to 95W
- Support dual channel(Non-ECC) DDR4-1866/2133/2400/2666MHz SO-DIMM slot up to 64GB
- Support VGA, HDMI, DP dual display
- 2 x Giga-bit Ethernet,
- 4x USB3.0 ports, 6 x USB2.0 ports
- 1 x RS232/485, 5 x RS232
- 3x SATA3.0, 1x SATA M.2-2242/2280 Slot
- 1x PCIeX16, 1x PCIeX4(x2link), 2x PCIeX4(x1link), 3x PCI slots

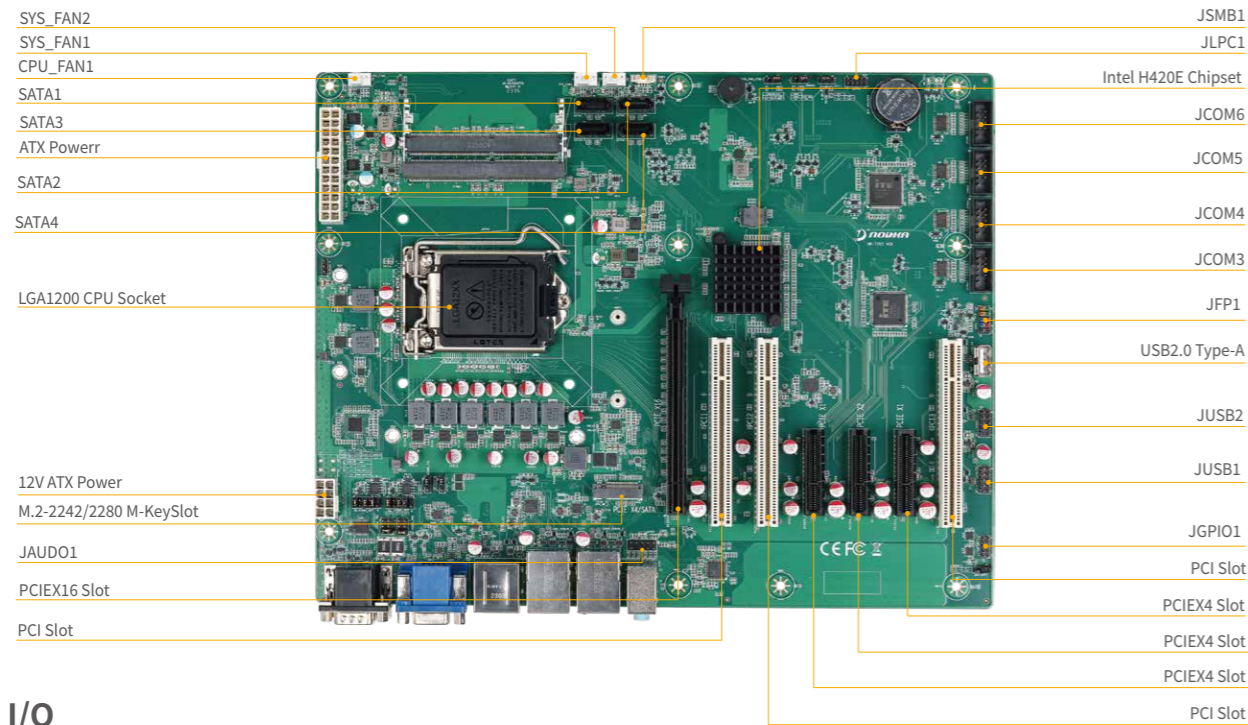
Specification

Model		NK-7107
Processor System	CPU	Intel® 6/7/8/9th generation Celeron/Pentium/Core-I series processor, TDP up to 95W
	Socket	LGA1151
	Chipset	Intel H110
	BIOS	AMI 128Mb UEFI BIOS
Memory	Technology	Dual Channel(Non-ECC) DDR4-1866/2133/2400/2666MHz, up to 64GB
	Slots	2 x DDR4 260-pin SO-DIMM slots
Storage	M.2	1 x M.2-2242/2280 Key M slot (SATA3.0 Signal) (BOM Optional share signal with SATA3.0 default M.2-2242/2280)
	SATA	4 x SATA3.0 (up to 6Gb/s, 1 x SATA3.0 (optional))
Graphics	Controller	Intel HD graphics integrated
Audio	Codec	Realtek ALC 897 codec
Rear I/O	显示 Display	1 x VGA, resolution up to 1920x1200@60Hz 1 x DP, resolution up to 4096x2160@60Hz 1 x HDMI, resolution up to 4096 x 2160@30Hz
	Ethernet	2 x GbE(RJ45), LAN1: Intel i219-V, LAN2: Realtek 8111H controller
	USB	4 x USB3.0(5Gbps), 2 x USB2.0(480Mbps)
	Serial	2 x RS232/485
	Audio	1 x Line-out, 1 x Mic-in, 1 x Line-in
	Internal I/O	4 x USB2.0 pin header (2 x 2*5pin), 1 x Vertical USB2.0 type-A connector (BOM option share signal with 1*USB2.0 header)
Expansion Slots	USB	4 x RS232 wafer
	PS/2	1 x PS/2 wafer
	LPT	1 x LPT header
	LPC	1 x LPC header
	SMbus	1 x SMbus wafer
	GPIO	1 x 8bit GPIO
	FAN	2 x System FAN /1 x CPU FAN
	FP	1 x FP(Power LED, HDD LED, Power button, Reset button)
	PCIe X16	1 x PCIeX16(Gen3) slots
	PCIe X4	2 x PCIeX4(Gen2, x 1 link) slots, 1 x PCIeX4(Gen2, x 2 link) slot
PCI	3 x PCI slots	
Watchdog Timer	Output & Interval	System reset, programmable from 1~255 sec
Security	TPM	fTPM2.0
	Power	Type
OS Support	Consumption	TBD
	Microsoft Windows	Windows 7/8.1(Only support with Intel 6th Gen. CPU), Windows 10
Linux	Linux	Linux
	Mechanism	Dimensions
Environment	Gross Weight	TBD
	Operating	0°C ~ 60°C
	Storage	-40°C ~ 85°C
Humidity	5~95% (Non-condensing)	

