NEXCOM
The Intelligent Systems

IoT Automation Solution Product Selection Guide

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Industry 4.0 Solution Provider

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IoT Automation Systems, The Solutions to Industry 4.0

NEXCOM maps out a solution blueprint for Industry 4.0, which seamlessly integrates connected manufacturing and big data cloud computing.

NEXCOM IoT Automation Solutions (IAS) Business Group has broadened its Industry 4.0 solutions to include cyber-physical system (CPS) ready solutions (iAutomation), robot solutions (NexROBO), EtherCAT motion solutions (NexMotion), and industrial network & cloud solutions. All solutions leverage NEXCOM IoT Studio and IoT gateways to stream field data to cloud services powered by world-renowned cloud services such as Microsoft Azure, IBM Bluemix™ and iSAP etc.

The integrated cloud-enabled services such as remote management, big data analytics, machine learning, and business intelligence (BI) can provide benefits such as remote monitoring to enable exception management and advanced process control.

For instance, operators can benefit by getting an accurate measure of machine status and factory operations in real-time, as well as integrating enterprise resource planning (ERP) and manufacturing execution systems (MES) systems to optimize supply chain management. Based on live field data, big data analytics and machine learning can establish predictive models that assist operators in managing factory operations, identifying causes for abnormal conditions, and taking corrective actions. Preventive maintenance can be executed prior an equipment failure to ensure production efficiency and yield rate.

Positioning itself as an industrial IoT forerunner, NEXCOM has broadened its Industry 4.0-ready iAutomation solutions, including cyber-physical system (CPS) ready solutions, robot solutions, EtherCAT motion solutions, and industrial network & cloud solutions for smart manufacturing. Mirroring the ambition for Industry 4.0, a connected factory will enable raw data to be exchanged over the network and translated into valuable information, helping enterprises make insightful decisions and therefore increase competiveness in fast-paced industries. Our best-in-class solution topology has new technological breakthroughs and innovative convergence of data communications technology. It can better serve customers in an increasingly competitive global marketplace and lead manufacturers to smart factory automation.

IoT Automation Solution Brochures

USB Drive

IoT Automation Solutions Master e-Catalog

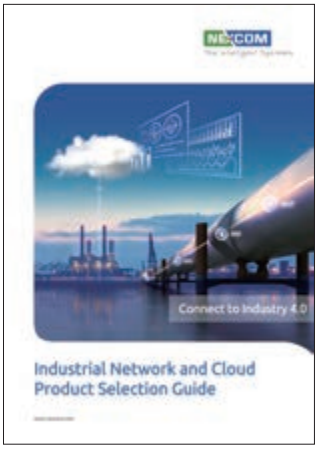
NEXCOM provides a wide range of IoT Automation solutions for increasing demands of industrial applications. NEXCOM IoT Automation Solutions Master e-Catalog covers NEXCOM's most up-to-date and completed solutions, detailed product datasheets, and selection guides of high-performance industrial fanless computers, different-size industrial panel PCs, machine and robot automation lineups, PC-based factory automation families, IoT solutions, industrial wireless solutions, and embedded computing and customization services.

IoT Automation Solution Product Selection Guide

The convergence of physical and digital worlds is giving rise to the smart factory and a new generation of industrial machinery. This new era, known as Industry 4.0, focuses on using the IoT and CPS to streamline manufacturing and business processes, improve versatility and precision, and boost quality and capacity.

Robot & Machine Automation Product Selection Guide

NEXCOM EtherCAT robot solutions, NexROBO, unleash possibilities for in-house development, add-on functionality, and reconfiguration of robots. Based on an open and modular architecture, NexROBO delivers development flexibility and expandable functions with a variety of EtherCAT Master controllers, pre-validated third-party EtherCAT slaves, and NEXCOM EtherCAT Master development stack, aimed to stimulate the broad use of robotic systems and industrial robots.



Industrial Network and Cloud Product Selection Guide

The industrial IoT (IIoT) network lay the important foundation for Industry 4.0. It includes three pillars—Cyber-Physical System (CPS), Industrial Wireless Solution, and Industrial Firewall for IoT Security. NEXCOM provides the IIoT network with complete product solutions which cover all three scopes. The product solutions are designed with the concepts of "ready to use" and "click to connect" so users can easily establish the IIoT network that can encompass existing automation systems in their Industry 4.0 and IIoT applications.

Towards An Industrial IoT Era

To construct a digital factory for a cloud enterprise, NEXCOM offers a unified architecture and seamless connection through NEXCOM's converged IoT automation solutions based on advanced IPC platforms to fulfill various applications' needs in the global rush for Industry 4.0.

NEXCOM's Industry 4.0 solution map covers essential elements to implementing automation systems of the device layer, wireless infrastructure of the communication layer, and smart cloud services of the application layer. This is a total CPS-ready solution which can digitalize and connect everything to build a digital factory.

Device Layer:

To build an industrial IoT (IIoT) based smart factory operated by intelligent machines and robotic applications, NEXCOM's full lineups consist of iAutomation—most updated and highly efficient CPS-ready control solutions, NexMotion and NexROBO—EtherCAT-based motion and robotics controllers, and Device Networking—fieldbus-enabled connectivity. They not only provide high-performance and networking PC-based PLCs capability, motion control systems, and robot controllers but also integrate real-time device status, data analysis and MES/ERP systems for information exchange. To build an IIoT-based digital automation production line, customers can take advantage of following NEXCOM products.

NexROBO:

The robotics controllers with built-in EtherCAT protocol stack and robotics algorithms are pre-configured packages that allow robot vendors and researchers to develop robotic control schemes and applications efficiently by using NEXCOM robotics SDKs, including SCARA, Delta, and articulated robots.

NexMotion:

The motion control solutions with EtherCAT technology, distributed I/O systems, and machine tooling controllers can help machine builders design and implement high-performance machinery efficiently.

iAutomation:

The IoT automation solutions composed of fieldbus and industrial Ethernet technologies, PLCopen standards, SoftPLC, SoftMotion controllers, distributed I/O systems, web-enabled software HMI, predictive maintenance systems, and advanced DCS systems can help project system integrators (SIs) and OEM SIs implementing automation systems and IoT-enabled applications carrying more value-added functions to optimize resources, enhance uptime, and maximum overall equipment effectiveness (OEE).

Device Networking:

The device connectivity solutions featuring fieldbus protocols, industrial Ethernet protocols, wireless communications, and firewall protection offers secure and seamless connections to connect field sites and legacy devices to a plant network and control rooms painlessly. The solutions can help project SIs integrate different systems using different protocols more easily.

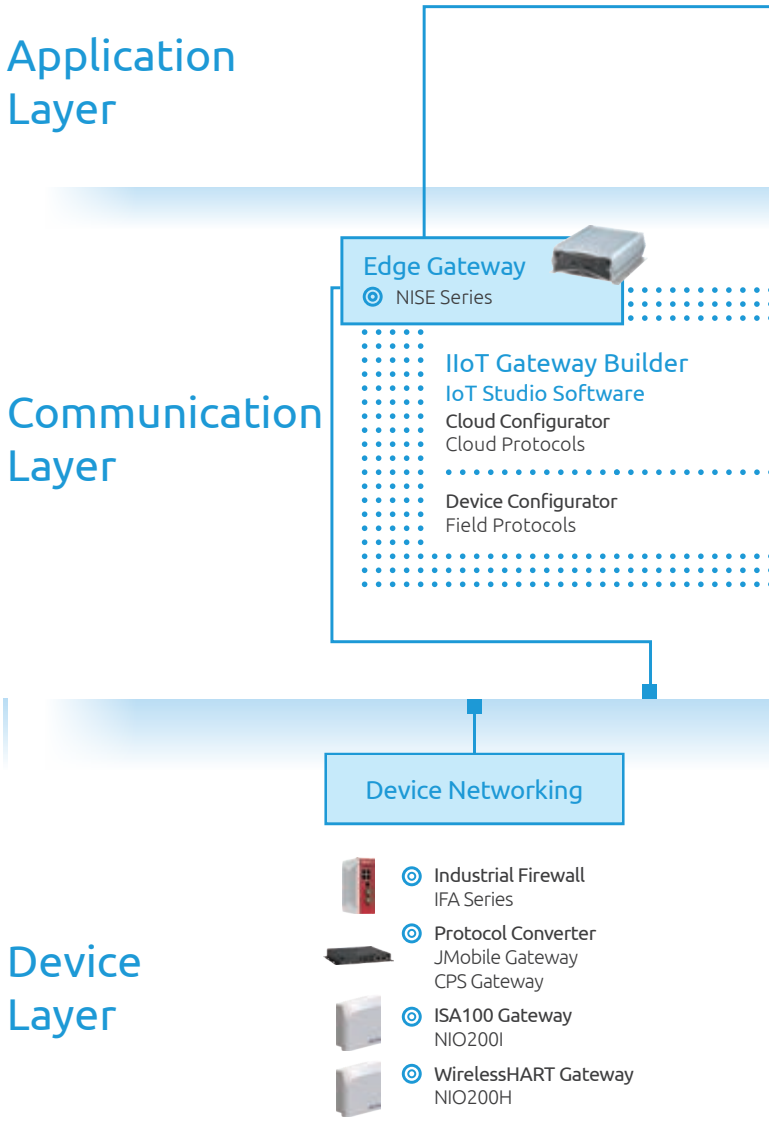
Communication Layer:

To build up a digitized network-based smart factory, reliable communication and anytime, anywhere monitoring will enhance the effectiveness and performance of industrial applications. Therefore, forming a wireless communications network will complete the Industry 4.0 communication mechanism. NEXCOM proposes a trustworthy Wi-Fi mesh networking solution to construct a ubiquitous backbone for plant operations. Field equipment can reliably and easily connect to a plant network. Thus, operators and workers can monitor the status of an entire factory and machines through mobile devices in real time. With agility in trouble shooting in every corner, manufacturers could maximize factory uptime and run more smoothly than ever. In regard to computer-integrated manufacturing (CIM), NEXCOM nCare makes device management more efficiently by visualizing information. The nCare can manage the status of not only wired and wireless devices but also the Modbus-based field equipment. It's a complementary device management solution to SCADA systems.

IIoT Gateway Builder:

The protocol routing solution supporting fieldbus protocols, industrial Ethernet protocols, cloud protocols, and the Node.js technology is a browser-based visualization tool allowing editing of data flow from a runtime engine—NEXCOM Industrial IoT Studio. NEXCOM Industrial IoT Studio connects field devices to cloud services intuitively by supporting drags-and-drops of protocol nodes and links. NEXCOM Industrial IoT Studio helps project SIs and cloud service SIs harvest and send data from field devices and sensors to could services without programming.

Field protocol nodes: PROFINET, PROFIBUS, EtherNet/IP, DeviceNet, Modbus TCP, Modbus RTU, EtherCAT, OPC DA client and OPC UA client.



Cloud protocol nodes: MQTT, Event Hub and IoT Hub (Microsoft Azure IoT Suite).

IIoT Gateways:

The IIoT gateways include lightweight communication hardware platforms (CPS series) pre-installed with NEXCOM Industrial IoT Studio. They provide IoT connectivity for field devices and sensors and support wired and wireless connections of GbE LAN, Wi-Fi, and 3G.

Edge Gateways:

The edge gateways offer heavy-duty communication hardware platforms (NISE series) pre-installed with NEXCOM Industrial IoT Studio. They can connect field devices through multiple fieldbus ports and Gb LAN ports and pre-process data which require high-computing power to execute complex algorithms and massive data storage.

Wireless Networking:

The wireless infrastructure solutions including network management and visualization software (nCare), mesh backbone (IWF 300/6000 series), and AP devices (IWF 500 series) offer scalability, flexibility, and reliability to construct a wide and distributed communication infrastructure for ubiquitous IoT networks.

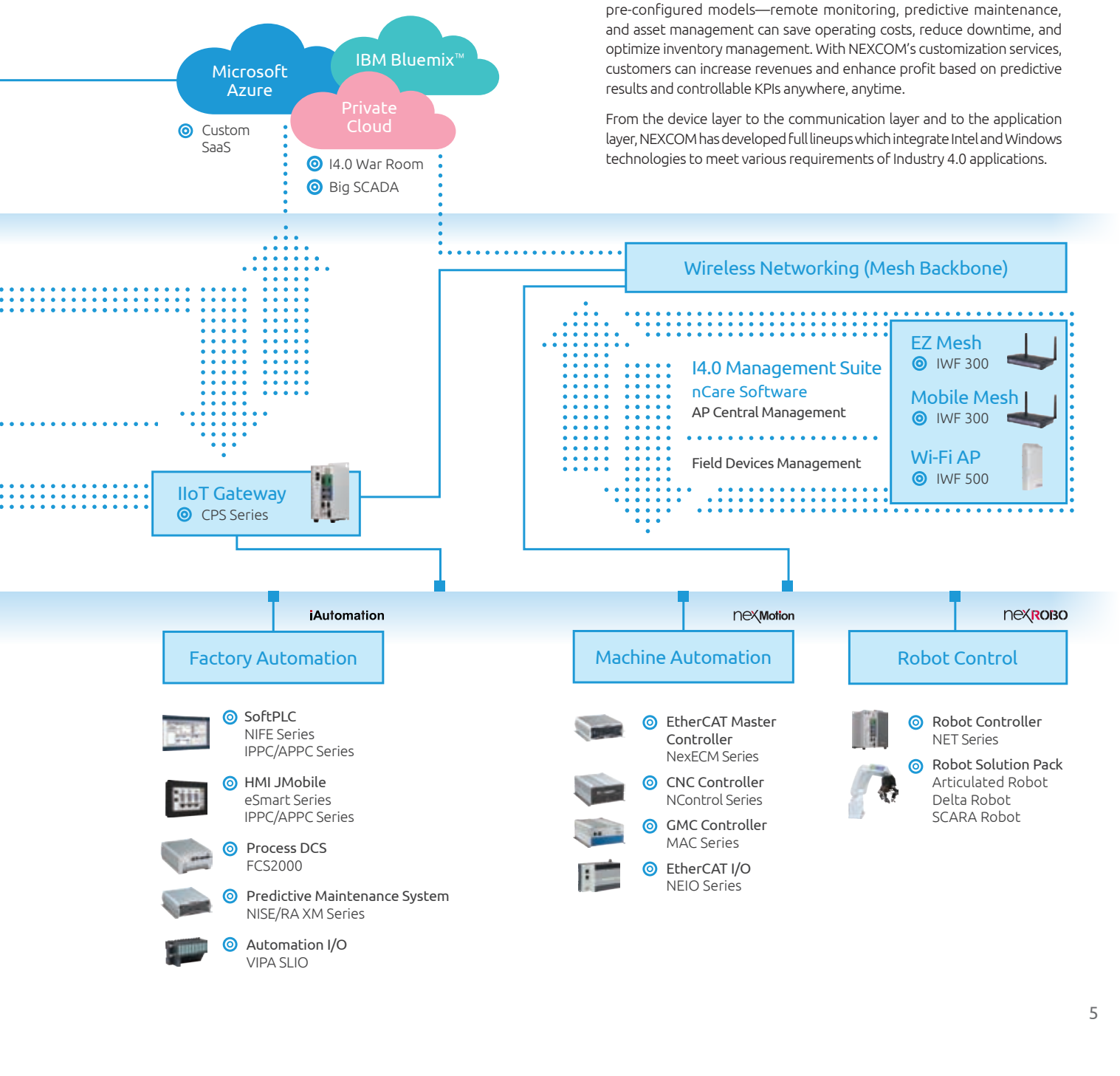
Application Layer:

Today's investment in factory automation equipment is gradually increasing and accounts for a high proportion of company assets. In the semiconductor industry, manufacturing equipment accounts for more than 80% of a company's total assets; the company now pays more attention to asset management.

The application of asset management uses factory equipment operation monitoring for predictive maintenance, efficiency optimization, and dispatch flexibility, helping with analysis and decision-making regarding equipment investment. NEXCOM provides asset management solutions to predictive maintenance systems (PMS) used in critical and high-value equipment, machine downtime analysis, and sensor interfaces with DI and AI modules. All features use NEXOM IoT gateways of CPS series to connect directly to cloud servers to allow for device and asset management.

Leveraging Microsoft Azure, IBM Bluemix, SAP HANA and other third-party cloud services, NEXCOM offers customization and consulting services for SaaS implementation to meet various demands of Industry 4.0 applications. Providing consultancy on critical issues for customers, NEXCOM as a Microsoft-certified partner can design and implement SaaS which is integrated with the latest machine learning and Power BI technologies to display the results of big data analysis from customers' factories. Therefore, customers can benefit by making effective decisions in real time. Three pre-configured models—remote monitoring, predictive maintenance, and asset management can save operating costs, reduce downtime, and optimize inventory management. With NEXCOM's customization services, customers can increase revenues and enhance profit based on predictive results and controllable KPIs anywhere, anytime.

From the device layer to the communication layer and to the application layer, NEXCOM has developed full lineups which integrate Intel and Windows technologies to meet various requirements of Industry 4.0 applications.



IoT Automation Solution Map

Manufacturers are enthusiastic about tapping the power of big data analysis to increase competitiveness, improve the bottom line, and anticipate trends. Manufacturers are looking to the Internet of Things (IoT), which lifts the communication barriers among field devices and enables data-driven decision making (DDDM). However, gaining access to field data is challenge because field devices use different field protocols, run independently, and lack connectivity.

To surmount communication barriers among various field devices including machinery, robots, PLCs, and sensors, NEXCOM IoT Automation Solution provides open-architecture solutions designed with cross-protocol communication capabilities, supporting data communication between field devices and the cloud. NEXCOM IoT Automation Solution can help manufactures improve operations, strengthen security barriers, simplify device management, and reduce maintenance costs.

NEXCOM IoT Automation Solution can be divided into four product categories which are data concentration system, PC-based automation system, prediction maintenance system, and automatic metering system, covering all scopes of IoT Automation applications. These four product categories all have connectivity to connect to the cloud. Featuring connectivity, these four product categories can connect to the cloud, forming a mesh network that links factories and enterprise.

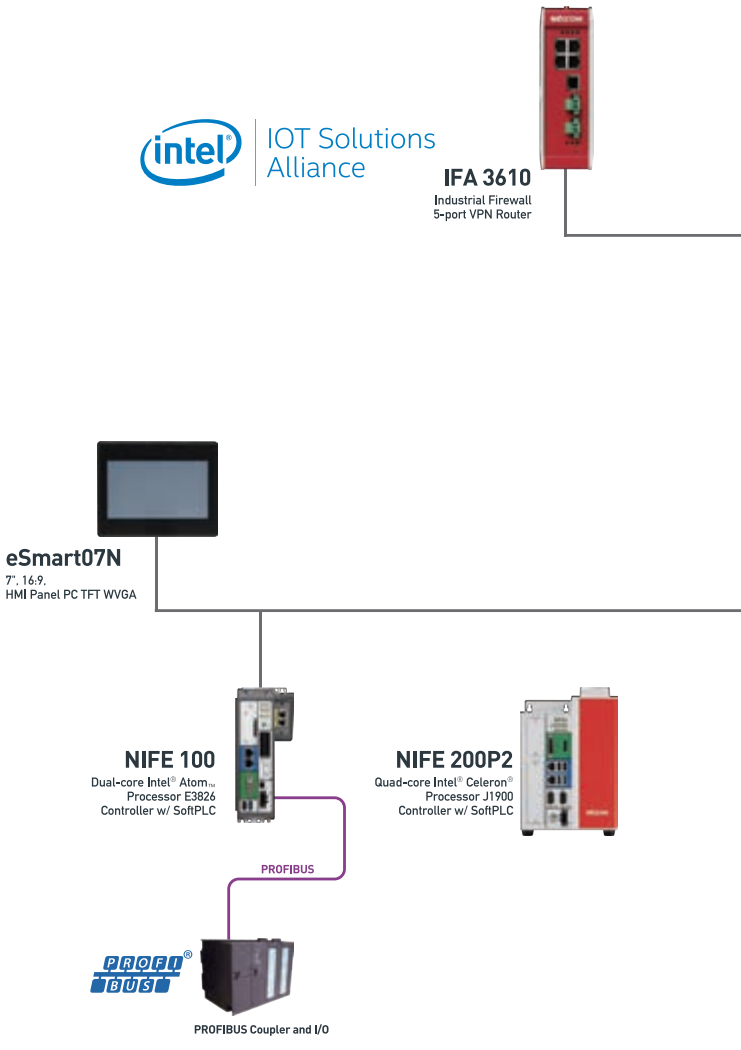
NEXOCM's data concentration systems are designed to collect data from controllers such as PLC, machinery and equipment. NEXCOM's fieldbus concentrators and IoT gateways can easily transfer different fieldbus protocols into data formats based on application needs. The built-in NEXCOM OPC server software provides an unified data retrieval mechanism for users. In addition, the MQTT software component allows users to turn NEXCOM's fieldbus concentrators into cloud bases.

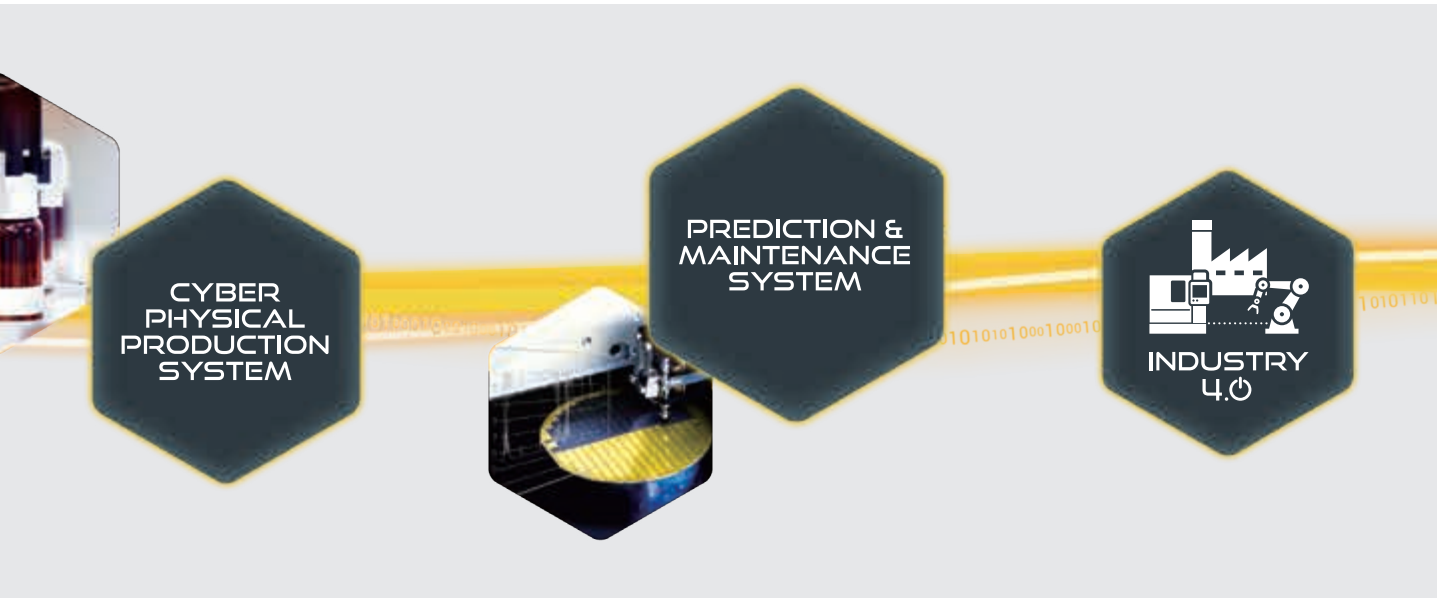
NEXCOM's PC-based automation systems are control systems compatible with most of the fieldbus networks. NEXCOM's PC-based automation systems can be used as standalone controllers and support multiple fieldbus networks at the same time. NEXCOM's PC-based automation systems support 3G/Wi-Fi wireless connection. With the built-in MQTT cloud software mechanism, NEXCOM's PC-based automation systems can support the cloud based application.

For automation application, both control and monitoring are important. Should machinery fail, production will be interrupted, causing enterprises serious revenue and profit losses. NEXCOM's prediction maintenance solutions are based on Rockwell condition monitoring systems. With built-in 3G modules, NEXCOM fanless SCADA platforms can receive signals from devices such as proximity sensor and accelerometer, measuring the time domain vibration altitude and spectrum detection for machinery condition analysis. NEXCOM's prediction maintenance solutions can also connect to machinery's control panels to get the operation data for further analysis. NEXCOM's systems are integrated with NEXCOM OPC server and remote alarm application components—which are compatible with Rockwell eMonitor software—to send alarm messages to maintenance engineers. Vibration data can also be shared via web-based functions to enable remote analysis.

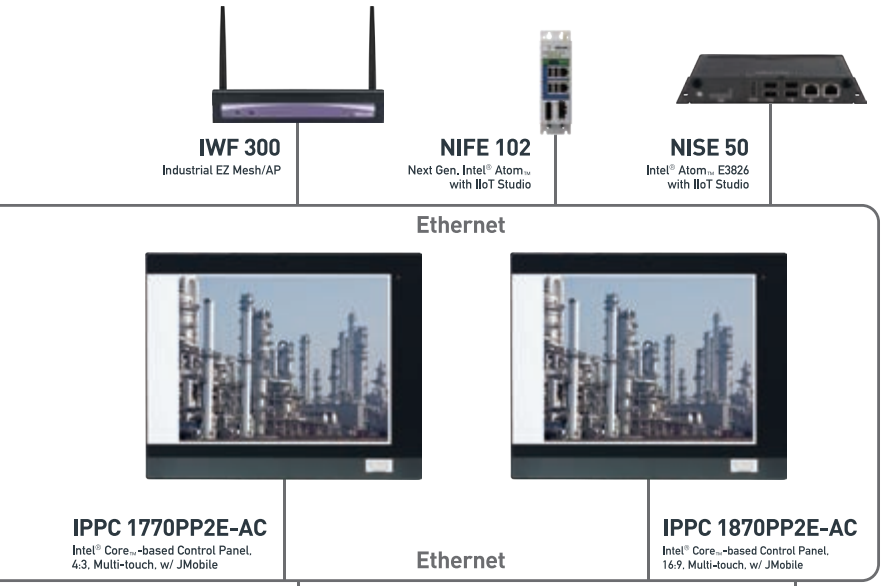
The Automatic Metering system is for the purpose of environmental monitoring. The system is also ideal for use in process production to help enhance pipeline safety and industrial flow measurement. NEXCOM fanless platform provides the system with easy expansion of wireless communication protocols such as ZigBee and Wi-Fi as well as power line communication interfaces. The MQTT software mechanism is also made available for cloud applications.

NEXCOM provides a clear scope and definition for IoT Automation infrastructure, turning a concept into reality.





CYBER PHYSICAL PRODUCTION SYSTEM



Cloud Connectivity

- Complete solution: gateway, Wi-Fi AP, and firewall
- Firewall/Intrusion prevention: secure from cyber attack
- SSL VPN: real-time remote monitoring
- Mesh connectivity: less data loss for fieldbus, video and data transmission
- Easy installation: build automatic network anywhere and anytime
- Click-to-connect to any cloud platform via IIoT Studio tool

SCADA / HMI

- Scalable control panel: multi-touch w/ P-cap or resistive, and IP66 on front
- Seamless connection: remote monitoring/web access via mobile device
- Simple and intuitive HMI interface & IEC61131-3 PLC programming
- All-in-one PC-based control panel, available with JMobile, SoftPLC & SoftMotion
- Support dynamic widget properties connected to tags
- Support multi-fieldbus protocol communication

PC-based Controller

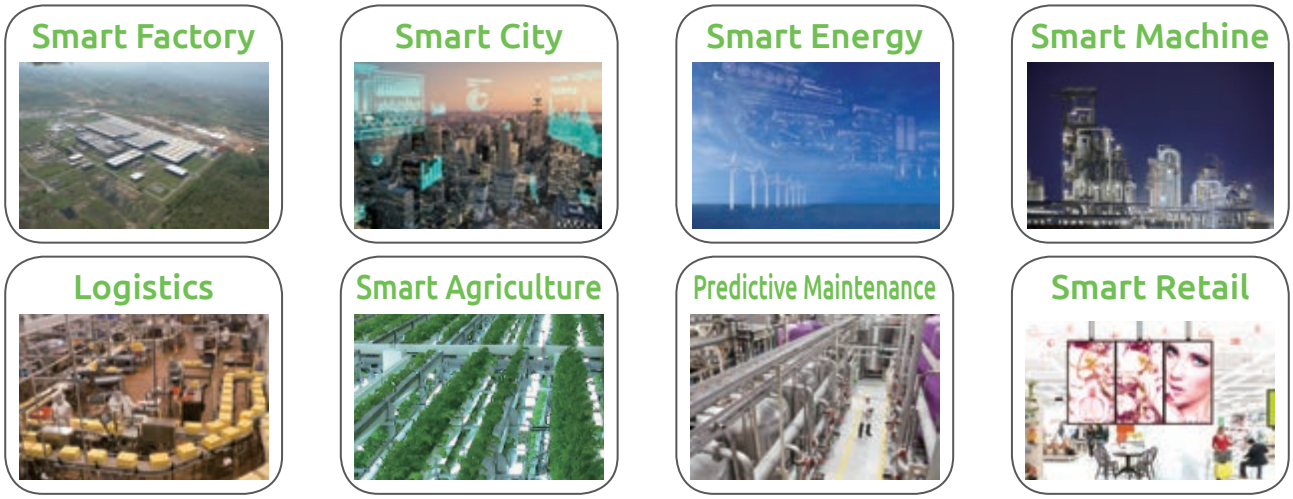
- Price-to-performance selections with open architecture
- Multicore processor: boost performance and improve real-time process
- Support 1024+ I/O point and 64+ axis controlling
- Industrial IEC61131-3 PLC programming and development
- Client/M2M communication: PLC handler APIs and OPC-UA server
- Retain data before power loss: NVRAM and power pack
- Compliant with heavy industrial EMC standard

Fieldbus Remote I/O

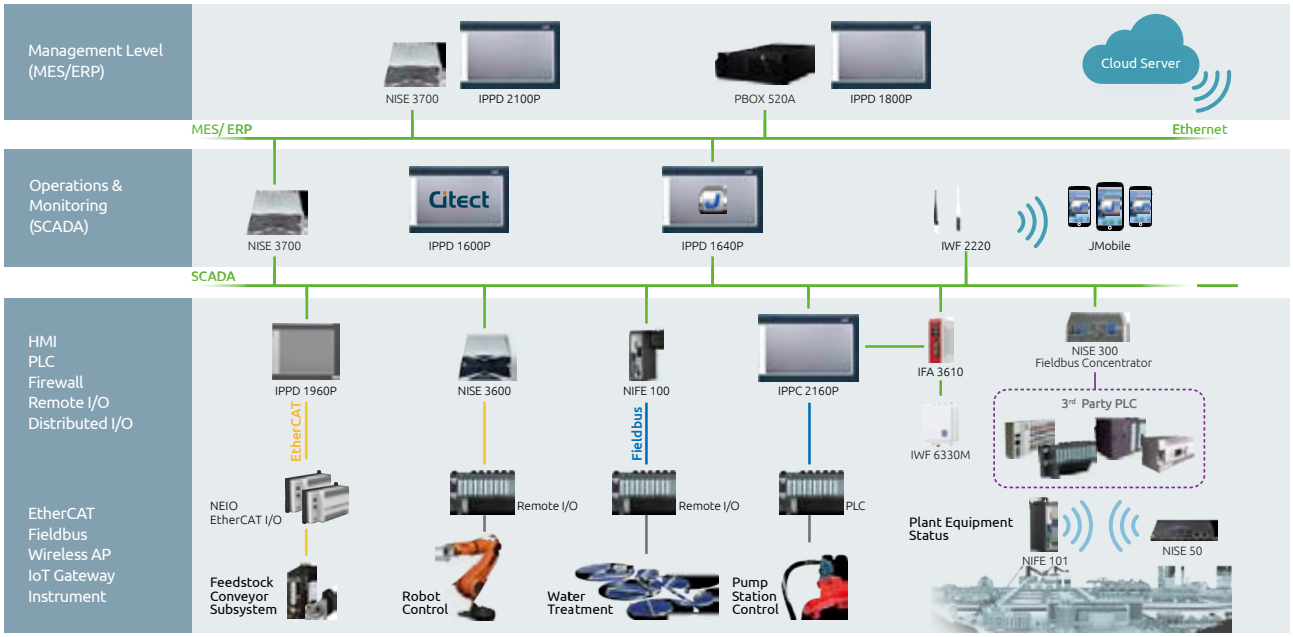
- PROFINET®
- PROFIBUS®
- EtherNET/IP®
- EtherCAT®
- DeviceNet®
- CANopen®
- Modbus® RTU/Modbus® TCP

Industry IoT-Ready Automation Controllers

The vision of the Internet of Things (IoT) is of a massively linked world of intelligent sensors and actuators communicating over the internet to improve performance, efficiency, and flexibility of automatic manufacturing. This vision includes coupling many sensors with the cloud (or server) for big data analytics to achieve advanced levels of optimization and efficiency. There are a broad range of IoT applications that can be improved with sensing and control in industrial automation applied to for example, energy, agriculture, manufacturing, logistic management, equipment, leasing business, etc.



Taking the manufacturing industry for example, smart manufacturing is driving new opportunities for end users as they look to optimize their production and supply chain by bringing big data to decision-making, management, and control processes. As end users pursue smart manufacturing, they need original equipment manufacturing partners who create intelligent manufacturing equipment that easily integrates into a facility, provides access to information, and enables agile reaction to changing market demands. In handling massive data, a powerful industrial PC-based controller is required to communicate with sensors and/or actuators in order to locally control, optimize, perform analytics, and refine data. With an open architecture, a PC-based controller has strong connectivity to link more devices and provides much more powerful computing performance than PLCs. This is a big help for factories seeking to streamline their manufacturing processes. In the new industrial IoT model, mobile workers are going to be able to interface with the automation taking place around them using mobile devices and web-based software applications. This brings a different way to influence the automation industry, creating great deals of excitement in automation and bringing up many IoT concepts and demands.



Scalable Performance, Open Architecture, Great Connectivity

A PC-based controller is a rugged computer designed as a hardware platform to control an industrial control system and has been adapted for industrial applications in various forms for a long time. The PC-based controller performs an auxiliary function within a control system (for process control, motion control, robot control, automatic optical inspection, measurement and more) and connects sensors and other field devices simply through standard I/Os. Using IEC 61131-3 programming tools, NEXCOM PC-based controllers (NIFE and Control Panel) are already equipped with SoftPLC and real-time engines to connect to common fieldbus devices and communicate with automation components. With an open architecture, NEXCOM PC-based controllers also support standard computing languages, such as C and C++.

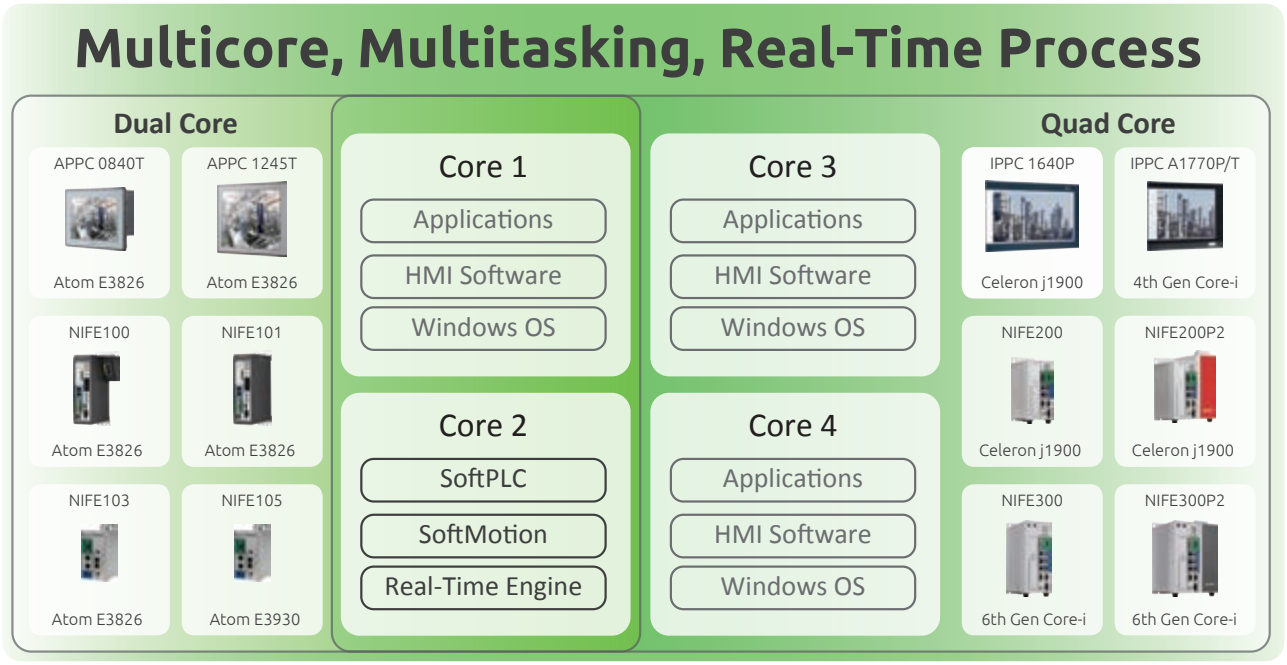
IoT applied to automation uses this technology to streamline and create system architectures that are more affordable, responsive, and effective. NEXCOM PC-based controllers enable frictionless communications and interaction from manufacturing field input/output (I/O), including sensors, actuators, analyzers, drives, vision, video, and robotics, for increased manufacturing performance and flexibility. With the open connectivity, NEXCOM PC-based controllers can help drive intelligence to the edge of the system with the ultimate goal of all industrial devices supporting IP, including field I/O and sensors which are already being used in manufacturing.

Automation Controller – Selection Guide

	SoftPLC			SoftMotion			SoftMotion CNC		
Performance Index	P10	P20	P30	M10	M20	M60	R10	R20	R60
Real-Time	Yes			Yes			Yes		
Software Protocols	EtherCAT, EtherNET I/P, PROFINET								
Optional Protocols via FBI	PROFIBUS, DeviceNET, CANopen								
IEC61131-3 Language	Ladder Diagram, Function Block Diagram, Instruction List, Structured Text, Sequential Function Chart, Continuous Function Chart								
Cycle Time (ms)	1	0.5	0.5	1	0.5	0.5	1	0.5	0.5
Max. I/O Points	512	1024	1024+	512	1024	1024+	512	1024	1024+
Max. Axes				12	24	64	12	24	64
Control Group							1	2	6
Motion Features				Support GEAR, CAM Function Integrated graphical CAM editor with extensive configuration options					
High-Computing Applications	-	-	V	-	-	V	-	-	V
Other Application Software									
HMI (integrated options)	-	JMobile Suite	JMobile Suite	--	TargetVisu	TargetVisu	TargetVisu	TargetVisu	TargetVisu
NIFE100	V			V					
NIFE101	V			V					
NIFE200		V	V		V		V	V	
NIFE200P2E		V	V		V			V	
NIFE300, Core i3			V			V		V	V
NIFE300, Core i5						V			V
NIFE300P2, Core i7									V
APPC0842T		V							
APPC1247T (J1900)		V			V				
APPC1542T (J1900)		V			V			V	
APPC1562TP2E-DC, (Core i5)			V			V			V
IPPC A1772PE2-DC, (Core i5)						V			V
IPPC A1772TFE2-DC, (Core i7 w/ FAN)						V			V
IPPC1642P (J1900)		V			V			V	

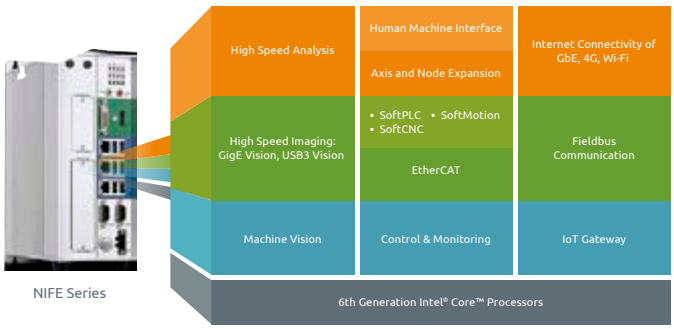
Multi-Core, Multi-Tasking

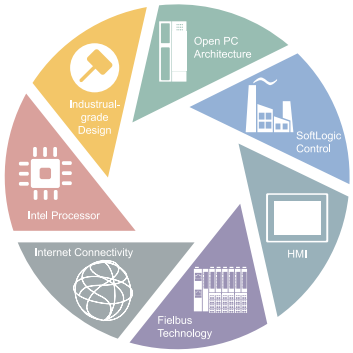
NEXCOM PC-based controllers have a multi-core 64-bit processor and support several gigabytes of RAM and mass storage, providing a tremendously capable computing platform. NEXCOM PC-based controllers also have the capacity to carry out many tasks simultaneously rather than switching from one task to another. Compared with traditional industrial PLCs designed for a single task and equipped with just enough processing power to perform that task, NEXCOM PC-based controllers have higher computing capability to carry out multiple tasks—running operating system, real-time SoftPLC, and other application software in different cores while keeping a high level of performance. Even if the Windows operating system freezes, NEXCOM PC-based controllers can ensure real-time processes on SoftPLC and SoftMotion are still running.



Highly Integrated Controller

NEXCOM PC-based controllers and Control Panels are integrated with SoftPLC, SoftMotion, real-time engine, OPC server, and operating system as a controller. There are five programming languages (Instruction List, Structured Text, Ladder Diagram, Function block Diagram, and Sequential Function Char) for application programming defined in the IEC 61131-3; all five are available in the development environment. This brings programmer high flexibility compared with traditional PLCs.





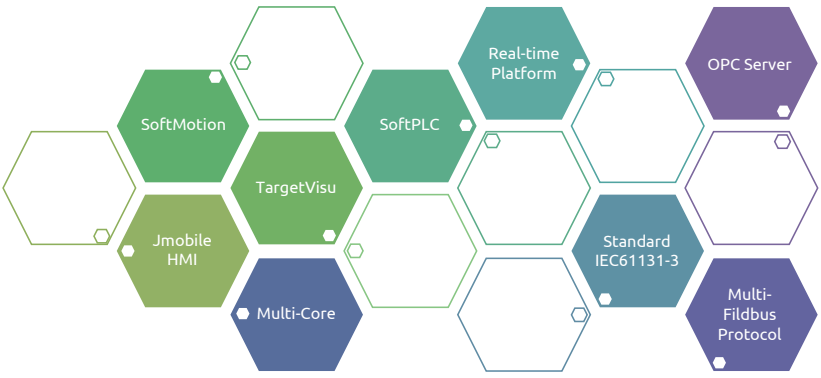
Different Fieldbuses can be used directly on NEXCOM NIFE PC-based controllers and Control Panel Pc powered by the Soft Logic programming Software. For this purpose, the tool integrates configurators for the most common system such as PROFIBUS, CANopen, EtherCAT, PROFINET and EtherNet/IP. By means of a software plugin in the FDT (Field Device Tool) Frame application, additional device-specific user interfaces from third-party suppliers can be integrated. Communication between these interfaces will be realized through a communication Device Type Manager (DTM). With these tools, seamless and flexible communication becomes easier as different protocols are handled in real time. Using NEXCOM's FBI interface with support for dual, triple or more different protocols, cross-over communication is made easy.

Optional Modules

FBI Fieldbus Module			
			
P/N:10J50090E08X0 EtherCAT Protocol	P/N:10J50090E09X0 PROFIBUS Protocol	P/N:10J50090E10X0 DeviceNet Protocol	P/N:10J50090E15X0 CANopen Protocol

FBI Fieldbus Module		COM Module	
			
P/N:10J50090E20X0 EtherNet/IP Protocol	P/N:10J50090E21X0 PROFINET Protocol	P/N:10JK0ECOM04X0 NISKECOM3 4xRS485	P/N:10JK0ECOM06X0 NISKECOM4 4xRS232

LAN Module		Persistent Memory Module
		
P/N:10JKLAN0401X0 NISKLAN04 2XI210AT	P/N:10JKLAN0101X0 NISKLAN01 1X82574L	P/N:10JKNVRAM00X0 NISK-NVRAM 1MB

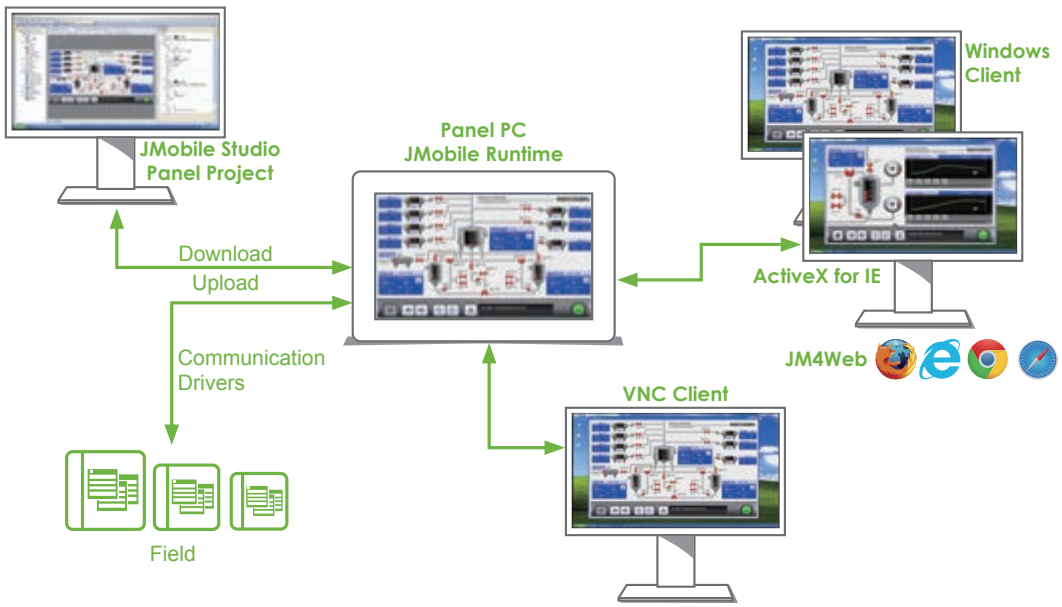


In regard to visualization software, there are two optional software bundles targeting different usage scenarios available with NEXCOM PC-based controllers. One is JMobile and the other is TargetVisu.

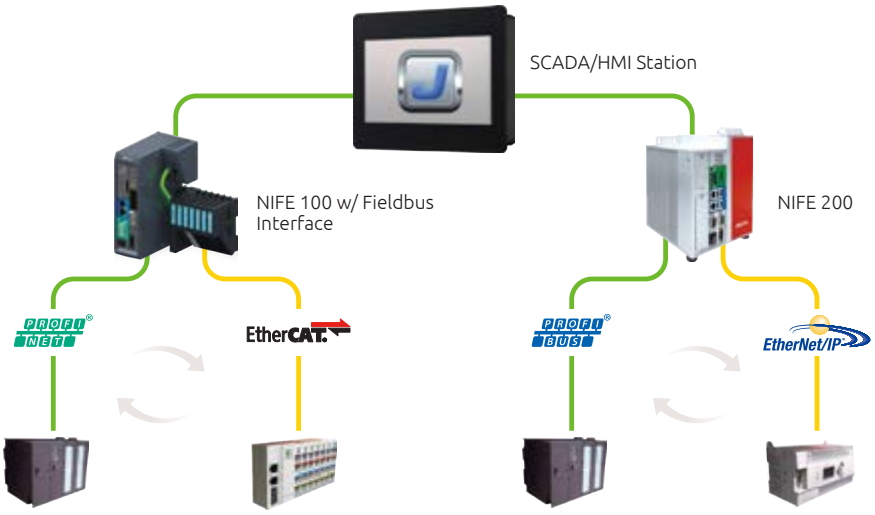
For CNC and motion control applications, TargetVisu is recommended. In order to optimize the performance of the visualization, putting as many elements, which are static (no movement, no dynamic texts, no dynamic color changes), to the back is suggested. As NEXCOM PC-based controllers are combined with the visualization software, they are perfect for operating and monitoring machines and systems

For machine and factory automation applications, JMobile is a perfect companion for the factory environment where the HMI is applied. It lets you view information from your factory whenever you need it. PLCs, sensors, drives, panels—practically any piece of equipment can be connected to JMobile. The JMobile server can interface to databases and over one hundred custom device protocols. As JMobile is a web-based HMI, it is easy to monitor equipment from inside the factory or from miles away.

JMobile Suite overview



Data Exchange on JMobile



The implementation of Industry 4.0 Cyber-Physical Production Systems, such as intelligent equipment, remote and connected devices, responsive and adaptable production and logistics control, requires the increased use of smart controllers with scalable performance, open architecture, and great connectivity. As smart manufacturing is applied throughout factory operations, a highly integrated controller with the multitasking capability will speed up the movement toward to a connected factory.

The Industrial IoT Cloud Solution

Xcare-RM: Remote Monitoring

Industry 4.0 is combining physical and digital worlds and giving rise to the smart factory. NEXCOM rides on the wave of Industry 4.0; we find all factories need to monitor the status of key equipment and keep track of equipment usage and performance. When a situation occurs, the key equipment can be automatically notified of administration units to improve processes and enhance efficiency. In addition, companies can make use of Microsoft Azure's machine learning services, analyzing historical data to not only predict future behavior and trends but also adjust internal production operations and equipment maintenance schedules and thusly helping companies make better decisions.

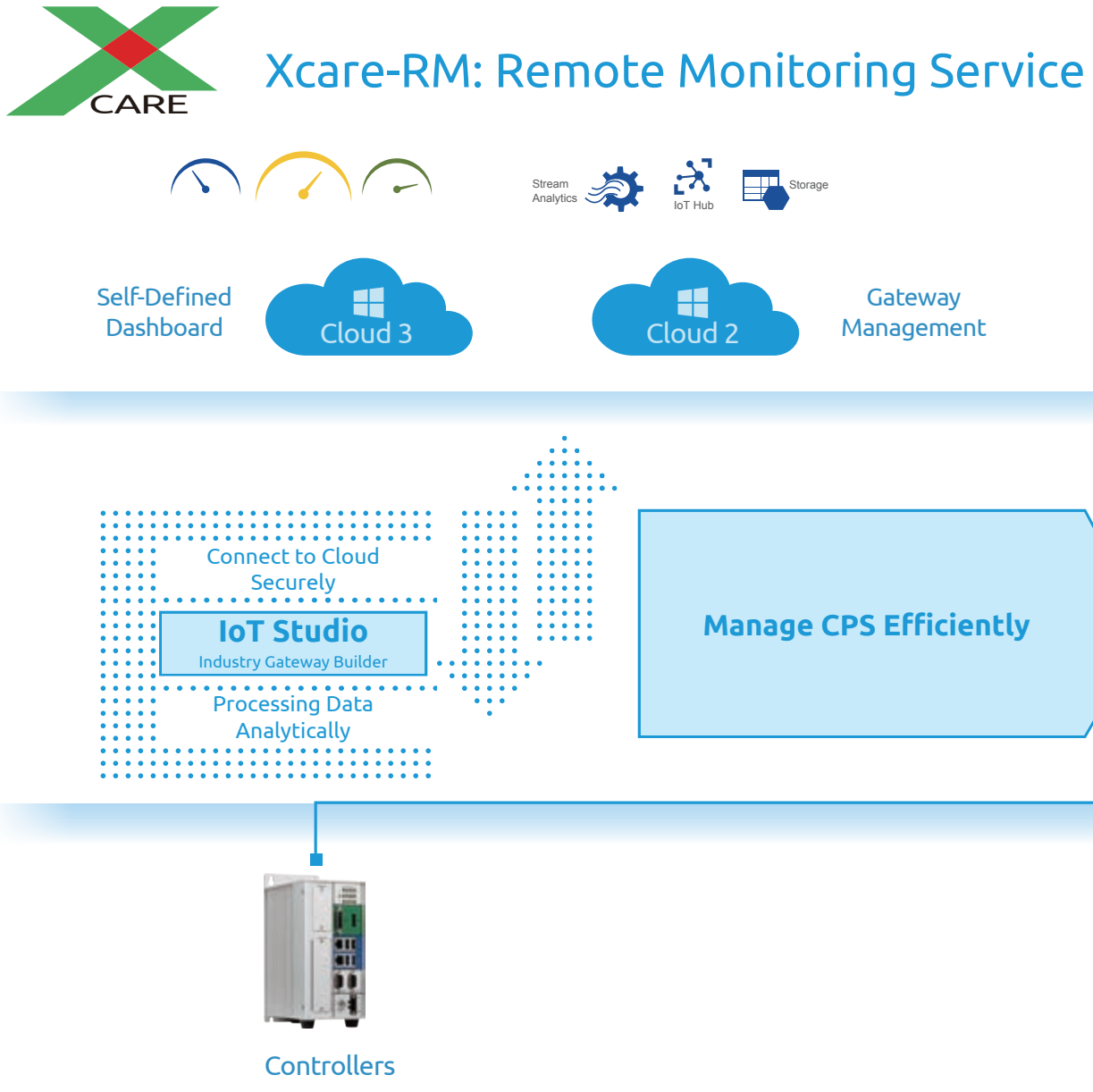
Key Features:

1.Industrial-Grade Availability

Xcare-RM is built on Microsoft Azure Cloud and uses IoT Hub (PaaS) to process bidirectional messages. It offers industrial-grade reliability and stability despite the amount of devices connected to the service. IoT Hub can process over a million messages simultaneously.

2.Standard Communication Protocols

Xcare-RM uses standard communication protocols including HTTP, Advanced Message Advanced Message Queuing Protocol (AMQP), and MQ Telemetry Transport (MQTT)



3.Two-Way Communication

NEXCOM cyber physical systems (CPSs) can easily and safely connect to the cloud. Users can use cloud data to understand the state of factories or machines and take actions when a device needs attention. In a cloud-to-device message, reliable notification to the command and connected devices can be added, and message delivery can be tracked through notification receipts. Messages are transmitted in a durable and lasting manner despite the fact that connected devices may intermittently drop connections.

4.Encrypt Every Connections

Identities and certifications are setup for each connected device. Xcare-RM will keep cloud-to-device and device-to-cloud messages confidential.

5.Bundle with NEXCOM CPSs

All NEXCOM CPSs are by default bundled with NEXCOM IoT Studio. Customer can use the NEXCOM Industrial IoT Studio to get sensor date, do process, and pass required date to the cloud for display and further analysis.

6.Flexible Dashboard

There are five dashboard templates in Xcare-RM. We also offer ready-to-use dashboards for customers to monitor sensors immediately with an affordable monthly fee.

7.Predictive Maintenance

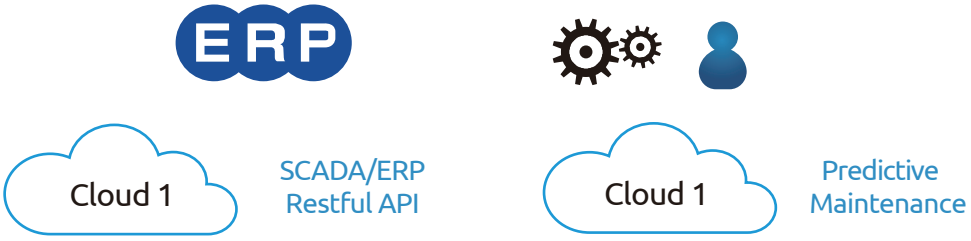
If the potential error predicted by Machine Learning, Xcare-PM will assign a engineer and provide all details to help the engineer solve the issue immediately.

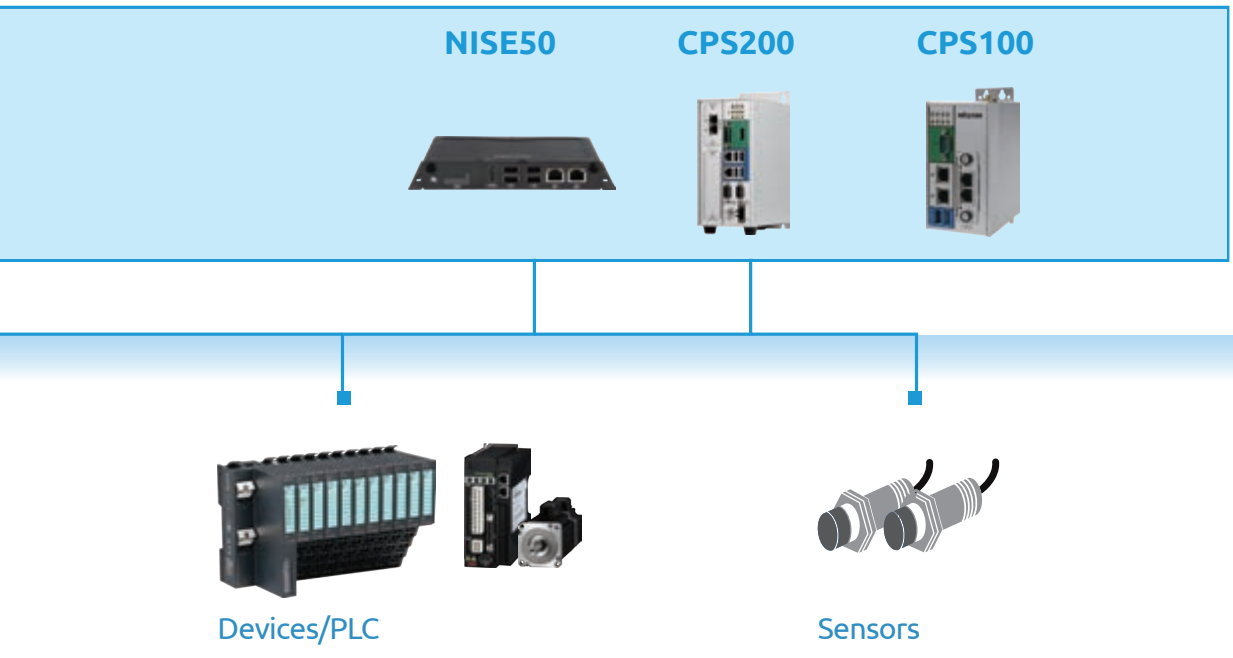
8.SCADA/ERP Rest APIs

The goal of smart manufacturing is enabling "the units" to determine and identify field activities, configuration options, and production conditions, and communicate independently and wirelessly with other units.

Xcare-RM helps collect data from previously unconnected devices and sensors and visualize the data. These are just initial steps of Industry 4.0, but will take precision manufacturing to the next level, streamline manufacturing and business processes, improve versatility and precision, and boost quality and capacity

Xcare-RM: Remote Monitoring Service





For Energy Savings, Count on a NEXCOM Trusted Fanless System

The era of the Internet of Things (IoT) increases demand for reliable and trusted systems. In the industrial automation world it not only increases M2M connectivity but also aids the collection of data from the field to the cloud for big data applications. However, since the IoT derives its name from the wide range of devices and their applications, its potential is further developed when these applications are utilized to increase productivity, reduce maintenance costs, deploy energy saving solutions, improve communities, and finally benefit society as a whole. Therefore, the Internet of Things is at the point where it is helping individuals, communities and cities become smarter energy consumers by using intelligent fanless computers.

NEXCOM industrial fanless computers featuring high performance in compact size, high durability, great expansion ability and low-noise design have emerged as new market favorites. NEXCOM NISE fanless box computer and Panel PC computer are applied to a wider range of applications, including those industrial automations, in digital signage, retail equipment, digital surveillance, smart factory, inspection equipment and industrial IoT Gateway.

Specials on Fanless Design:

- Component selection
- Optimize system placement for better thermal dissipation
- Power efficiency to reduce the heat
- Passive cooling design
- Enhance system reliability via stress test

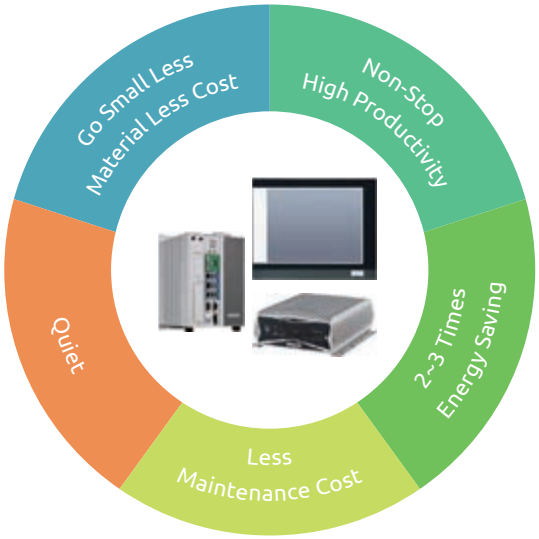
Benefits of Using Fanless Systems:

- Maximize system reliability
- Reduce downtime
- Extend system lifecycle
- Reduce maintenance costs
- Energy savings

Industrial fanless computers bring you a better world

Using energy more efficiently is an essential part of our strategy to save costs, reduce carbon emissions and save energy. As a smart energy consumer, choosing a reliable and trusted fanless computer can produce 2~3 times the energy saving of a regular desktop PC (about 100W consumption) or more if it is a traditional industrial IPC rackmount computer. These savings add up quickly in both annual emissions and running costs. Fanless computers bring you a more compact system (using less material), optimized performance (less power consumption, about 60W for Core-i and 25W for Atom processors), and minimized maintenance costs (less labor costs) on cleaning fan's filter or replacing the fan itself. Over many years, this energy saving cost is amazing. Out of respect to the environment and global resources, reliable and greater energy saving computers will be essential.

NEXCOM fanless NISE and panel PC aim to give developers convenient, simplified and trusted solutions for embedded applications. To maximize the flexibility to every work space and environment, NEXCOM fanless computer always keeps its rich I/O and easy expansion capabilities. NEXCOM also develop Xcare software utility for the remote management to facilitate easy management and maximum benefits. NEXCOM's excellence shows not only in outstanding system design but also in software and firmware support for any customization service.



Specials on NISE & Panel PC:

- Scalable CPU options for excellent computing performance
- Wide range of power supply, 9-30Vdc, fulfills different applications
- Ultra-low power consumption
- Full-featured I/O interface
- Multi-choice on communication & connectivity options

Benefits:

- Best Cost and Performance value
- Space saving with Slim & Compact design
- Scalable performance in small footprint system
- Upgrade friendly and great expansion capability
- Easy software porting to define the system application

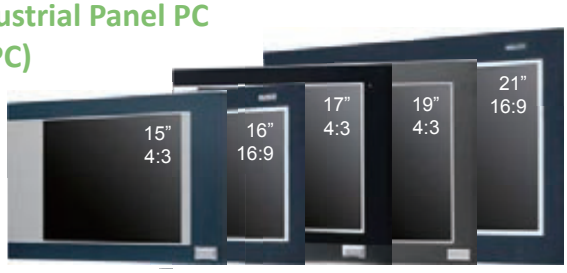
NEXCOM brings one-stop shopping choices

As the value of the IoT is derived from a wide range of applications, NEXCOM brings a wide range of products to fulfill different applications covering Industrial panel computers, Industrial Displays and fanless Industrial Computers . For smart city applications, the APPC (Fanless Panel Computer) and NISE (Fanless Box computer) with IEC60950 EMC compliance are recommended. For applications which require greater noise reduction such as Machine or Factory Automation, EN 61000-4-2 & EN 61000-4-4 compliant IPPCs (Fanless Panel Computer) and NIFEs (Fanless Box Computer) are recommended. Thus, NEXCOM fanless computers are tailored to meet your requirements.

LIGHTER INDUSTRY **INDUSTRIAL** HEAVY INDUSTRY

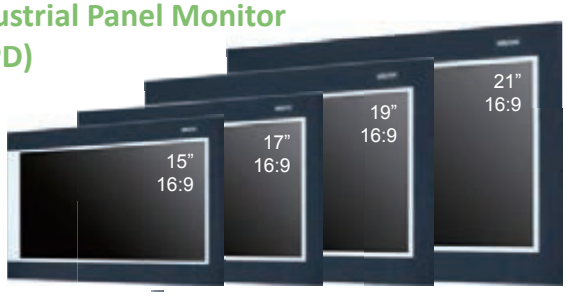
Applied Panel PC (APPC)

Industrial Panel PC (IPPC)



Applied Panel Monitor (APPD)

Industrial Panel Monitor (IPPD)



NISE

NIFE

Fanless Panel Computers, available in either Capacitive Multi-Touch mode or Single-Touch Resistive mode, are supported in the IPPC 4:3 series. This brings more flexibility. For example industrial fanless computers, which come in Slim and, Compact models are optimized for their size, high performance, expansion ability and performance level and are the key to choosing the best computer for the project. To choose the best-fitting fanless computer it is essential to save the total cost in investment and also deploy energy savings solutions.

Industrial Fanless Computer
Smart NISE, Intelligent Anywhere

NISE 50 series	NISE 100 series	NISE 2000 series	NISE 3000 series	NISE 300 series
ATOM **IoT Lite**	ATOM **IoT Gateway**	ATOM **Optimization**	Core-i Performance	Multi-Expansion **(Mini-PCIe)**

Fanless Computer

Model					
	NISE 50	**NISE 50W**	**NISE 50C**	**NISE 50C-H**	**NISE 103**
CPU	Intel® Atom™ E3826 1.46GHz	Intel® Atom™ E3826 1.46GHz	Intel® Atom™ E3826 1.46GHz	Intel® Atom™ E3826 1.46GHz	Intel® Atom™ D425 1.8GHz
Chipset	Intel® Bay Trail-I	Intel® Bay Trail-I	Intel® Bay Trail-I	Intel® Bay Trail-I	Intel® ICH8M
Max. Memory	2G DDR3L onboard (support 4G memory max)	2G DDR3L onboard (support 4G memory max)	2G DDR3L onboard (support 2G memory max)	2G DDR3L onboard (support 2G memory max)	2GB DDR3
HDD Space	-	1 x 2.5" SATA HDD bay	-	1 x 2.5" SATA HDD bay	1 x 2.5" SATA HDD bay
CFast Socket	-	-	-	-	1 (External, CF)
SD Card	-	-	-	-	-
eMMC	16GB	16GB	16GB	-	-
CD-ROM/DVD-ROM	-	-	-	-	-
VGA	-	-	-	-	1
LVDS	-	-	-	-	Single, 18-bit (Internal)
DVI	-	-	-	-	-
TV-Out	-	-	-	-	-
HDMI	1	1	1	1	-
Display Port	-	-	-	-	-
eSATA	-	-	-	-	-
IEEE1394	-	-	-	-	-
USB	4	4	4 x USB 2.0	4 x USB 2.0	4
PS/2	-	-	-	-	-
Parallel Port	-	-	-	-	-
Serial Port	3	3	3	3	4
RS422/485	1	1	-	-	1
RS422/485 Isolation	-	-	-	-	-
CANbus	-	-	-	-	-
mini-PCIe	3	3	3	3	1
SIM Card Holder	1	1	1	1	1 (Internal)
GPIO	4-in/4-out (internal)	4-in/4-out (internal)	4-in/4-out (internal)	4-in/4-out (internal)	-
LAN Ports	2 x GbE	2 x GbE	1 x GbE	1 x GbE	2 x GbE
Audio	Mic-in & Line-out	Mic-in & Line-out	Mic-in & Line-out	Mic-in & Line-out	Mic-in & Line-out
Power Input Range	ATX, DC +24V	ATX, DC +24V	ATX, DC 12V	ATX, DC 12V	ATX, DC 12V
Power Supply Adapter	Optional	Optional	Optional	Optional	Optional
Expansion	-	-	-	-	-
Win7 32-bit	-	V	V	V	V
Win7 64-bit	-	V	V	V	-
WES2009 32-bit	-	-	-	-	V
Win8 32-bit	V	V	V	V	-
Win8 64-bit	V	V	V	V	-
WinCE/WEC	-	-	-	-	WinCE 6.0
Win10 32-bit	V	V	V	V	-
Win10 64-bit	V	V	V	V	-
System Dimension (W x D x H, mm)	162 x 26 x 150	285 x 150 x 26	146 x 26 x 150	146 x 42 x 150	185 x 131 x 54
Carton Dimension (W x D x H, mm)	233 x 227 x 169	346 x 265 x 200	233 x 227 x 169	233 x 227 x 169	259 x 233 x 129
Net Weight (kg)	0.87	1.4	0.84	0.95	1.2
Gross Weight (kg)	1.5	2.3	1.5	1.6	2

					
NISE 104	**NISE 105**	**NISE 105A**	**NISE 105-E3845**	**NISE 106-N3160**	**NISE 106-N3710**
Intel® Atom™ D2550 1.86GHz	Intel® Atom™ E3826 1.46GHz	Intel® Atom™ E3826 1.46GHz	Intel® Atom™ E3845 1.91GHz	Intel® Celeron® N3160 1.6GHz	Intel® Pentium® N3710 1.6GHz
Intel® NM10	Intel® Bay Trail-I	Intel® Bay Trail-I	Intel® Bay Trail-I	Intel® Braswell	Intel® Braswell
4G DDR3	4GB DDR3L	4GB DDR3L	4GB DDR3L	4GB DDR3L	4GB DDR3L
1 x 2.5" SATA HDD bay	1 x 2.5" SATA 2.0 HDD bay	1 x 2.5" SATA 2.0 HDD bay	1 x 2.5" SATA 2.0 HDD bay	1 x 2.5" SATA HDD bay	1 x 2.5" SATA HDD bay
1 (External, CFast)	1 (External, SATA 2.0 CFast)	1 (External, SATA 2.0 CFast)	1 (External, SATA 2.0 CFast)	1 (External, CFast)	1 (External, CFast)
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
1 (DVI-I)	1 (DVI-I)	1 (DVI-I)	1 (DVI-I)	1 (DVI-D)	1 (DVI-D)
-	-	-	-	-	-
1	1	1	1	1	1
-	-	-	-	1	1
-	-	-	-	-	-
-	-	-	-	-	-
6	2 x USB 2.0 1 x USB 3.0	2 x USB 2.0 1 x USB 3.0	2 x USB 2.0 1 x USB 3.0	4 x USB 3.0	4 x USB 3.0
-				-	-
-	-	-	-	-	-
4	4	4	4	4	4
2	2	4	2	2	2
-	-	-	-	-	-
-	-	-	-	-	-
1	1	1	1	1	1
1 (Internal)	1	1	1	1	1
-	4-in/4-out (internal)	4-in/4-out (internal)	4-in/4-out (internal)	4-in/4-out (internal)	4-in/4-out (internal)
2 x GbE	2 x GbE	2 x GbE	2 x GbE	2 x GbE	2 x GbE
Mic-in & Line-out	Mic-in & Line-out	Mic-in & Line-out	Mic-in & Line-out	Mic-in & Line-out	Mic-in & Line-out
ATX, DC +10~28V	ATX, DC +9V~30VDC	ATX, DC +9V~30VDC	ATX, DC +9V~30VDC	ATX, DC +9V~30VDC	ATX, DC +9V~30VDC
Optional	Optional	Optional	Optional	Optional	Optional
-	-	-	-	-	-
V	V	V	V	V	V
-	V	V	V	V	V
V	-	-	-	-	-
-	V	V	V	V	V
-	V	V	V	V	V
WinCE 7.0	WinCE 7.0	WinCE 7.0	WinCE 7.0	-	-
-	V	V	V	V	V
-	V	V	V	V	V
185 x 131 x 54	185 x 131 x 54	185 x 131 x 54	185 x 131 x 54	185 x 131 x 54	185 x 131 x 54
259 x 233 x 129	259 x 233 x 129	259 x 233 x 129	259 x 233 x 129	245 x 318 x 152	245 x 318 x 152
1.2	1.3	1.3	1.3	1.3	1.3
2	2	2	2	2	2

Fanless Computer

Model					
	NISE 2200	**NISE 2210**	**NISE 2210E**	**NISE 2300**	**NISE 2310**
CPU	Intel® Atom™ D2550 1.86GHz	Intel® Atom™ D2550 1.86GHz	Intel® Atom™ D2550 1.86GHz	Intel® Atom™ D2550 1.86GHz	Intel® Atom™ D2550 1.86GHz
Chipset	Intel® ICH10 RAID	Intel® ICH10 RAID	Intel® ICH10 RAID	Intel® ICH10 RAID	Intel® ICH10 RAID
Max. Memory	4G DDR3	4G DDR3	4G DDR3	4G DDR3	4G DDR3
HDD Space	1 x 2.5" SATA HDD bay	1 x 2.5" SATA HDD bay	1 x 2.5" SATA HDD bay	1 x 2.5" SATA HDD bay	1 x 2.5" SATA HDD bay
CFast Socket	1 (External, CFast)	1 (External, CFast)	1 (External, CFast)	1 (External, CFast)	1 (External, CFast)
SD Card	-	-	-	-	-
eMMC	-	-	-	-	-
CD-ROM/DVD-ROM	-	-	-	-	-
VGA	-	-	-	-	-
LVDS	Single, 24-bit (Internal)	Single, 24-bit (Internal)	Single, 24-bit (Internal)	-	-
DVI	1 (DVI-I)	1 (DVI-I)	1 (DVI-I)	1 (DVI-I)/1 (DVI-D)	1 (DVI-I)/1 (DVI-D)
TV-Out	-	-	-	-	-
HDMI	1	1	1	-	-
Display Port	-	-	-	-	-
eSATA	-	-	-	-	-
IEEE1394	-	-	-	-	-
USB	6	6	6	6	6
PS/2	-	-	-	-	-
Parallel Port	-	-	-	-	-
Serial Port	6	6	6	4	4
RS422/485	4	4	4	4	4
RS422/485 Isolation	2 (2.5KV Isolation)	2 (2.5KV Isolation)	2 (2.5KV Isolation)	2 (2.5KV Isolation)	2 (2.5KV Isolation)
CANbus	-	-	-	-	-
mini-PCIe	1	1	1	1	1
SIM Card Holder	1	1	1	1	1
GPIO	4-in/4-out (external)	4-in/4-out (external)	4-in/4-out (external)	4-in/4-out (external)	4-in/4-out (external)
LAN Ports	2 x GbE	2 x GbE	2 x GbE	4 x GbE	4 x GbE
Audio	Mic-in & Line-out	Mic-in & Line-out	Mic-in & Line-out	Mic-in & Line-out	Mic-in & Line-out
Power Input Range	ATX, DC +9V~36VDC	ATX, DC +9V~36VDC	ATX, DC +9V~36VDC	ATX, DC + 9V~36VDC	ATX, DC +9V~36VDC
Power Supply Adapter	Optional	Optional	Optional	Optional	Optional
Expansion	-	1 x PCI	1 x PCIe x4 or 1 x PCIe x1(if mini-PCIe module is installed)	-	1 x PCI
Win7 32-bit	V	V	V	V	V
Win7 64-bit	-	-	-	-	-
WES2009 32-bit	V	V	V	V	V
Win8 32-bit	-	-	-	-	-
Win8 64-bit	-	-	-	-	-
WinCE/WEC	WinCE 7.0	WinCE 7.0	WinCE 7.0	WinCE 7.0	WinCE 7.0
Win10 32-bit	-	-	-	-	-
Win10 64-bit	-	-	-	-	-
System Dimension (W x D x H, mm)	195 x 200 x 65	195 x 200 x 90	195 x 200 x 90	195 x 200 x 65	195 x 200 x 90
Carton Dimension (W x D x H, mm)	335 x 294 x 193	335 x 294 x 193	335 x 294 x 193	335 x 294 x 193	335 x 294 x 193
Net Weight (kg)	2.6	3	3	2.6	3
Gross Weight (kg)	4	4.4	4.4	4	4.4