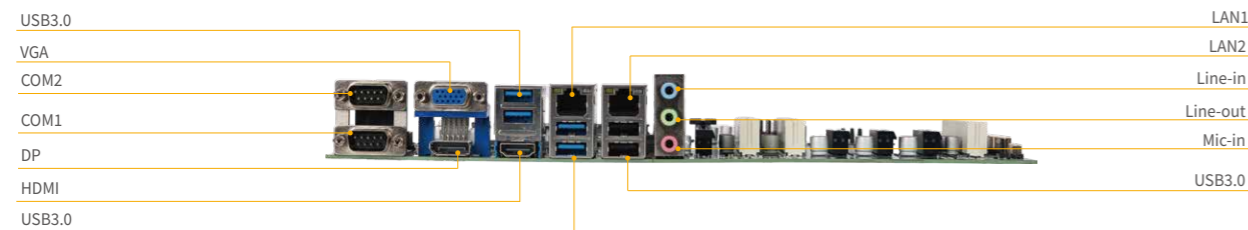
NK-7205

Intel® 10/11th Generation Celeron/Pentium/Core-I series processor, TDP 125W

Internal I/O



Rear I/O



Dimension (Unit: mm)

Feature

- Intel® 10/11th Generation Celeron/Pentium/Core-I series processor, TDP up to 125W
- Support dual channel(Non-ECC) DDR4-2933/3200MHz SO-DIMM slot up to 64GB
- Support VGA,HDMI,DP Tri-Display
- 2 x Giga-bit Ethernet
- 6 x USB3.0 ports, 4 x USB2.0 ports
- 1 x RS232/RS485, 5 x RS232
- 3 x SATA3.0, 1 x SATA M.2-2242/2280 Slot
- 1 x PCIe X 16, 1 x PCIe X 4(x2link), 2 x PCIeX4(x1link), 3 x PCI slots

Specification

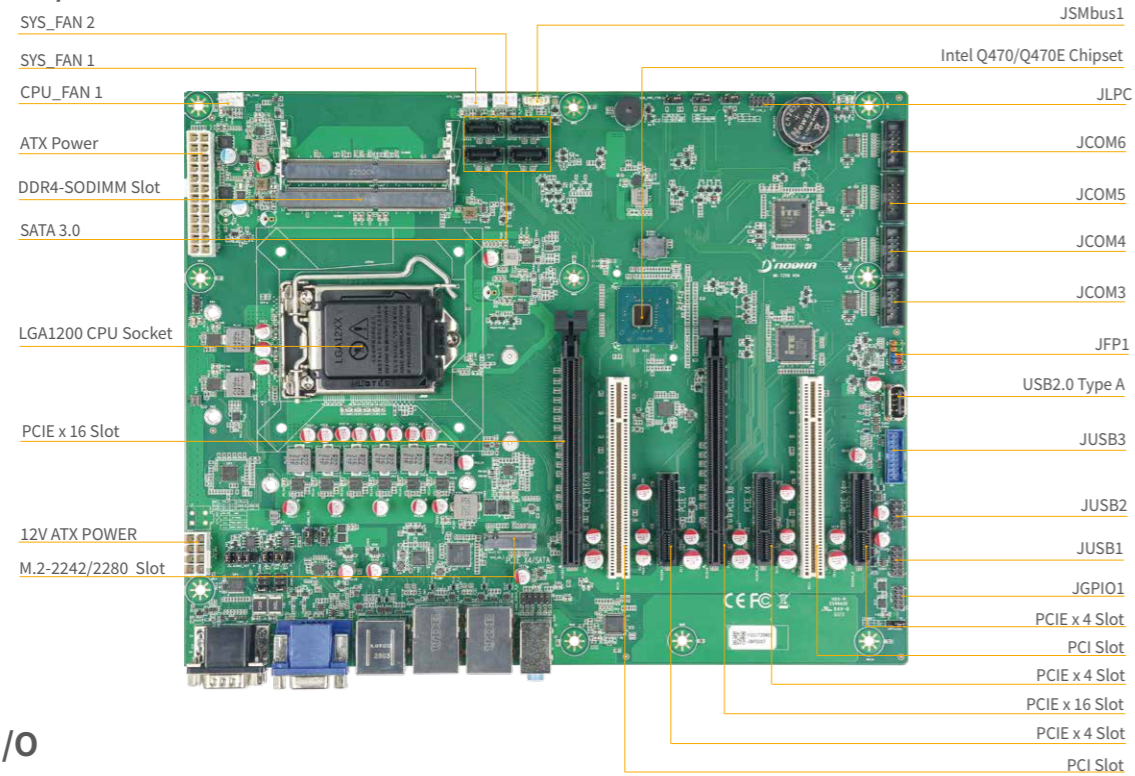
Model		NK-7205
Processor System	CPU	Intel® 10/11th Generation Celeron/Pentium/Core-I series processor, TDP up to 125W
	Socket	LGA1200
	Chipset	Intel H420E
	BIOS	AMI 256Mb UEFI BIOS
Memory	Technology	Dual Channel(Non-ECC) DDR4-2933/3200MHz, up to 64GB
	Slots	2 x 260-pin SO-DIMM slots
Storage	M.2 SSD	1 x M.2-2242/2280 Key M slot ¹ (SATA3.0 /PCIe 4.0 Signal) (BOM Optional share signal with 1*SATA3.0 ,default M.2-2242/2280)
	SATA	4 x SATA3.0 (up to 6Gb/s, 1 x SATA3.0 (optional))
Graphics	Controller	Intel HD graphics integrated
Audio	Codec	Realtek ALC897 codec
Rear I/O	Display	1 x VGA, resolution up to 1920x1200@60Hz 1 x DP, resolution up to 4096x2160@60Hz 1 x HDMI, resolution up to 4096 x 2160@30Hz
	Ethernet	2 x GbE(RJ45) LAN1: Intel i219-V, LAN2: Realtek 8111H controller
	Audio	1 x Line-out, 1 x Mic-in, 1 x Line-in
	USB	6 x USB3.0 (5Gbps)
	Serial	2 x RS232/485(DB9), 1 x RS232
Internal I/O	USB	4 x USB2.0 header, 1 x vertical USB2.0 type-A connect (BOM Optional share signal with 1*USB2.0 header,define type-A)
	COM	4 x RS232 header
	LPC	1 x LPC header for debug
	FAN	1 x CPU Fan / 2 xSYS Fan
	GPIO	1 x 8bit GPIO
	SMBus	1 x SMBus wafer
Expansion Slots	PCIe X16	1 x PCIeX16(Gen3) slot
	PCIe X4	2 x PCIeX4(Gen3, x1 link) slots,1 x PCIeX4(Gen3, x2 link) slot
	PCI	3 x PCI slots
Watchdog Timer	Output & Interval	System reset, programmable from 1~255 sec
Security	TPM	fTPM2.0
Power	Type	ATX Power Input: 24-Pin ATX + 8/12-Pin ATX 12V
	Consumption	TBD
OS Support	Microsoft Windows	Windows 10 /11
	Linux	Linux
Mechanism	Dimensions	(L)305mm x(W) 244mm
	Gross Weight	TBD
Environment	Operating	0°C ~ 60°C
	Storage	-40°C ~ 85°C
	Humidity	5~95% (Non-condensing)