				
NISE 2310E	**NISE 2400**	**NISE 2400-J1900**	**NISE 2410**	**NISE 2410E**
Intel® Atom™ D2550 1.86GHz	Intel® Atom™ E3827 1.75GHz	Intel® Atom™ J1900 2.0GHz	Intel® Atom™ E3827 1.75GHz	Intel® Atom™ E3845 1.91GHz
Intel® ICH10 RAID	Intel® Bay Trail-I	Intel® Bay Trail-D	Intel® Bay Trail-I	Intel® Bay Trail-I
4G DDR3	8GB DDR3L	8GB DDR3L	8GB DDR3	8GB DDR3
1 x 2.5" SATA HDD bay	1 x 2.5" SATA II HDD bay	1 x 2.5" SATA II HDD bay	1 x 2.5" SATA II HDD bay	1 x 2.5" SATA II HDD bay
1 (External, CFast)	1 (External, CFast)	1 (External, CFast)	1 (External, CFast)	1 (External, CFast)
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
1 (DVI-I)/1 (DVI-D)	1 (DVI-I)	1 (DVI-I)	1 (DVI-I)	1 (DVI-I)
-	-	-	-	-
-	1	1	1	1
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
6	4 x USB 2.0 1 x USB 3.0	4 x USB 2.0 1 x USB 3.0	4 x USB 2.0 1 x USB 3.0	4 x USB 2.0 1 x USB 3.0
-	-	-	-	-
-	-	-	-	-
4	4	4	4	4
4	2	2	2	2
2 (2.5KV Isolation)	-	-	-	-
-	-	-	-	-
1	2	2	2	2
1	1	1	1	1
4-in/4-out (external)	4-in/4-out (internal)	4-in/4-out (internal)	4-in/4-out (internal)	4-in/4-out (internal)
4 x GbE	2 x GbE	2 x GbE	2 x GbE	2 x GbE
Mic-in & Line-out	Mic-in & Line-out	Mic-in & Line-out	Mic-in & Line-out	Mic-in & Line-out
ATX, DC +9V~36VDC	ATX, DC +9~30V	ATX, DC +9~30V	ATX, DC +9~30V	ATX, DC +9~30V
Optional	Optional	Optional	Optional	Optional
1 x PCIex1	-	-	1 x PCI	1 x PCIe
V	V	V	V	V
-	V	V	V	V
V	-	-	-	-
-	V	V	V	V
-	V	V	V	V
WinCE 7.0	WinCE 7.0	WinCE 7.0	WinCE 7.0	WinCE 7.0
-	V	V	V	V
-	V	V	V	V
195 x 200 x 90	195 x 200 x 65	195 x 200 x 65	195 x 200 x 90	195 x 200 x 90
335 x 294 x 193	335 x 294 x 193	335 x 294 x 193	335 x 294 x 193	335 x 294 x 193
3	2.7	2.7	3	3
4.4	4	4	4.4	4.4

Fanless Computer

Model					
	NISE 2410-J1900	**NISE 2420**	**NISE 300**	**NISE 301**	**NISE 3600E**
CPU	Intel® Atom™ J1900 2.0GHz	Intel® Atom™ E3845 1.91GHz	4th Gen. Haswell Intel® i5-4402E BGA	Intel® Atom™ E3845 1.91GHz	3rd Gen. Intel® Core™ i5/i3 socket (2nd Gen. Intel® Core™ i5/i3 socket)
Chipset	Intel® Bay Trail-D	Intel® Bay Trail-I	Intel® QM87	Intel® Bay Trail-I	Intel® QM77
Max. Memory	8GB DDR3L	8GB DDR3	8GB DDR3/DDR3L	4GB DDR3L	8GB DDR3
HDD Space	1 x 2.5" SATA II HDD bay	1 x 2.5" SATA II HDD bay	2 x 2.5" SATA3.0 HDD bay	1 x 2.5" SATA II HDD bay	1 x 2.5" SATA HDD bay
CFast Socket	1 (External, CFast)	1 (External, CFast)	1 (External, SATA 3.0 CFast)	1 (External, SATA 2.0 CFast)	1 (External, CFast)
SD Card	-	-	-	-	-
eMMC	-	-	-	-	-
CD-ROM/DVD-ROM	-	-	-	-	-
VGA	-	-	-	1	1
LVDS	-	-	-	-	Dual, 24-bit (Internal)
DVI	1 (DVI-I)	1 (DVI-I)	1 (DVI-I)	1 (DVI-D)	1 (DVI-D)
TV-Out	-	-	-	-	-
HDMI	1	1	1	-	-
Display Port	-	-	-	-	2
eSATA	-	-	-	-	-
IEEE1394	-	-	-	-	-
USB	4 x USB 2.0 1 x USB 3.0	4 x USB 2.0 1 x USB 3.0	2 x USB 2.0 2 x USB 3.0	2 x USB 2.0	2 x USB 2.0 4 x USB 3.0
PS/2	-	-	-	-	-
Parallel Port	-	-	-	-	-
Serial Port	4	4	2	2	6
RS422/485	2	2	2 (RS232/422/485)	2 (RS232/422/485)	1
RS422/485 Isolation	-	-	-	-	-
CANbus	-	-	-	-	-
mini-PCIe	2	2	6	2	1
SIM Card Holder	1	1	1	1	1
GPIO	4-in/4-out (internal)	4-in/4-out (internal)	4-in/4-out (internal)	4-in/4-out (internal)	4-in/4-out (internal)
LAN Ports	2 x GbE	2 x GbE	2 x GbE	2 x GbE	2 x GbE
Audio	Mic-in & Line-out	Mic-in & Line-out	Mic-in & Line-out	Mic-in & Line-out	Mic-in & Line-out
Power Input Range	ATX, DC +9~30V	ATX, DC +9~30V	ATX, DC +9~30V	ATX,DC +24V	ATX, DC +9~30V
Power Supply Adapter	Optional	Optional	Optional	Optional	Optional
Expansion	1 x PCI	2 x PCI	-	-	1 x PCIe x4
Win7 32-bit	V	V	V	V	V
Win7 64-bit	V	V	V	V	V
WES2009 32-bit	-	-	-	-	V
Win8 32-bit	V	V	V	V	V
Win8 64-bit	V	V	V	V	V
WinCE/WEC	WinCE 7.0	WinCE 7.0	-	WEC 7	-
Win10 32-bit	V	V	-	-	V
Win10 64-bit	V	V	-	-	V
System Dimension (W x D x H, mm)	195 x 200 x 90	195 x 200 x 111	310 x 212 x 80	205 x 160 x 80	215 x 272 x 93
Carton Dimension (W x D x H, mm)	335 x 294 x 193	337 x 296 x 227	440 x 340 x 224	324 x 303 x 193	378 x 342 x 269
Net Weight (kg)	3	3.2	4.3	2.4	5
Gross Weight (kg)	4.4	4.6	5.7	3.6	7

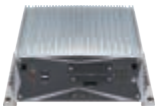
				
NISE 3600E2	**NISE 3600P2**	**NISE 3600P2E**	**NISE 3640E**	**NISE 3640E2**
3rd Gen. Intel® Core™ i5/i3 socket (2nd Gen. Intel® Core™ i5/i3 socket)	3rd Gen. Intel® Core™ i5/i3 socket (2nd Gen. Intel® Core™ i5/i3 socket)	3rd Gen. Intel® Core™ i5/i3 socket (2nd Gen. Intel® Core™ i5/i3 socket)	3rd Gen. Intel® Core™ i7 BGA	3rd Gen. Intel® Core™ i7 BGA
Intel® QM77	Intel® QM77	Intel® QM77	Intel® QM77	Intel® QM77
8GB DDR3	8GB DDR3	8GB DDR3	8GB DDR3	8GB DDR3
1 x 2.5" SATA HDD bay	1 x 2.5" SATA HDD bay	1 x 2.5" SATA HDD bay	1 x 2.5" SATA HDD bay	1 x 2.5" SATA HDD bay
1 (External, CFast)	1 (External, CFast)	1 (External, CFast)	1 (External, CFast)	1 (External, CFast)
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
1	1	1	1	1
Dual, 24-bit (Internal)	Dual, 24-bit (Internal)	Dual, 24-bit (Internal)	Dual, 24-bit (Internal)	Dual, 24-bit (Internal)
1 (DVI-D)	1 (DVI-D)	1 (DVI-D)	1 (DVI-D)	1 (DVI-D)
-	-	-	-	-
-	-	-	-	-
2	2	2	2	2
-	-	-	-	-
-	-	-	-	-
2 x USB 2.0 4 x USB 3.0	2 x USB 2.0 4 x USB 3.0	2 x USB 2.0 4 x USB 3.0	2 x USB 2.0 2 x USB 3.0	2 x USB 2.0 2 x USB 3.0
-	-	-	-	-
-	-	-	-	-
6	6	6	6	6
1	1	1	2	2
-	-	-	-	-
-	-	-	-	-
1	1	1	2	2
1	1	1	1	1
4-in/4-out (internal)	4-in/4-out (internal)	4-in/4-out (internal)	4-in/4-out (internal)	4-in/4-out (internal)
2 x GbE	2 x GbE	2 x GbE	4 x GbE	4 x GbE
Mic-in & Line-out	Mic-in & Line-out	Mic-in & Line-out	Mic-in & Line-out	Mic-in & Line-out
ATX, DC +9~30V	ATX, DC +9~30V	ATX, DC +9~30V	ATX, DC +24V	ATX, DC +24V
Optional	Optional	Optional	Optional	Optional
2 x PCIe x4	2 x PCI	1 x PCI and 1 x PCIe x4	1 x PCIe x4	2 x PCIe x4
V	V	V	V	V
V	V	V	V	V
V	V	V	V	V
V	V	V	V	V
V	V	V	V	V
-	-	-	-	-
V	V	V	-	-
V	V	V	-	-
215 x 272 x 114	215 x 272 x 114	215 x 272 x 114	215 x 272 x 93	215 x 272 x 114
378 x 342 x 269	378 x 342 x 269	378 x 342 x 269	378 x 342 x 269	378 x 342 x 269
5.4	5.4	5.4	5.2	5.4
7.4	7.4	7.4	7	7.2

Fanless Computer

Model					
	NISE 3640P2	**NISE 3640P2E**	**NISE 3640M**	**NISE 3640M2**	**NISE 3640ME2**
CPU	3rd Gen. Intel® Core™ i7 BGA	3rd Gen. Intel® Core™ i7 BGA	3rd Gen. Intel® Core™ i7 BGA	3rd Gen. Intel® Core™ i7 BGA	3rd Gen. Intel® Core™ i7 BGA
Chipset	Intel® QM77	Intel® QM77	Intel® QM77	Intel® QM77	Intel® QM77
Max. Memory	8GB DDR3	8GB DDR3	8GB DDR3/DDR3L	8GB DDR3/DDR3L	8GB DDR3/DDR3L
HDD Space	1 x 2.5" SATA HDD bay	1 x 2.5" SATA HDD bay	1 x 2.5" SATA HDD bay	1 x 2.5" SATA HDD bay	1 x 2.5" SATA HDD bay
CFast Socket	1 (External, CFast)	1 (External, CFast)	1 (External, CFast)	1 (External, CFast)	1 (External, CFast)
SD Card	-	-	-	-	-
eMMC	-	-	-	-	-
CD-ROM/DVD-ROM	-	-	-	-	-
VGA	1	1	1	1	1
LVDS	Dual, 24-bit (Internal)	Dual, 24-bit (Internal)	Dual, 24-bit (Internal)	Dual, 24-bit (Internal)	Dual, 24-bit (Internal)
DVI	1 (DVI-D)	1 (DVI-D)	1 (DVI-D)	1 (DVI-D)	1 (DVI-D)
TV-Out	-	-	-	-	-
HDMI	-	-	-	-	-
Display Port	2	2	2	2	2
eSATA	-	-	-	-	-
IEEE1394	-	-	-	-	-
USB	2 x USB 2.0 2 x USB 3.0	2 x USB 2.0 2 x USB 3.0	2 x USB 2.0 2 x USB 3.0	2 x USB 2.0 2 x USB 3.0	2 x USB 2.0 2 x USB 3.0
PS/2	-	-	-	-	-
Parallel Port	-	-	-	-	-
Serial Port	6	6	6	6	6
RS422/485	2	2	2	2	2
RS422/485 Isolation	-	-	-	-	-
CANbus	-	-	-	-	-
mini-PCIe	2	2	2	2	2
SIM Card Holder	1	1	1	1	1
GPIO	4-in/4-out (internal)	4-in/4-out (internal)	4-in/4-out (internal)	4-in/4-out (internal)	4-in/4-out (internal)
LAN Ports	4 x GbE	4 x GbE	4 x GbE	4 x GbE	4 x GbE
Audio	Mic-in & Line-out	Mic-in & Line-out	Mic-in & Line-out	Mic-in & Line-out	Mic-in & Line-out
Power Input Range	ATX, DC +24V	ATX, DC +24V	ATX, DC +24V	ATX, DC +24V	ATX, DC +24V
Power Supply Adapter	Optional	Optional	Optional	Optional	Optional
Expansion	2 x PCI	1 x PCI and 1 x PCIe x4	1 x PCIe x4	2 x PCI	2 x PCIe x4
Win7 32-bit	V	V	V	V	V
Win7 64-bit	V	V	V	V	V
WES2009 32-bit	V	V	V	V	V
Win8 32-bit	V	V	V	V	V
Win8 64-bit	V	V	V	V	V
WinCE/WEC	-	-	-	-	-
Win10 32-bit	-	-	-	-	-
Win10 64-bit	-	-	-	-	-
System Dimension (W x D x H, mm)	215 x 272 x 114	215 x 272 x 114	215 x 272 x 93	215 x 272 x 114	215 x 272 x 114
Carton Dimension (W x D x H, mm)	378 x 342 x 269	378 x 342 x 269	378 x 342 x 269	378 x 342 x 269	378 x 342 x 269
Net Weight (kg)	5.4	5.4	5.2	5.4	5.4
Gross Weight (kg)	7.2	7.2	7	7.2	7.2

				
NISE 3640M2E	**NISE 3640VR**	**NISE 3700E**	**NISE 3700E2**	**NISE 3700P2**
3rd Gen. Intel® Core™ i7 BGA	3rd Gen. Intel® Core™ i7 BGA	4th Gen. Intel® Core™ i7/i5/i3 LGA socket	4th Gen. Intel® Core™ i7/i5/i3 LGA socket	4th Gen. Intel® Core™ i7/i5/i3 LGA socket
Intel® QM77	Intel® QM77	Intel® Q87 PCH	Intel® Q87 PCH	Intel® Q87 PCH
8GB DDR3/DDR3L	8GB DDR3	8GB DDR3/DDR3L	8GB DDR3/DDR3L	8GB DDR3/DDR3L
1 x 2.5" SATA HDD bay	2 x 3.5" SATA HDD bay	1 x 2.5" SATA HDD bay	1 x 2.5" SATA HDD bay	1 x 2.5" SATA HDD bay
1 (External, CFast)	1 (External, CFast)	1 (External, CFast)	1 (External, CFast)	1 (External, CFast)
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
1	1	-	-	-
Dual, 24-bit (Internal)	Dual, 24-bit (Internal)	-	-	-
1 (DVI-D)	1 (DVI-D)	1 (DVI-I)/1 (DVI-D)	1 (DVI-I)/1 (DVI-D)	1 (DVI-I)/1 (DVI-D)
-	-	-	-	-
-	-	1	1	1
2	2	-	-	-
-	-	-	-	-
-	-	-	-	-
2 x USB 2.0 2 x USB 3.0	2 x USB 2.0 2 x USB 3.0	4 x USB 2.0 4 x USB 3.0	4 x USB 2.0 4 x USB 3.0	4 x USB 2.0 4 x USB 3.0
-	-	-	-	-
-	-	-	-	-
6	6	3	3	3
2	2	2	2	2
-	-	-	-	-
-	-	-	-	-
2	2	2	2	2
1	1	1	1	1
4-in/4-out (internal)	4-in/4-out (internal)	4-in/4-out (internal)	4-in/4-out (internal)	4-in/4-out (internal)
4 x GbE	4 x GbE	3 x GbE	3 x GbE	3 x GbE
Mic-in & Line-out	Mic-in & Line-out	Mic-in & Line-out	Mic-in & Line-out	Mic-in & Line-out
ATX, DC +24V	ATX, DC +24V	ATX, DC +9~30V	ATX, DC +9~30V	ATX, DC +9~30V
Optional	Optional	Optional	Optional	Optional
1 x PCI and 1 x PCIe x4	-	1 x PCIe x4	2 x PCIe x4	2 x PCI
V	V	V	V	V
V	V	V	V	V
V	V	-	-	-
V	V	V	V	V
V	V	V	V	V
-	-	V	V	V
-	-	V	V	V
-	-	V	V	V
215 x 272 x 114	215 x 272 x 114	215 x 272 x 93	215 x 272 x 114	215 x 272 x 114
378 x 342 x 269	378 x 342 x 269	378 x 342 x 269	378 x 342 x 269	378 x 342 x 269
5.4	5.2	4.5	5	5
7.2	7	5.9	6.4	6.4

Fanless Computer

Model				
	NISE 3700P2E	**NISE 3700E-C226**	**NISE 3700E2-C226**	**NISE 3700P2-C226**
CPU	4th Gen. Intel® Core™ i7/i5/i3 LGA socket	4th Gen. Intel® Core™ i7/i5/i3 LGA socket	4th Gen. Intel® Core™ i7/i5/i3 LGA socket	4th Gen. Intel® Core™ i7/i5/i3 LGA socket
Chipset	Intel® Q87 PCH	Intel® C226 PCH	Intel® C226 PCH	Intel® C226 PCH
Max. Memory	8GB DDR3/DDR3L	8GB DDR3/DDR3L	8GB DDR3/DDR3L	8GB DDR3/DDR3L
HDD Space	1 x 2.5" SATA HDD bay	1 x 2.5" SATA HDD bay	1 x 2.5" SATA HDD bay	1 x 2.5" SATA HDD bay
CFast Socket	1 (External, CFast)	1 (External, CFast)	1 (External, CFast)	1 (External, CFast)
SD Card	-	-	-	-
eMMC	-	-	-	-
CD-ROM/DVD-ROM	-	-	-	-
VGA	-	-	-	-
LVDS	-	-	-	-
DVI	1 (DVI-I)/1 (DVI-D)	1 (DVI-I)/1 (DVI-D)	1 (DVI-I)/1 (DVI-D)	1 (DVI-I)/1 (DVI-D)
TV-Out	-	-	-	-
HDMI	1	-	-	-
Display Port	-	-	-	-
eSATA	-	-	-	-
IEEE1394	-	-	-	-
USB	4 x USB 2.0 4 x USB 3.0	4 x USB 2.0 2 x USB 3.0	4 x USB 2.0 2 x USB 3.0	4 x USB 2.0 2 x USB 3.0
PS/2	-	-	-	-
Parallel Port	-	-	-	-
Serial Port	3	3	3	3
RS422/485	2	2	2	2
RS422/485 Isolation	-	-	-	-
CANbus	-	-	-	-
mini-PCIe	2	2	2	2
SIM Card Holder	1	1	1	1
GPIO	4-in/4-out (internal)	4-in/4-out (internal)	4-in/4-out (internal)	4-in/4-out (internal)
LAN Ports	3 x GbE	2 x GbE	2 x GbE	2 x GbE
Audio	Mic-in & Line-out	Mic-in & Line-out	Mic-in & Line-out	Mic-in & Line-out
Power Input Range	ATX, DC +9~30V	ATX, DC +9~30V	ATX, DC +9~30V	ATX, DC +9~30V
Power Supply Adapter	Optional	Optional	Optional	Optional
Expansion	1 x PCI and 1 x PCIe x4	1 x PCIe x4	2 x PCIe x4	2 x PCI
Win7 32-bit	V	V	V	V
Win7 64-bit	V	V	V	V
WES2009 32-bit	-	-	-	-
Win8 32-bit	V	V	V	V
Win8 64-bit	V	V	V	V
WinCE/WEC	V	V	V	V
Win10 32-bit	V	V	V	V
Win10 64-bit	V	V	V	V
System Dimension (W x D x H, mm)	215 x 272 x 114	215 x 272 x 93	215 x 272 x 114	215 x 272 x 114
Carton Dimension (W x D x H, mm)	378 x 342 x 269	378 x 342 x 269	378 x 342 x 269	378 x 342 x 269
Net Weight (kg)	5	4.5	5	5
Gross Weight (kg)	6.4	5.9	6.4	6.4

				
NISE 3700P2E-C226	**NISE 3720E**	**NISE 3720E2**	**NISE 3720P2**	**NISE 3720P2E**
4th Gen. Intel® Core™ i7/i5/i3 LGA socket	Onboard Intel® Core™ i7 Processor (i7-5650U)	Onboard Intel® Core™ i7 Processor (i7-5650U)	Onboard Intel® Core™ i7 Processor (i7-5650U)	Onboard Intel® Core™ i7 Processor (i7-5650U)
Intel® C226 PCH	Broadwell MCP	Broadwell MCP	Broadwell MCP	Broadwell MCP
8GB DDR3/DDR3L	8GB DDR3L	8GB DDR3L	8GB DDR3L	8GB DDR3L
1 x 2.5" SATA HDD bay	1 x 2.5" SATA HDD bay	1 x 2.5" SATA HDD bay	1 x 2.5" SATA HDD bay	1 x 2.5" SATA HDD bay
1 (External, CFast)	1 (External, CFast)	1 (External, CFast)	1 (External, CFast)	1 (External, CFast)
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	1	1	1	1
-	-	-	-	-
1 (DVI-I)/1 (DVI-D)	1 (DVI-I)/1 (DVI-D)	1 (DVI-I)/1 (DVI-D)	1 (DVI-I)/1 (DVI-D)	1 (DVI-I)/1 (DVI-D)
-	-	-	-	-
-	-	-	-	-
-	2	2	2	2
-	-	-	-	-
-	-	-	-	-
4 x USB 2.0 2 x USB 3.0	2 x USB 2.0 2 x USB 3.0 2 x Internal USB 2.0	2 x USB 2.0 2 x USB 3.0 2 x Internal USB 2.0	2 x USB 2.0 2 x USB 3.0 2 x Internal USB 2.0	2 x USB 2.0 2 x USB 3.0 2 x Internal USB 2.0
-	-	-	-	-
-	-	-	-	-
3	6	6	6	6
2	2 (RS232/422/485)	2 (RS232/422/485)	2 (RS232/422/485)	2 (RS232/422/485)
-	-	-	-	-
-	-	-	-	-
2	2 (mSATA/ PCIe option)	2 (mSATA/ PCIe option)	2 (mSATA/ PCIe option)	2 (mSATA/ PCIe option)
1	1	1	1	1
4-in/4-out (internal)	4-in/4-out (internal)	4-in/4-out (internal)	4-in/4-out (internal)	4-in/4-out (internal)
2 x GbE	2 x GbE	2 x GbE	2 x GbE	2 x GbE
Mic-in & Line-out	Mic-in & Line-out	Mic-in & Line-out	Mic-in & Line-out	Mic-in & Line-out
ATX, DC +9~30V	ATX, DC +24V	ATX, DC +24V	ATX, DC +24V	ATX, DC +24V
Optional	Optional	Optional	Optional	Optional
1 x PCI and 1 x PCIe x4	1 x PCIe x4	2 x PCIe x4	2 x PCI	1 x PCI and 1 x PCIe x4
V	V	V	V	V
V	V	V	V	V
-	-	-	-	-
V	V	V	V	V
V	V	V	V	V
V	-	-	-	-
V	-	-	-	-
V	-	-	-	-
215 x 272 x 114	215 x 272 x 93	215 x 272 x 114	215 x 272 x 114	215 x 272 x 114
378 x 342 x 269	378 x 342 x 269	378 x 342 x 269	378 x 342 x 269	378 x 342 x 269
5	4.5	5	5	5
6.4	5.9	6.4	6.4	6.4

Factory Automation

Model					
	NIFE 100	**NIFE 100S**	**NIFE 101**	**NIFE 103**	**NIFE 105**
CPU	Intel® Atom™ E3826 1.46GHz	Intel® Atom™ E3826 1.46GHz	Intel® Atom™ E3826 1.46GHz	Intel® Atom™ E3826 1.46GHz	Intel® Atom™ x5-E3930 1.8GHz
Chipset	Intel® Bay Trail-I	Intel® Bay Trail-I	Intel® Bay Trail-I	Intel® Bay Trail-I	Intel® Apollo Lake-I
Max. Memory	4GB DDR3L	4GB DDR3L	4GB DDR3L	Onboard 2GB DDR3L	Onboard 4GB DDR3L
NVRAM	1Mb	1Mb	1Mb	-	-
Storage	1 x 2.5" SATA HDD bay	1 x 2.5" SATA HDD bay	1 x 2.5" SATA HDD bay	Onboard eMMC 16GB	Onboard eMMC 16GB
CFast Socket	1 (External, CFast)	1 (External, CFast)	1 (External, CFast)	-	-
SD Card	-	-	-	-	1
VGA	-	-	-	-	-
DVI	1 (DVI-I)	1 (DVI-I)	1 (DVI-I)	-	-
HDMI	-	-	-	1 (Micro HDMI)	1
Display Port	-	-	-	-	-
USB	1 x USB 2.0 1 x USB 3.0	1 x USB 2.0 1 x USB 3.0	1 x USB 2.0 1 x USB 3.0	1 x USB 2.0 1 x USB 3.0	4 x USB 3.0
PS/2	-	-	-	-	-
Parallel Port	-	-	-	-	-
Serial Port	2	2	2	1	2
RS422/485	2 (RS232/422/485)	2 (RS232/422/485)	2 (RS232/422/485)	1 (RS485)	2 (RS232/422/485)
RS422/485 Isolation	2 (2.5KV Isolation)	2 (2.5KV Isolation)	2 (2.5KV Isolation)	1 (2.5KV Isolation)	2 (2.5KV Isolation)
CANbus	-	-	-	-	-
mini-PCIe	1	1	1	2	2
SIM Card Holder	1	1	1	1	1
GPIO	4-in/4-out (internal)	4-in/4-out (internal)	4-in/4-out (internal)	4-in/4-out (external)	4-in/4-out (internal)
LAN Ports	2 x GbE	2 x GbE	2 x GbE	2 x GbE	2 x GbE
Audio	Line-out	Line-out	Line-out	-	-
Fieldbus I/O Support	1	1	-	-	-
Power Input Range	ATX, DC +24V	ATX, DC +24V	ATX, DC +24V	ATX, DC +24V	ATX, DC +24V
Win7 32-bit	V	V	V	V	-
Win7 64-bit	V	V	V	V	-
WES2009 32-bit	-	-	-	-	-
Win8 32-bit	V	V	V	V	-
Win8 64-bit	V	V	V	V	-
WinCE/WEC	WinCE 7.0	WinCE 7.0	WinCE 7.0	WinCE 7.0	-
Win10 32-bit	-	-	-	V	-
Win10 64-bit	-	-	-	V	V
Power Supply Adapter	Optional	Optional	Optional	Optional	Optional
Expansion	-	-	-	-	-
Operating Temp. (w/HDD) Based on IEC 60068 STD	-20˚C to 70˚C	-20˚C to 70˚C	-20˚C to 70˚C	-5°C to 55°C	-5°C to 55°C
System Dimension (W x D x H, mm)	92 x 135.5 x 192.5	92 x 135.5 x 192.5	58 x 135.5 x 192.5	56.5 x 100 x 120	46.2 x 100 x 120
Carton Dimension (W x D x H, mm)	298 x 262 x 196	298 x 262 x 196	298 x 262 x 196	212 x 221 x 164	212 x 221 x 164
Net Weight (kg)	1.9	1.8	1.7	0.6	0.7
Gross Weight (kg)	3	2.9	2.8	1.5	1.6

				
NIFE 105W	**NIFE 200**	**NIFE 200P2**	**NIFE 200P2E**	**NIFE 200E2**
Intel® Atom™ x5-E3930 1.8GHz	Intel® Atom™ J1900 2.0GHz	Intel® Atom™ J1900 2.0GHz	Intel® Atom™ J1900 2.0GHz	Intel® Atom™ J1900 2.0GHz
Intel® Apollo Lake-I	Intel® Bay Trail-D	Intel® Bay Trail-D	Intel® Bay Trail-D	Intel® Bay Trail-D
Onboard 4GB DDR3L	8GB DDR3L	8GB DDR3L	8GB DDR3L	8GB DDR3L
-	-	-	-	-
Onboard eMMC 16GB	1 x 2.5" SATA HDD bay	1 x 2.5" SATA HDD bay	1 x 2.5" SATA HDD bay	1 x 2.5" SATA HDD bay
-	-	-	-	-
1	1	1	1	1
-	-	-	-	-
-	1 (DVI-I)	1 (DVI-I)	1 (DVI-I)	1 (DVI-I)
1	-	-	-	-
-	1	1	1	1
4 x USB 3.0	3 x USB 2.0 1 x USB 3.0	3 x USB 2.0 1 x USB 3.0	3 x USB 2.0 1 x USB 3.0	3 x USB 2.0 1 x USB 3.0
-	1 (Internal)	1 (Internal)	1 (Internal)	1 (Internal)
-	-	-	-	-
2	2	2	2	2
2 (RS232/422/485)	2 (RS232/422/485)	2 (RS232/422/485)	2 (RS232/422/485)	2 (RS232/422/485)
2 (2.5KV Isolation)	2 (2.5KV Isolation)	2 (2.5KV Isolation)	2 (2.5KV Isolation)	2 (2.5KV Isolation)
-	-	-	-	-
2	2	2	2	2
1	1	1	1	1
4-in/4-out (internal)	4-in/4-out (internal)	4-in/4-out (internal)	4-in/4-out (internal)	4-in/4-out (internal)
2 x GbE	2 x GbE	2 x GbE	2 x GbE	2 x GbE
-	Line-out	Line-out	Line-out	Line-out
1 (Optional)	1 (Optional)	1 (Optional)	1 (Optional)	1 (Optional)
ATX, DC +24V	ATX, DC +24V	ATX, DC +24V	ATX, DC +24V	ATX, DC +24V
-	V	V	V	V
-	V	V	V	V
-	-	-	-	-
-	V	V	V	V
-	V	V	V	V
-	WinCE 7.0	WinCE 7.0	WinCE 7.0	WinCE 7.0
-	V	V	V	V
V	V	V	V	V
Optional	Optional	Optional	Optional	Optional
-	-	2 x PCI	1 x PCI and 1x PCIe x1	2 x PCIe x1
-5°C to 55°C	-5˚C to 55˚C	-5˚C to 55˚C	-5˚C to 55˚C	-5°C to 55°C
78.2 x 100 x 120	85 x 157 x 214	151 x 157 x 230	151 x 157 x 230	151 x 157 x 230
212 x 221 x 164	346 x 265 x 200	355 x 259 x 321	355 x 259 x 321	355 x 259 x 321
0.8	2.3	3.3	3.3	3.3
1.8	3.3	4.3	4.3	4.3

Factory Automation

Model						
	NIFE 300	NIFE 300P2	NIFE 300P2E	NIFE 300E16	NIFE 300P3	NIFE 300E3
CPU	6th Gen. Intel®Core™ i7/i5/i3 LGA socket (Skylake-S)	6th Gen. Intel®Core™ i7/i5/i3 LGA socket (Skylake-S)	6th Gen. Intel®Core™ i7/i5/i3 LGA socket (Skylake-S)	6th Gen. Intel®Core™ i7/i5/i3 LGA socket (Skylake-S)	6th Gen. Intel®Core™ i7/i5/i3 LGA socket (Skylake-S)	6th Gen. Intel® Core™ i7/i5/i3 LGA socket (Skylake-S)
Chipset	Intel® Q170	Intel® Q170	Intel® Q170	Intel® Q170	Intel® Q170	Intel® Q170
Max. Memory	8GB DDR4 2133MHz	8GB DDR4 2133MHz	8GB DDR4 2133MHz	8GB DDR4 2133MHz	8GB DDR4 2133MHz	8GB DDR4 2133MHz
NVRAM	-	-	-	-	-	-
Storage	2 x 2.5" SATA HDD bay	2 x 2.5" SATA HDD bay	2 x 2.5" SATA HDD bay	2 x 2.5" SATA HDD bay	2 x 2.5" SATA HDD bay	2 x 2.5" SATA HDD bay
CFast Socket	1 (External, CFast)	1 (External, CFast)	1 (External, CFast)	1 (External, CFast)	1 (External, CFast)	1 (External, CFast)
SD Card	-	-	-	-	-	-
VGA	-	-	-	-	-	-
DVI	1 (DVI-D)	1 (DVI-D)	1 (DVI-D)	1 (DVI-D)	1 (DVI-D)	1 (DVI-D)
HDMI	1	1	1	1	1	1
Display Port	-	-	-	-	-	-
USB	2 x USB 2.0 4 x USB 3.0	2 x USB 2.0 4 x USB 3.0	2 x USB 2.0 4 x USB 3.0	2 x USB 2.0 4 x USB 3.0	2 x USB 2.0 4 x USB 3.0	2 x USB 2.0 4 x USB 3.0
PS/2	1 (Internal)	1 (Internal)	1 (Internal)	1 (Internal)	1 (Internal)	1 (Internal)
Parallel Port	-	-	-	-	-	-
Serial Port	2	2	2	2	2	2
RS422/485	2 (RS232/422/485)	2 (RS232/422/485)	2 (RS232/422/485)	2 (RS232/422/485)	2 (RS232/422/485)	2 (RS232/422/485)
RS422/485 Isolation	2 (2.5KV Isolation)	2 (2.5KV Isolation)	2 (2.5KV Isolation)	2 (2.5KV Isolation)	2 (2.5KV Isolation)	2 (2.5KV Isolation)
CANbus	-	-	-	-	-	-
mini-PCIe	2	2	2	2	2	2
SIM Card Holder	1	1	1	1	1	1
GPIO	4-in/4-out (internal)	4-in/4-out (internal)	4-in/4-out (internal)	4-in/4-out (internal)	4-in/4-out (internal)	4-in/4-out (internal)
LAN Ports	3 x GbE	3 x GbE	3 x GbE	3 x GbE	3 x GbE	3 x GbE
Audio	Mic-in & Line-out	Mic-in & Line-out	Mic-in & Line-out	Mic-in & Line-out	Mic-in & Line-out	Mic-in & Line-out
Fieldbus I/O Support	1 (Optional)	1 (Optional)	1 (Optional)	1 (Optional)	1 (Optional)	1 (Optional)
Power Input Range	ATX, DC +24V	ATX, DC +24V	ATX, DC +24V	ATX, DC +24V	ATX, DC +24V	ATX, DC +24V
Win7 32-bit	V	V	V	V	V	V
Win7 64-bit	V	V	V	V	V	V
WES2009 32-bit	-	-	-	-	-	-
Win8 32-bit	V	V	V	V	V	V
Win8 64-bit	V	V	V	V	V	V
WinCE/WEC	-	-	-	-	-	-
Win10 32-bit	V	V	V	V	V	V
Win10 64-bit	V	V	V	V	V	V
Power Supply Adapter	Optional	Optional	Optional	Optional	Optional	Optional
Expansion	-	2 x PCI	1 x PCI and 1 x PCIe x8	1 x PCIe x16	2 x PCI and 1 x PCIe x8	2 x PCIe x4 and 1 x PCIe x8
Operating Temp. (w/HDD) Based on IEC 60068 STD	-5˚C to 55˚C	-5˚C to 55˚C	-5˚C to 55˚C	-5˚C to 55˚C	-5˚C to 55˚C	-5°C to 55°C
System Dimension (W x D x H, mm)	90 x 185 x 251	155 x 185 x 251	155 x 185 x 251	155 x 185 x 251	175 x 185 x 251	175 x 185 x 251
Carton Dimension (W x D x H, mm)	389 x 329 x 251	389 x 329 x 336	389 x 329 x 336	389 x 329 x 336	389 x 329 x 336	389 x 329 x 336
Net Weight (kg)	3.5	4.4	4.4	4.4	4.7	4.7
Gross Weight (kg)	4.9	6.1	6.1	6.1	6.4	6.4

Teach Pendant

Model				
	TP-100	TP-100-VGA	TP-100-DVI	TP-100-DP
LCD Size	10.1" 16:10	10.1" 16:10	10.1" 16:10	10.1" 16:10
Max Resolution	WXGA, 1280 x 800	WXGA, 1280 x 800	WXGA, 1280 x 800	WXGA, 1280 x 800
Luminum (cd/m2)	500	500	500	500
Backlight	LED	LED	LED	LED
LCD Color	16.7M	16.7M	16.7M	16.7M
Touch Screen	10 points P-Cap	10 points P-Cap	10 points P-Cap	10 points P-Cap
Emergency Stop Button	2 channels (2 NC)	2 channels (2 NC)	2 channels (2 NC)	2 channels (2 NC)
3-position Deadman Switch	3 channels (2 NO & 1 NC)	3 channels (2 NO & 1 NC)	3 channels (2 NO & 1 NC)	3 channels (2 NO & 1 NC)
2-position Key Switch	2 channels (auto/manual)	2 channels (auto/manual)	2 channels (auto/manual)	2 channels (auto/manual)
CPU	Intel® Atom™ E3826 Dual Core 1.46GHz	-	-	-
Memory	4GB DDR3L	-	-	-
User Memory	32GB	-	-	-
Ethernet	1 (10/100/1000 Mbit)	-	-	-
Display Input	-	VGA	DVI-D	DisplayPort
USB	2 USB 3.0	2 USB 3.0	2 USB 3.0	2 USB 3.0
Cable Connector and Signal	HDB-44 (including power, E-stop buttons, deadman switch, key switch and Giga LAN signals)	HDB-44 (including power, E-stop buttons, deadman switch, key switch, USB 3.0 and VGA signals)	HDB-44 (including power, E-stop buttons, deadman switch, key switch, USB 3.0 and DVI-D signals)	HDB-44 (including power, E-stop buttons, deadman switch, key switch, USB 3.0 and DisplayPort signals)
Construction	Front: aluminum magnesium alloy Back: ABS+PC plastic	Front: aluminum magnesium alloy Back: ABS+PC plastic	Front: aluminum magnesium alloy Back: ABS+PC plastic	Front: aluminum magnesium alloy Back: ABS+PC plastic
Power Input	24 Vdc (19.2 to 28.8 Vdc)	24 Vdc (19.2 to 28.8 Vdc)	24 Vdc (19.2 to 28.8 Vdc)	24 Vdc (19.2 to 28.8 Vdc)
Current Consumption	0.76A at 24Vdc (max.)	0.625A at 24Vdc (max.)	0.635A at 24Vdc (max.)	0.635A at 24Vdc (max.)
Power Supply Adapter	Optional	Optional	Optional	Optional
Operating Temp.	0°C to 45°C	0°C to 50°C	0°C to 50°C	0°C to 50°C
Storage Temp.	-20˚C to 75˚C	-20˚C to 75˚C	-20˚C to 75˚C	-20˚C to 75˚C
Operating Humidity	5%~90%, non-condensing	5%~90%, non-condensing	5%~90%, non-condensing	5%~90%, non-condensing
IP level	Full IP65	Full IP65	Full IP65	Full IP65
Dimmension (W x H x D, mm)	297.3 x 257.2 x 57.2 (78.5mm including emergency button)	297.3 x 257.2 x 57.2 (78.5mm including emergency button)	297.3 x 257.2 x 57.2 (78.5mm including emergency button)	297.3 x 257.2 x 57.2 (78.5mm including emergency button)
Weight (kg)	1.45	1.5	1.49	1.49
Gross Weight (kg)	2	2.3	2.2	2.2