¹SATA signal share with SATA port0, PCIeX4 signal only support with 11th Gen. processors

NK-7208

Intel® 10/11th Generation Celeron/Pentium/Core-I series processor, TDP 125W

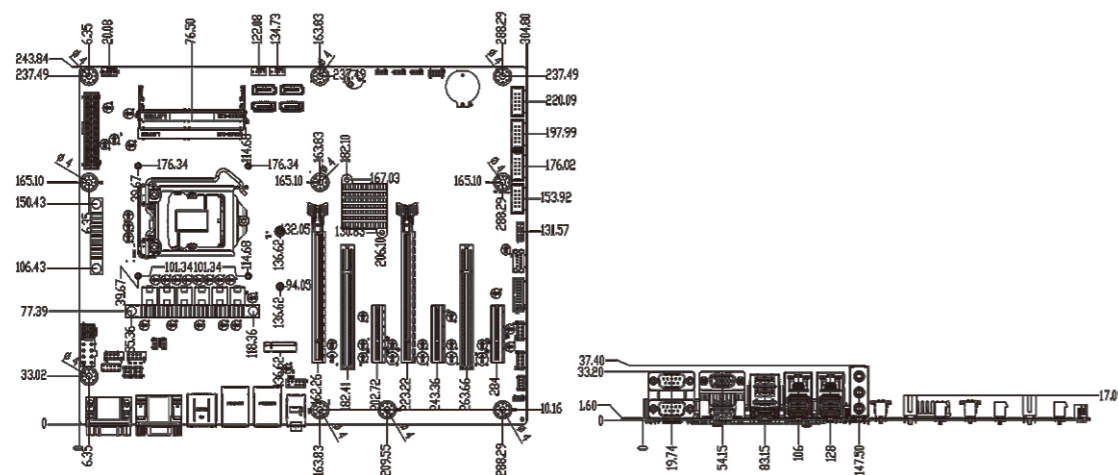
Internal I/O



Rear I/O



Dimension (Unit: mm)



Feature

- Intel® 10/11th Generation Celeron/Pentium/Core-I series processor, TDP up to 125W
- Support dual channel(Non-ECC) DDR4-2933/3200MHz SO-DIMM slot , up to 64GB
- Support VGA,HDML,DP Tri-Display
- 2 x Giga-bit Ethernet,
- 8 x USB3.0 ports, 5 x USB2.0 ports
- 1 x RS232/RS485, 5 x RS232
- 4 x SATA3.0 support software RAID 0,1,5,10, 1 x M.2-2242/2280 SATA/NVME(11th Gen. processors) Slot
- 2 x PCIeX16(1x 16 or 2x 8 link), 3x PCIe X 4, 2 x PCI slots

Specification

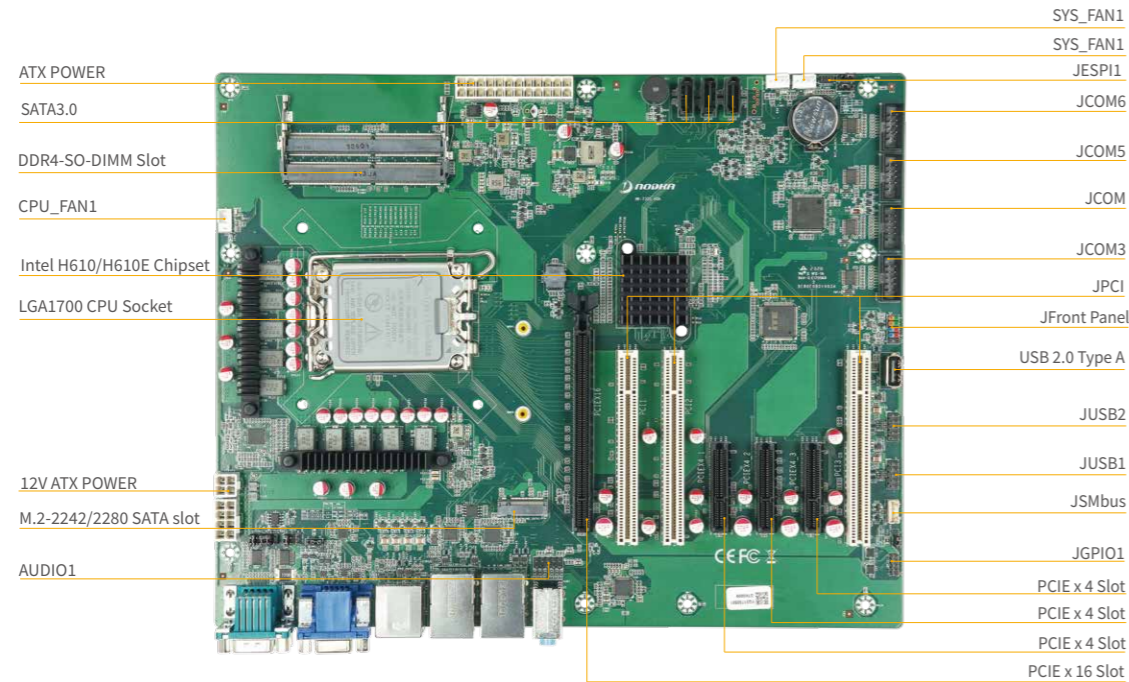
Model		NK-7208
Processor System	CPU	Intel® 10/11th Generation Celeron/Pentium/Core-I series processor, TDP up to 125W
	Socket	LGA1200
	Chipset	Intel Q470/Q470E
	BIOS	AMI 256Mb UEFI BIOS
Memory	Technology	Dual Channel(Non-ECC) DDR4-2933/3200MHz, up to 64GB
	Slots	2 x 260-pin SO-DIMM slots
Storage	SATA	4 x SATA3.0 (up to 6Gb/s) support RAID 0/1/5/10
	M.2 SSD	1 x M.2-2242/2280 Key M slot ⁽¹⁾ (SATA3.0/PCIe4.0 X4 Signal)
Graphic	Controller	Intel HD graphics integrated
Audio	Codec	Realtek ALC897 codec
Rear I/O	Display	1 x VGA, resolution up to 1920x1200@60Hz 1 x DP++, resolution up to 4096x2160@60Hz 1 x HDMI, resolution up to 4096 x 2160@30Hz
	Ethernet	2 x GbE(RJ45) LAN1: Intel i219-V; LAN 2: Intel i210AT
	Audio	1 x Line-out, 1 x Mic-in, 1 x Line-in
	USB	6 x USB3.0(5Gbps)
	Serial	2 x RS485/232
Internal I/O	FP	1 x FP(Power LED, HDD LED, Power button, Reset button)
	COM	4 x RS232 wafer
	USB	2 x USB3.0 pin header (1 x 2*5pin) , 4 x USB2.0 pin header, (2 x 2*5pin)
	eSPI	1 x LPC header for debug
	FAN	1 x CPU Fan / 2 x SYS Fan
	GPIO	1 x 8bit GPIO(optional)
	SMbus	1 x SMbus wafer
Expansion Slots	PCIe X16	2 x PCIeX16(Gen3) slots (1 x 16 or 2 x 8 link)
	PCIe X4	3 x PCIeX4(Gen3) slots
	PCI	2 x PCI slots
Watchdog Timer	Output & Interval	System reset, programmable from 1~255 sec
Security	TPM	fTPM2.0
Power	Type	ATX Power Input:24-Pin ATX + 8/12-Pin ATX 12V
	Consumption	TBD
O.S Support	Microsoft Windows	Windows 10 /11
	Linux	Linux
Mechanism	尺寸 Dimensions	(L)305mm x(W) 244mm
	Gross Weight	TBD
Environment	Operating	0°C~60°C
	Storage	-40°C ~ 85°C
	Humidity	5~95% (Non-condensing)