HMI

Model			
	eTOP504	**eSMART04N**	**eTOP507/507N**
LCD Size	4.3" 16:9	4.3" 16:9	7" 16:9
Max Resolution	WQVGA, 480 x 272	WQVGA, 480 x 272	WVGA, 800 x 480
Luminum (cd/m2)	150 typ.	200 typ.	300 typ.
Backlight	LED	LED	LED
LCD Color	64K	64K	64K
Touch Screen	Resistive	Resistive	Resistive
OS	Microsoft Windows CE 6.0	Linux 3.12	Microsoft Windows CE 6.0
Memory	256MB DDR	256MB DDR	256MB DDR
User Memory	128MB	2GB	128MB
Ethernet	2 (10/100 Mbit)	1 (10/100 Mbit)	2 (10/100 Mbit)
USB	2 x USB 2.0	1 x USB 2.0	2 x USB 2.0
COM Port	1 x RS232, 422, 485 software configuration	1 x RS232, 422, 485 software configuration	1 x RS232, 422, 485 software configuration
Power Jack	3-pin terminal block	3-pin terminal block	3-pin terminal block
SD Socket	Yes	-	Yes
Expansion	1 Optional plug-in	-	2 Optional plug-in
Construction	Aluminum	Plastic	Aluminum
Mounting	Panel Mounting	Panel Mounting	Panel Mounting
Power Input	24 Vdc (10 to 32 Vdc)	24 Vdc (18 to 32 Vdc)	24 Vdc (10 to 32 Vdc)
Current Consumption	0.55A at 24Vdc (max.)	0.25A at 24Vdc (max.)	0.65A at 24Vdc (max.)
Power Supply Adapter	Optional	Optional	Optional
Operating Temp.	0°C to 50°C	0°C to 50°C	0°C to 50°C
Storage Temp.	-20˚C to 70˚C	-20˚C to 70˚C	-20˚C to 70˚C
Operating Humidity	5% ~ 85%, Non-condensing	5% ~ 85%, Non-condensing	5% ~ 85%, Non-condensing
IP Level	IP66 (front), IP20 (rear)	IP66 (front), IP20 (rear)	IP66 (front), IP20 (rear)
Cut Out Size (W x H, mm)	136 x 96	136 x 96	176 x 136
Dimmension (W x H x D, mm)	147 x 107 x 60	147 x 107 x 34	187 x 147 x 51
Net Weight (kg)	Approx. 1	Approx 0.4	Approx. 1
Gross Weight (kg)	1.3	0.7	1.4

			
eSMART07N	**eTOP510**	**eSMART10N**	**eLITE610**
7" 16:9	10.4" 4:3	10.1" 16:9	10.1" 16:9
WVGA, 800 x 480	SVGA, 800 x 600	WSVGA, 1024 x 600	WSVGA, 1024 x 600
200 typ.	300 typ.	200 typ.	240
LED	LED	LED	LED
64K	64K	64K	16.7M
Resistive	Resistive	Resistive	Resistive
Linux 3.12	Microsoft Windows CE 6.0	Linux 3.12	Windows 10
256MB DDR	256MB DDR	512MB DDR	4GB DDR3L
2GB	256MB	4GB	32GB
1 (10/100 Mbit)	2 (10/100 Mbit)	1 (10/100 Mbit)	2 (10/100/1000 Mbit)
1 x USB 2.0	2 x USB 2.0	1 x USB 2.0	2 x USB 3.0
1 x RS232, 422, 485 software configuration	1 x RS232, 422, 485 software configuration	1 x RS232, 422, 485 software configuration	1 x RS232, 422, 485 BIOS configuration
3-pin terminal block	3-pin terminal block	3-pin terminal block	3-pin terminal block
-	Yes	-	-
-	2 Optional plug-in	-	-
Plastic	Aluminum	Plastic	Plastic
Panel Mounting	Panel Mounting	Panel Mounting	Panel/VESA Mounting
24 Vdc (18 to 32 Vdc)	24 Vdc (10 to 32 Vdc)	24 Vdc (18 to 32 Vdc)	24 Vdc (19.2 to 28.8 Vdc)
0.3A at 24Vdc (max.)	0.95A at 24Vdc (max.)	0.38A at 24Vdc (max.)	1.64A at 24Vdc (max.)
Optional	Optional	Optional	Optional
0°C to 50°C	0°C to 50°C	0°C to 50°C	-5°C to 50°C
-20˚C to 70˚C	-20˚C to 70˚C	-20˚C to 70˚C	-20˚C to 75˚C
5% ~ 85%, Non-condensing	5% ~ 85%, Non-condensing	5% ~ 85%, Non-condensing	5% ~ 90%, Non-condensing
IP66 (front), IP20 (rear)	IP66 (front), IP20 (rear)	IP66 (front), IP20 (rear)	IP66 (front), IP20 (rear)
176 x 136	276 x 221	271 x 186	271 x 186
187 x 147 x 34	287 x 232 x 60	282 x 197 x 35	282 x 197 x 35
Approx. 0.6	Approx. 2.1	Approx. 1	Approx. 1.37
0.9	2.8	1.6	2.3

Industrial Panel PC

Model				
	IPPC 1632P	**IPPC 1640P**	**IPPC 1840P**	**IPPC 2132P**
LCD Size	15.6" 16:9	15.6" 16:9	18.5" 16:9	21.5" 16:9
Max. Resolution	WXGA, 1366 x 768	WXGA, 1366 x 768	WXGA, 1366 x 768	Full HD, 1920 x 1080
Luminance (cd/m^2)	300	300	300	300
Contrast Ratio	500	500	1000	5000
Viewing Angle (H-V)	80(U), 80(D), 85(L), 85(R)	80(U), 80(D), 85(L), 85(R)	80(U), 80(D), 85(L), 85(R)	89(U), 89(D), 89(L), 89(R)
Backlight	LED	LED	LED	LED
LCD Color	16.7M	16.7M	16.7M	16.7M
Touch Screen	10 Point P-Cap	10 Point P-Cap	10 Point P-Cap	10 Point P-Cap
Touch Light Transmission	87%	87%	87%	87%
CPU	Intel® Atom™ D2550 Dual Core 1.86GHz	Intel® Celeron® J1900 Quad Core 2.0 GHz	Intel® Celeron® J1900 Quad Core 2.0 GHz	Intel® Atom™ D2550 Dual Core 1.86GHz
Chipset	Intel® NM10 Express	-	-	Intel® NM10 Express
Memory	4GB DDR3 SO-DIMM module	4GB DDR3L SO-DIMM module	4GB DDR3L SO-DIMM module	4GB DDR3 SO-DIMM module
CFast Socket	1	1	1	1
2nd Display Output	VGA	VGA	VGA	VGA
PS2 KB/MS	-	1	1	-
Ethernet (10/100/1000)	2	2	2	2
Line-out	1	1	1	1
Line-in	1	-	-	1
Mic-in	1	-	-	1
USB 2.0/3.0	4/-	2/1	2/1	4/-
COM Port	Isolation 2 x RS232,422,485	Isolation 2 x RS232,422,485	Isolation 2 x RS232,422,485	Isolation 2 x RS232,422,485
Parallel Port	-	-	-	-
Power Switch	1	1	1	1
Remote Power Switch	-	1	1	-
Reset Button	1	1	1	1
Power Jack	Terminal Blocks 3-Pin Phoenix Connector	Terminal Blocks 3-Pin Phoenix Connector	Terminal Blocks 3-Pin Phoenix Connector	Terminal Blocks 3-Pin Phoenix Connector
GPIO	-	-	-	-
Digital I/O	4-In/4-Out	-	-	4-In/4-Out
Expansion	2 x mini-PCIe	2 x mini-PCIe	2 x mini-PCIe	2 x mini-PCIe
Construction Front Panel	Aluminum Front Zero Bezel	Aluminum Front Zero Bezel	Aluminum Front Zero Bezel	Aluminum Front Zero Bezel
Mounting	Panel/Wall/Stand/VESA 100 x 100mm	Panel/Wall/Stand/VESA 100 x 100mm	Panel/Wall/Stand/VESA 100 x 100mm	Panel/Wall/Stand/VESA 100 x 100mm
Power Input	+12~30VDC	+12~30VDC	+12~30VDC	+12~30VDC
Power Supply Adapter	Optional	Optional	Optional	Optional
Operating Temp.	-10°C to 60°C	-10°C to 60°C	-10°C to 60°C	-10°C to 60°C
Storage Temp.	-20°C to 75°C	-20°C to 75°C	-20°C to 75°C	-20°C to 75°C
Operating Humidity	10%~90%, Non-condensing	10%~90%, Non-condensing	10%~90%, Non-condensing	10%~90%, Non-condensing
IP Level	Front Frame IP66	Front Frame IP66	Front Frame IP66	Front Frame IP66
Cut Out Size (W x H, mm)	401 x 296	401 x 296	475.4 x 305.2	547 x 367
Dimension (W x H x D, mm)	417.4 x 312.4 x 63.75	417.4 x 312.4 x 63.75	490.8 x 320.6 x 62.65	562.4 x 382.4 x 62.85
Net Weight (kg)	6.4	6.4	8.2	9.26
Gross Weight (kg)	9.5	10	10.5	13

			
IPPC 2140P	**IPPC 1560TE**	**IPPC 1560T-DC**	**IPPC 1560T-AC**
21.5" 16:9	15" 4:3	15" 4:3	15" 4:3
Full HD, 1920 x 1080	XGA, 1024 x 768	XGA, 1024 x 768	XGA, 1024 x 768
300	400	450	450
5000	700	800	800
89(U), 89(D), 89(L), 89(R)	60(U), 80(D), 80(L), 80(R)	70(U), 80(D), 80(L), 80(R)	70(U), 80(D), 80(L), 80(R)
LED	LED	LED	LED
16.7M	16.2M	16.2M	16.2M
10 Point P-Cap	Resistive 5-wire	Resistive 5-wire	Resistive 5-wire
87%	81%	81%	81%
Intel® Celeron® J1900 Quad Core 2.0 GHz	3rd Gen. Intel®Core™ i5 (i5-3610ME) 2 x 2.7GHz	3rd Gen. Intel®Core™ i5 (i5-3610ME) 2 x 2.7GHz	3rd Gen. Intel®Core™ i5 (i5-3610ME) 2 x 2.7GHz
-	Intel® HM76	Intel® HM76	Intel® HM76
4GB DDR3L SO-DIMM module	4GB DDR3 SO-DIMM module	4GB DDR3 SO-DIMM module	4GB DDR3 SO-DIMM module
1	1	1	1
VGA	VGA	VGA	VGA
1	2	2	2
2	2	2	2
1	-	1	1
-	-	1	1
-	-	1	1
2/1	4 (Hidden)/-	5 (1 In front)/-	5 (1 In front)/-
Isolation 2 x RS232,422,485	Isolation 2 x RS232,422,485/ 1 x RS232	2 x RS232,422,485/ 1 x RS232	Isolation 2 x RS232,422,485/ 4 x RS232
-	-	-	1
1	1	1	1
1	-	-	-
1	1	1	1
Terminal Blocks 3-Pin Phoenix Connector	Terminal Blocks 3-Pin Phoenix Connector	Terminal Blocks 3-Pin Phoenix Connector	AC Inlet (IEC60320 C14)
-	-	-	4-In/4-Out
-	-	-	4-In/4-Out
2 x mini-PCIe	2 x mini-PCIe/ 2 x PCI or PCIe slots	2 x mini-PCIe/ 2 x PCI or PCIe slots	2 x mini-PCIe/ 2 x PCI or PCIe slots
Aluminum Front Zero Bezel	Aluminum Front Bezel	Aluminum Front Bezel	Aluminum Front Bezel
Panel/Wall/Stand/ VESA 100 x 100mm	Panel/Wall/Stand/ VESA 100 x 100mm	Panel/Wall/Stand/ VESA 100 x 100mm	Panel/Wall/Stand/ VESA 100 x 100mm
+12~30VDC	+24VDC ±20%; Fuse: 250V/10A	+12~30VDC	100-240 V~, 1.5A, 50-60Hz; Fuse: 250VAC/3A
Optional	Optional	Optional	Internal
-10°C to 60°C	-10°C to 50°C	-10°C to 50°C	-10°C to 50°C
-20˚C to 75˚C	-20˚C to 75˚C	-20˚C to 75˚C	-20˚C to 75˚C
10%~90%, Non-condensing	10%~90%, Non-condensing	10%~90%, Non-condensing	10% ~ 90%, Non-condensing
Front Frame IP66	Front Frame IP65	Front Frame IP65	Front Frame IP65
547 x 367	455 x 295	455 x 295	455 x 295
562.4 x 382.4 x 62.85	477.64 x 310 x 95.72	477.64 x 310 x 95.72	477.64 x 310 x 95.72
9.26	9.51	9.34	9.75
13	14.5	14.5	14.5

Industrial Panel PC

Model	Coming Soon	Coming Soon		
	IPPC A1570T-DC	**IPPC A1570P-DC**	**IPPC A1770T-DC**	**IPPC A1770P-DC**
LCD Size	15" 4:3	15" 4:3	17" 4:3	17" 4:3
Max. Resolution	XGA,1024 x 768	XGA, 1024 x 768	SXGA, 1280 x 1024	SXGA, 1280 x 1024
Luminance (cd/m^2)	450	450	350	350
Contrast Ratio	800	800	1000	1000
Viewing Angle (H-V)	70(U), 80(D), 80(L), 80(R)	70(U), 80(D), 80(L), 80(R)	80(U), 80(D), 85(L), 85(R)	80(U), 80(D), 85(L), 85(R)
Backlight	LED	LED	LED	LED
LCD Color	16.2M	16.2M	16.7M	16.7M
Touch Screen	Resistive 5-wire	Five Point P-cap	Resistive 5-wire	Five Point P-Cap
Touch Light Transmission	81%	87%	81%	87%
CPU	4th Gen. Intel® Core™ i5/i3 LGA socket	4th Gen. Intel®Core™ i5/i3 LGA socket	4th Gen. Intel®Core™ i5/i3 LGA socket	4th Gen. Intel®Core™ i5/i3 LGA socket
Chipset	Intel® QM87	Intel® QM87	Intel® QM87	Intel® QM87
Memory	Max. 8GB DDR3/DDR3L	Max. 8GB DDR3/DDR3L	Max. 8GB DDR3/DDR3L	Max. 8GB DDR3/DDR3L
CFast Socket	1	1	1	1
2nd Display Output	DVI-I + DP	DVI-I + DP	DVI-I + DP	DVI-I + DP
PS2 KB/MS	1	1	2	2
Ethernet (10/100/1000)	2	2	2	2
Line-out	1	1	1	1
Line-in	1	1	1	1
Mic-in	1	1	1	1
USB 2.0/3.0	1(In front)/4	1(In front)/4	1(In front)/4	1(In front)/4
COM Port	2 x RS232,422,485	2 x RS232,422,485	2 x RS232,422,485	2 x RS232,422,485
Parallel Port	-	-	-	-
Power Switch	1	1	1	1
Remote Power Switch	1	1	1	1
Reset Button	1	1	1	1
Power Jack	Terminal Blocks 3-Pin Phoenix Connector	Terminal Blocks 3-Pin Phoenix Connector	Terminal Blocks 3-Pin Phoenix Connector	Terminal Blocks 3-Pin Phoenix Connector
GPIO	-	-	-	-
Digital I/O	-	-	-	-
Expansion	2 x mini-PCIe/ 2 x PCI or PCIe slots	2 x mini-PCIe/ 2 x PCI or PCIe slots	2 x mini-PCIe/ 2 x PCI or PCIe slots	2 x mini-PCIe/ 2 x PCI or PCIe slots
Construction Front Panel	Aluminum Front Bezel	Aluminum Front Bezel	Aluminum Front Bezel	Aluminum Front Bezel
Mounting	Panel/Wall/Stand/VESA 100 x 100mm	Panel/Wall/Stand/VESA 100 x 100mm	Panel/Wall/Stand/VESA 100 x 100mm	Panel/Wall/Stand/VESA 100 x 100mm
Power Input	+12V~30VDC	+12V ~ 30VDC	+12~30VDC	+12~30VDC
Power Supply Adapter	Optional	Optional	Optional	Optional
Operating Temp.	-10°C to 50°C	-20°C to 60°C	-10°C to 50°C	-10°C to 60°C
Storage Temp.	-20°C to 75°C	-20°C to 75°C	-20˚C to 75˚C	-20˚C to 75˚C
Operating Humidity	10%~90% relative humidity, Non-condensing	10%~90% relative humidity, Non-condensing	10%~90%, Non-condensing	10%~90%, Non-condensing
IP Level	Front Frame IP66	Front Frame IP66	Front Frame IP66	Front Frame IP66
Cut Out Size (W x H, mm)	382 x 312	382 x 312	436 x 360.5	436 x 360.5
Dimension (W x H x D, mm)	400 x 330 x 104.9	400 x 330 x 104.9	451 x 375.5 x 105	451 x 375.5 x 105
Net Weight (kg)	8.99	9.08	10.2	10.2
Gross Weight (kg)	13.83	13.83	16.2	16.2

				
IPPC A1770T-AC	**IPPC A1770P-AC**	**IPPC A1770TF-DC**	**IPPC 1960T-DC**	**IPPC 1960T-AC**
17" 4:3	17" 4:3	17" 4:3	19" 4:3	19" 4:3
SXGA, 1280 x 1024	SXGA, 1280 x 1024	SXGA, 1280 x 1024	SXGA 1280 x 1024	SXGA, 1280 x 1024
350	350	350	350	350
1000	1000	1000	1000	1000
80(U), 80(D), 85(L), 85(R)	80(U), 80(D), 85(L), 85(R)	80(U), 80(D), 85(L), 85(R)	80(U), 80(D), 85(L), 85(R)	80(U), 80(D), 85(L), 85(R)
LED	LED	LED	LED	LED
16.7M	16.7M	16.7M	16.7M	16.7M
Resistive 5-wire	Five Point P-Cap	Resistive 5-wire	Resistive 5-wire	Resistive 5-wire
81%	87%	81%	81%	81%
4th Gen. Intel® Core™ i5/i3 LGA socket	4th Gen. Intel®Core™ i5/i3 LGA socket	4th Gen. Intel® Core™ i7/i5/i3 LGA socket	3rd Gen. Intel®Core™ i5 (i5-3610ME) 2 x 2.7GHz	3rd Gen. Intel®Core™ i5 (i5-3610ME) 2 x 2.7GHz
Intel® QM87	Intel® QM87	Intel® QM87	Intel® HM76	Intel® HM76
Max. 8GB DDR3/DDR3L	Max. 8GB DDR3/DDR3L	Max. 8GB DDR3/DDR3L	4GB DDR3 SO-DIMM module	4GB DDR3 SO-DIMM module
1	1	1	1	1
DVI-I + DP	DVI-I + DP	DVI-I + DP	VGA	VGA
2	2	2	2	2
2	2	2	2	2
1	1	1	1	1
1	1	1	1	1
1	1	1	1	1
1(In front)/4	1(In front)/4	1(In front)/4	5 (1 In front)/-	5 (1 In front)/-
Isolation 2 x RS232,422,485	Isolation 2 x RS232,422,485	2 x RS232,422,485	2 x RS232,422,485/ 1 x RS232	Isolation 2 x RS232,422,485/ 4 x RS232
-	-	-	-	1
1	1	1	1	1
1	1	1	-	-
1	1	1	1	1
AC Inlet (IEC60320 C14)	AC Inlet (IEC60320 C14)	Terminal Blocks 3-Pin Phoenix Connector	Terminal Blocks 3-Pin Phoenix Connector	AC Inlet (IEC60320 C14)
4-In/4-Out	4-In/4-Out	-	-	4-In/4-Out
4-In/4-Out	4-In/4-Out	-	-	4-In/4-Out
2 x mini-PCIe/ 2 x PCI or PCIe slots	2 x mini-PCIe/ 2 x PCI or PCIe slots	2 x mini-PCIe/ 2 x PCI or PCIe slots	2 x mini-PCIe/ 2 x PCI or PCIe slots	2 x mini-PCIe/ 2 x PCI or PCIe slots
Aluminum Front Bezel	Aluminum Front Bezel	Aluminum Front Bezel	Aluminum Front Bezel	Aluminum Front Bezel
Panel/Wall/Stand/VESA 100 x 100mm	Panel/Wall/Stand/VESA 100 x 100mm	Panel/Wall/Stand/VESA 100 x 100mm	Panel/Wall/Stand/VESA 100 x 100mm	Panel/Wall/Stand/VESA 100 x 100mm
100-240 V~, 1.5A, 50-60Hz; Fuse: 250VAC/3A	100-240 V~, 1.5A, 50-60Hz; Fuse: 250VAC/3A	+12~30VDC	+12~30VDC	100-240 V~, 1.5A, 50-60Hz; Fuse: 250VAC/3A
Internal	Internal	Optional	Optional	Internal
-10°C to 50°C	-10°C to 60°C	-10°C to 50°C	-10°C to 50°C	-10°C to 50°C
-20˚C to 75˚C	-20˚C to 75˚C	-20°C to 75°C	-20°C to 75°C	-20˚C to 75˚C
10%~90%, Non-condensing	10%~90%, Non-condensing	10%~90%, Non-condensing	10%~90%, Non-condensing	10% ~ 90%, Non-condensing
Front Frame IP66	Front Frame IP66	Front Frame IP66	Front Frame IP65	Front Frame IP65
436 x 360.5	436 x 360.5	436 x 360.5	455 x 385	455 x 385
451 x 375.5 x 92.9	451 x 375.5 x 92.9	451 x 375.5 x 105	477.64 x 399.24 x 99.38	477.64 x 399.24 x 99.38
10.5	10.5	9.26	10.6	11.2
16.5	16.5	15.26	16.5	17.2

Industrial Panel PC

Model				
	IPPC A1970T-DC	**IPPC A1970P-DC**	**IPPC 2160P-DC**	**IPPC 2160P-AC**
LCD Size	19" 4:3	19" 4:3	21.5" 16:9	21.5" 16:9
Max. Resolution	SXGA, 1280 x 1024	SXGA, 1280 x 1024	Full HD, 1920 x 1080	Full HD, 1920 x 1080
Luminance (cd/m^2)	350	350	300	300
Contrast Ratio	1000	1000	5000	5000
Viewing Angle (H-V)	80(U), 80(D), 85(L), 85(R)	80(U), 80(D), 85(L), 85(R)	89(U), 89(D), 89(L), 89(R)	89(U), 89(D), 89(L), 89(R)
Backlight	LED	LED	LED	LED
LCD Color	16.7M	16.7M	16.7M	16.7M
Touch Screen	Resistive 5-wire	Five Point P-cap	Five Point P-Cap	Five Point P-Cap
Touch Light Transmission	80%	87%	87%	87%
CPU	4th Gen. Intel®Core™ i5/i3 LGA socket	4th Gen. Intel®Core™ i5/i3 LGA socket	3rd Gen. Intel®Core™ i5 (i5-3610ME) 2 x 2.7GHz	3rd Gen. Intel®Core™ i5 (i5-3610ME) 2 x 2.7GHz
Chipset	Intel® QM87	Intel® QM87	Intel® HM76	Intel® HM76
Memory	Max. 8GB DDR3/DDR3L	Max. 8GB DDR3/DDR3L	4GB DDR3 SO-DIMM module	4GB DDR3 SO-DIMM module
CFast Socket	1	1	1	1
2nd Display Output	DVI-I + DP	DVI-I + DP	VGA	VGA
PS2 KB/MS	1	1	2	2
Ethernet (10/100/1000)	2	2	2	2
Line-out	1	1	1	1
Line-in	1	1	1	1
Mic-in	1	1	1	1
USB 2.0/ 3.0	1 (In front)/4	1 (In front)/4	4/-	4/-
COM Port	2 x RS232,422,485	2 x RS232,422,485	2 x RS232,422,485/ 1 x RS232	Isolation 2 x RS232,422,485/ 4 x RS232
Parallel Port	-	-	-	1
Power Switch	1	1	1	1
Remote Power Switch	1	1	-	-
Reset Button	1	1	1	1
Power Jack	Terminal Blocks 3-Pin Phoenix Connector	Terminal Blocks 3-Pin Phoenix Connector	Terminal Blocks 3-Pin Phoenix Connector	AC Inlet (IEC60320 C14)
GPIO	-	-	-	4-In/4-Out
Digital I/O	-	-	-	4-In/4-Out
Expansion	2 x mini-PCIe/ 2 x PCI or PCIe slots	2 x mini-PCIe/ 2 x PCI or PCIe slots	2 x mini-PCIe/ 2 x PCI or PCIe slots	2 x mini-PCIe/ 2 x PCI or PCIe slots
Construction Front Panel	Aluminum Front Bezel	Aluminum Front Bezel	Aluminum Front Bezel	Aluminum Front Bezel
Mounting	Panel/Wall/Stand/VESA 100 x 100mm	Panel/Wall/Stand/VESA 100 x 100mm	Panel/Wall/Stand/VESA 100 x 100mm	Panel/Wall/Stand/VESA 100 x 100mm
Power Input	+12V~30VDC	+12V~30VDC	+12~30VDC	100-240 V~, 1.5A, 50-60Hz; Fuse: 250VAC/3A
Power Supply Adapter	Optional	Optional	Optional	Internal
Operating Temp.	-10°C to 50°C	-20°C to 60°C	-10°C to 60°C	-10°C to 60°C
Storage Temp.	-20°C to 75°C	-20°C to 75°C	-20˚C to 75˚C	-20˚C to 75˚C
Operating Humidity	10%~90% relative humidity, Non-condensing	10%~90% relative humidity, Non-condensing	10% ~ 90%, Non-condensing	10% ~ 90%, Non-condensing
IP Level	Front Frame IP66	Front Frame IP66	Front Frame IP65	Front Frame IP65
Cut Out Size (W x H, mm)	452 x 382	452 x 382	455 x 385	455 x 385
Dimension (W x H x D, mm)	470 x 400 x 104.9	470 x 400 x 104.9	562.4 x 382.4 x 99.38	562.4 x 382.4 x 99.38
Net Weight (kg)	10.25	10.34	11.91	12.51
Gross Weight (kg)	16.25	16.34	18.91	19.51

Industrial Touch Monitor

Model			
	IPPD 1600P	**IPPD 1800P**	**IPPD 2100P**
LCD Size	15.6" 16:9	18.5" 16:9	21.5" 16:9
Max. Resolution	WXGA, 1366 x 768	WXGA, 1366 x 768	Full HD, 1920 x 1080
Luminance (cd/m^2)	300	400	300
Contrast Ratio	500	1000	5000
Viewing Angle (H-V)	80(U), 80(D), 85(L), 85(R)	80(U), 80(D), 85(L), 85(R)	89(U), 89(D), 89(L), 89(R)
Backlight	LED	LED	LED
LCD Color	16.7M	16.7M	16.7M
Touch Screen	10 Point P-Cap	10 Point P-Cap	10 Point P-Cap
Touch Light Transmission	87%	87%	87%
Touch Screen I/F	USB	USB	USB
OSD Function	OSD Keypad	OSD Keypad	OSD Keypad
Video Input	VGA; DVI-D; DP	VGA; DVI-D; DP	VGA; DVI-D; DP
Power Jack	Terminal Blocks 3-Pin Phoenix Connector	Terminal Blocks 3-Pin Phoenix Connector	Terminal Blocks 3-Pin Phoenix Connector
Construction Front Panel	Aluminum Front Zero Bezel	Aluminum Front Zero Bezel	Aluminum Front Zero Bezel
Mounting	Panel/Wall/Stand/VESA 100 x 100mm	Panel/Wall/Stand/VESA 100 x 100mm	Panel/Wall/Stand/VESA 100 x 100mm
Power Input	+12~30VDC	+12~30VDC	+12~30VDC
Power Supply Adapter	Optional	Optional	Optional
Operating Temp.	-10°C to 60°C	-10°C to 60°C	-10°C to 60°C
Storage Temp.	-20˚C to 75˚C	-20˚C to 75˚C	-20˚C to 75˚C
Operating Humidity	10%~90%, Non-condensing	10%~90%, Non-condensing	10%~90%, Non-condensing
IP Level	Front Frame IP66	Front Frame IP66	Front Frame IP66
Certifications	CE, FCC Class B	CE, FCC Class B	CE, FCC Class B
Cut Out Size (W x H, mm)	401 x 296	475.4 x 305.2	547 x 367
Dimension (W x H x D, mm)	417.4 x 312.4 x 51.75	490.8 x 320.6 x 50.65	562.4 x 382.4 x 50.85
Net Weight (kg)	5.48	6.24	7.87
Gross Weight (kg)	8.5	9	12

Applied Panel PC

Model			
	APPC 0840T	APPC 1230T/1231T	APPC 1235T
LCD Size	8.0" 4:3	12.1" 4:3	12.1" 4:3
Max. Resolution	SVGA, 800 x 600	SVGA, 800 x 600	XGA, 1024 x 768
Luminance (cd/m^2)	400	450	500
Contrast Ratio	500	700	700
Viewing Angle (H-V)	50(U), 70(D), 70(L), 70(R)	65(U), 75(D), 80(L), 80(R)	80(U), 80(D), 80(L), 80(R)
Backlight	LED	LED	LED
LCD Color	262K	16.2M	16.2M
Touch Screen	Resistive 5-wire (flush panel type)	Resistive 5-wire (flush panel type)	Resistive 5-wire (flush panel type)
Touch Light Transmission	82%	80%	80%
CPU	Intel® Atom™ E3826 Dual Core 1.46GHz	Intel® Atom™ D2550 Dual Core 1.86GHz	Intel® Atom™ D2550 Dual Core 1.86GHz
Chipset	-	Intel® NM10 Express	Intel® NM10 Express
Memory	2GB DDR3L SO-DIMM module	2GB DDR3 SO-DIMM module	2GB DDR3 SO-DIMM module
CF Socket	1	1	1
2nd Display Output	VGA	VGA	VGA
PS2 KB/MS	-	1	1
Ethernet (10/100/1000)	2	2	2
Line-out	1	1	1
Line-in	-	1	1
Mic-in	-	1	1
USB 2.0/3.0	3/1	4/-	4/-
COM Port	2 x RS232,422,485	2 x RS232,422,485/Isolation 2 x RS232,422,485, 2 x RS232	2 x RS232,422,485
Power Switch	1	1	1
Remote Power Switch	1	-	-
Reset Button	1	1	1
Power Jack	DC 4-pin DIN Power Jack with shield, 90°	DC 4-pin DIN Power Jack with shield, 90°	Terminal Blocks 3-pin phoneix connector
GPIO	-	-/2-in, 2-out	-
Digital I/O	-	-/4-in, 4-out	-
Expansion	1 x mini-PCIe	2 x mini-PCIe	2 x mini-PCIe
Construction Front Panel	ABS+PC Plastic front bezel	ABS+PC Plastic front bezel	ABS+PC Plastic front bezel
Mounting	Panel/Wall/Stand/VESA 100 x 100mm	Panel/Wall/Stand/VESA 100 x 100mm	Panel/Wall/Stand/VESA 100 x 100mm
Power Input	+12~30VDC	+12~30VDC	+12~30VDC
Power Supply Adapter	Optional	Optional	Optional
Operating Temp.	-5°C to 50°C	-5°C to 60°C	-5°C to 60°C
Storage Temp.	-20˚C to 75˚C	-20˚C to 75˚C	-20˚C to 75˚C
Operating Humidity	10% ~ 90%, Non-condensing	10% ~ 90%, Non-condensing	10%~90%, Non-condensing
IP Level	Front Frame IP65	Front Frame IP65	Front Frame IP65
Cut Out Size (W x H, mm)	209.6 x 167.1	304.5 x 230	304.5 x 230
Dimension (W x H x D, mm)	217.4 x 176.4 x 68.9	317 x 243 x 65.89	317 x 243 x 65.89
Net Weight (kg)	2.3	3.9	3.9
Gross Weight (kg)	4	6	6

			
APPC 1240T	**APPC 1245T**	**APPC 1530T/1531T**	**APPC 1540T**
12.1" 4:3	12.1" 4:3	15" 4:3	15" 4:3
SVGA, 800 x 600	XGA, 1024 x 768	XGA, 1024 x 768	XGA, 1024 x 768
450	500	450	450
700	700	800	800
65(U), 75(D), 80(L), 80(R)	80(U), 80(D), 80(L), 80(R)	70(U), 80(D), 80(L), 80(R)	70(U), 80(D), 80(L), 80(R)
LED	LED	LED	LED
16.2M	16.2M	16.2M	16.2M
Resistive 5-wire (flush panel type)	Resistive 5-wire (flush panel type)	Resistive 5-wire (flush panel type)	Resistive 5-wire (flush panel type)
80%	80%	81%	81%
Intel® Atom™ E3826 Dual Core 1.46GHz	Intel® Atom™ E3826 Dual Core 1.46GHz	Intel® Atom™ D2550 Dual Core 1.86GHz	Intel® Atom™ E3826 Dual Core 1.46GHz
-	-	Intel® NM10 Express	-
2GB DDR3L SO-DIMM module	2GB DDR3L SO-DIMM module	2GB DDR3 SO-DIMM module	2GB DDR3L SO-DIMM module
1	1	1	1
VGA	VGA	VGA	VGA
1	1	1	1
2	2	2	2
1	1	1	1
-	-	1	-
-	-	1	-
2/1	2/1	4/-	2/1
Isolation 2 x RS232,422,485	Isolation 2 x RS232,422,485	2 x RS232,422,485/Isolation 2 x RS232,422,485, 2 x RS232	Isolation 2 x RS232,422,485
1	1	1	1
1	1	-	1
1	1	1	1
Terminal Blocks 3-pin phoneix connector	Terminal Blocks 3-pin phoneix connector	DC 4 pin DIN Power Jack with shield, 90°	Terminal Blocks 3-pin phoneix connector
-	-	-/2-in, 2-out	-
-	-	-/4-in, 4-out	-
2 x mini-PCIe	2 x mini-PCIe	2 x mini-PCIe	2 x mini-PCIe
ABS+PC Plastic front bezel	ABS+PC Plastic front bezel	ABS+PC Plastic front bezel	ABS+PC Plastic front bezel
Panel/Wall/Stand/VESA 100 x 100mm	Panel/Wall/Stand/VESA 100 x 100mm	Panel/Wall/Stand/VESA 100 x 100mm	Panel/Wall/Stand/VESA 100 x 100mm
+12~30VDC	+12~30VDC	+12~30VDC	+12~30VDC
Optional	Optional	Optional	Optional
-5°C to 60°C	-5°C to 60°C	-5°C to 60°C	-5°C to 60°C
-20˚C to 75˚C	-20˚C to 75˚C	-20˚C to 75˚C	-20˚C to 75˚C
10%~90%, Non-condensing	10%~90%, Non-condensing	10%~90%, Non-condensing	10%~90%, Non-condensing
Front Frame IP65	Front Frame IP65	Front Frame IP65	Front Frame IP65
304.5 x 230	304.5 x 23	371 x 297	371 x 297
317 x 243 x 65.89	317 x 243 x 65.89	384.37 x 309.95 x 63.2	384.37 x 309.95 x 63.2
4	4	5	5.1
6	6	8	9

Applied Panel PC

Model				
	APPC 1730T/1731T	APPC 1740T	APPC 1930T/1931T	APPC 1940T
LCD Size	17" 4:3	17" 4:3	19" 4:3	19" 4:3
Max. Resolution	SXGA, 1280 x 1024	SXGA, 1280 x 1024	SXGA, 1280 x 1024	SXGA, 1280 x 1024
Luminance (cd/m^2)	350	350	350	350
Contrast Ratio	1000	1000	1000	1000
Viewing Angle (H-V)	80(U), 80(D), 85(L), 85(R)	80(U), 80(D), 85(L), 85(R)	80(U), 80(D), 85(L), 85(R)	80(U), 80(D), 85(L), 85(R)
Backlight	LED	LED	LED	LED
LCD Color	16.7M	16.7M	16.7M	16.7M
Touch Screen	Resistive 5-wire (flush panel type)	Resistive 5-wire (flush panel type)	Resistive 5-wire (flush panel type)	Resistive 5-wire (flush panel type)
Touch Light Transmission	81%	81%	81%	81%
CPU	Intel® Atom™ D2550 Dual Core 1.86GHz	Intel® Atom™ E3826 Dual Core 1.46GHz	Intel® Atom™ D2550 Dual Core 1.86GHz	Intel® Atom™ E3826 Dual Core 1.46GHz
Chipset	Intel® NM10 Express	-	Intel® NM10 Express	-
Memory	2GB DDR3 SO-DIMM module	2GB DDR3L SO-DIMM module	2GB DDR3 SO-DIMM module	2GB DDR3L SO-DIMM module
CF Socket	1	1	1	1
2nd Display Output	VGA	VGA	VGA	VGA
PS2 KB/MS	1	1	1	1
Ethernet (10/100/1000)	2	2	2	2
Line-out	1	1	1	1
Line-in	1	-	1	-
Mic-in	1	-	1	-
USB 2.0/3.0	4/-	2/1	4/-	2/1
COM Port	2 x RS232,422,485/Isolation 2 x RS232,422,485, 2 x RS232	Isolation 2 x RS232,422,485	2 x RS232,422,485/Isolation 2 x RS232,422,485, 2 x RS232	Isolation 2 x RS232,422,485
Power Switch	1	1	1	1
Remote Power Switch	-	1	-	1
Reset Button	1	1	1	1
Power Jack	DC 4 pin DIN Power Jack with shield, 90°	Terminal Blocks 3-pin phoneix connector	DC 4 pin DIN Power Jack with shield, 90°	Terminal Blocks 3-pin phoneix connector
GPIO	-/2-in, 2-out	-	-/2-in, 2-out	-
Digital I/O	-/4-in, 4-out	-	-/4-in, 4-out	-
Expansion	2 x mini-PCIe	2 x mini-PCIe	2 x mini-PCIe	2 x mini-PCIe
Construction Front Panel	ABS+PC Plastic front bezel	ABS+PC Plastic front bezel	ABS+PC Plastic front bezel	ABS+PC Plastic front bezel
Mounting	Panel/Wall/Stand/VESA 100 x 100mm	Panel/Wall/Stand/VESA 100 x 100mm	Panel/Wall/Stand/VESA 100 x 100mm	Panel/Wall/Stand/VESA 100 x 100mm
Power Input	+12~30VDC	+12to30V DC	+12to30V DC	+12to30V DC
Power Supply Adapter	Optional	Optional	Optional	Optional
Operating Temp.	-5°C to 60°C	-5°C to 60°C	-5°C to 50°C	-5°C to 50°C
Storage Temp.	-20˚C to 75˚C	-20˚C to 75˚C	-20˚C to 75˚C	-20˚C to 75˚C
Operating Humidity	10%~90%, Non-condensing	10%~90%, Non-condensing	10%~90%, Non-condensing	10%~90%, Non-condensing
IP Level	Front Frame IP65	Front Frame IP65	Front Frame IP65	Front Frame IP65
Cut Out Size (W x H, mm)	399 x 329	399 x 329	436 x 366	436 x 366
Dimension (W x H x D, mm)	410.4 x 340.4 x 65.9	410.4 x 340.4 x 65.9	457.64 x 379.24 x 61.25	457.64 x 379.24 x 61.25
Net Weight (kg)	6.6	6.7	6.5	6.7
Gross Weight (kg)	9.5	8	10	9