NOTE1:SATA signal share with SATA port0, PCIeX4 signal only support with 11th Gen. processors

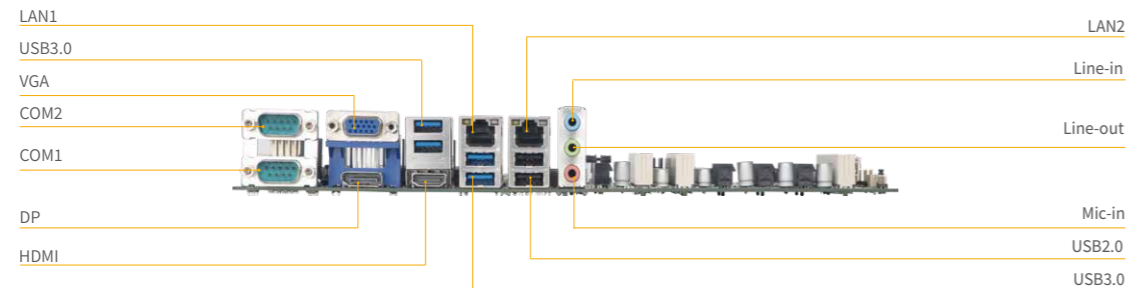
NK-7305

Intel® 12/13th Generation Celeron/Pentium/Core-I series LGA1700 processor,TDP 125W

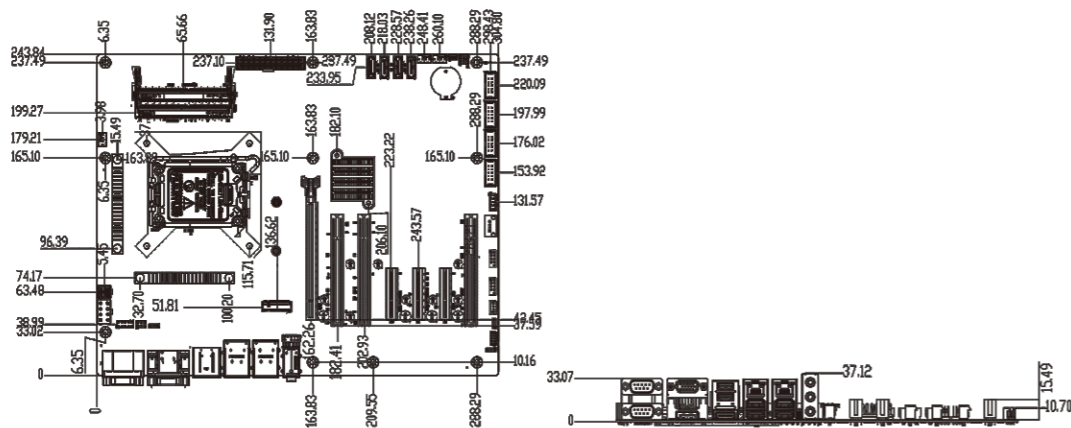
Internal I/O



Rear I/O



Dimension (Unit: mm)



Feature

- Intel® 12/13th Generation Celeron/Pentium/Core-I series LGA1700 processor,TDP up to 125W
- Support Dual Channel(Non-ECC) DDR4-3200MHz SO-DIMM slot, up to 64GB
- Support VGA,HDMI,DP Tri-display
- 2 x Giga-bit Ethernet
- 4 x USB3.0 ports, 6 x USB2.0 ports
- 1 x RS232/485, 5 x RS232
- 1 x PCIe4.0 X 16 (GEN 4),1 x PCIe X4(Gen4) , 2 x PCIe X4(Gen4, X1 link), 3 X PCI