Applied Touch Monitor

Model					
	APPD 1200T	**APPD 1205T**	**APPD 1500T**	**APPD 1700T**	**APPD 1900T**
LCD Size	12.1" 4:3	12.1" 4:3	15" 4:3	17" 4:3	19" 4:3
Max. Resolution	SVGA, 800 x 600	XGA, 1024 x 768	XGA, 1024 x 768	SXGA, 1280 x 1024	SXGA, 1280 x 1024
Luminance (cd/m^2)	450	500	450	350	350
Contrast Ratio	700	700	800	1000	1000
Viewing Angle (H-V)	65(U), 75(D), 80(L), 80(R)	80(U), 80(D), 80(L), 80(R)	70(U), 80(D), 80(L), 80(R)	80(U), 80(D), 85(L), 85(R)	80(U), 80(D), 85(L), 85(R)
Backlight	LED	LED	LED	LED	LED
LCD Color	16.2M	16.2M	16.2M	16.7M	16.7M
Touch Screen	Resistive 5-wire (flush panel type)	Resistive 5-wire (flush panel type)	Resistive 5-wire (flush panel type)	Resistive 5-wire (flush panel type)	Resistive 5-wire (flush panel type)
Touch Light Transmission	80%	80%	81%	81%	81%
Touch Screen I/F	RS232, USB	RS232, USB	RS232, USB	RS232, USB	RS232, USB
OSD Function	OSD Keypad	OSD Keypad	OSD Keypad	OSD Keypad	OSD Keypad
Video Input	VGA, DVI-D	VGA, DVI-D	VGA, DVI-D	VGA, DVI-D	VGA, DVI-D
Power Jack	Terminal Blocks 3-pin phoneix connector	Terminal Blocks 3-pin phoneix connector	Terminal Blocks 3-pin phoneix connector	Terminal Blocks 3-pin phoneix connector	Terminal Blocks 3-pin phoneix connector
Construction Front Panel	ABS+PC Plastic front bezel	ABS+PC Plastic front bezel	ABS+PC Plastic front bezel	ABS+PC Plastic front bezel	ABS+PC Plastic front bezel
Mounting	Panel/Wall/Stand/VESA 100 x 100mm	Panel/Wall/Stand/VESA 100 x 100mm	Panel/Wall/Stand/VESA 100 x 100mm	Panel/Wall/Stand/VESA 100 x 100mm	Panel/Wall/Stand/VESA 100 x 100mm
Power Input	+12 ~ 24VDC	+12 ~ 24VDC	+12 ~ 24VDC	+12 ~ 24VDC	+12 ~ 24VDC
Power Supply Adapter	Optional	Optional	Optional	Optional	Optional
Operating Temp.	-5°C to 60°C	-5°C to 60°C	-5°C to 60°C	-5°C to 60°C	-5°C to 50°C
Storage Temp.	-20˚C to 75˚C	-20˚C to 75˚C	-20˚C to 75˚C	-20˚C to 75˚C	-20˚C to 75˚C
Operating Humidity	10%~90%, Non-condensing	10%~90%, Non-condensing	10%~90%, Non-condensing	10%~90%, Non-condensing	10%~90%, Non-condensing
IP Level	Front Frame IP65	Front Frame IP65	Front Frame IP65	Front Frame IP65	Front Frame IP65
Certifications	CE, FCC Class B	CE, FCC Class B	CE, FCC Class B	CE, FCC Class B	CE, FCC Class B
Cut Out Size (W x H, mm)	304.5 x 230	304.5 x 230	371 x 297	399 x 329	436 x 366m
Dimension (W x H x D, mm)	317 x 243 x 53.5	317 x 243 x 53.5	384.37 x 309.95 x 51.2	410.4 x 340.4 x 43.7	457.64 x 379.24 x 49.25
Net Weight (kg)	2.9	2.9	3.98	5.3	5.4
Gross Weight (kg)	5	5	7	8	9

iAutomation Controller

Automation Runtime Engine – Selection Guide

	SoftPLC			SoftMotion			SoftMotion CNC		
Performance Index	P10	P20	P30	M10	M20	M60	R10	R20	R60
Real-Time	Yes			Yes			Yes		
Software Protocols	EtherCAT, EtherNET I/P, PROFINET								
Optional Protocols via FBI	PROFIBUS, DeviceNET, CANopen								
IEC61131-3 Language	Ladder Diagram, Function Block Diagram, Instruction List, Structured Text, Sequential Function Chart, Continuous Function Chart								
Cycle Time (ms)	1	0.5	0.5	1	0.5	0.5	1	0.5	0.5
Max. I/O Points	512	1024	1024+	512	1024	1024+	512	1024	1024+
Max. Axes				12	24	64	12	24	64
Control Group							1	2	6
Motion Features				Support GEAR, CAM Function Integrated graphical CAM editor with extensive configuration options					
High-Computing Applications Other Application Software	-	-	V	-	-	V	-	-	V
HMI (integrated options)	-	JMobile Suite	JMobile Suite	-	TargetVisu	TargetVisu	TargetVisu	TargetVisu	TargetVisu
NIFE100	V			V					
NIFE101	V			V					
NIFE200		V	V		V		V	V	
NIFE200P2E		V	V		V			V	
NIFE300, Core i3			V			V		V	V
NIFE300, Core i5						V			V
NIFE300P2, Core i7									V
APPC0842T		V							
APPC1247T (J1900)		V			V				
APPC1542T (J1900)		V			V			V	
APPC1562TP2E-DC, (Core i5)			V			V			V
IPPC A1772PE2-DC, (Core i5)						V			V
IPPC A1772TFE2-DC, (Core i7 w/ FAN)						V			V
IPPC1642P (J1900)		V			V			V	

Controller Softlogic Overview

A PC-based control solution composes of four elements—IPC, runtime engine for controller, HMI and I/O systems. The IPC serves as the basis of the control platform and integrates a runtime engine for the controller, while the HMI is the main visualization interface of the control system. The I/O systems, on other hand, provide the physical connectivity for transferring and extending signals. NEXCOM offers the NIFE series, IPPC series, APPC series and VIPA SLIO series that make up the four elements of a PC-based control solution.

For runtime engine, NEXCOM defines three major levels of runtime engine, and also aid the users to find the most suitable and affordable products accordingly. The three major levels are defines as the followings:

- SoftPLC : Basic PLC controls and manipulations
- SoftMotion : Advanced motion and axis controls
- SoftMotion CNC for Robot : Advanced motion, axis and robot arm controls with high performance visualization

In the past centuries, the development of the Industrial Revolution has contributed greatly to the human society and economy, improving quality of lives and making mass production possible and efficient. Today, with technological advances in data communication, mobile and cloud computing, new innovative services and business optimizations can be achieved for greater efficiency. These advances have also found its way into the industrial automation segment, turning what were once stand-alone and passive machines in factories into smart, connected machines that lead to the next generation of manufacturing—Industry 4.0.

However, to achieve the vision of Industry 4.0, PC-based controllers are needed in place of traditional automation control systems. PC-based controllers possess high computing power to enable optimized manufacturing operations that traditional automation control systems lack to provide. Take for example, a legacy machine used for visual inspection of product surface defects and position alignment. The legacy machine can only recognize the patterns and then send the results to the PLC for machining. With PC-based controllers, machining can be executed without the need for PLC due to the higher performance and integrated architecture of PC-based platforms. A PC-based control solution is composed of four elements—IPC, runtime engine for controller, HMI and I/O systems. The IPC serves as the basis of the control platform and integrates a runtime engine for the controller, while the HMI is the main visualization interface of the control system. The I/O systems, on other hand, provide the physical connectivity for transferring and extending signals. NEXCOM offers the NIFE series, IPPC series, APPC series and VIPA SLIO series that make up the four elements of a PC-based control solution.

PC-based Controller

NIFE 300 is a high performance fanless box IPC based on the 6th generation Intel® Core® i7-6700TE processor (Intel Core® i3 and i5 options available). Pre-installed with CODESYS SoftMotion and real-time EtherCAT support, NIFE 300 can function as a high performance SoftMotion controller following the PLCopen logic (IEC 61131-3) and PLCopen motion control standard. Furthermore, NIFE 300 features Windows OS, comprehensive PC peripherals and I/O expansions to support a variety of third party add-on expansion cards and software. Ideal for visual inspection, 3D UI/HMI, CAD/CAM, remote maintenance, local-recipe management, historian data logging, self-diagnosis and power management, NIFE 300 can meet the needs of various automation applications.

NEXCOM also offers NIFE 200 and NIFE 100 based on the Intel® Celeron® processor J1900 and Intel® Atom™ processor E3826 respectively in its IPC solution family. NIFE 200 is targeted at basic logic and motion control systems, while NIFE 100 is designed for harsh and confined environments with a wide operating temperature and compact design.

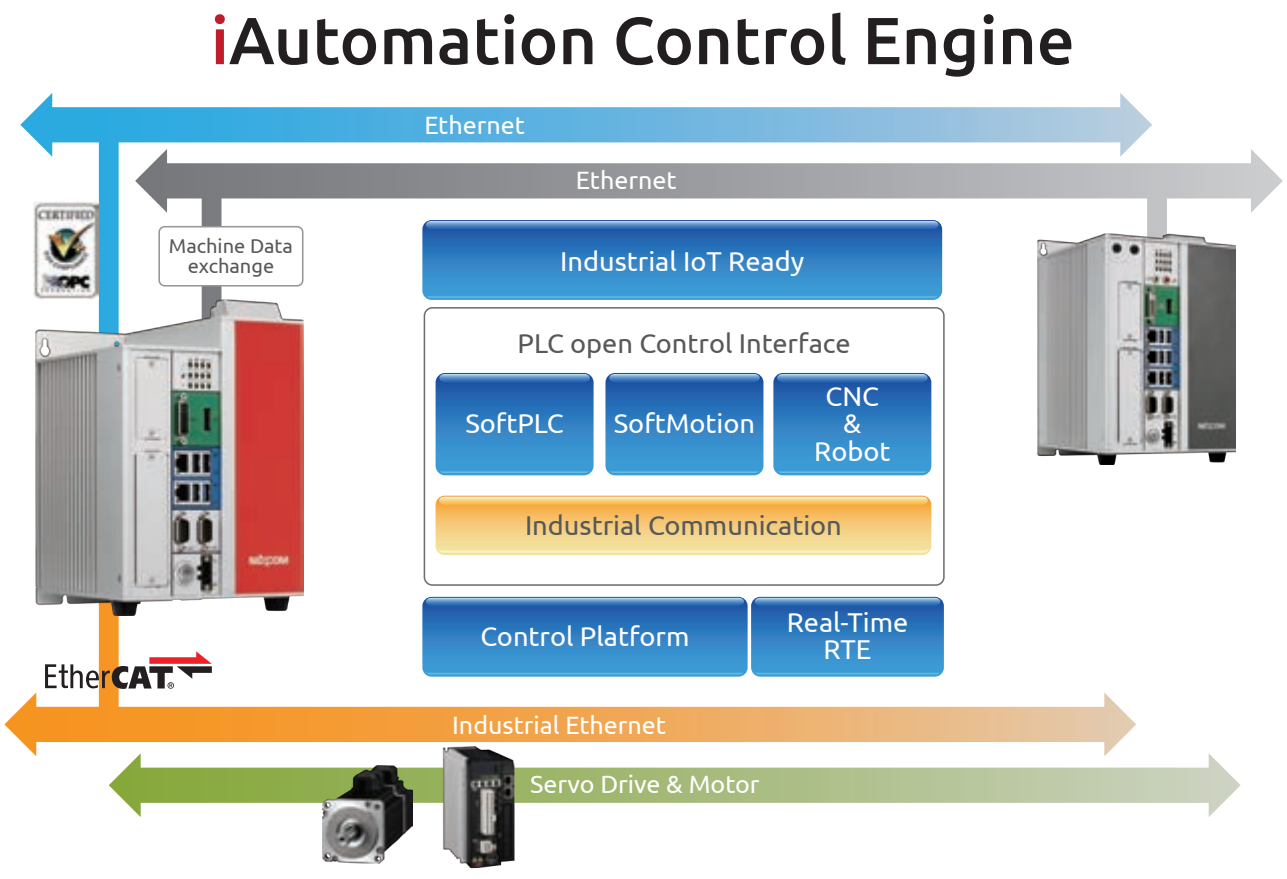
Control Panel Computer

The IPPC and APPC series are a range of touch screen panel PCs featuring Control RTE, SoftMotion and HMI functionality for SoftPLC and SoftMotion applications. The IPPC and APPC series feature P-Cap and resistive touch panels respectively, and are available in sizes from 8" to 17" with 4:3 or 16:9 aspect ratios. Furthermore, the panel PCs come with processor options including 3rd and 4th generation Intel® Core™ i5 processors, Intel® Atom™ and Intel® Celeron processors to meet different types of control applications.

iAutomation Control Engine - Softlogic

NEXCOM's IPCs implement the softlogic runtime engine, a software that enables IEC 61131-3 programming for logic and motion control. The software offers the following features:

- Standard IEC 61131-3 languages, including LD, FBD, IL, ST, SFC, CFC.
- Fieldbus protocol support, including PROFIBUS-DP and DeviceNet.
- Industrial Ethernet protocol support, including EtherCAT, PROFINET, EtherNet/IP and Modbus TCP/IP.



Ready for use with Windows OS, the iAutomation Control Engine includes three types of licenses: PLC-Control RTE, SMC-SoftMotion and Robot- SoftMotion CNC. PLC-Control RTE provides real-time SoftPLC functionality for I/O and offers support for various different fieldbus and industrial Ethernet protocols. SMC-SoftMotion provides PLCopen motion control features (V2.0, Part 1,2 and 3) for implementing motion control. Robot- SoftMotion CNC offers a variety of robotic function blocks and EtherCAT support for Delta, SCARA and articulated robots.

Scope of the function library

Scope of the function library	RTE Options	
	Softmotion	CNC
Certified function blocks according to PLCopen MotionControl		
Absolute and relative positioning (MC_MoveAbsolute, MC_MoveRelative)	v	v
Superimposed positioning (MC_MoveSuperimposed)	v	v
Movement at constant velocity (MC_MoveVelocity)	v	v
Consistent support of jerk-limited profiles (continuous acceleration for any kind of	v	v
interruption of the current motion)	v	v
Drive-guided homing (MC_Home)	v	v
Blocking stop (MC_Stop)	v	v
Control release (MC_Power)	v	v
Read and write parameters (MC_Read/WriteParameter)	v	v
Read actual position (MC_ReadActualPosition)	v	v
Position, velocity, and acceleration profiles (MC_*Profile)	v	v
Function blocks according to PLCopen MotionControl		
Probe (MC_TouchProbe, MC_AbortTrigger)	v	v
Set and move position (MC_SetPosition)	v	v
Read actual velocity and actual torque(MC_ReadActualVelocity,MC_ReadActualTorque)	v	v
Cam switch (MC_DigitalCamSwitch)	v	v
Electronic gear with synchronization position (MC_GearInPos)	v	v
Full stop (MC_Halt)	v	v
Additional blocks	v	v
Control and query of the static deceleration	v	v
Monitoring of the drag error, a position window, or maximum values	v	v
Distance measurement (also of modulo axes)	v	v
External definition of position, velocity, and target value from the application	v	v
Management of errors in the function blocks	v	v
Controller-guided homing	v	v
Operation of cams and cam switches	v	v
Definition of the specified target torque	v	v
Commissioning the drive	v	v
Absolute and relative positioning with transitional velocity (SMC_MoveContinuousAbsolute and SMC_MoveContinuousRelative)	v	v
Setting control mode to position, velocity, or torque	v	v
Range of functions for the cam editor		
Graphical and numerical planning for the cam using any base in representation of the distance, velocity, acceleration, and jerk	v	v
Linear or polynomial interpolation (5th order polynomial)	v	v
Configuration of tappets and their switching behavior in the cam	v	v
Configuration of the cam regarding dimension, period, and continuity requirements	v	v
Scope of the CNC function library		
Decoder for converting G-code into a proprietary data structure		v
Limiter for restricting the dynamic values of velocity and acceleration for one or more axes		v
Block for testing velocities at transitions		v
Interpolator for computing the path points based on the velocity profile (bidirectional		v
interpolator for forward and reverse gear)		v
Interpolator override		v
Blocks for coordinate transformation (for example, SMC_ScaleQueue3D and SMC_Coordinate Transformation3D)		v
Blocks for reading and processing CNC paths from a file (for paths created and processed externally)		v
Path velocity modes trapezoid / sigmoidal / quadratic (jerk-limited) / quadratic_smooth (jerk-limited with continuous jerk curve)		v
Any definition of the lookahead puffer		v
Odometer function		v
Parameterizable 3D coordinate transformation (including inverse)		v
Ascertainment of a coordinate system from six scanning points		v

Scope of the function library	RTE Options	
	Softmotion	CNC
Help modules for path preprocessing and modulation:		
Tool-radius correction 2D		v
Angle smoothing (with circular arcs)		v
Angle smoothing (with 3rd and 5th order splines)		v
Loop suppression		v
Limitation of dynamics		v
Range limit check		v
Path shifting and twisting		v
Velocity and acceleration definition for each axis		v
Transformation blocks (including inverser) for popular kinematic designs:		
Portal systems 2D / 3D		v
Portal systems with axes of orientation and tool offset		v
Portal systems with belt drive (H-portals and T-portals)		v
Polar transformation		v
2/3-arm SCARA		v
Bipod		v
Tripod with linear and joint axes		v
5-axis kinematics for 3-axis portal with rotating and tilting tool		v
4-axis kinematics for palletizing robots		v
6-axis kinematics for articulated arm robots		v
Scope of functions for 3D CNC editor according to DIN 66025 (G-Code)		
Path preprocessing (offline preview of the effects, for example angle smoothing)		v
Path pre-interpolation (offline preview of the resulting position, velocity, acceleration, and jerk curves of all supported axes)		v
DXF import		v
Read from and save to file		v
Program transformations (rotate, shift, scale in G-code)		v
Conversion to tables		v
Program information (path length, path duration, number of objects, etc.)		v
G-code command set		
Linear interpolation (G1), Circular interpolation (G2/G3)		v
Dwell (G4)		v
Spline interpolation (G5, G10)		v
Parabola interpolation (G6), Ellipsis interpolation (G8, G9)		v
Interpolation plane selections for circular arcs (G16 to G19)		v
Conditional jumps (G20)		v
Variable write/increment (G36, G37)		v
Tool radius compensation (G40 to G42)		v
Angle rounding and smoothing (G50, G51, G52)		v
Coordinate system shift (G53 bis G56)		v
Loop suppression (G60, G61)		v
Interpreter halt (G75)		v
Absolute and relative coordinates (G90, G91)		v
Position setting (G92)		v
Absolute and relative coordinates (G98, G99)		v
M-Functions (M), Path tappets (H)		v
Velocity and acceleration definition (F, E)		v
Use of IEC variables		v
Supported dimensions: X, Y, Z (primary interpolation axes)		v
A, B, C (orientation axes—splined)		v
P, Q, U, V, W (additional axes —linear)		v

NIFE 100 Controller

Intel® Atom™ Dual Core
Automation PC-Based Controller

NIFE 100

NIFE 101

Main Features

- Distributed, modularized and open-architecture controller
- Compliant with industrial IEC61131-3 programming languages (LD/FBD/SFC/IL/ST/CFC)
- Support up to 512 I/O points and maximum 12 axis for motion
- Support PLC handler APIs and OPC-UA server for Client/M2M communication
- Support industrial Ethernet Fieldbus protocols (EtherCAT, EtherNet/IP, PROFINET)
- Support industrial Fieldbus protocols (PROFINET, PROFIBUS, DeviceNET) by optional FBI
- Available NEXCOM IoT Studio for cloud and data acquisition
- Support multi-core, multi-tasking powered by Intel® ATOM® Dual Core processor

Product Overview

Powered by the latest generation of Intel® Atom™ processor E3826 (formerly codenamed "Bay Trail-I"), NIFE 100 presents intelligent PC-based controller and IoT gateway for smart factory automation. Up to 4G DDR3L memory, NIFE 100 have several options on storage devices like CFast and SSD. NIFE 100 support extended operating temperature from -20 up to 70°C with typical DC input 24V ±20% range. The NIFE 100 has high integration ability with optional mini-PCIe module and 2 x COM ports with 2.5KV isolation protect, which makes it a reliable connection with devices in factory automation applications via EtherCAT protocol and IoT applications (with optional GbE LAN, Wi-Fi, 3.5G/4G LTE module)

NIFE 100 also meets PLCopen® specifications and allows easy control programming via SoftPLC and SoftMotion tool kit. Using libraries of reusable logic and motion functionality, control schemes can be developed with reduced programming efforts for fast deployment of SoftPLC and IoT controllers. NIFE 100 also meets PLCopen® specifications and allows easy control programming via Control RTE and SoftMotion tool kit. Using libraries of reusable logic and motion functionality, control schemes can be developed with reduced programming efforts for fast deployment of SoftPLC and IoT controllers.

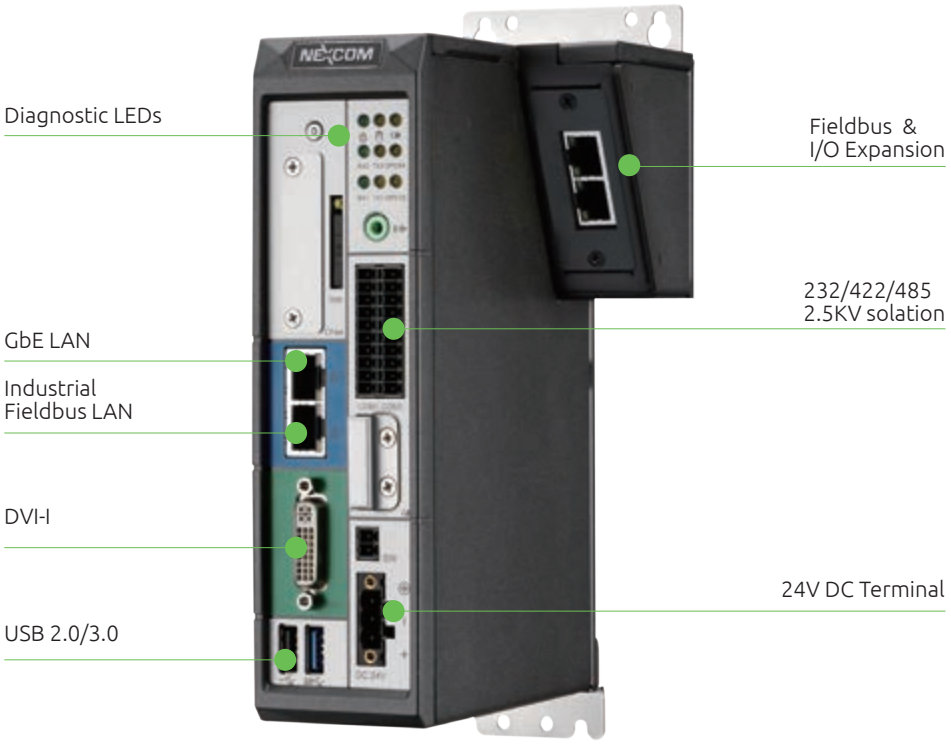
Controller Specifications

Specification	SoftPLC Controller	SoftMotion Controller
Performance Index	P10	M10
Real-Time	Yes	Yes
Software Protocols	EtherCAT, EtherNet/IP, PROFINET	
Optional Protocols via FBI	PROFIBUS, DeviceNET, CANopen	
IEC61131-3 Language	Ladder diagram, function block diagram, instruction list, structured text, sequential function chart, continuous function chart	
Cycle Time (ms)	1	1
Max. I/O Points	512	512
Max. Axes	No support	12
Control Group	No support	No support
Motion Features	No support	GEAR, CAM Function Integrated graphical CAM editor with extensive configuration option
High-Computing Applications Other Application Software	No support	No support
HMI (License Options)	No support	No support

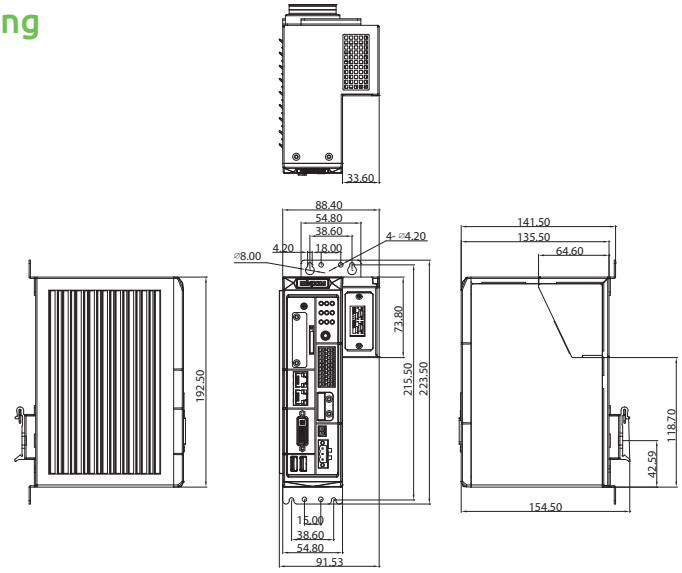
System Specification

Technical Data	NIFE 100/NIFE 101
Processor	Onboard Intel® Atom™ processor E3826 Dual Core 1.46GHz
Main Memory	DDR3L 1600/1333MHz memory maximum up to 4GB
Storage Memory	Optional 2.5" SSD or HDD
Persistent Memory	Optional 1M-bit NVRAM via NISKNVRAM module
Power Backup	Optional battery pack, NISKBAT
General Interface	2 x GbE LAN (I210IT), 1 x DVI-I (DVI-D + VGA), 1 x USB 2.0, 1 x USB 3.0
Diagnostics LED	1 x Power, 1 x storage, 1 x CMOS battery low, 2 x Tx/Rx, 4 x programmable LEDs
Operating System	Win8 32-bit/64-bit, WES8 32-bt/64-bit Win7 32-bit/64-bit, WES732-bit/64-bit WEC7 Linux Kernel version 3.8.0
Control Software	P10: control RTE/M10 : SoftMotion RTE (optional)
Serial Ports	2 x RS232/422/485 with 2.5KV isolation protection
Power Requirement	Typical 24V DC input with ±20% range
Operating Temperature	Ambient with air flow: -20°C to 70°C (according to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14)
Storage Temperature	-20°C to 85°C
Relative Humidity	10% to 93% (non-condensing)
Shock Resistance	50G, half sine, 11ms, IEC60068-27
Vibration Resistance	Random: 2Grms @ 5~500Hz, IEC60068-2-64 Sinusoidal: 2Grms @ 5~500Hz, IEC60068-2-64
EMC Standard	CE Approval: EN55022 & EN55024 /FCC Class A/LVD

I/O Connectors

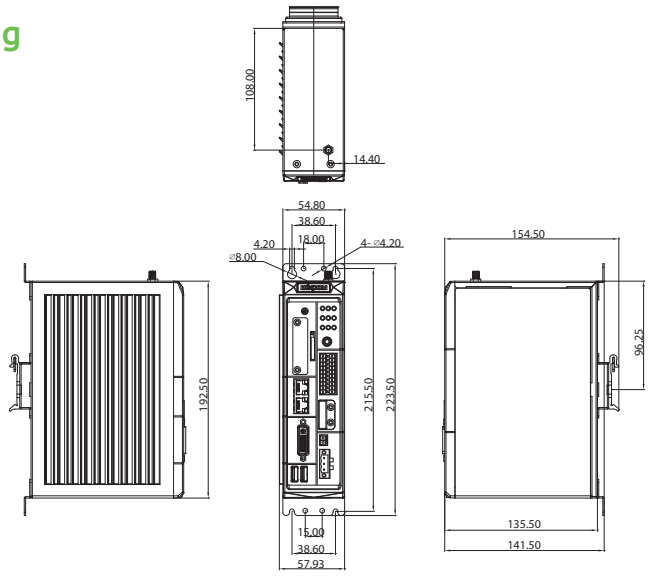


Dimension Drawing



NIFE 100

Dimension Drawing



NIFE 101

Ordering Information

* HMI Software License Exclude

System	Processor	Main Memory	Storage	Software Package	SoftPLC	SoftMotion	SoftMotion CNC	HMI (Optional) JMobile	TargetVisu
NIFE100 P10 Controller A0J70010000X0	Atom E3826	4G	32G	・P10 Windows WES7 Package (P/N: 88J70010017X0) ・P10 Linux Ubuntu Package (P/N: TBC)	v	-	-	-	-
NIFE101 P10 Controller A0J70010100X0		4G	32G	・P10 Windows WES7 Package (P/N: 88J70010017X0) ・P10 Linux Ubuntu Package (P/N: TBC)	v	-	-	-	-
NIFE100 M10 Controller A0J70010000X0		4G	32G	・M10 Windows WES7 Package (P/N :88J70010018X0) ・M10 Linux Ubuntu Package (P/N: TBC)	v	v	-	-	-
NIFE101 M10 Controller A0J70010100X0		4G	32G	・M10 Windows WES7 Package (P/N: 8J70010018X0) ・M10 Linux Ubuntu Package (P/N: TBC)	v	v	-	-	-

System	Processor	Main Memory	Storage	Software Package	SoftPLC			HMI (Optional)	
					SoftMotion			JMobile	
					SoftMotion CNC				TargetVisu
NIFE 100 Bare-bone System 10J70010000X0	Atom E3826	Option	Option	Support ・Win8 32-bit/64-bit, WES8 32-bt/64-bit ・Win7 32-bit/64-bit, WES732-bit/64-bit ・Linux Kernel version 3.8.0	-	-	-	-	-
NIFE 101 Bare-bone System 10J70010100X0		Option	Option	Support ・Win8 32-bit/64-bit, WES8 32-bt/64-bit ・Win7 32-bit/64-bit, WES732-bit/64-bit ・Linux Kernel version 3.8.0	-	-	-	-	-

System	Optional Power Adapter
Power Adapter	60W 24V/2.5A w/ 3pin phoenix contact w/o power cord (P/N: 7400060033X00)

Optional Modules

FBI Fieldbus Module

P/N:10J50090E08X0
EtherCAT Protocol

P/N:10J50090E09X0
PROFIBUS Protocol

P/N:10J50090E10X0
DeviceNet Protocol

P/N:10J50090E15X0
CANopen Protocol

FBI Fieldbus Module

P/N:10J50090E20X0
EtherNet/IP Protocol

P/N:10J50090E21X0
PROFINET Protocol

COM Module

P/N:10JK0ECOM04X0
NISKECOM3 4xRS485

P/N:10JK0ECOM06X0
NISKECOM4 4xRS232

LAN Module

P/N:10JKLAN0401X0
NISKLAN04 2XI210AT

P/N:10JKLAN0101X0
NISKLAN01 1X82574L

Power Pack

P/N:10JK00BAT00X0
NISKBAT MAIN

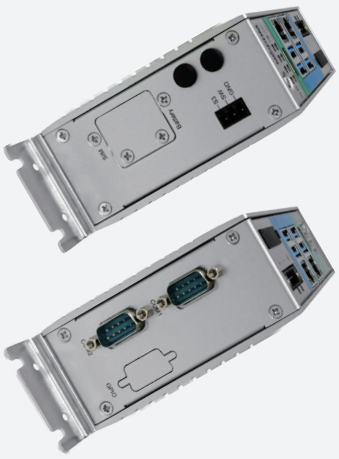
P/N:10JK00BAT01X0
NISKBAT EXPANSION

Persistent Memory Module

P/N:10JKNVRAM00X0
NISK-NVRAM 1MB

NIFE 105

Intel® Atom™x5-E3930 Dual Core Factory Automation Fanless System with Palm Size form Factor



Top View

Bottom View

- Onboard Intel® Atom™ x5-E3930 processor Dual Core 1.8GHz
- 1 x HDMI display
- 2 x Intel® I210IT GbE LAN ports; support WoL, teaming and PXE
- 4 x USB 3.0
- 2 x mini-PCIe sockets for optional Wi-Fi/3.5G/LTE modules
- 2 x RS232/422/485 with auto flow control
- 1 x External SD card slot and 1 x SIM card socket
- Support -5~55 degree C operating temperature
- Support typical +24VDC ±20%

Product Overview

NEXCOM's NIFE product line comes in a range of form factors and processor configurations including Intel® Atom™ and Intel Core processors to suit different application requirements. For NIFE 105, it positions itself at the entry level of fieldbus controller, and suitable for M2M communication gateway and data server applications. Boosted by Intel® latest Atom™ x5-E3930 Processor and the palm size form-factor, NIFE 105 is the most suitable entry level automation system which satisfying the needs of steady system performance and installation in gateway field or a small controller cabinet.

NIFE 105 meets PLCopen® specifications and allows easy control programming via Softlogic Tool Kit. Using libraries of reusable logic and motion functionality, control schemes can be developed with reduced programming efforts for fast deployment of SoftPLC controller and M2M gateway.

Specifications

CPU Support
- Onboard Intel® Atom™ x5-E3930 processor Dual Core 1.8GHz

Main Memory
- On-board type 4GB DDR3L RAM
  - Un-buffered and non-ECC

Display Output
- 1 x HDMI display

I/O Interface-Front
- 2 x Intel® I210IT GbE LAN ports; support WoL, teaming and PXE
- 4 x USB 3.0 (900mA)
- 1 x External SD card slot (data storage only)
- 1 x Power/1x HDD access LEDs
- 1 x Battery Low/1x GP0 programming LED
- 2 x Tx/Rx LEDs
- 1 x ATX power on/off switch

I/O Interface-Top
- 1 x Remote switch/1 x S3
- 1 x SIM card slot
- 1 x RTC battery socket

I/O Interface-Bottom
- 2 x DB9, support RS232/422/485 with Auto Flow Control
  - Support 2.5KV isolation protection
- 1 x Optional DB9, support 4 x GPI and 4 x GPO

Storage Device
- On-board 16GB EMMC
- Optional mSATA module

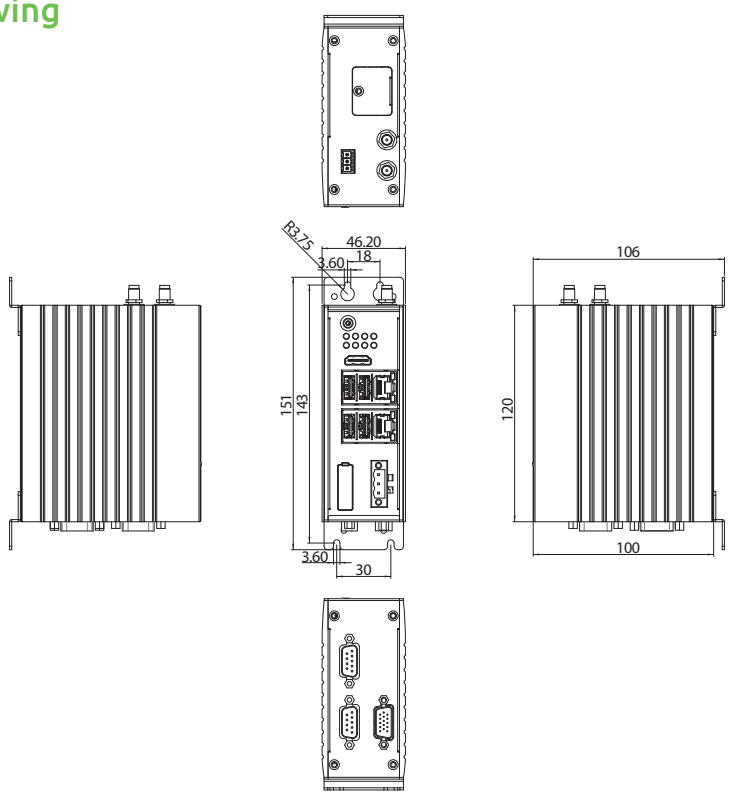
Power Requirement
- Power input: typical +24VDC ±20%
- 1 x Optional 24V, 60W power adapter

Dimensions
- 46.2mm (W) x 100mm (D) x 120mm (H)

Construction
- Aluminum and Metal Chassis with front access design

Environment
- Operating temperature:
  Ambient with air flow: -5°C to 55°C
  (according to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14)
- Storage temperature: -20°C to 75°C
- Relative humidity: 10% to 93% (non-condensing)
- Shock protection:
  - mSATA/EMMC: 50G, half sine, 11ms, IEC60068-27
- Vibration protection w/ mSATA or EMMC condition:
  - Random: 2Grms @ 5~500 Hz, IEC60068-2-64
  - Sinusoidal: 2Grms @ 5~500 Hz, IEC60068-2-6

Dimension Drawing



Certifications

- CE approval
  - EN61131-2
  - EN61000-6-4
- FCC Class A

Support OS

- Windows* 10 Enterprise (64-bit)

Ordering Information

- **NIFE 105 system (P/N: 10J70010500X0)**
- **24V, 60W AC/DC power adapter w/o power cord (P/N: 7400060033X00)**

NIFE 200 Controller

Intel® Celeron® Quad Core
Automation PC-Based Controller

Main Features

- Distributed, modularized and open-architecture controller
- Compliant with Industrial IEC61131-3 Programming Languages (LD/FBD/SFC/IL/ST/CFC)
- Support up to 1024+ I/O Points and maximum 24 Axis for motion
- Support PLC Handler APIs and OPC-UA server for Client/M2M communication
- Available HMI APIs for human-machine interface
- Support industrial Ethernet Fieldbus protocols (EtherCAT, EtherNet/IP, PROFINET)
- Support industrial Fieldbus protocols (PROFINET, PROFIBUS, DeviceNET) by optional FBI
- Available NEXCOM IoT Studio for cloud and data acquisition
- Support Multi-Core, Multi-Tasking powered by Intel® Celeron® Quad Core processor

Product Overview

Powered by the Intel® Celeron® processor J1900 (formerly codenamed "Bay Trail-D"), NIFE 200 presents intelligent PC-based controller and IoT gateway for factory automation. NIFE 200 supports up to 8G DDR3L memory and have several options on storage devices like SD, mSATA, and SSD. The NIFE 200 support operating temperature from -5 up to 55 degree C with typical DC input 24V ±20% range. The NIFE 200 has high integration ability with optional mini-PCIe module and 2 x COM ports, which makes it a reliable connection with devices in factory automation applications (with optional PROFIBUS, PROFINET, DeviceNET, EtherCAT, EtherNet/IP, CANopen fieldbus modules), IoT applications (with optional GbE LAN, Wi-Fi, 3.5G/4G LTE module) and communication applications (with optional GPIO, RS232/422/485). NIFE 200 is the top choice for M2M intelligent system as a factory automation controller and IoT gateway.

NIFE 200 also meets PLCopen® specifications and allows easy control programming via Control RTE and SoftMotion tool kit. Using libraries of reusable logic and motion functionality, control schemes can be developed with reduced programming efforts for fast deployment of SoftPLC and IoT controllers.

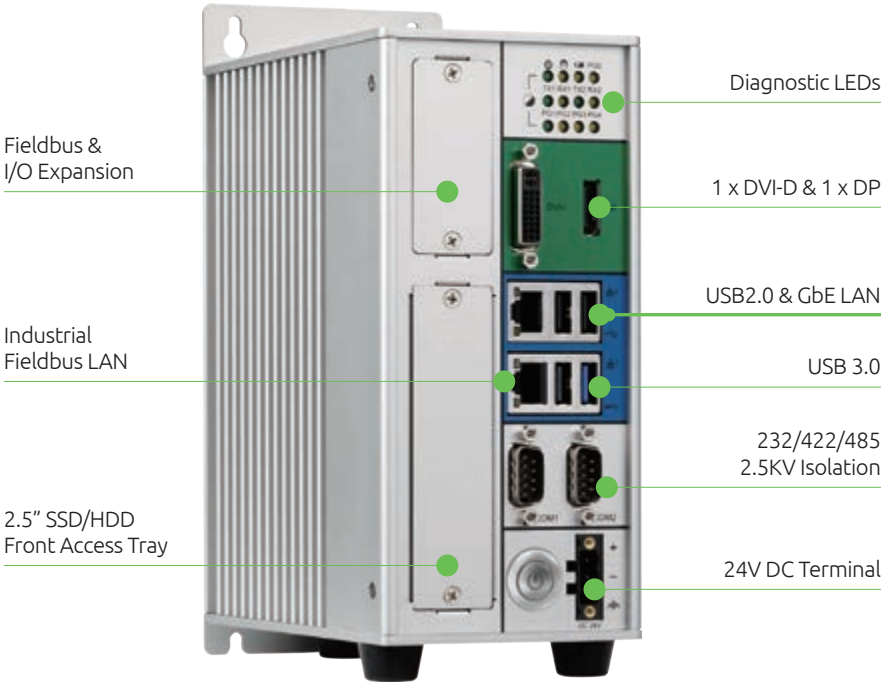
Controller Specifications

Specification	SoftPLC Controller		SoftMotion Controller	SoftMotion CNC Controller	
Performance Index	P20	P30	M20	R10	R20
Real-Time	Yes	Yes	Yes	Yes	Yes
Software Protocols	EtherCAT, EtherNet/IP, PROFINET				
Optional Protocols via FBI	PROFIBUS, DeviceNET, CANopen				
IEC61131-3 Language	Ladder Diagram, Function Block Diagram, Instruction List, Structured Text, Sequential Function Chart, Continuous Function Chart				
Cycle Time (ms)	0.5	0.5	0.5	0.5	0.5
Max. I/O Points	1024	1024+	1024	512	1024
Max. Axes	No support	No support	24	12	24
Control Group	No support	No support	No support	1	2
Motion Features	No support	No support	GEAR, CAM Function Integrated graphical CAM editor with extensive configuration options		
High-Computing Applications Other Application Software	No support	Yes	No support	No support	No support
HMI (License Options)	JMobile Suite	JMobile Suite	TargetVisu	TargetVisu	TargetVisu

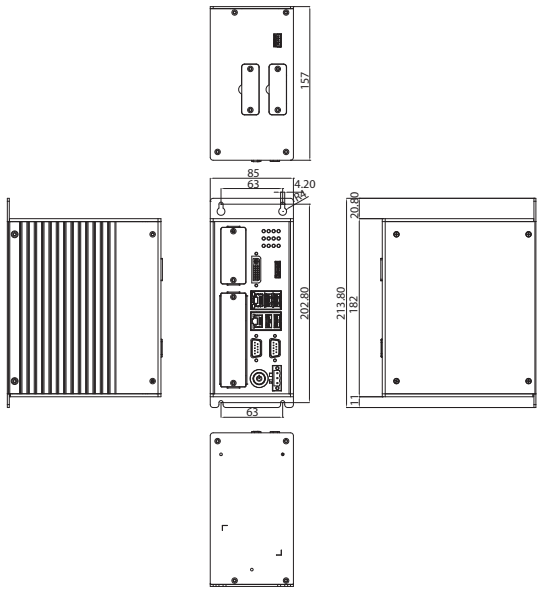
System Specification

Specification	NIFE 200 / NIFE 200P2E
Processor	Onboard Intel® Celeron® processor J1900 Quad Cord 2.0GHz
Main Memory	DDR3L 1600/1333MHz memory maximum up to 8GB
Storage Memory	Optional 2.5" SSD or HDD
Persistent Memory	Optional 1M-bit NVRAM via mini-PCIe
Power Backup	Optional battery pack, NISKBAT
General Interface	2 x GbE RJ45 (I210AT), 1 x DVI-I (DVI-D + VGA), 1 x DP, 3 x USB 2.0, 1 x USB 3.0
Diagnostics LED	1 x Power, 1 x storage, 1 x battery low, 2 x Tx/Rx, 5 x GPO LEDs
Operating System	Win8 32-bit/64-bit, WES8 32-bit/64-bit Win7 32-bit/64-bit, WES7 32-bit/64-bit WEC7 Linux Kernel version 3.8.0
Control Software	SoftPLC: P20, P30 (optional) SoftMotion: M20 (optional) SoftMotion CNC: R10, R20 (optional)
Serial Ports	2 x RS232/422/485 with 2.5KV Iisolation
Power Requirement	Typical 24V DC input with ±0% range
Operating Temperature	Ambient with air flow: -5°C to 55°C (according to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14)
Storage Temperature	-20°C to 85°C
Relative Humidity	10% to 93% (non-condensing)
Shock Resistance	50G, half sine, 11ms, IEC60068-27
Vibration Resistance	Random: 2Grms @ 5~500Hz, IEC60068-2-64 Sinusoidal: 2Grms @ 5~500Hz, IEC60068-2-64
EMC Standard	CE Approval: EN61000-4-2 & EN61000-4-4/FCC Class A/UL60950/LVD

I/O Connectors

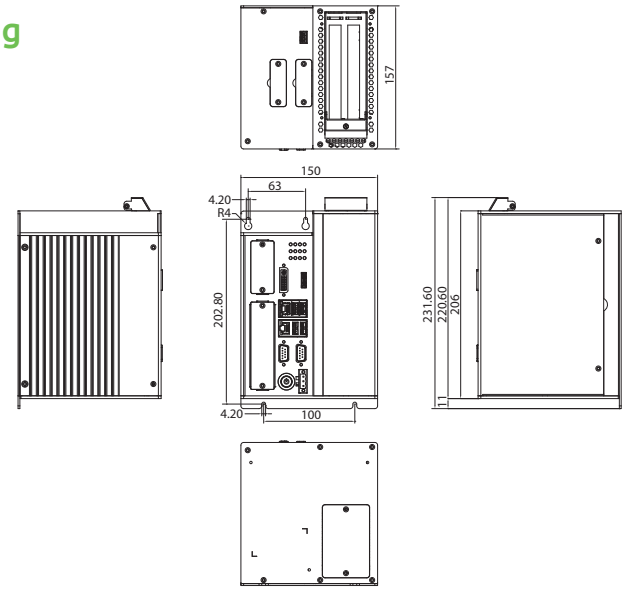


Dimension Drawing



NIFE 200

Dimension Drawing



NIFE 200P2E

Ordering Information

* HMI Software License Exclude

System	Processor	Main Memory	Storage	Software Package	SoftPLC			HMI (Optional)	
					SoftMotion			JMobile	
					SoftMotion CNC				TargetVisu
NIFE200 P20 Controller A0J70020000X0	Celeron J1900	4G	32G	♦ P20 Windows WES7 Package (P/N: 88J70020011X0) ♦ P20 Linux Ubuntu Package (P/N: TBC)	V	-	-	V	-
NIFE200 P30 Controller A0J70020000X0		4G	32G	♦ P30 Windows WES7 Package (P/N: 88J70020012X0) ♦ P30 Linux Ubuntu Package (P/N: TBC)	V	-	-	V	-
NIFE200 M20 Controller A0J70020000X0		4G	32G	♦ M20 Windows WES7 Package (P/N: 88J70020013X0) ♦ M20 Linux Ubuntu Package (P/N: TBC)	V	V	-	-	V
NIFE200 R10 Controller A0J70020000X0		8G	64G	♦ Windows 7 Pro Emb Package (P/N: 88J70020014X0) ♦ R10 Linux Ubuntu Package (P/N: TBC)	V	V	V	-	V

System	Processor	Main Memory	Storage	Software Package	SoftPLC			HMI (Optional)	
					SoftMotion			JMobile	
					SoftMotion CNC				TargetVisu
NIFE 200 R20 Controller A0J70020000X0	Celeron J1900	8G	64G	• R20 Windows 7 Pro Emb Package (P/N : 88J70020015X0) • R20 Linux Ubuntu Package (P/N: TBC)	V	V	V	-	V
NIFE 200P2E R20 Controller A0J70020002X0		8G	64G	• R20 Windows 7 Pro Emb Package (P/N: 88J70020015X0) • R20 Linux Ubuntu Package (P/N: TBC)	V	V	V	-	V
NIFE 200 Bare-bone System 10J70010000X0		Option	Option	Support • Win8 32-bit/64-bit, WES8 32-bit/64-bit • Win7 32-bit/64-bit, WES7 32-bit/64-bit • Linux Kernel version 3.8.0	-	-	-	-	-
NIFE 200P2E Bare-bone System 10J70010100X0		Option	Option	Support • Win8 32-bit/64-bit, WES8 32-bit/64-bit • Win7 32-bit/64-bit, WES7 32-bit/64-bit • Linux Kernel version 3.8.0	-	-	-	-	-

System	Optional Power Adapter
Power Adapter	60W 24V/2.5A w/3pin phoenix contact w/o power cord (P/N: 7400060033X00)

Optional Modules

FBI Fieldbus Module

P/N:10J50090E08X0
EtherCAT Protocol

P/N:10J50090E09X0
PROFIBUS Protocol

P/N:10J50090E10X0
DeviceNet Protocol

P/N:10J50090E15X0
CANopen Protocol

FBI Fieldbus Module

P/N:10J50090E20X0
EtherNet/IP Protocol

P/N:10J50090E21X0
PROFINET Protocol

COM Module

P/N:10JK0ECOM04X0
NISKECOM3 4xRS485

P/N:10JK0ECOM06X0
NISKECOM4 4xRS232

LAN Module

P/N:10JKLAN0401X0
NISKLAN04 2XI210AT

P/N:10JKLAN0101X0
NISKLAN01 1X82574L

Power Pack

P/N:10JK00BAT00X0
NISKBAT MAIN

P/N:10JK00BAT01X0
NISKBAT EXPANSION

Persistent Memory Module

P/N:10JKNVRAM00X0
NISK-NVRAM 1MB

NIFE 300 Controller

Intel® Core™-i Automation PC-Based Controller

Main Features

- Distributed, modularized and open-architecture controller
- Compliant with Industrial IEC61131-3 Programming Languages (LD/FBD/SFC/IL/ST/CFC)
- Support 1024+ I/O Points and maximum 64 Axis for motion control
- Support PLC Handler APIs and OPC-UA server for Client/M2M communication
- Available HMI APIs for human-machine interface
- Support industrial Ethernet Fieldbus protocols (EtherCAT, EtherNet/IP, PROFINET)
- Support industrial Fieldbus protocols (PROFINET, PROFIBUS, DeviceNET) by optional FBI
- Available NEXCOM IoT Studio for cloud and data acquisition
- Support Multi-Core, Multi-Tasking powered by Intel® Core™-i processor

Product Overview

NEXCOM PC-based IoT controller solution NIFE 300 accelerates the migration of automation systems to cyber-physical systems for smart manufacturing. Boosted by the 6th generation Intel® Core™ processors, the NIFE 300's open architecture features high interoperability to provide a unified infrastructure, communication network, and programming tool for factory floors and company offices, regaining speed, efficiency, and agility in manufacturing. The 6th generation Intel® Core™ processors utilizing Intel's 14nm process have integrated Intel® HD Graphics and the latest generation interfaces including DDR4 2133. NIFE300 excellent performance is suited for graphic- and compute-intensive applications such as motion control and machine vision, while the 4K2K support enables human machine interface (HMI) to show exquisite details of working pieces and 3D simulation of working processes.

NIFE 300 also meets PLCopen® specifications and allows easy control programming via Control RTE and SoftMotion tool kit. Using libraries of reusable logic and motion functionality, control schemes can be developed with reduced programming efforts for fast deployment of SoftPLC and IoT controllers.

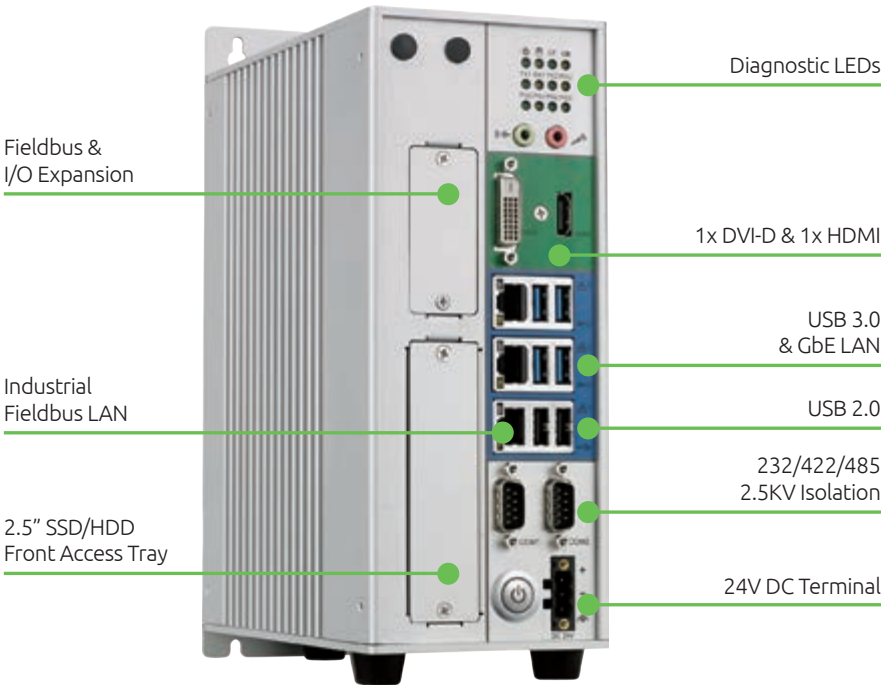
Controller Specifications

Specification	SoftPLC Controller	SoftMotion Controller	SoftMotion CNC Controller	
Performance Index	P30	M60	R20	R60
Real-Time	Yes	Yes	Yes	Yes
Software Protocols	EtherCAT, EtherNet/IP, PROFINET			
Optional Protocols via FBI	PROFIBUS, DeviceNET, CANopen			
IEC61131-3 Language	Ladder Diagram, Function Block Diagram, Instruction List, Structured Text, Sequential Function Chart, Continuous Function Chart			
Cycle Time (ms)	0.5	0.5	0.5	0.5
Max. I/O Points	1024+	1024+	1024	1024+
Max. Axes	No support	64	24	64
Control Group	No support	No Support	2	6
Motion Features	No support	GEAR, CAM Function Integrated graphical CAM editor with extensive configuration options		
High-Computing Applications Other Application Software	Yes	Yes	No support	Yes
HMI (License Options)	JMobile Suite	TargetVisu	TargetVisu	TargetVisu

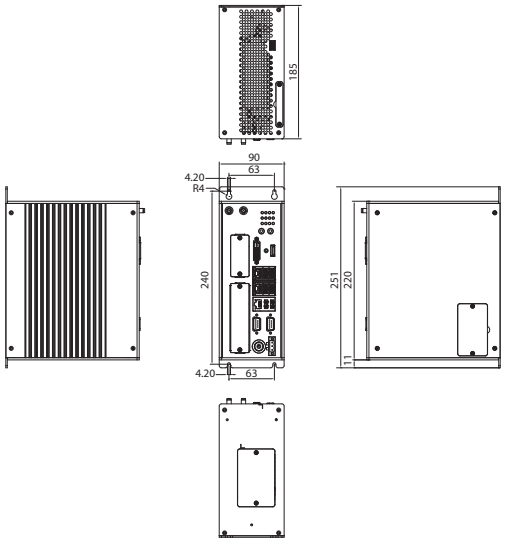
System Specification

Technical Data	NIFE 300 / NIFE 300P2
Processor	6th generation Intel Core i7/i5/i3 LGA Socket Type Processor - Core™ i7-6700TE, quad core, 2.4GHz, 8M cache - Core™ i5-6500TE, quad core, 2.3GHz, 6M cache - Core™ i3-6100TE, dual core, 2.7GHz, 4M cache
Main Memory	DDR4 2133MHz Memory Maximum up to 8GB
Storage Memory	Optional 2.5" SSD or HDD
Persistent Memory	Optional 1MBit NVRAM via mini-PCIe
Power Backup	Optional Battery Pack, NISKBAT
General Interface	3 x GbE RJ45 (I210IT), 1 x DVI-D, 1 x HDMI, 2 x USB 2.0, 4 x USB 3.0
Diagnostics LED	1 x Power, 1 x Storage, 1 x CFast, 1 x Battery Low, 2 x Tx/Rx, 4 x GPO LEDs
Operating System	Win8 32-bit/64-bit, WES8 32-bit/64-bit Win7 32-bit/64-bit, WES7 32-bit/64-bit Linux Kernel version 3.8.0
Control Software	SoftPLC: P30 (Optional) SoftMotion: M60 (Optional) SoftMotion CNC: R20, R60 (Optional)
Serial Ports	2 x RS232/422/485 with 2.5KV Isolation
Power Requirement	Typical 24V DC input with ±20% range
Operating Temperature	Ambient with air flow: -5°C to 55°C (according to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14)
Storage Temperature	-20°C to 85°C
Relative Humidity	10% to 93% (non-condensing)
Shock Resistance	50G, half sine, 11ms, IEC60068-27
Vibration Resistance	Random: 2Grms @ 5~500Hz, IEC60068-2-64 Sinusoidal: 2Grms @ 5~500Hz, IEC60068-2-64
EMC Standard	CE Approval: EN61000-4-2 & EN61000-4-4/FCC Class A/LVD

I/O Connectors

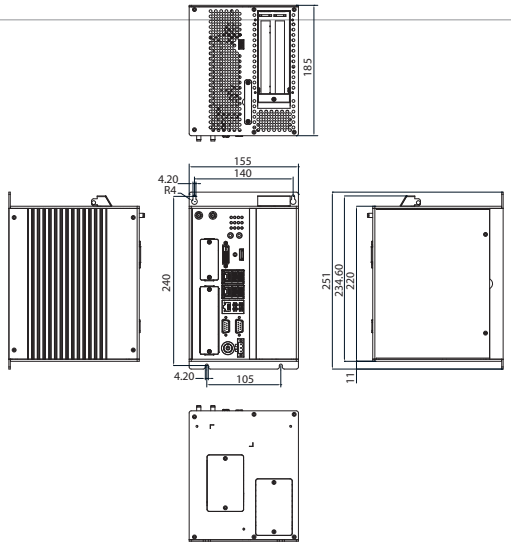


Dimension Drawing



NIFE 300

Dimension Drawing



NIFE 300P2E

Ordering Information

* HMI Software License Exclude

System	Processor	Main Memory	Storage	Software Package	SoftPLC			HMI (Optional)	
					SoftMotion			JMobile	
					SoftMotion CNC				TargetVisu
NIFE300 P30 Controller A0J70030000X0	Core-i i3-6100TE	4G	32G	• P30 Windows WES7 Package (P/N: 88J70030013X0) • P30 Linux Ubuntu Package (P/N: TBC)	V	-	-	V	-
NIFE300 M60 Controller A0J70030000X0	Core-i i3-6100TE	4G	32G	• M60 Windows WES7 Package (P/N: 88J70030014X0) • M60 Linux Ubuntu Package (P/N: TBC)	V	V	-	-	V
NIFE300 M60 Controller A0J70030000X0	Core-i i5-6500TE	4G	32G	• M60 Windows WES7 Package (P/N: 88J70030015X0) • M60 Linux Ubuntu Package (P/N: TBC)	V	V	-	-	V
NIFE300 R20 Controller A0J70030000X0	Core-i i3-6100TE	8G	64G	• R20 Windows 7 Pro Emb Package (P/N: 88J70030016X0) • R20 Linux Ubuntu Package (P/N: TBC)	V	V	V	-	V
NIFE300 R60 Controller A0J70030000X0	Core-i i3-6100TE	8G	64G	• R60 Windows 7 Pro Emb Package (P/N: 88J70030017X0) • R60 Linux Ubuntu Package (P/N: TBC)	V	V	V	-	V
NIFE300 R60 Controller A0J70030000X0	Core-i i5-6500TE	8G	64G	• R60 Windows 7 Pro Emb Package (P/N: 88J70030018X0) • R60 Linux Ubuntu Package (P/N: TBC)	V	V	V	-	V
NIFE300P2 R60 Controller A0J70030001X0	Core-i i7-7600TE	8G	64G	• R60 Windows 7 Pro Emb Package (P/N: 88J70030019X0) • R60 Linux Ubuntu Package (P/N: TBC)	V	V	V	-	V

System	Processor	Main Memory	Storage	Software Package	SoftPLC			HMI (Optional)	
					SoftMotion			JMobile	
					SoftMotion CNC				TargetVisu
NIFE300 Bare-bone System 10J70030000X0	Option	Option	Option	Support ♦ Win8 32-bit/64-bit, WES8 32-bit/64-bit ♦ Win7 32-bit/64-bit, WES7 32-bit/64-bit ♦ Linux Kernel version 3.8.0	-	-	-	-	-
NIFE300P2 Bare-bone System 10J70030001X0	Option	Option	Option	Support ♦ Win8 32-bit/64-bit, WES8 32-bit/64-bit ♦ Win7 32-bit/64-bit, WES7 32-bit/64-bit ♦ Linux Kernel version 3.8.0	-	-	-	-	-

System	Optional Power Adapter
Power Adapter	24V, 120W AC to DC Power Adapter w/o power cord (P/N: 7400180005X00)

Optional Modules

FBI Fieldbus Module

P/N:10J50090E08X0
EtherCAT Protocol

P/N:10J50090E09X0
PROFIBUS Protocol

P/N:10J50090E10X0
DeviceNet Protocol

P/N:10J50090E15X0
CANopen Protocol

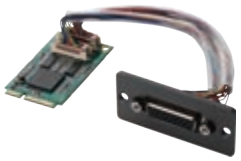
FBI Fieldbus Module

P/N:10J50090E20X0
EtherNet/IP Protocol

P/N:10J50090E21X0
PROFINET Protocol

COM Module

P/N:10JK0ECOM04X0
NISKECOM3 4xRS485



P/N:10JK0ECOM06X0
NISKECOM4 4xRS232

LAN Module

P/N:10JKLAN0401X0
NISKLAN04 2XI210AT

P/N:10JKLAN0101X0
NISKLAN01 1X82574L

Power Pack

P/N:10JK00BAT00X0
NISKBAT MAIN

P/N:10JK00BAT01X0
NISKBAT EXPANSION

Persistent Memory Module

P/N:10JKNVRAM00X0
NISK-NVRAM 1MB

APPC 0842T Controller

8” 4:3 Control Panel Computer

Main Features

- Compliant with industrial IEC61131-3 programming languages (LD/FBD/SFC/IL/ST/CFC)
- Support up to 1024 I/O points
- Build-in HMI APIs for human-machine interface
- Support remote monitor, remote control and maintenance
- Support industrial Ethernet Fieldbus protocols (EtherCAT, EtherNet/IP, PROFINET)
- Support industrial Fieldbus protocols (PROFINET, PROFIBUS, DeviceNET) by optional FBI
- Support Multi-Core, Multi-Tasking powered by Intel® ATOM® Dual Core processor

Product Overview

The 8” 4:3 SVGA control panel computer APPC 0842T comes with flush panel design and can have IP65 front for industrial applications, such as, access control, small automation machineries, forklift and truck etc. It supports fieldbus communication in automation market with optional PROFIBUS, PROFINET, DeviceNET, EtherCAT, EtherNet/IP, CANopen fieldbus modules. It also meets PLCopen® specifications and allows easy control programming via SoftPLC tool kit. Using libraries of reusable logic and motion functionality, control schemes can be developed with reduced programming efforts for fast deployment of SoftPLC. It also supports JMobile PC runtime to become HMI.

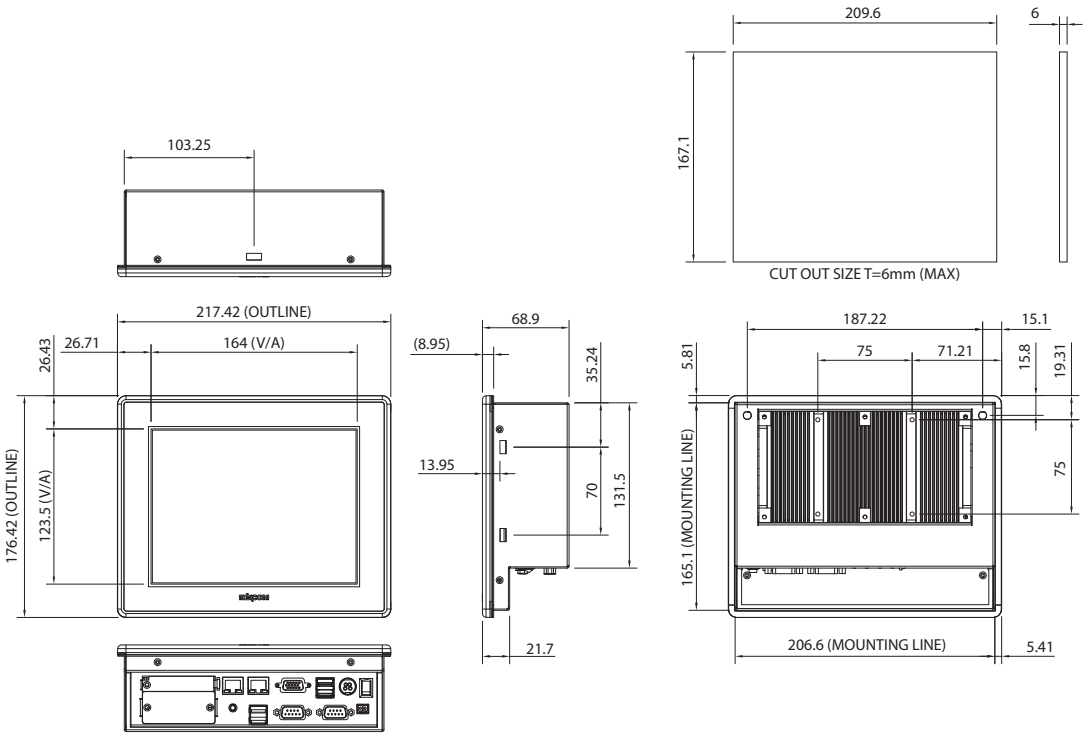
Controller Specifications

Specification	SoftPLC Controller	Specification	SoftPLC Controller
Performance Index	P20	IEC61131-3 Language	Ladder Diagram, Function Block Diagram, Instruction List,Structured Text, Sequential Function Chart, Continuous Function Chart
Real-Time	Yes		
Software Protocols	EtherCAT, EtherNet/IP, PROFINET		
Optional Protocols via FBI	PROFIBUS, DeviceNET, CANopen	Max. I/O Points	1024
Cycle Time (ms)	0.5	HMI (License Options)	JMobile Suite

System Specifications

Technical Data	APPC 0842T	Technical Data	APPC 0842T
Panel	8”, 4:3, SVGA 800 x 600	Expansion	2 x mini-PCIe (Optional Module refer to Page 45)
	Luminance: 400cd/m2	Power Requirement	12~30V DC Input
	Contrast ratio: 500	System Enclosure	Plastic front bezel with Metal housing
	LCD color: 262K		IP Protection: IP65 front
	Viewing angle: 50(U), 70(D), 70(L), 70(R)		Panel Mount/Wall Mount/VESA Mount
Touch screen	5-wire USB resistive (flush panel type)		Dimension: 217.4(W) x 176.4(H) x 68.9 (D)mm
	Touch light transmission: 82%		Weight: 2.3Kg
Processor	Intel® Atom™ processor E3826 Dual Core 1.46GHz	Operating Temperature	Ambient with air flow: -5°C to 50°C (according to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14)
Main Memory	DDR3L 1600/1333MHz Memory Maximum up to 8GB		
Storage Memory	Optional 2.5” SSD or HDD	Storage Temperature	-20°C to 75°C
Persistent Memory	Optional 1MBit NVRAM via NISKNVRAM module	Relative Humidity	10%~90% relative humidity, non-condensing
General Interface	2 x GbE LAN (I210IT), 1 x VGA, 3 x USB 2.0, 1 x USB 3.0, 1 x Line-out		Limits to be at 90% RH at max 50°C
Serial Ports	2 x RS232/422/485	Shock Resistance	20G, half sine, 11ms, IEC60068-27
Control Software	P20: Control RTE	Vibration Resistance	Random: 2Grms @ 5~500Hz, IEC60068-2-64
Operating System	Win8 32-bit/64-bit, WES8 32-bt/64-bit Win7 32-bit/64-bit, WES732-bit/64-bit, WEC7, Linux Kernel version 3.8.0		Sinusoidal: 2Grms @ 5~500Hz, IEC60068-2-64
		EMC	CE Approval: EN55022 & EN55024 FCC Class A

Dimension Drawing



Ordering Information

* HMI Software License Exclude

System	Processor	Main Memory	Storage	Software Package	SoftPLC			HMI (Optional)	
					SoftMotion			JMobile	
					SoftMotion CNC				TargetVisu
APPC 0842T P20 HMI Controller A0IA0842T00X2	Atom E3826	4G	32G	• P20 Windows WES7 Package (P/N: 88IA0842T00X2)	v	-	-	-	-
APPC 0840T HMI Starter Kit 10IA0840T03X0		2G	32G	• Built-in WES7 Package with JMobile PC Runtime, • JMobile Studio, Control RTE, ACRONIS License	v	-	-	-	-
APPC 0840T Bare-bone System 10IA0840T00X0		2G	Option	• Support • Win8 32-bit/64-bit, WES8 32-bt/64-bit • Win7 32-bit/64-bit, WES732-bit/64-bit • Linux Kernel version 3.8.0	-	-	-	-	-
APPC 0840T-4G Bare-bone System 10IA0840T01X0		4G	Option	• Support • Win8 32-bit/64-bit, WES8 32-bt/64-bit • Win7 32-bit/64-bit, WES732-bit/64-bit • Linux Kernel version 3.8.0	-	-	-	-	-

System	Optional Power Adapter
Power Adapter	60W 12V/5A w/ Mini DIN 4pin w/o power cord (P/N: 7400060029X00)

APPC 1247T Controller

12.1" 4:3 Control Panel Computer

Main Features

- Compliant with industrial IEC61131-3 programming languages (LD/FBD/SFC/IL/ST/CFC)
- Support up to 1024 I/O points
- Build-in HMI APIs for human-machine interface
- Support remote monitor, remote control and maintenance
- Support industrial Ethernet Fieldbus protocols (EtherCAT, Ethernet I/P, PROFINET)
- Support industrial Fieldbus protocols (PROFINET, PROFIBUS, DeviceNET) by optional FBI
- Support Multi-Core, Multi-Tasking powered by Intel® Celeron® Dual Core processor

Product Overview

The 12.1" 4:3 XGA fanless Control Panel Computer APPC 1247T comes with industrial motherboard, flush panel design and can have IP65 front for industrial applications. It supports fieldbus communication in automation market with optional PROFIBUS, PROFINET, DeviceNET, EtherCAT, EtherNet/IP, CANopen fieldbus modules. It also meets PLCopen® specifications and allows easy control programming via SoftPLC and SoftMotion tool kit. It also supports JMobile PC runtime to become HMI.

Controller Specifications

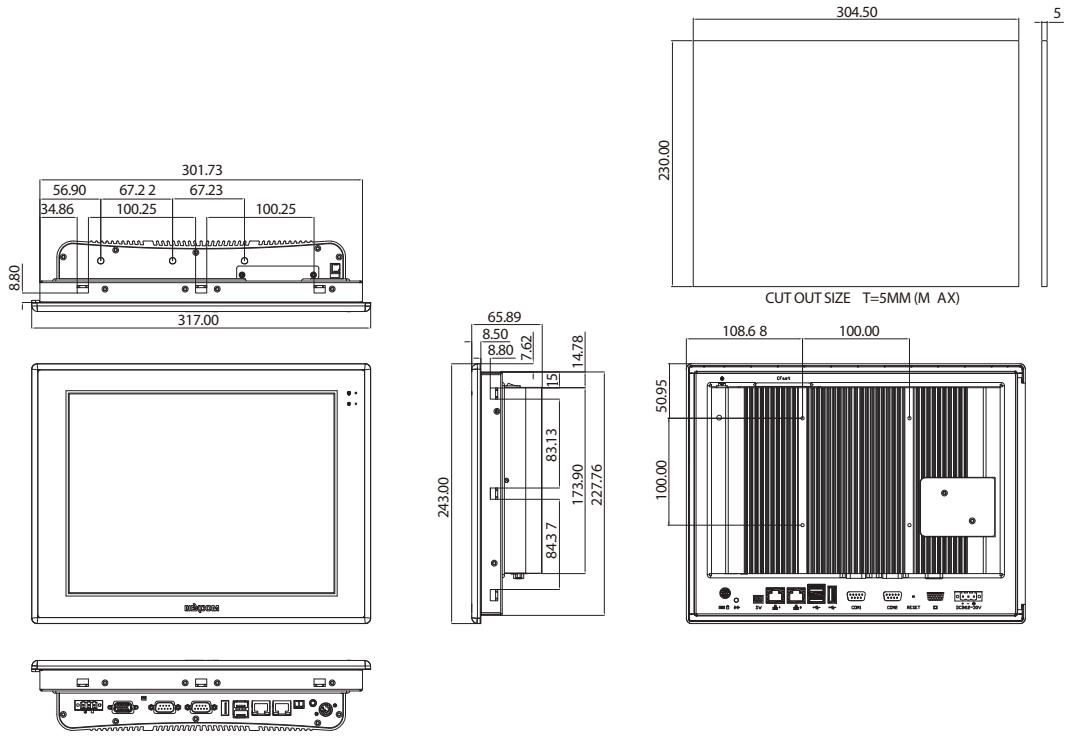
Specification	SoftPLC Controller	SoftMotion Controller
Performance Index	P20	M20
Real-Time	Yes	Yes
Software Protocols	EtherCAT, EtherNet/IP, PROFINET	
Optional Protocols via FBI	PROFIBUS, DeviceNET, CANopen	
IEC61131-3 Language	Ladder Diagram, Function Block Diagram, Instruction List, Structured Text, Sequential Function Chart, Continuous Function Chart	
Cycle Time (ms)	0.5	0.5
Max. I/O Points	1024	1024
Max. Axes	No support	24
Motion Features	No support	GEAR, CAM Function Integrated graphical CAM editor with extensive configuration option
HMI (License Options)	JMobile Suite	TargetVisu

System Specifications

Technical Data	APPC 1247T	Technical Data	APPC 1247T
Panel	12.1", 4:3, XGA 1024 x768	Expansion	2 x mini-PCIe (Optional Module refer to Page 45)
	Luminance: 500cd/m2	Power Requirement	12~30V DC Input
	Contrast ratio: 700	System Enclosure	Plastic front bezel with Metal housing
	LCD color: 16.2M		IP Protection: IP65 front
	Viewing angle: 80(U), 80(D), 80(L), 80(R)		Panel Mount/Wall Mount/VESA Mount
Touch screen	5-wire USB resistive (flush panel type) Touch light transmission: 80%		Weight: 4Kg
Processor	Intel® Celeron® processor J1900 quad core 2GHz	Operating Temperature	Ambient with air flow: -5°C to 60°C (according to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14)
Main Memory	DDR3L 1600/1333MHz Memory Maximum up to 8GB	Storage Temperature	-20°C to 75°C

Technical Data	APPC 1247T	Technical Data	APPC 1247T
Storage Memory	Optional 2.5" SSD or HDD	Relative Humidity	10%~90% relative humidity, non-condensing Limits to be at 90% RH at max 50°C
Persistent Memory	Optional 1MBit NVRAM via NISKNVRAM module		
General Interface	2 x GbE LAN (I210IT), 1 x VGA, 2 x USB 2.0, 1 x USB 3.0, 1 x Line-out, 1 x PS/2 Keyboard & Mouse	Shock Resistance	20G, half sine, 11ms, IEC60068-27
Serial Ports	2 x RS232/422/485 w/ 2.5kv isolated	Vibration Resistance	Random: 2.2Grms @ 5~500Hz, IEC60068-2-64 Sinusoidal: 2Grms @ 5~500Hz, IEC60068-2-64
Control Software	P20: Control RTE / M20 : SoftMotion RTE (Optional)		
Operating System	Win8 32-bit/64-bit, WES8 32-bt/64-bit Win7 32-bit/64-bit, WES732-bit/64-bit, WEC7, Linux Kernel version 3.8.0	EMC	CE Approval: EN55022 & EN55024, FCC Class A

Dimension Drawing



Ordering Information

* HMI Software License Exclude

System	Processor	Main Memory	Storage	Software Package	SoftPLC			HMI (Optional)	
					SoftMotion			JMobile	
					SoftMotion CNC				TargetVisu
APPC 1247T P20 HMI Controller A0IA1247T00X2	Celeron J1900	4G	32G	• P20 Windows WES7 Package (P/N: 88IA1247T00X2)	v	-	-	v	-
APPC 1247T M20 HMI Controller A0IA1247T00X2		4G	32G	• M20 Windows WES7 Package (P/N: 88IA1247T01X2)	v	v	-	-	v
APPC 1245T Bare-bone System 10IA1245T00X0	Atom E3826	2G	Option	Support • Win8 32-bit/64-bit, WES8 32-bt/64-bit • Win7 32-bit/64-bit, WES732-bit/64-bit • Linux Kernel version 3.8.0	-	-	-	-	-

System	Optional Power Adapter
Power Adapter	60W 12V/5A w/ 3pin phoenix contact w/o power cord (P/N: 7400060031X00)

APPC 1542T Controller

15” 4:3 Control Panel Computer

Main Features

- Compliant with industrial IEC61131-3 programming languages (LD/FBD/SFC/IL/ST/CFC)
- Support up to 1024 I/O points
- Build-in HMI APIs for human-machine interface
- Support remote monitor, remote control and maintenance
- Support industrial Ethernet Fieldbus protocols (EtherCAT, Ethernet I/P, PROFINET)
- Support industrial Fieldbus protocols (PROFINET, PROFIBUS, DeviceNET) by optional FBI
- Support Multi-Core, Multi-Tasking powered by Intel® Celeron® Dual Core processor

Product Overview

The 15” 4:3 XGA fanless Control Panel Computer APPC 1542T comes with industrial motherboard, flush panel design and can have IP65 front for industrial applications. It supports fieldbus communication in automation market with optional PROFIBUS, PROFINET, DeviceNET, EtherCAT, EtherNet/IP, CANopen fieldbus modules. It also meets PLCopen® specifications and allows easy control programming via SoftPLC and SoftMotion tool kit. It also supports JMobile PC runtime to become HMI.