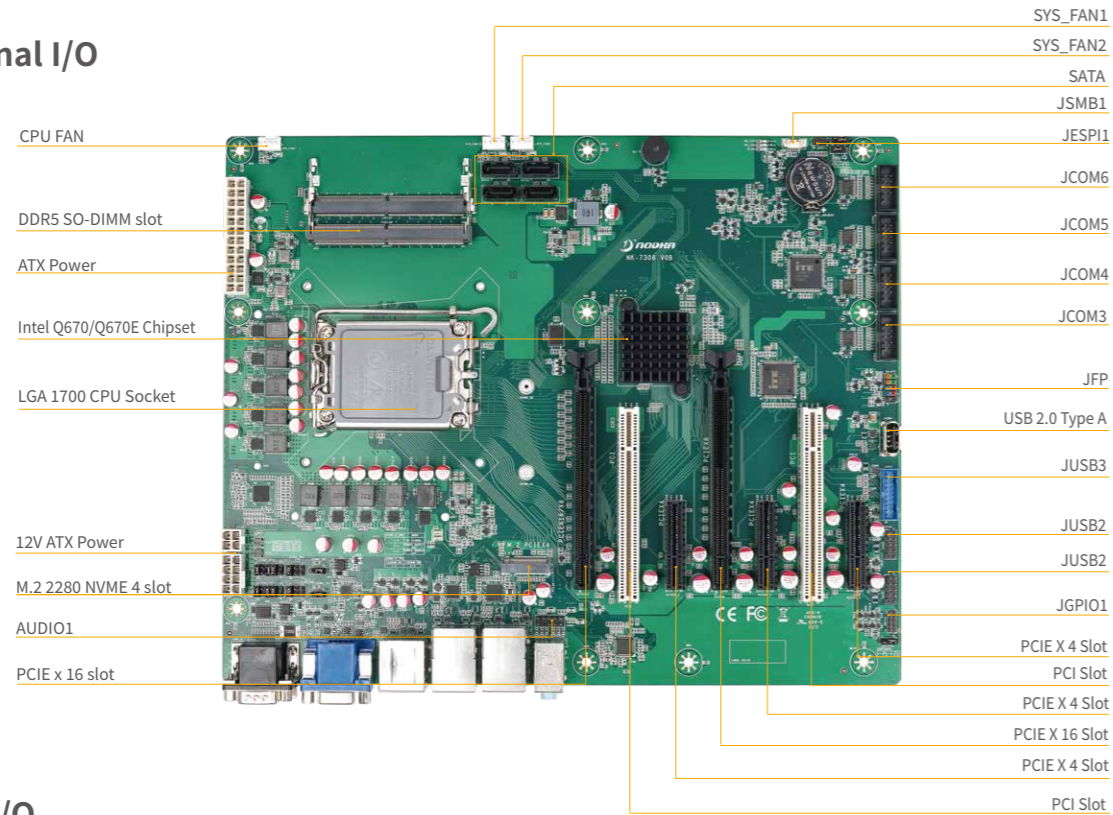
Specification

Model		NK-7305
Processor System	CPU	Intel® 12/13th Generation Celeron/Pentium/Core-I series processor, TDP up to 125W
	Socket	LGA1700
	Chipset	Intel H610/H610E
	BIOS	AMI 256Mb UEFI BIOS
Memory	Technology	Dual Channel(Non-ECC) DDR4 3200MHz, up to 64GB
	Slot	2 x 260-pin SO-DIMM slots
Storage	SATA	4 x SATA3.0 (up to 6Gb/s, 1 x SATA3.0 (optional))
	M.2	1 x M.2-2242/2280 Key M slot (BOM Optional share signal with 1*SATA3.0 ,default M.2-2242/2280)
Graphic	Controller	Intel HD graphics integrated
	Display	1 x VGA, resolution up to 1920x1200@60Hz 1 x DP, resolution up to 4096x2160@60Hz 1 x HDMI, resolution up to 4096 x 2160@30Hz
Rear I/O	Ethernet	2 x GbE(RJ45) LAN1: Intel i219-V ;LAN 2 : Realtek 8111H
	Audio	1 x Line-out, 1 x Mic-in, 1 x Line-in, optional
	USB	4 x USB3.0(5Gbps),2 x USB2.0
	Serial	2 x RS232/485
Internal I/O	COM	4 x RS232 wafer
	USB	4 x USB2.0 pin header, (2 x 2*5pin) (Default), 1 x vertical USB2.0 type-A connect (BOM Optional share signal with 1*USB2.0 header,optional type-A)
	eSPI	1 x eSPI header for debug
	FAN	1 x CPU FAN / 2 x SYS FAN
	GPIO	1 x 8bit GPIO
	FP	1 x FP(Power LED, HDD LED, Power button, Reset button)
	SMbus	1 x SMbus wafer
	Expansion Slots	PCIe X16 PCIe X4 PCI
Watchdog Timer	Output&Interval	System reset, programmable from 1~255 sec
Power	Type	ATX Power Input:24-Pin ATX + 8/12-Pin ATX 12V
	Power Consumption	TBD
O.S Support	MS Windows	Windows 10 /11
	Linux	Linux
Mechanism	Dimensions	(L)305mm x(W) 244mm
	Gross Weight	TBD
Environment	Operating	0°C~60°C
	Storage	-40°C ~ 85°C
	Humidity	5~95% (Non-condensing)

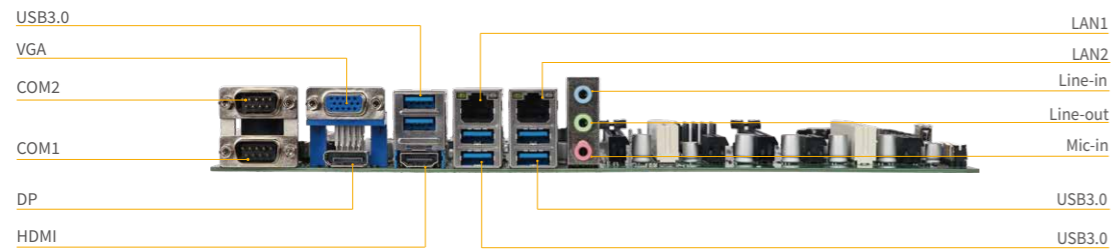
NK-7306

Intel® 12/13th Generation Celeron/Pentium/Core-I series LGA1700 processor,TDP 125W

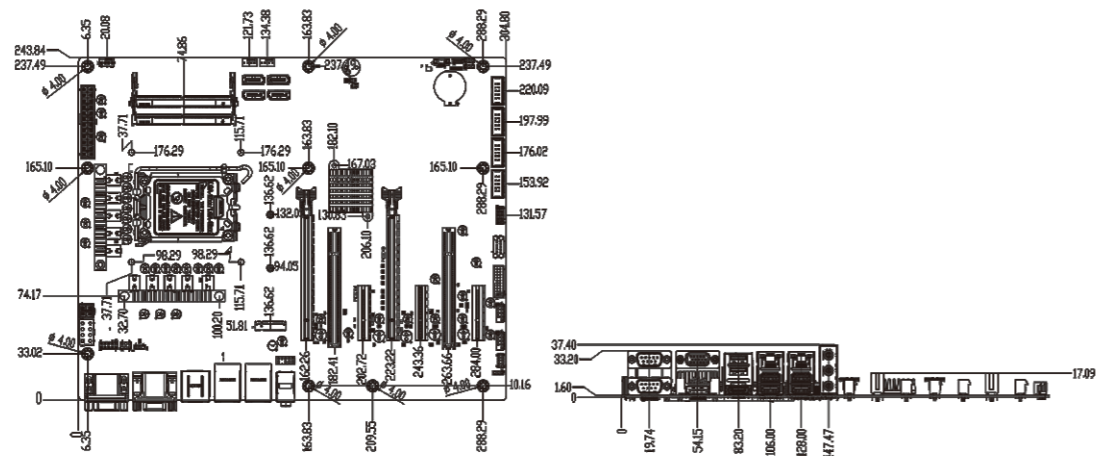
Internal I/O



Rear I/O



Dimension (Unit: mm)



Feature

- Intel® 12/13th Generation Celeron/Pentium/Core-I series LGA1700 processor,TDP up to 125W
- Support dual channel(Non-ECC) DDR5-4800/5600MHz SO-DIMM slot, up to 64GB
- Support VGA,HDMI,DP Tri-display
- 1 x Giga-bit Ethernet,1 x 2.5 Giga-bit Ethernet
- 8 x USB3.0 ports, 5 x USB2.0 ports
- 1 x RS232/485, 5 x RS232
- 4 x SATA3.0 support software RAID 0,1,5,10,1xM.2-2242/2280 SATA/NVME Slot
- 2 x PCIe4.0 X 16 (1 x 16 or 2 x 8 link),3x PCIeX4, 2x PCI

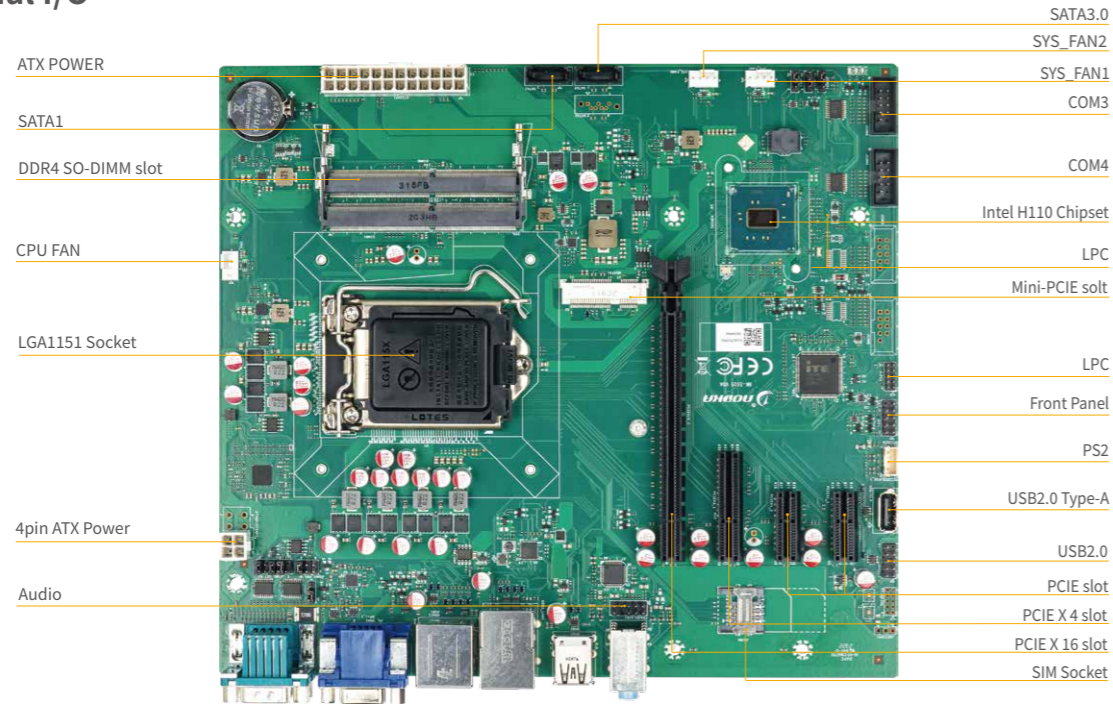
Specification

Model		NK-7306
Processor System	CPU	Intel® 12/13th Generation Celeron/Pentium/Core-I series processor, TDP up to 125W
	Socket	LGA1700
	Chipset	Intel Q670/Q670E
	BIOS	AMI 256Mb UEFI BIOS
Memory	Technology	Dual Channel(Non-ECC) DDR5-4800/5600MHz, up to 64GB
	Slot	2 x 262-pin SO-DIMM slots
Storage	SATA	4 x SATA3.0 ports,Support software RAID 0,1,5,10
	M.2	1 x M.2-2242/2280 M Key Slot (PCIe4.0 X 4 Signal)
Graphic	Controller	Intel HD graphics integrated
Audio	Codec	Realtek ALC 897 codec
Rear I/O	Display	1 x VGA, resolution up to 1920x1200@60Hz 1 x DP, resolution up to 4096x2160@60Hz 1 x HDMI, resolution up to 4096x2160@30Hz
	Ethernet	2 x GbE(RJ45)LAN1: Intel i219-V ;LAN 2: Intel i226-V
	Audio	1 x Mic-in, 1 x Line-in, 1 x Line-out
	USB	6 x USB3.0(5Gbps)
	Serial Port	1 x RS485/232,1 x RS232
Internal I/O	Front Panel	1 x Front Panel(Power LED, HDD LED, Power button, Reset button)
	COM	4 x RS232 wafer
	USB	2xUSB3.0 pin header (1x2*5pin) , 4xUSB2.0 pin header, (2x2*5pin) , 1 x Vertical USB2.0 type-A connector
	eSPI	1 x eSPI header for debug
	FAN	1 x CPU Fan wafer(1*4pin) 2 x SYS Fan wafer(1*4pin)
	GPIO	1 x 8bit GPIO
	SMbus	1 x SMbus wafer
Expansion Slots	PCIe X 16	2 x PCIe X 16(Gen4) slots (1 x 16 or 2 x 8 link)
	PCIe X 4	3 x PCIe X 4(Gen4) slots
	PCIe	2 x PCI slots
Security	TPM	fTPM2.0
Watchdog Timer	Output&Interval	System reset, programmable from 1~255 sec
Power	Type	ATX Power Input: 24-Pin ATX + 8/12-Pin ATX 12V
	Consumption	TBD
O.S Support	MS Windows	Windows10/11
	Linux	Linux
Mechanism	Dimensions	(L)305mm x(W) 244mm
	Gross Weight	TBD
Environment	Operating	0°C~60°C
	Storage	-40°C ~ 85°C
	Humidity	5~95% (Non-condensing)

NK-5105

Intel® 6/7/8/9th Generation Celeron/Pentium/Core-I series processor,TDP 95W

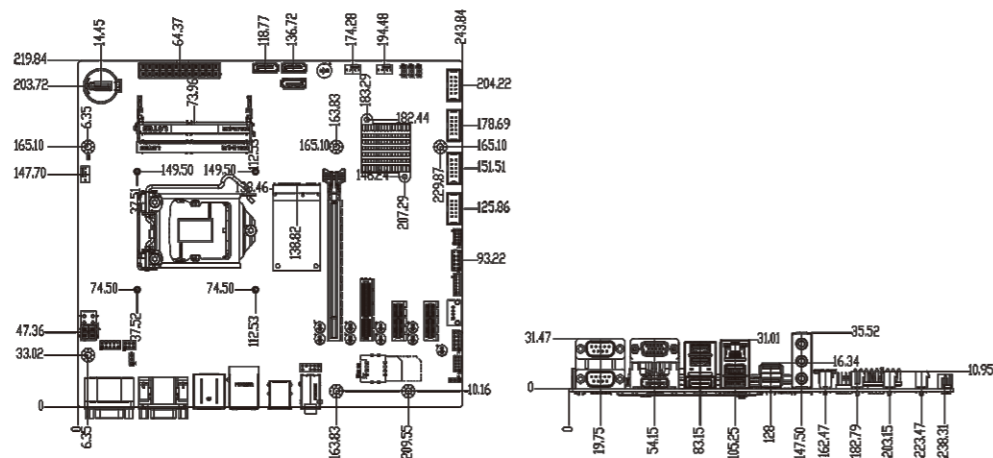
Internal I/O



Rear I/O



Dimension (Unit: mm)