Controller Specifications

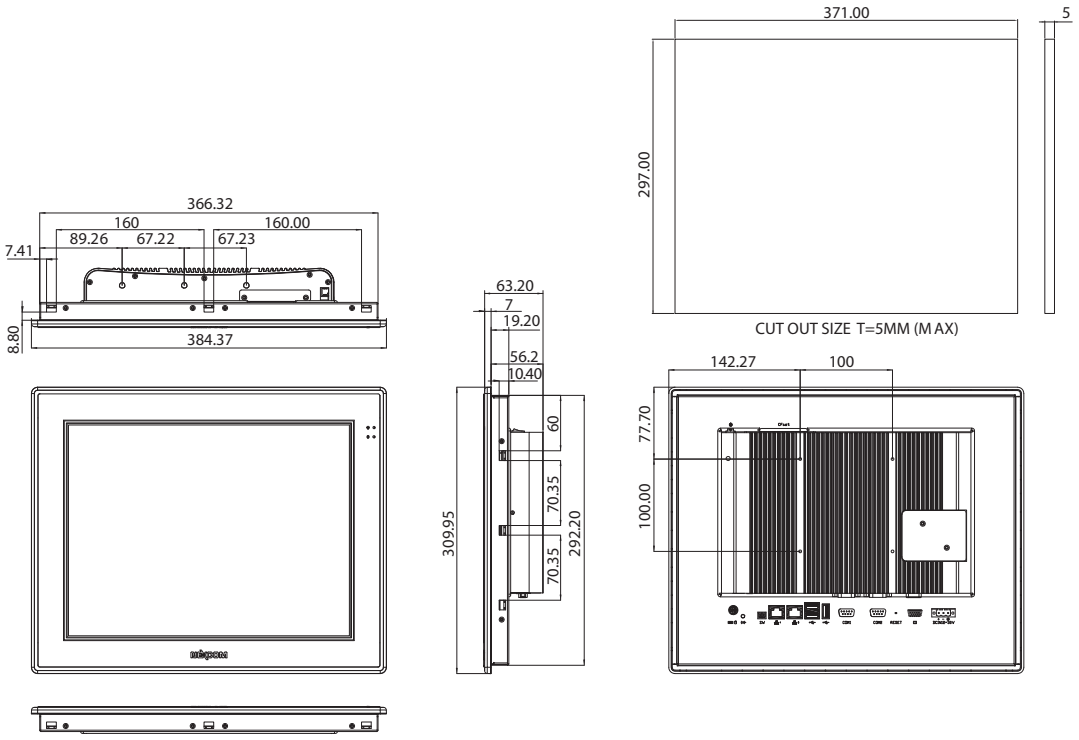
Specification	SoftPLC Controller	SoftMotion Controller	SoftMotion CNC Controller
Performance Index	P20	M20	R20
Real-Time	Yes	Yes	Yes
Software Protocols	EtherCAT, EtherNet/IP, PROFINET		
Optional Protocols via FBI	PROFIBUS, DeviceNET, CANopen		
IEC61131-3 Language	Ladder Diagram, Function Block Diagram, Instruction List, Structured Text, Sequential Function Chart, Continuous Function Chart		
Cycle Time (ms)	0.5	0.5	0.5
Max. I/O Points	1024	1024	1024
Max. Axes	No support	24	24
Control Group	No support	No support	2
Motion Features	No support	GEAR, CAM Function Integrated graphical CAM editor with extensive configuration option	
HMI (License Options)	JMobile Suite	TargetVisu	TargetVisu

System Specifications

Technical Data	APPC 1542T	Technical Data	APPC 1542T
Panel	15”, 4:3, XGA 1024 x768	Expansion	2x mini-PCIe (Optional Module refer to Page 45)
	Luminance: 400cd/m2	Power Requirement	12~30V DC Input
	Contrast ratio: 700	System Enclosure	Plastic front bezel with Metal housing
	LCD color: 16.2M		IP Protection: IP65 front
	Viewing angle: 60(U), 80(D), 80(L), 80(R)		Panel Mount/Wall Mount/VESA Mount
Touch screen	5-wire USB resistive (flush panel type)		Dimension: 384.37 x 309.95 x 63.2 mm
	Touch light transmission: 80%		Weight: 5.1Kg

Technical Data	APPC 1542T	Technical Data	APPC 1542T
Processor	Intel® Celeron® processor J1900 quad core 2GHz	Operating Temperature	Ambient with air flow: -5°C to 60°C (according to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14)
Main Memory	DDR3L 1600/1333MHz Memory Maximum up to 8GB		
Storage Memory	Optional 2.5" SSD or HDD	Storage Temperature	-20°C to 75°C
Persistent Memory	Optional 1MBit NVRAM via NISKNVRAM module	Relative Humidity	10%~90% relative humidity, non-condensing
General Interface	2 x GbE LAN (I210IT), 1 x VGA, 2 x USB 2.0, 1 x USB 3.0, 1 x Line-out,1 x PS/2 Keyboard & Mouse		Limits to be at 90% RH at max 50°C
Serial Ports	2x RS232/422/485 w/ 2.5kv isolated	Shock Resistance	20G, half sine, 11ms, IEC60068-27
Control Software	P20: Control RTE/M20 : SoftMotion RTE/R20: SoftMotion CNC (Optional)	Vibration Resistance	Random: 2.2Grms @ 5~500Hz, IEC60068-2-64
Operating System	Win8 32-bit/64-bit, WES8 32-bt/64-bit Win7 32-bit/64-bit, WES732-bit/64-bit, WEC7, Linux Kernel version 3.8.0	EMC	CE Approval: EN55022 & EN55024, FCC Class A

Dimension Drawing



Ordering Information

* HMI Software License Exclude

System	Processor	Main Memory	Storage	Software Package	SoftPLC			HMI (Optional)	
					SoftMotion			JMobile	
					SoftMotion CNC				TargetVisu
APPC 1542T P20 HMI Controller A0IA1542T00X2	Celeron J1900	4G	32G	• P20 Windows WES7 Package (P/N: 88IA1247T00X2)	v	-	-	v	-
APPC 1542T M20 HMI Controller A0IA1542T00X2		4G	32G	• M20 Windows WES7 Package (P/N: 88IA1247T01X2)	v	v	-	-	v
APPC 1542T R20 HMI Controller A0IA1542T00X2		8G	32G	• R20 Windows Win7ProEmb Package (P/N: 88IA1542T00X2)	v	v	v	-	v
APPC 1540T Bare-bone System 10IA1540T00X0	Atom E3826	2G	Option	Support • Win8 32-bit/64-bit, WES8 32-bt/64-bit • Win7 32-bit/64-bit, WES732-bit/64-bit • Linux Kernel version 3.8.0	-	-	-	-	-

System	Optional Power Adapter
Power Adapter	60W 12V/5A w/ 3pin phoenix contact w/o power cord (P/N: 7400060031X00)

APPC 1562TP2E-DC Controller

15” 4:3
Control Panel Computer

Main Features

- Compliant with industrial IEC61131-3 programming languages (LD/FBD/SFC/IL/ST/CFC)
- Support up to 1024+ I/O points and maximum 64 axis for motion control
- Build-in HMI APIs for human-machine interface
- Support remote monitor, remote control and maintenance
- Support industrial Ethernet Fieldbus protocols (EtherCAT, Ethernet I/P, PROFINET)
- Support industrial Fieldbus protocols (PROFINET/PROFIBUS/DeviceNET) by optional FBI
- Support Multi-Core, Multi-Tasking powered by Intel® Core™ i5/i3 processor

Product Overview

The 15” 4:3 XGA fanless Control Panel Computer APPC 1562T comes with industrial motherboard, flush panel design and can have IP65 front for industrial applications. It supports fieldbus communication in automation market with optional PROFIBUS, PROFINET, DeviceNET, EtherCAT, EtherNet/IP, CANopen fieldbus modules. It also meets PLCopen® specifications and allows easy control programming via SoftPLC and SoftMotion tool kit. It also supports JMobile PC runtime to become HMI.

Controller Specifications

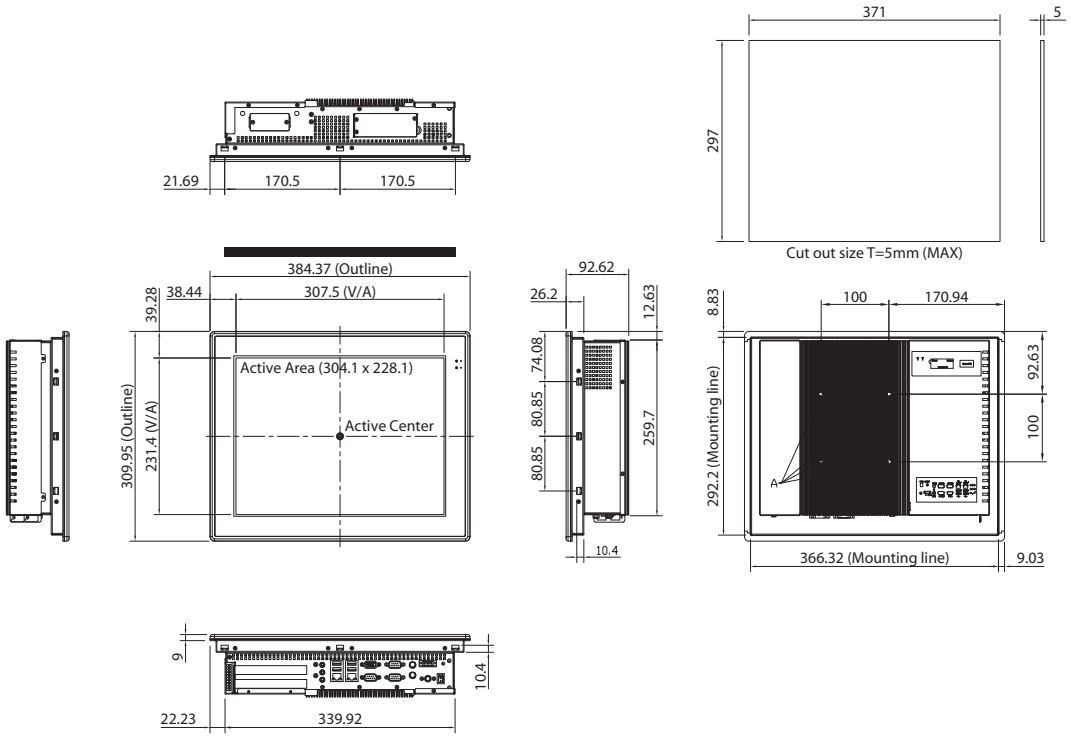
Specification	SoftPLC Controller	SoftMotion Controller	SoftMotion CNC Controller
Performance Index	P30	M60	R60
Real-Time	Yes	Yes	Yes
Software Protocols	EtherCAT, EtherNet/IP, PROFINET		
Optional Protocols via FBI	PROFIBUS, DeviceNET, CANopen		
IEC61131-3 Language	Ladder Diagram, Function Block Diagram, Instruction List, Structured Text, Sequential Function Chart, Continuous Function Chart		
Cycle Time (ms)	0.5	0.5	0.5
Max. I/O Points	1024+	1024+	1024+
Max. Axes	No support	64	64
Control Group	No support	No support	6
Motion Features	No support	GEAR, CAM Function Integrated graphical CAM editor with extensive configuration option	
High-Computing Applications	Yes	Yes	Yes
Other Application Software			
HMI (License Options)	JMobile Suite	TargetVisu	TargetVisu

System Specifications

Technical Data	APPC1562TP2E-DC	Technical Data	APPC1562TP2E-DC
Panel	15”, 4:3, XGA 1024 x768	Power Requirement	12~30V DC Input
	Luminance: 400cd/m2	System Enclosure	Plastic front bezel with Metal housing
	Contrast ratio: 700		IP Protection: IP66 front
	LCD color: 16.2M		Panel Mount/Wall Mount/VESA Mount
	Viewing angle: 60(U), 80(D), 80(L), 80(R)		Dimension: 384.37 x 309.95 x 92.62 mm

Technical Data	APPC1562TP2E-DC	Technical Data	APPC1562TP2E-DC
Touch screen	5-wire USB resistive (flush panel type) Touch light transmission: 80%	System Enclosure	Weight: 7.8Kg
Processor	3th generation Intel Core i5/i3 LGA Socket Type Processor - Core™ i5-3610ME, dual core, 2.7GHz, 3M cache - Core™ i3-3120ME, dual core, 2.47GHz, 3M cache	Operating Temperature	Ambient with air flow: -5°C to 50°C (according to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14)
Main Memory	DDR3 1333/1066MHz Memory Maximum up to 8GB	Storage Temperature	-20°C to 75°C
Storage Memory	Optional 2.5" SSD or HDD	Relative Humidity	10%~90% relative humidity, non-condensing Limits to be at 90% RH at max 50°C
General Interface	2x GbE LAN (82574L), 1x VGA, 4x USB2.0, 1x PS/2 Keyboard, 1x PS/2 Mouse, 1 x Line-out; 1 x Line-in; 1 x MIC-in		
Serial Ports	2x RS232/422/485 w/ 2.5kv isolated; 1x RS232	Shock Resistance	20G, half sine, 11ms, IEC60068-27
Control Software	P30: Control RTE / M60 : SoftMotion RTE / R60: SoftMotion CNC (Optional)	Vibration Resistance	Random: 2.2Grms @ 5 ~ 500Hz, IEC60068-2-64 Sinusoidal: 2Grms @ 5 ~ 500Hz, IEC60068-2-64
Operating System	Win8 32-bit/64-bit, WES8 32-bt/64-bit Win7 32-bit/64-bit, WES732-bit/64-bit		
Expansion	2x mini-PCIe (Optional Module refer to Page 45)	EMC	CE Approval: EN55022 & EN55024, FCC Class A

Dimension Drawing



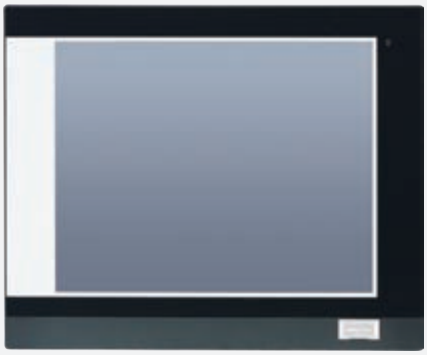
Ordering Information

* HMI Software License Exclude

System	Processor	Main Memory	Storage	Software Package	SoftPLC			HMI (Optional)	
					SoftMotion			JMobile	
					SoftMotion CNC				TargetVisu
APPC 1562TP2E-DC P30 HMI Controller A0IA1562T00X2	Core-i i5-3610ME	4G	32G	P30 Windows WES7 Package (P/N: 88IA1562T00X2)	v	-	-	v	-
APPC 1562TP2E-DC M60 HMI Controller A0IA1562T00X2		4G	32G	M60 Windows WES7 Package (P/N: 88IA1562T01X2)	v	v	-	-	v
APPC 1562TP2E-DC R60 HMI Controller A0IA1562T00X2		4G	32G	R60 Windows Win7ProEmb Package (P/N: 88IA1562T02X2)	v	v	v	-	v

IPPC A1772PE2-DC Controller

17” 4:3
Control Panel Computer



Main Features

- Compliant with industrial IEC61131-3 programming languages (LD/FBD/SFC/IL/ST/CFC)
- Support up to 1024+ I/O points and maximum 64 axis for motion control
- Support remote monitor, remote control and maintenance
- Support industrial Ethernet Fieldbus protocols (EtherCAT, Ethernet I/P, PROFINET)
- Support industrial Fieldbus protocols (PROFINET, PROFIBUS, DeviceNET) by optional FBI
- Support Multi-Core, Multi-Tasking powered by Intel® Core™ i5/i3 processor

Product Overview

The 17” 4:3 SXGA fanless Control Panel Computer IPPC A1772P comes with industrial motherboard, flush panel design and can have IP66 front for industrial applications. It supports fieldbus communication in automation market with optional PROFIBUS, PROFINET, DeviceNET, EtherCAT, EtherNet/IP, CANopen fi eldbus modules. It also meets PLCopen® specifi cations and allows easy control programming via SoftPLC and SoftMotion tool kit. It also supports JMobile PC runtime to become HMI.

Controller Specifications

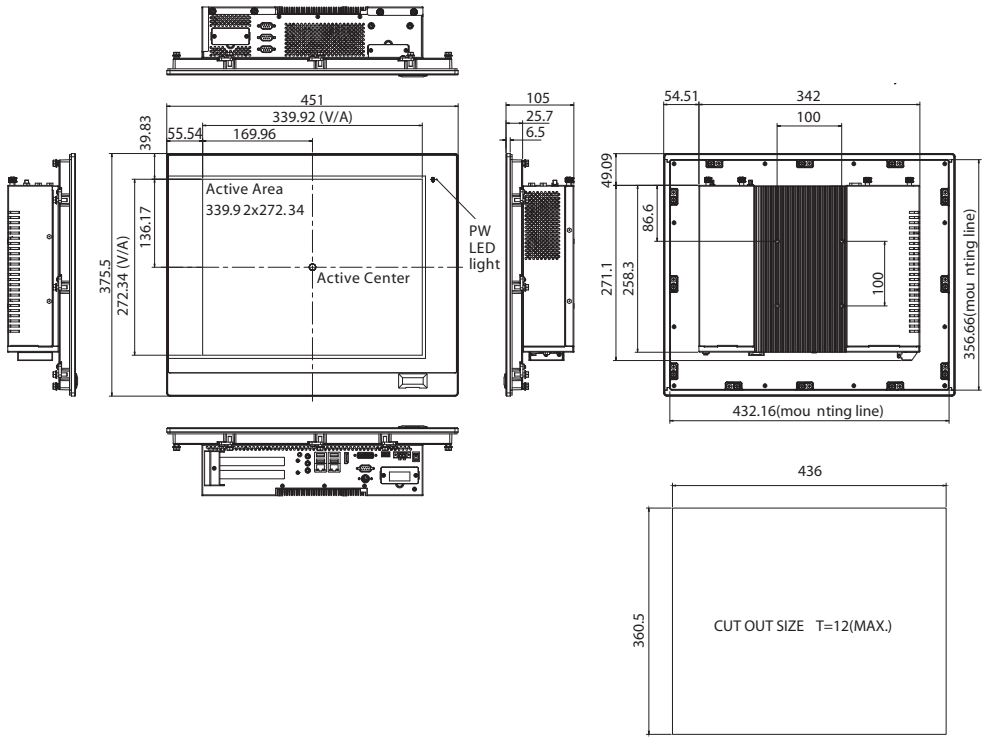
Specification	SoftMotion Controller	SoftMotion CNC Controller
Performance Index	M60	R60
Real-Time	Yes	Yes
Software Protocols	EtherCAT, EtherNet/IP, PROFINET	
Optional Protocols via FBI	PROFIBUS, DeviceNET, CANopen	
IEC61131-3 Language	Ladder Diagram, Function Block Diagram, Instruction List, Structured Text, Sequential Function Chart, Continuous Function Chart	
Cycle Time (ms)	0.5	0.5
Max. I/O Points	1024+	1024+
Max. Axes	64	64
Control Group	No support	6
Motion Features	GEAR, CAM Function Integrated graphical CAM editor with extensive configuration option	
High-Computing Applications	Yes	Yes
Other Application Software		
HMI (License Options)	TargetVisu	TargetVisu

System Specifications

Technical Data	IPPC A1772PE2-DC	Technical Data	IPPC A1772PE2-DC
Panel	17”, 4:3, SXGA 1280 x 1024 Luminance: 350cd/m2 Contrast ratio: 1000 LCD color: 16.7M Viewing angle: 80(U), 80(D), 85 (L), 85(R)	Operating System	Win8 32-bit/64-bit, WES8 32-bt/64-bit Win7 32-bit/64-bit, WES732-bit/64-bit
		Expansion	2x mini-PCIe (Optional Module refer to Page 45)
		Power Requirement	12~30V DC Input
Touch screen	Ten points P-Cap (Projected Capacitive Touch) Touch light transmission: 87%	System Enclosure	Aluminum front bezel with Metal housing IP Protection: IP66 front Panel Mount/Wall Mount/VESA Mount

Technical Data	IPPC A1772PE2-DC	Technical Data	IPPC A1772PE2-DC
Processor	3th generation Intel Core i5/i3 LGA Socket Type Processor - Core™ i5-4570TE, dual core, 2.7GHz, 4M cache - Core™ i5-4590T, quad core, 2GHz, 6M cache - Core™ i3-4340TE, dual core, 2.6GHz, 4M cache - Core™ i3-4350T, dual core, 3.1GHz, 4M cache	System Enclosure	Dimension: 451 x 375.5 x 105 mm Weight: 9.6 Kg
		Operating Temperature	Ambient with air flow: -20°C to 50°C (according to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14)
		Storage Temperature	-20°C to 75°C
Main Memory	DDR3/DDR3L 1600/1333MHz Memory Maximum up to 16GB	Relative Humidity	10%~90% relative humidity, non-condensing
Storage Memory	Optional 2.5" SSD or HDD	Shock Resistance	20G, half sine, 11ms, IEC60068-27
General Interface	2x GbE LAN (I210IT), 1 x DVI-I, 1 x DisplayPort, 4 x USB 3.0, 1 x PS/2 Keyboard & Mouse, 1 x Line-out; 1 x Line-in; 1 x MIC-in	Vibration Resistance	Random: 2.2Grms @ 5~500Hz, IEC60068-2-64 Sinusoidal: 2Grms @ 5~500Hz, IEC60068-2-64
Serial Ports	2 x RS232/422/485	EMC	CE Approval: EN61000-6-2 & EN61000-6-4, FCC Class A
Control Software	M60 : SoftMotion RTE/R60: SoftMotion CNC (Optional)		

Dimension Drawing



Ordering Information

* HMI Software License Exclude

System	Processor	Main Memory	Storage	Software Package	SoftPLC			HMI (Optional)	
					SoftMotion			JMobile	
					SoftMotion CNC				TargetVisu
IPPC A1772PE2-DC M60 HMI Controller A0II1772P00X2	Core-i i5-4570TE	4G	32G	M60 Windows WES7 Package (P/N: 88II1772P00X2)	v	v	-	-	v
IPPC A1772PE2-DC R60 HMI Controller A0II1772P00X2		8G	32G	R60 Windows Win7ProEmb Package (P/N: 88II1772P01X2)	v	v	v	-	v
IPPC A1770PE2-DC Bare-bone System 10II1770P00X0	Option	4G	Option	Support ♦ Win8 32-bit/64-bit, WES8 32-bt/64-bit ♦ Win7 32-bit/64-bit, WES732-bit/64-bit	-	-	-	-	-

System	Optional Power Adapter
Power Adapter	120W 24V/5A w/ 3pin phoenix contact w/o power cord (P/N: 7400120023X00)

IPPC A1772TFE2-DC Controller

17" 4:3
Control Panel Computer

Main Features

- Compliant with industrial IEC61131-3 programming languages (LD/FBD/SFC/IL/ST/CFC)
- Support up to 1024+ I/O points and maximum 64 axis for motion control
- Support remote monitor, remote control and maintenance
- Support industrial Ethernet Fieldbus protocols (EtherCAT, Ethernet I/P, PROFINET)
- Support industrial Fieldbus protocols (PROFINET, PROFIBUS, DeviceNET) by optional FBI
- Support Multi-Core, Multi-Tasking powered by Intel® Core™ i7/i5/i3 processor

Product Overview

The 17" 4:3 SXGA fanless Control Panel Computer IPPC A1772TF comes with Fan, industrial motherboard, flush panel design and can have IP66 front for industrial applications. It supports fieldbus communication in automation market with optional PROFIBUS, PROFINET, DeviceNET, EtherCAT, EtherNet/IP, CANopen fieldbus modules. It also meets PLCopen® specifications and allows easy control programming via SoftPLC and SoftMotion tool kit. It also supports JMobile PC runtime to become HMI.

Controller Specifications

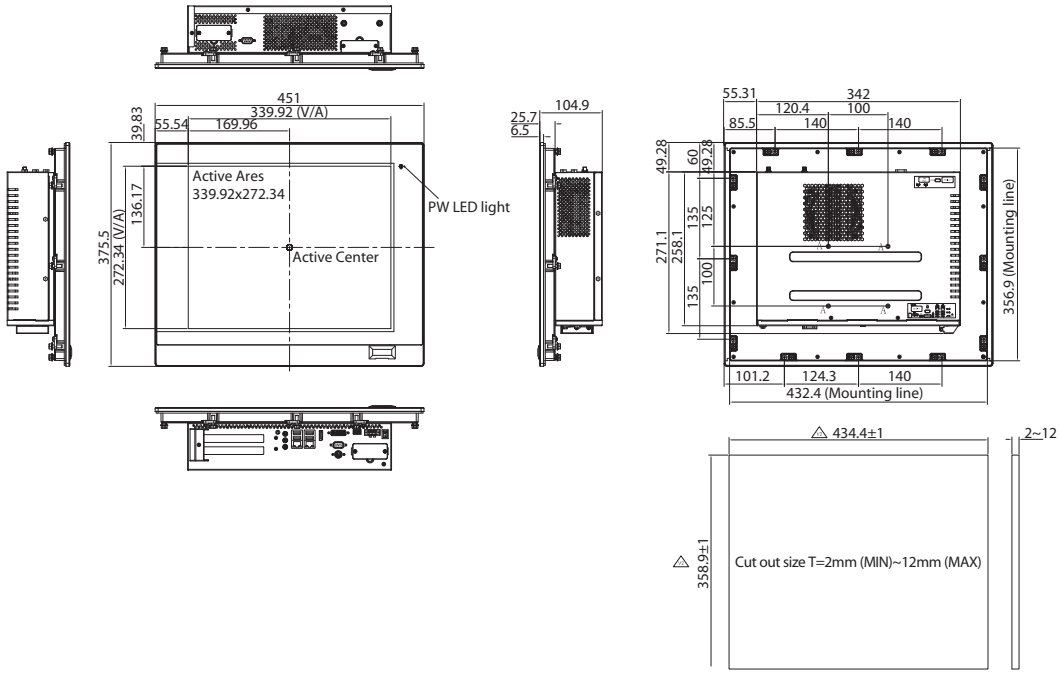
Specification	SoftMotion Controller	SoftMotion CNC Controller
Performance Index	M60	R60
Real-Time	Yes	Yes
Software Protocols	EtherCAT, EtherNet/IP, PROFINET	
Optional Protocols via FBI	PROFIBUS, DeviceNET, CANopen	
IEC61131-3 Language	Ladder Diagram, Function Block Diagram, Instruction List, Structured Text, Sequential Function Chart, Continuous Function Chart	
Cycle Time (ms)	0.5	0.5
Max. I/O Points	1024+	1024+
Max. Axes	64	64
Control Group	No support	6
Motion Features	GEAR, CAM Function Integrated graphical CAM editor with extensive configuration option	
High-Computing Applications	Yes	Yes
Other Application Software		
HMI (License Options)	TargetVisu	TargetVisu

System Specifications

Technical Data	IPPC A1772TFE2-DC	Technical Data	IPPC A1772TFE2-DC
Panel	17", 4:3, SXGA 1280 x 1024	Control Software	M60 : SoftMotion RTE/R60: SoftMotion CNC (Optional)
	Luminance: 350cd/m2	Operating System	Win8 32-bit/64-bit, WES8 32-bt/64-bit Win7 32-bit/64-bit, WES732-bit/64-bit
	Contrast ratio: 1000	Expansion	2x mini-PCIe (Optional Module refer to Page 45)
	LCD color: 16.7M	Power Requirement	12~30V DC Input
	Viewing angle: 80(U), 80(D), 85(L), 85(R)	System Enclosure	Aluminum front bezel with Metal housing (FAN Optional)

Technical Data	IPPC A1772TFE2-DC	Technical Data	IPPC A1772TFE2-DC
Touch screen	5-wire USB resistive (flush panel type) Touch light transmission: 87%	System Enclosure	IP Protection: IP66 front Panel Mount/Wall Mount/VESA Mount Dimension: 451 x 375.5 x 104.9 mm Weight: 9 Kg
Processor	3th generation Intel Core i7/i5/i3 LGA Socket Type Processor - Core™ i7-4770TE, quad core, 2.3GHz, 8M cache - Core™ i7-4785T, quad core, 2.2GHz, 8M cache - Core™ i5-4570TE, dual core, 2.7GHz, 4M cache - Core™ i5-4590T, quad core, 2.GHz, 6M cache - Core™ i3-4340TE, dual core, 2.6GHz, 4M cache - Core™ i3-4350T, dual core, 3.1GHz, 4M cache	Operating Temperature	Ambient with air flow: -20°C to 50°C (according to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14)
		Storage Temperature	-20°C to 75°C
Main Memory	DDR3/DDR3L 1600/1333MHz Memory Maximum up to 16GB	Relative Humidity	10%~90% relative humidity, non-condensing Limits to be at 90% RH at max 50°C
Storage Memory	Optional 2.5" SSD or HDD	Shock Resistance	20G, half sine, 11ms, IEC60068-27
General Interface	2x GbE LAN (I210IT), 1 x DVI-I, 1 x DisplayPort, 4x USB3.0, 1x PS/2 Keyboard & Mouse, 1 x Line-out; 1 x Line-in; 1 x MIC-in	Vibration Resistance	Random: 2.2Grms @ 5~500Hz, IEC60068-2-64 Sinusoidal: 2Grms @ 5~500Hz, IEC60068-2-64
Serial Ports	2x RS232/422/485	EMC	CE Approval: EN61000-6-2 & EN61000-6-4, FCC Class A

Dimension Drawing



Ordering Information

* HMI Software License Exclude

System	Processor	Main Memory	Storage	Software Package	SoftPLC			HMI (Optional)	
					SoftMotion			JMobile	
					SoftMotion CNC				TargetVisu
IPPC A1772TFE2-DC M60 HMI Controller A0II1772T00X2	Core-i i7-4770TE	4G	32G	M60 Windows WES7 Package (P/N: 88II1772T00X2)	v	v	-	-	v
IPPC A1772TFE2-DC R60 HMI Controller A0II1772T00X2		8G	32G	R60 Windows Win7ProEmb Package (P/N: 88II1772T01X2)	v	v	v	-	v
IPPC A1770PE2-DC Bare-bone System 10II1770P00X0	Option	4G	Option	Support • Win8 32-bit/64-bit, WES8 32-bt/64-bit • Win7 32-bit/64-bit, WES732-bit/64-bit	-	-	-	-	-
System	Optional Power Adapter								
Power Adapter	120W 24V/5A w/ 3pin phoenix contact w/o power cord (P/N: 7400120023X00)								

IPPC 1642P Controller

15.6” 16:9 Control Panel Computer

Main Features

- Compliant with industrial IEC61131-3 programminglanguages (LD/FBD/SFC/IL/ST/CFC)
- Support up to 1024 I/O points
- Build-in HMI APIs for human-machine interface
- Support remote monitor, remote control and maintenance
- Support industrial Ethernet Fieldbus protocols (EtherCAT, Ethernet I/P, PROFINET)
- Support industrial Fieldbus protocols (PROFINET, PROFIBUS, DeviceNET) by optional FBI
- Support Multi-Core, Multi-Tasking powered by Intel® Celeron® Dual Core processor

Product Overview

The 15.6” 16:9 WXGA fanless Control Panel Computer IPPC 1642P comes with industrial motherboard, flush panel design and can have IP66 front for industrial applications. It supports fieldbus communication in automation market with optional PROFIBUS, PROFINET, DeviceNET, EtherCAT, EtherNet/IP, CANopen Fieldbus modules. It also meets PLCopen® specifications and allows easy control programming via SoftPLC and SoftMotion tool kit. It also supports JMobile PC runtime to become HMI.

Controller Specifications

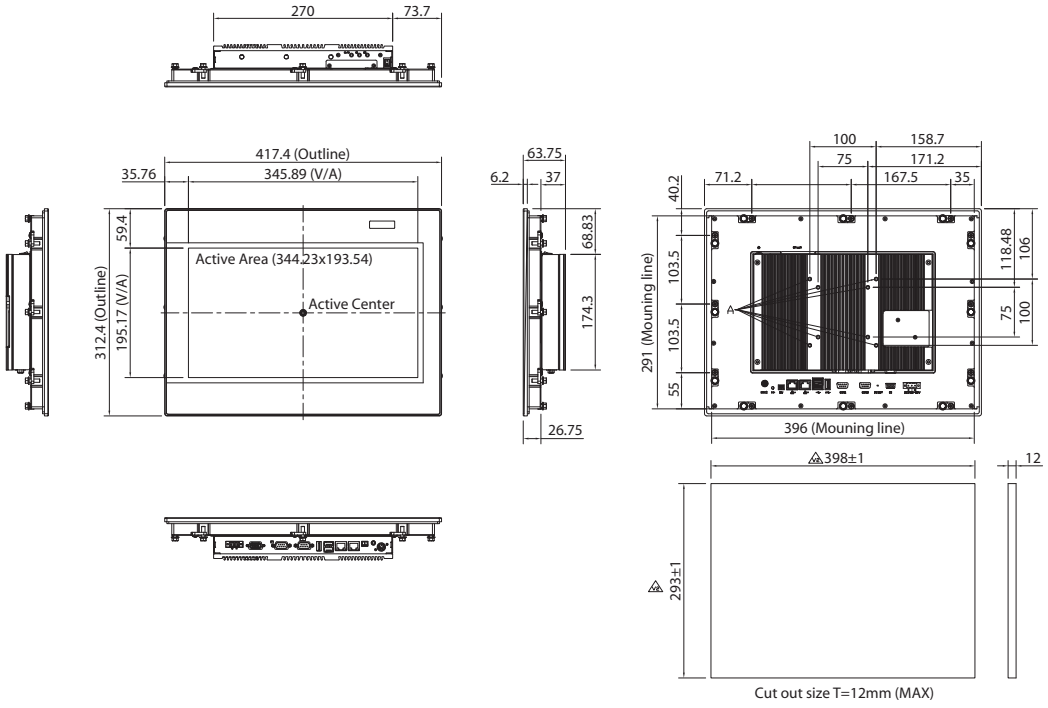
Specification	SoftPLC Controller	SoftMotion Controller	SoftMotion CNC Controller
Performance Index	P20	M20	R20
Real-Time	Yes	Yes	Yes
Software Protocols	EtherCAT, EtherNet/IP, PROFINET		
Optional Protocols via FBI	PROFIBUS, DeviceNET, CANopen		
IEC61131-3 Language	Ladder Diagram, Function Block Diagram, Instruction List, Structured Text, Sequential Function Chart, Continuous Function Chart		
Cycle Time (ms)	0.5	0.5	0.5
Max. I/O Points	1024	1024	1024
Max. Axes	No support	24	24
Control Group	No support	No support	2
Motion Features	No support	GEAR, CAM Function Integrated graphical CAM editor with extensive configuration option	
HMI (License Options)	JMobile Suite	TargetVisu	TargetVisu

System Specifications

Technical Data	IPPC 1642P	Technical Data	IPPC 1642P
Panel	15.6”, 16:9, WXGA 1366 x 768 Luminance: 300cd/m2 Contrast ratio: 500 LCD color: 16.7M Viewing angle: 80(U), 80(D), 85(L), 85(R)	Expansion	2x mini-PCIe (Optional Module refer to Page 45)
		Power Requirement	12~30V DC Input
Touch screen	Ten points P-Cap (Projected Capacitive Touch) Touch light transmission: 87%	System Enclosure	Aluminum front bezel with Metal housing IP Protection: IP66 front Panel Mount/ Wall Mount/ VESA Mount Dimension: 417.4 x 312.4 x 63.75 mm Weight: 6.4 Kg
Processor	Intel® Celeron® processor J1900 quad core 2GHz	Operating Temperature	Ambient with air flow: -10°C to 60°C

Technical Data	IPPC 1642P	Technical Data	IPPC 1642P
Main Memory	DDR3L 1600/1333MHz Memory Maximum up to 8GB	Operating Temperature	According to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14
Storage Memory	Optional 2.5" SSD or HDD	Storage Temperature	-20°C to 75°C
Persistent Memory	Optional 1MBit NVRAM via NISKNVRAM module	Relative Humidity	10%~90% relative humidity, non-condensing
General Interface	2 x GbE LAN (I210IT), 1 x VGA, 2x USB2.0, 1 x USB3.0, 1 x Line-out, 1 x PS/2 Keyboard & Mouse	Shock Resistance	20G, half sine, 11ms, IEC60068-27
Serial Ports	2 x RS232/422/485 w/ 2.5kv isolated	Vibration Resistance	Random: 2.2Grms @ 5~500Hz, IEC60068-2-64
Control Software	P20: Control RTE/M20 : SoftMotion RTE/ R20: SoftMotion CNC (Optional)		Sinusoidal: 2Grms @ 5~500Hz, IEC60068-2-64
Operating System	Win8 32-bit/64-bit, WES8 32-bt/64-bit Win7 32-bit/64-bit, WES732-bit/64-bit, WEC7 Linux Kernel version 3.8.0	EMC	CE Approval: EN55022 & EN55024, FCC Class A

Dimension Drawing



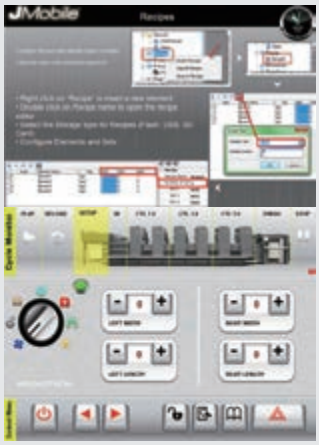
Ordering Information

* HMI Software License Exclude

System	Processor	Main Memory	Storage	Software Package	SoftPLC			HMI (Optional)	
					SoftMotion			JMobile	
						SoftMotion CNC			TargetVisu
IPPC 1642P P20 HMI Controller A0II1642P00X2	Celeron J1900	4G	32G	P20 Windows WES7 Package (P/N: 88II1642P00X2)	v	-	-	v	-
IPPC 1642P M20 HMI Controller A0II1642P00X2		4G	32G	M20 Windows WES7 Package (P/N: 88II1642P01X2)	v	v	-	-	v
IPPC 1642P R20 HMI Controller A0II1642P00X2		8G	32G	R20 Windows Win7ProEmb Package (P/N: 88II1642P02X2)	v	v	v	-	v
IPPC1640P SoftMotion HMI Starter Kit 10II1640P01X0		4G	32G	Build-in WES7	v	-	-	v	-
IPPC 1640P Bare-bone System 10II1640P00X0		4G	Option	Support • Win8 32-bit/64-bit, WES8 32-bt/64-bit • Win7 32-bit/64-bit WES732-bit/64-bit • Linux Kernel version 3.8.0	-	-	-	-	-

System	Optional Power Adapter
Power Adapter	60W 12V/5A w/ 3pin phoenix contact w/o power cord (P/N: 7400060031X00)

JMobile



Main Features

- OS-independent HMI platform
- Online and mobile access
- Remote monitoring of equipment
- Scalable and standardized system
- Multiple communication protocol support
- Drag-and-drop interface development
- Configure system and communication
- Reduce development time

Product Overview

JMobile is a modern & innovative software solution for the design of HMI applications in a simple and intuitive way. A powerful and versatile tool set allowing for the rapid design of tailored applications crafted for a better, more modern user experience. Designed for simplicity, flexibility, and efficiency, JMobile and its advanced graphics engine are based on SVG technology with full object-oriented design properties. Modern and flexible widgets allow for tailoring a truly better, more intuitive user experience, better usability for operators with modern widgets and navigation, better visibility for management with remote tools and reporting, and better serviceability both locally and from afar.