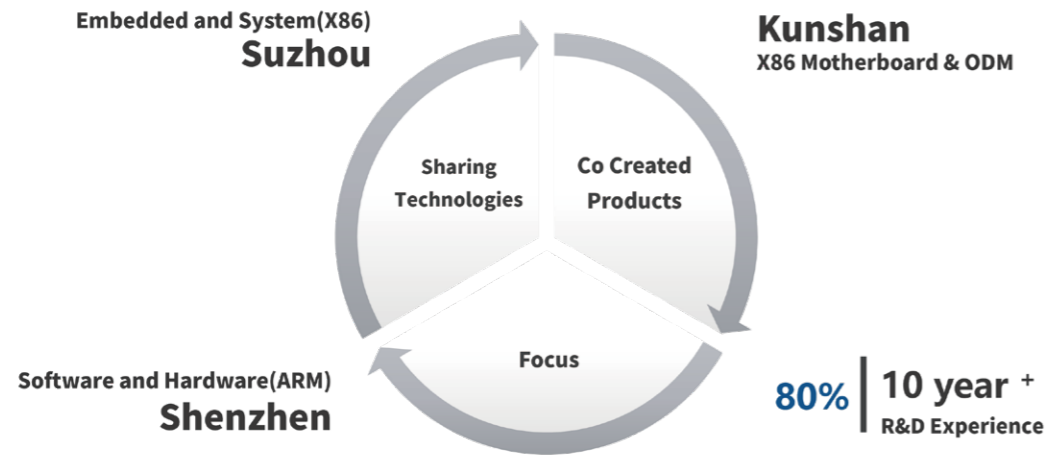
Feature

- Intel® 6/7/8/9th Generation Celeron/Pentium/Core-I series processor,TDP 95W
- Support dual channel(Non-ECC) DDR4-1866/2133/2400/2666MHz SO-DIMM slot, up to 64GB
- Support VGA,HDMI,DP Dual-display
- 1 x Giga-bit Ethernet
- 4 x USB3.0 ports, 4 x USB2.0 ports
- 1 x RS232/RS485, 5 x RS232
- 2 x SATA3.0, 1 x mSATA
- 1 x PCIe3.0 X 16,1xPCIEX4(x2link), 2xPCIE(X1link)

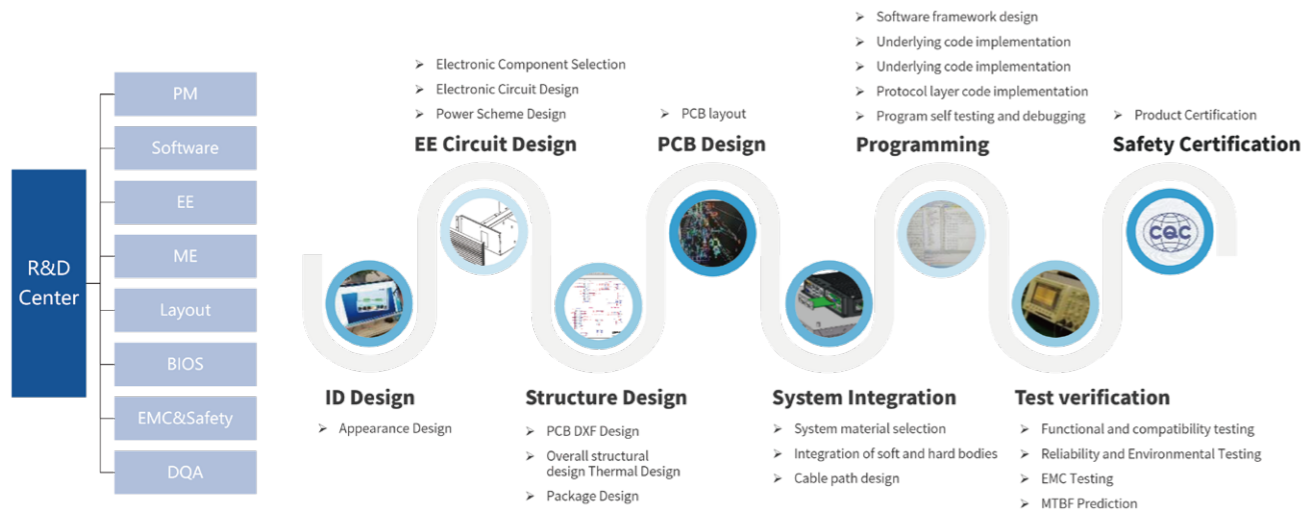
Specification

Model		NK-5105
Processor System	CPU	Intel® 6/7/8/9th Generation Celeron/Pentium/Core-I series processor, TDP up to 95W
	Socket	LGA1151
	Chipset	Intel H110
	BIOS	AMI 128Mb UEFI BIOS
Memory	Technology	Dual Channel(Non-ECC) DDR4-1866/2133/2400/2666MHz, up to 64GB
	Slot	2 x DDR4 260-pin SO-DIMM slots
Storage	mSATA	1 x mSATA
	SATA	2 x SATA3.0 (up to 6Gb/s)
Graphic	Controller	Intel HD graphics integrated
Audio	Codec	Realtek ALC897 codec
Rear I/O	Display	1 x VGA, resolution up to 1920x1200@60Hz 1 x DP, resolution up to 4096x2304@60Hz 1 x HDMI 1.4, resolution up to 4096x2160@60Hz
	Ethernet	1 x GbE Intel i219-V
	Audio	1 x Line-out, 1 x Mic-in, 1 x Line-in
	USB	4 x USB3.0(5Gbps), 2 x USB2.0(480bps)
	Serial Port	1 x RS232/485, 1 x RS232
Internal I/O	COM	2 x RS232 wafer
	USB	2x USB2.0 header(BOM Optional share signal with 1*USB2.0 header,define type-A) 1 x Vertical USB2.0 type-A connect
	LPC	1 x LPC header
	PS/2	1 x PS/2 wafer
	Fan	1 x CPU Fan wafer(1*4pin) 2 x SYS Fan wafer(1*4pin)
	SMBus	1 x SMBus wafer
	Expansion Slots	PCIe X 16 PCIe X 4 PCIe Mini-PCIe
Security	TPM	fTPM2.0
Watchdog Timer	Output&Interval	System reset, programmable from 1~255 sec
Power	Type	ATX Power Input: 24-Pin ATX + 4/8-Pin ATX 12V
	Consumption	TBD
O.S Support	MS Windows	Windows 7/8.1(Only support with Intel 6th Gen. CPU), Windows 10
	Linux	Linux
Mechanism	Dimensions	(L)244mm x(W) 220mm
	Gross Weight	TBD
Environment	Operating	0°C~60°C
	Storage	-40°C ~ 85°C
	Humidity	5~95% (Non-condensing)

Nodka R&D Centers



Nodka R&D Strength



Take root in China's intelligent manufacturing center and build intelligent manufacturing factories

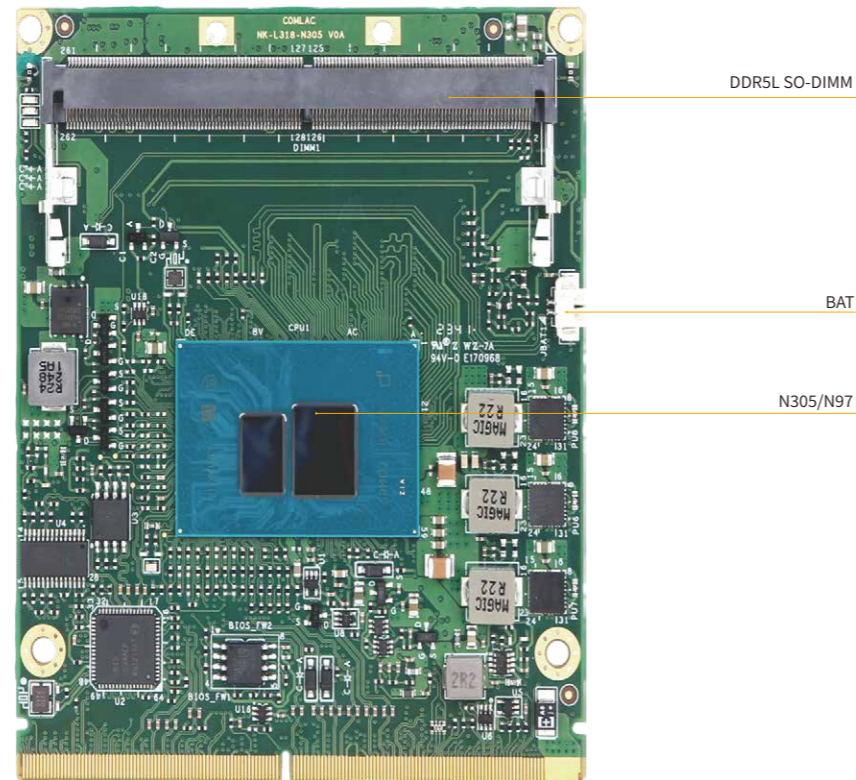
Global Sales System Layout

- Established European Service Center in Eindhoven, the Netherlands.
- Keep long-term partnership with prestigious companies in 19 countries.

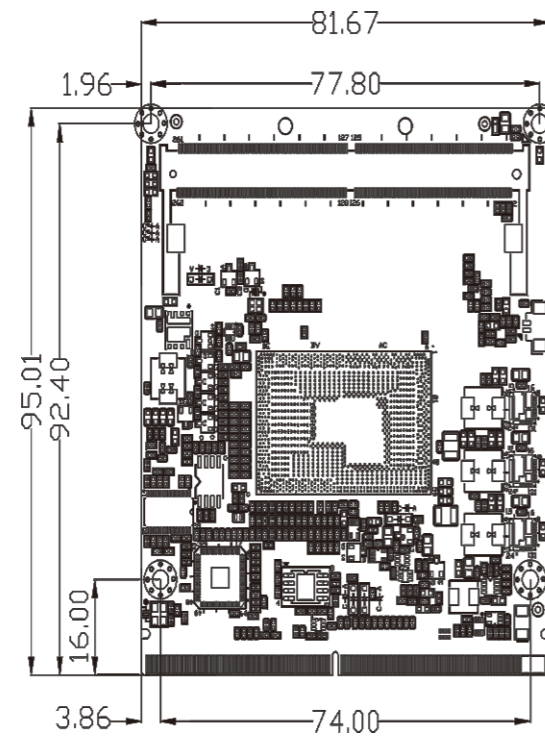
Stable construction of global supply and local service capacity

NK-L318-N305/N97

Internal I/O



Dimension (Unit:mm)



Feature

- Intel® Core i3-N305 processor, Octa-core, Max frequency 3.8GHz , TDP 15W
- Intel® N-series N97 processor, Quad-core, Max frequency 3.6GHz , TDP 15W
- Support 1 x DDR5-4800MHz SO-DIMM slot, up to 16GB
- Support 2 x DDI,1 x eDP, Tri-Display
- Type3 Interface Signals with MXM3.0 Gold Finger

Specification

Model		NK-L317-J6412
Processor System	CPU	Intel® Core™ i3-N305/N97 Alder lake N processor, TDP 15W
	Chipset	Intel® SoC integrated
	BIOS	AMI 256Mb UEFI BIOS
Memory	Technology	Signal Channel(Non-ECC) DDR5-4800MHz, up to 16GB
	Slot	1 x DDR5 262-pin SO-DIMM slot
Graphic	Controller	Intel® UHD Graphics integrated
	Display	2 x DDI, 1 x eDP
Expansion Signals	Ethernet	Intel I210AT controller
	Serial Port	2 x Uart (9 line) , 4 x Uart (3 line)
	USB	2 x USB3.0 , 8 x USB2.0
	Audio	1 x Intel HDA Audio codec
	GPIO	1 x 4bit GPIO
	Fan	1 x Smart FAN
	PCIe	4 port 4 lanes (4 x PCIe (1X2, 2X1))
	SATA	2 x SATA 3.0
	others	1 x I ² C, 1 x Smbus, 1 x Buzzer, 1 x eSPI, 1 x KB/MS
	Watchdog Timer	Output&Interval
Power	Power input	5V
	OS Support	Windows10/11
Mechanism	Linux	Linux
	Dimensions	(L)95mm x (W)82mm
Environment	Gross Weight	0.8kg
	Temperature	Operating: -20°C ~70°C with SSD Storage: -40°C ~85°C
Environment	Humidity	5~95% (Non-condensing)
	Vibration	5~500Hz, 3Grms operating