JMobile client-server architecture is based on current web technologies providing users with advanced control and remote supervision, from any browser, any device (smartphone, tablet, or computer). In addition, the ability to capture, store and share data in higher-level structures make it an effective tool for integration across the entire enterprise. A rich set of symbols, widgets and advanced functions (e-mail, RSS, PDF Reporting, Scheduler, HTML5 Browser) allows JMobile deployment in a wide variety of applications and industries, from industrial to building and marine automation.

System Specification

Specification	Description
JMobile Suit	JMobile Studio: an application for designing custom HMI projects in a user-friendly manner, along with a variety of objects in its built-in library, the Widget Gallery.
	JMobile Client: a light-weight application that can be used on Windows computers to remotely view and manage a project running on an HMI device.
	JMobile HMI Runtime: a standalone application that runs on the HMI devices (eTOP / eSMART series). The HMI Runtime is installed via JMobile Studio.
	JMobile PC Runtime: a standalone application that runs on Win32 platforms (NISE/NIFE/xPPC computers instead of HMI devices).
Simulation	On-line and off -line
Multi-Access	up to 4 simultaneous
Library	Rich set of symbols, widgets, advanced functions (e-mail, RSS, PDF Reporting Scheduler, HTML5 Browser) and Project templates
Rich set of HMI features	Dynamic objects, data acquisition, alarm handling, multi language, applications, recipes, tag editor and tag database, user and password, scripting, etc.
Scalable Vector Graphics (SVG)	• Small file size • Rescale without quality loss • Can handle dynamic properties
Protocol	Multiple communication protocol support
Multilanguage	for JMobile Studio, JMobile HMI Runtime and JMobile PC Runtime
OPC UA Client	Connection to OPC UA servers (PLCs, controllers)

System Specification

Specification	Description
Data Logging	Data acquisition and storage of multiple data items Synchronous sampling of values. Same timestamp
Data server	SQL4Automation Connector (Optional) Add database connectivity to your JMobile applications

System Requirements

JMobile Studio has the following system requirements

System Requirements	JMobile Studio
Operating System	Windows XP (SP2 or SP3)
	Windows Vista Business/Ultimate
	Windows 7
	Windows 8
Storage	500 MB minimum
RAM	512 MB
Other	One Ethernet connection / support virtual machine environment

JMobile PC Runtime has the following system requirements

System Requirements	JMobile Studio
Operating System	Windows XP Professional
	Windows XP Embedded
	Windows Embedded Standard (WES 2009)
	Windows Vista Business/Ultimate
	Windows 7 Professional
	Windows Embedded Standard 7
	Windows 8
	Windows Server 2003
Storage	256 MB minimum
RAM	512 MB
CPU	Minimum 300 MHz Pentium® III or similar processors with 500 MHz
Graphic	Minimum SVGA
Other	One Ethernet connection

Order Information

- **JMobile Studio License (P/N: 6014500029X00)**
  HMI development software JMobile Studio License—one license for ten active development PCs
- **JMobile PC Runtime License (P/N: 6014500029X00)**
  HMI PC Runtime License for x86 Windows PCs—one license for one active HMI up to 4000 tags
- **SQL4Automation USB License Key (P/N: 6014500072X00) (Option)**
  SQL4Automation Connector license. USB dongle. Supports 1 database connection and 1 HMI connection

Note: "JMobile Studio" and "JMobile PC Runtime" have a 30-day free trial version, fully functional. The "trial version" is not supported in the virtual machine environment.

eSMART04N

4.3" Widescreen TFT WQVGA HMI Panel PC
with Touchscreen

ASIA ONLY

Main Features

- 4.3" TFT color display, LED backlight
- 480 x 272 pixel (WQVGA) resolution, 64K colors
- Resistive touchscreen
- 1 x Ethernet port
- 1 x USB host port
- 1 x RS232/422/485 communication port
- Extremely cost efficient HMI with plastic chassis
- Slim design. Mounting depth less than 30mm

Product Overview

The eSMART Series HMI products combine state-of-the-art features and top performance with an outstanding design. They are the ideal choice for adding affordable functionality and control to your system. The eSMART04N features a bright 4.3" TFT widescreen (16:9) display with a fully dimmable LED backlight.The JMobile software offers full vector graphic capabilities and plenty of connectivity options.

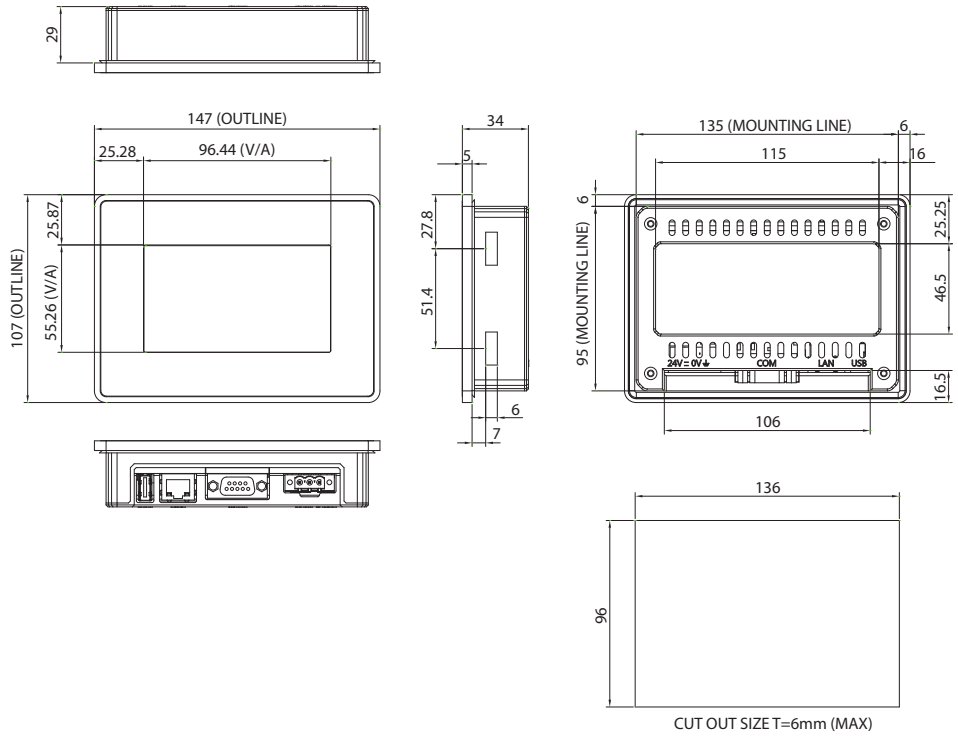
Hightlight

- JMobile runtime included. Full compatibility with JMobile Studio
- Full vector graphic support. Native support of SVG graphic objects. Transparency and alpha blending
- Multilanguage applications. Easily create and manage your applications in multiple languages to meet global requirements. Far East languages are supported. Tools available in JMobile studio support easy third-party translations and help reducing development and maintenance costs of the application
- Data display in numerical, text, bargraph, analog gauges and graphic image formats
- Rich set of state-of-the-art HMI features: data acquisition, alarm handling, scheduler and timed actions (daily and weekly schedulers, exception dates), recipes, users and passwords, e-mail and RSS feeds, rotating menus
- Includes support for a wide range of communication drivers for factory and building automation systems
- Multiple drivers communication capability
- Remote monitoring and control. Client- server functionality. Mobile clients supported
- Remote maintenance and support with VNC-based functionality
- Off-line simulation of the HMI application with JMobile studio
- Powerful scripting language for automating HMI applications. Script debugging improves efficiency in application development
- Rich gallery of symbols and objects
- Project templates
- Optional plug-in modules for fieldbus systems, I/O and controllers
- Display backlight dimmable to 0%

Specifications

Technical Data	eSMART04N	Technical Data	eSMART04N
Panel	- 4.3”, 16:9, WQVGA, 480 x 272 - Luminance: 200 cd/m² typ. - LCD color: 64K - Active display area: 4.3” diagonal - Backlight: LED	Ratings	- Power supply voltage: 24Vdc (18 to 32 Vdc) - Current consumption: 0.3A at 24Vdc (max.) - Fuse: Automatic - Weight: Approx. 0.6Kg
Operator Interface	- Touch: Resistive		

Dimension Drawing



Technical Data	eSMART04N	Technical Data	eSMART04N
System Resources	- CPU: ARM Cortex A8 300 MHz - Operating system: Linux 3.12 - RAM: 256MB DDR - Flash: 2 GB - Application memory: 60MB - Real-time clock: Yes - RTC backup: Supercapacitor - Buzzer: Yes	Environmental Conditions	- Operating temperature: 0°C to 50°C (vertical installation) - Storage temperature: -20°C to 70°C - Operating and storage humidity: 5%~85%, relative humidity, non-condensing - Protection class: IP66 (front), IP20 (rear)
		Dimensions	- Faceplate LxH: 147 x 107mm - Cutout AxB: 136 x 96mm - Depth D+T: 29 + 5mm
Interface	- Ethernet: 1 x 10/100Mbit - USB: 1 x host V2.0, max. 500 mA - Serial: 1 x RS232/422/485 software configuration	Certifications	- CE (Emission EN61000-6-4; Immunity EN61000-6-2 for installation in industrial environments) - CE (Emission EN61000-6-3; Immunity EN61000-6-1 for installation in residential environments) - cULus (UL508 Listed)

Ordering Information

- **eSMART04N (P/N: 10IE0000408X0) +ESMA04AN301**
  4.3" widescreen TFT WQVGA touchscreen with Ethernet and USB interfaces. JMobile run-time

* Note: This product is only for Taiwan, China, Thailand, Vietnam, Philippines, Korea, UAE and Saudi Arabia.

eSMART07N

7" Widescreen TFT WVGA HMI Panel PC
with Touchscreen

ASIA ONLY

Main Features

- 7" TFT color display, LED backlight
- 800 x 480 pixel (WVGA) resolution, 64K colors
- Resistive touchscreen
- 1 x Ethernet port
- 1 x USB host port
- 1 x RS232/422/485 communication port
- Extremely cost efficient HMI with plastic chassis
- Slim design. Mounting depth less than 30mm

Product Overview

The eSMART Series HMI products combine state-of-the-art features and top performance with an outstanding design. They are the ideal choice for adding affordable functionality and control to your system. The eSMART07N features a bright 7" TFT widescreen (16:9) display with a fully dimmable LED backlight. The JMobile software offers full vector graphic capabilities and plenty of connectivity options.

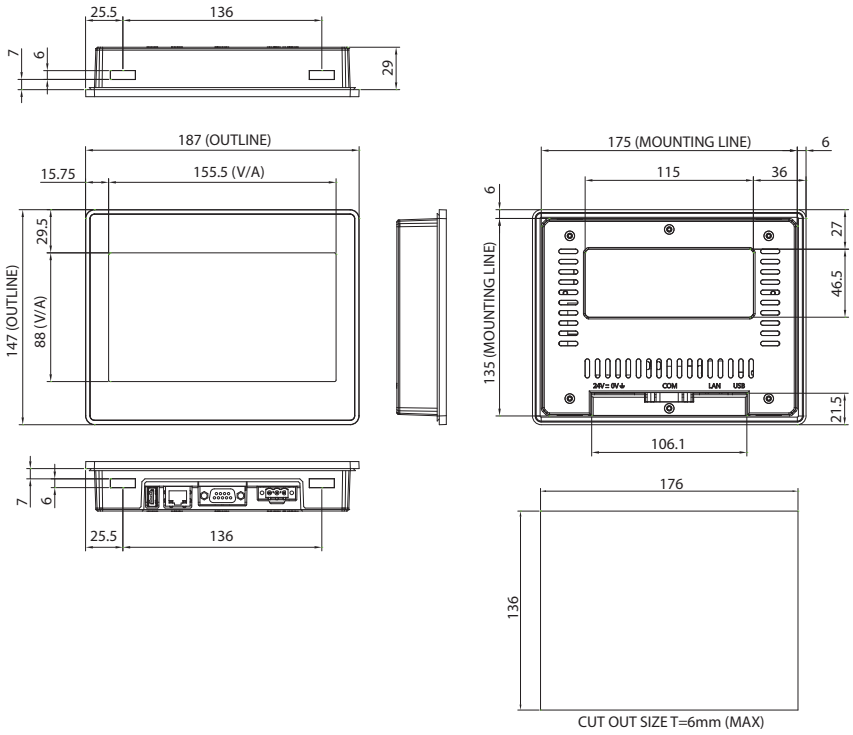
Hightlight

- JMobile runtime included. Full compatibility with JMobile Studio
- Full vector graphic support. Native support of SVG graphic objects. Transparency and alpha blending
- Multilanguage applications. Easily create and manage your applications in multiple languages to meet global requirements. Far east languages are supported. Tools available in JMobile studio support easy third-party translations and help reducing development and maintenance costs of the application
- Data display in numerical, text, bargraph, analog gauges and graphic image formats
- Rich set of state-of-the-art HMI features: data acquisition, alarm handling, scheduler and timed actions (daily and weekly schedulers, exception dates), recipes, users and passwords, e-mail and RSS feeds, rotating menus
- Includes support for a wide range of communication drivers for factory and building automation systems
- Multiple drivers communication capability
- Remote monitoring and control. Client- server functionality. Mobile clients supported
- Remote maintenance and support with VNC-based functionality
- Off-line simulation of the HMI application with JMobile studio
- Powerful scripting language for automating HMI applications. Script debugging improves efficiency in application development.
- Rich gallery of symbols and objects
- Project templates
- Optional plug-in modules for fieldbus systems, I/O and controllers
- Display backlight dimmable to 0%

Specifications

Technical Data	eSMART07N	Technical Data	eSMART07N
Panel	- 7”, 16:9, WVGA, 800 x 480 - Luminance: 200 cd/m² typ. - LCD color: 64K - Active display area: 7” diagonal - Backlight: LED	Ratings	- Power supply voltage: 24Vdc (18 to 32 Vdc) - Current consumption: 0.25A at 24Vdc (max.) - Fuse: Automatic - Weight: Approx. 0.4Kg
Operator Interface	- Touch: Resistive		

Dimension Drawing



Technical Data	eSMART07N	Technical Data	eSMART07N
System Resources	- CPU: ARM Cortex A8 300 MHz - Operating system: Linux 3.12 - RAM: 256MB DDR - Flash: 2 GB - Application memory: 60MB - Real-time clock: Yes - RTC backup: Supercapacitor - Buzzer: Yes	Environmental Conditions	- Operating temperature: 0°C to 50°C (vertical installation) - Storage temperature: -20°C to 70°C - Operating and storage humidity: 5%~85%, relative humidity, non-condensing - Protection class: IP66 (front), IP20 (rear)
		Dimensions	- Faceplate LxH: 187 x 147 mm - Cutout AxB: 176 x 136 mm - Depth D+T: 29 + 5 mm
Interface	- Ethernet: 1 x 10/100Mbit - USB: 1 x host V2.0, max. 500 mA - Serial: 1 x RS232/422/485 software configuration	Certifications	- CE (Emission EN61000-6-4; Immunity EN61000-6-2 for installation in industrial environments) - CE (Emission EN61000-6-3; Immunity EN61000-6-1 for installation in residential environments) - cULus (UL508 Listed)

Ordering Information

- **eSMART07N (P/N: 10IE0000708X0) +ESMA07AN301**
  7" widescreen TFT WVGA touchscreen with Ethernet and USB interfaces. JMobile run-time

* Note: This product is only for Taiwan, China, Thailand, Vietnam, Philippines, Korea, UAE and Saudi Arabia.

eSMART10N

10.1" Widescreen TFT WSVGA HMI Panel PC
with Touchscreen

ASIA ONLY

Main Features

- 10.1"TFT color display, LED backlight
- 1024 x 600 pixel (WSVGA) resolution, 64K colors
- Resistive touchscreen
- 1 x Ethernet port
- 1 x USB host port
- 1 x RS232/422/485 communication port
- Extremely cost efficient HMI with plastic chassis
- Slim design. Mounting depth less than 30mm

Product Overview

The eSMART Series HMI products combine state-of-the-art features and top performance with an outstanding design. They are the ideal choice for adding affordable functionality and control to your system. The eSMART10N features a bright 10.1" TFT widescreen (16:9) display with a fully dimmable LED backlight. The JMobile software offers full vector graphic capabilities and plenty of connectivity options.

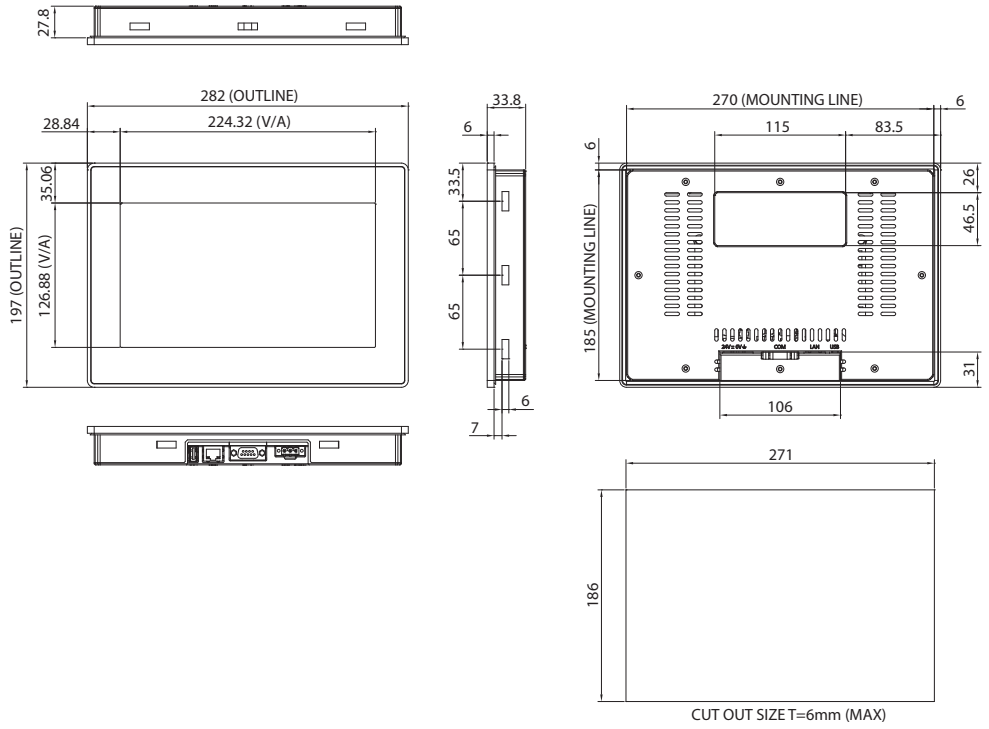
Hightlight

- JMobile runtime included. Full compatibility with JMobile Studio
- Full vector graphic support. Native support of SVG graphic objects. Transparency and alpha blending
- Multilanguage applications. Easily create and manage your applications in multiple languages to meet global requirements. Far east languages are supported. Tools available in JMobile studio support easy third-party translations and help reducing development and maintenance costs of the application
- Data display in numerical, text, bargraph, analog gauges and graphic image formats
- Rich set of state-of-the-art HMI features: data acquisition, alarm handling, scheduler and timed actions (daily and weekly schedulers, exception dates), recipes, users and passwords, e-mail and RSS feeds, rotating menus
- Includes support for a wide range of communication drivers for factory and building automation systems
- Multiple drivers communication capability
- Remote monitoring and control. Client- server functionality. Mobile clients supported
- Remote maintenance and support with VNC-based functionality
- Off-line simulation of the HMI application with JMobile studio
- Powerful scripting language for automating HMI applications. Script debugging improves efficiency in application development
- Rich gallery of symbols and objects
- Project templates
- Optional plug-in modules for fieldbus systems, I/O and controllers
- Display backlight dimmable to 0%

Specifications

Technical Data	eSMART10N	Technical Data	eSMART10N
Panel	- 10.1", 16:9, WSVGA, 1024 x 600 - Luminance: 200 cd/m² typ. - LCD color: 64K - Active display area: 10.1" diagonal - Backlight: LED	Ratings	- Power supply voltage: 24Vdc (18 to 32 Vdc) - Current consumption: 0.38A at 24Vdc (max.) - Fuse: Automatic - Weight: Approx. 1.0Kg
Operator Interface	- Touch: Resistive		

Dimension Drawing



Technical Data	eSMART10N	Technical Data	eSMART10N
System Resources	- CPU: ARM Cortex A8 1 GHz - Operating system: Linux 3.12 - RAM: 512MB DDR - Flash: 4 GB - Application memory: 60MB - Real-time clock: Yes - RTC backup: Supercapacitor - Buzzer: Yes	Environmental Conditions	- Operating temperature: 0°C to 50°C (vertical installation) - Storage temperature: -20°C to 70°C - Operating and storage humidity: 5%~85%, relative humidity, non-condensing - Protection class: IP66 (front), IP20 (rear)
		Dimensions	- Faceplate LxH: 282 x 197mm - Cutout AxB: 271 x 186mm - Depth D+T: 29 + 6mm
Interface	- Ethernet: 1 x 10/100Mbit - USB: 1 x host V2.0, max. 500 mA - Serial: 1 x RS232/422/485 software configuration	Certifications	- CE (Emission EN61000-6-4; Immunity EN61000-6-2 for installation in industrial environments) - CE (Emission EN61000-6-3; Immunity EN61000-6-1 for installation in residential environments) - cULus (UL508 Listed)

Ordering Information

- **eSMART10N (P/N: 10IE0001005X0) +ESMA010AN301**
  10.1" widescreen TFT WSVGA touchscreen with Ethernet and USB interfaces. JMobile run-time

* Note: This product is only for Taiwan, China, Thailand, Vietnam, Philippines, Korea, UAE and Saudi Arabia.

NISKBAT Power Pack

Din Rail Power Pack with Supercapacitors
24V DC Input, 22V DC Output

NISKBAT Power Pack

NISKBAT3 Power Pack

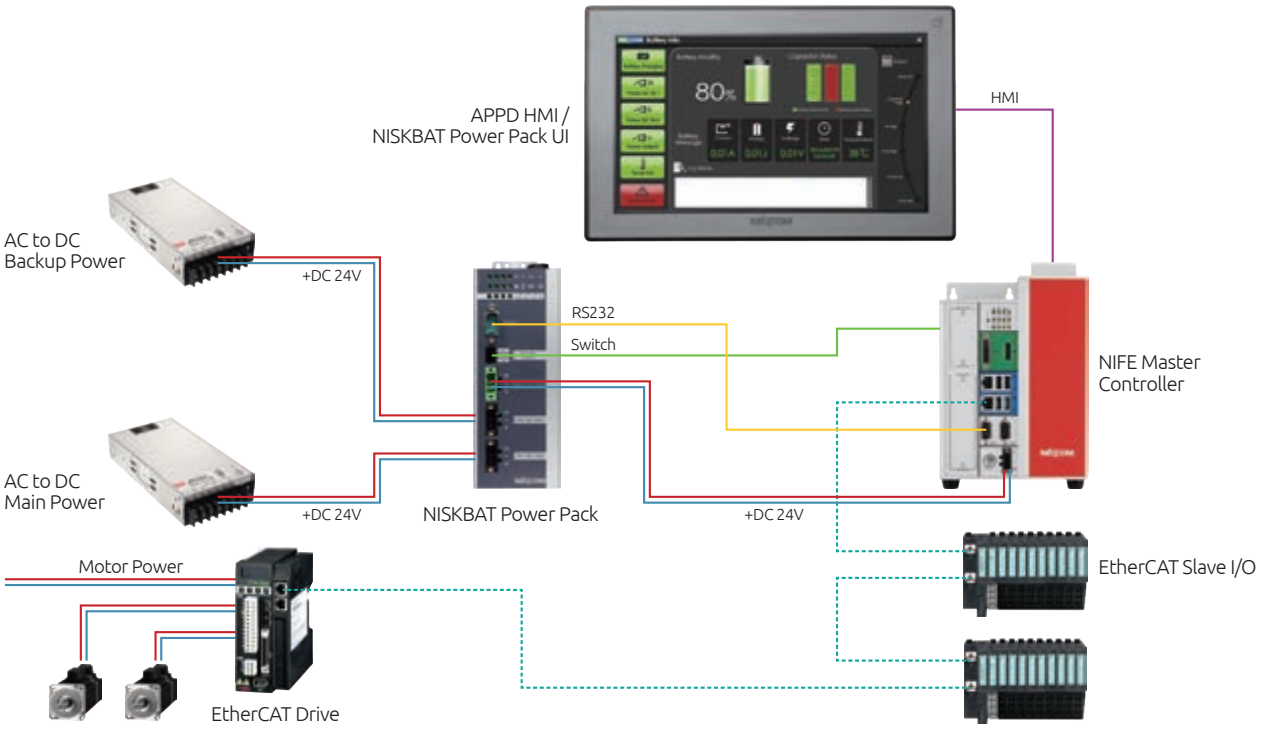
Main Features

- Power Pack with maintenance-free supercapacitors
- Support Emergency System Shutdown during power loss
- Support both Din Rail Mounting and Wall Mount Mounting
- Support software application for continuous status monitoring via RS232
- Support -5~55 degree C Operating Temperature
- Support 2 x DC input 24V and 1 x DC output 22V

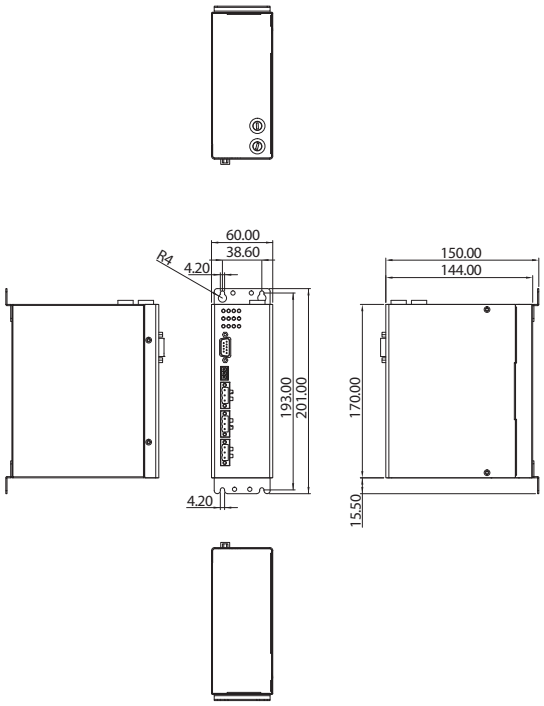
Product Overview

Power failure brings un-expected production outage and interrupted operations in factory automation. To prevent the production risk and business impact, the NISKBAT power pack offers a perfect protection for both power outage and critical data loss. The NISKBAT power pack is designed with reliable super capacitor and able to provide short term backup time for a safe system shutdown or critical data saving. The NISKBAT power pack supports software utility which allows the users to monitor the power pack charging status continuously on the system's HMI. The NISKBAT power pack is a reliable choice of DC +24V UPS configurations for powered embedded-computers, PLC and other electronic devices.

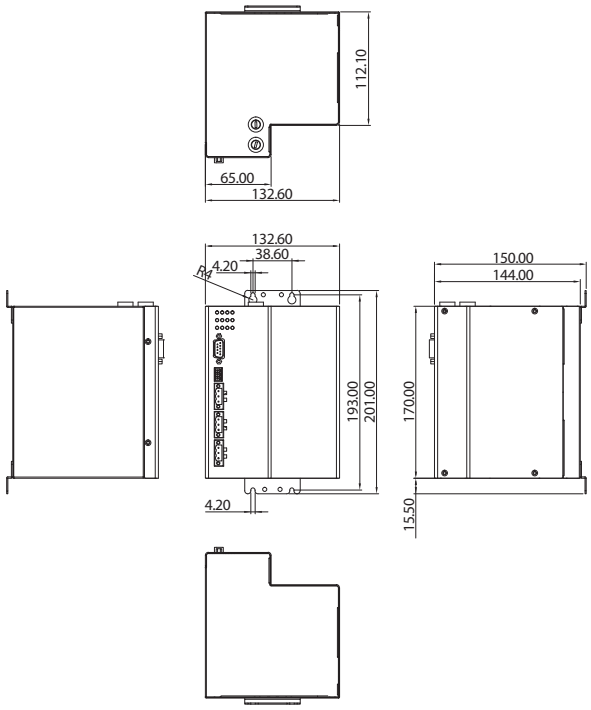
System Architecture with NISKBAT Power Pack



Dimension Drawing



NISKBAT Power Pack



NISKBAT3 Power Pack

Specifications

Power Requirement
- 2 x 3-pic DC input, Typical 24V DC input with +/-20% range
- 1 x 3-pic DC output, Typical 22V DC output with +/-20% range

Commutation I/O
- 1 x RS232 for NISKBAT utility communication with Monitor
- 1 x S3 connector for Remote control

LED Indicators
- 3 x Power LEDs for 2 x DC input and 1 x DC output
- 4 x Battery capacity LEDs for 25%, 50%, 75% and 100%
- 2 x RS232 LEDs for Tx, Rx status
- 1 x Temperature Hot LED
- 1 x Capacitor fail alarm LED
- 1 x Battery charger LED

Dimensions
- NISKBAT Power Pack: 60mm (W) x 144mm (D) x 170mm (H) without wallmount
- NISKBAT3 Power Pack: 132.6mm (W) x 144mm (D) x 170mm (H) without wallmount

Construction
- Aluminum and metal chassis

Environment
- Operating temperature:
  Ambient with air flow: -5°C to 55°C
  (According to EN60950-1, EN50178, EN60715)
- Storage temperature:
  -40°C to 60°C, Relative humidity: 10% to 95% (non-condensing)

Certifications
- CE/FCC Class A
- IP20

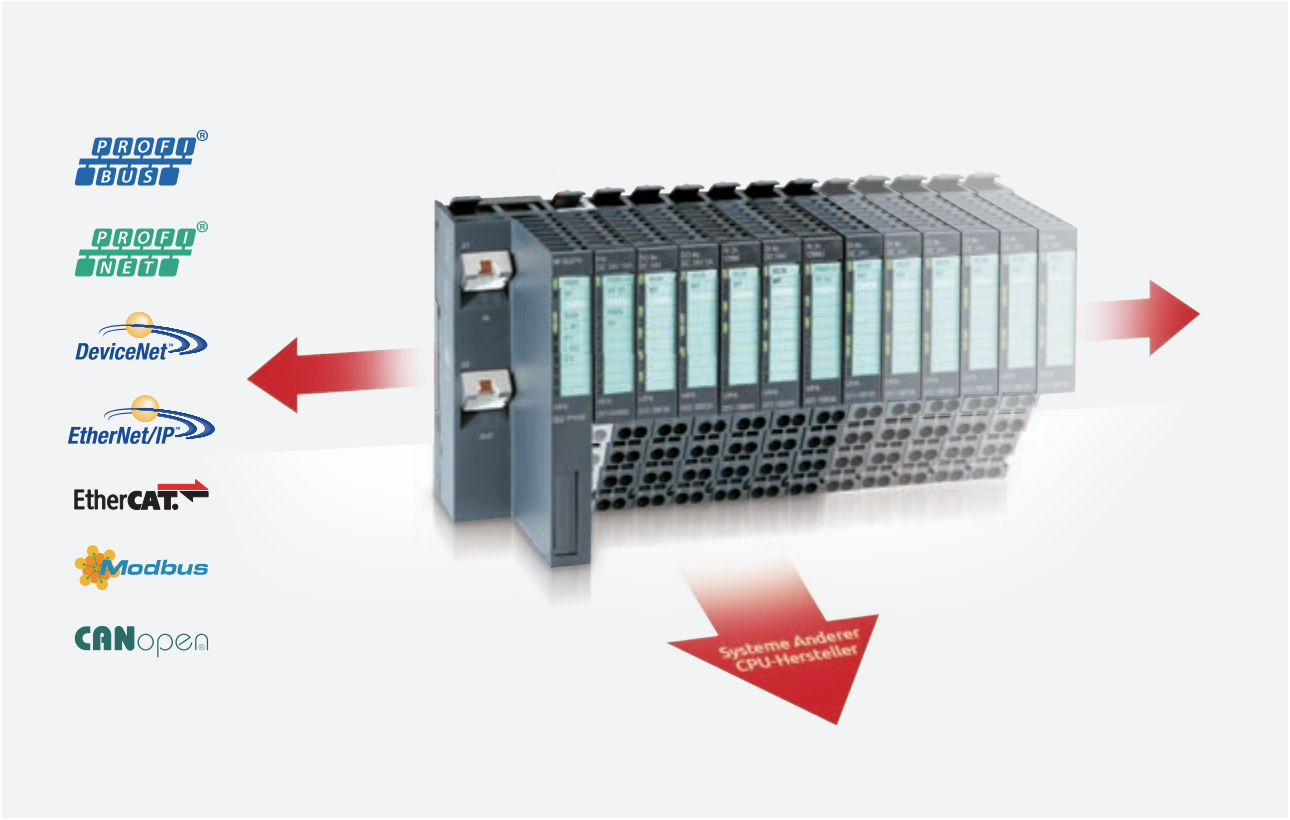
Ordering Information

- **NISKBAT Power Pack (P/N: 10JK00BAT00X0)**
  NISKBAT Power Pack for NIFE Series
- **NISKBAT3 Power Pack (P/N: 10JK00BAT01X0)**
  NISKBAT Power Pack with Expansion for NIFE Series
- **24V, 120W AC/DC power adapter w/ o power cord (P/N: 7400120015X00)**

Power Pack Table

PowerConsumption / Configuration DC Input 24V	10W	20W	30W	40W	50W	60W	70W	80W
NISKBAT Time (Minutes)	9 Mins	5 Mins	3 Mins	-	-	-	-	-
NISKBAT Current (A)	0.45A	0.9A	1.25A	-	-	-	-	-
NISKBAT3 (Minutes)	26 Mins	15 Mins	11 Mins	8 Mins	6 Mins	5 Mins	4 Mins	3 Mins
NISKBAT3 Current (A)	0.45A	0.9A	1.25A	1.71A	2.2A	2.7A	3.2A	3.6A

Fieldbus I/O Solution



Product Overview

NEXCOM's I/O solution allies VIPA SLIO series. VIPA is the expertise in PLC technology. Their I/O modules are very popular in industrial automation market. VIPA SLIO is the micro form factory with high speed bus responding time. And it supports all of the Fieldbus communication. By equipping different coupler, it can be the remote IO for various Fieldbus network. Combining NEXCOM's NIFE PC-based controller and VIPA SLIO series, uses can easily establish the completed PC-based control station.

VIPA SLIO is with VIPA high reliability remote IO technology. The compact size for VIPA SLIO can save the installation space. The docking station modularized design is for easy maintenance. Users don't have to remove the wiring to change the I/O module. The fully option for the I/O modules can satisfy the requirement for any automation application.

Features

Compact and Space-Saving Design

- Conceptual separation of electronic and installation layer
- Space-saving, thin design
- Innovative staircase-shaped wiring layer
- Simple "Two components set-up"

Clever Labeling and Diagnostic Concept

- Clear allocation and readability of channel states
- Simple, time-saving installation and maintenance by means of the connector pin assignment provided on the module
- Clear, definite labeling of channels
- Reference designator label remains on the exchange of a module

Installation and Maintainability

- "Permanent Wiring" enables the exchanging without the disconnection of the wiring
- Intelligent slide and plug mechanism for a simple handling
- Electronic is protected against reverse polarity
- Encoding of the electronic modules prevents from incorrect plugging

High Performanc

- Quick backplane bus concept of 48MBit/s
- With ETS modules it is possible to switch exactly up to +-1us independent of fieldbus

Ordering Information

Order No.	Description
Clamp Modules	
001-1BA00	CM 001 - Potential distributor module8xDC 24V clamps
001-1BA10	CM 001 - Potential distributor module8xDC 0V clamps
001-1BA20	CM 001 - Potential distributor module4xDC 24V, 4xDC 0V clamps
Power Modules	
007-1AB00	PM 007 - Power modulePower supply DC 24V, 10AReverse polarity protectionOvervoltage protection
007-1AB10	PM 007 - Power modulePower supply DC 24V, 4APower supply DC 24V for bus supply 5V, 2AReverse polarity protectionOvervoltage protection
Digital Input Modules	
021-1BB00	SM 021 - Digital input2 inputs
021-1BB10	SM 021 - Digital input2 fast inputsInput filter time delay parameterizable 2µs…4ms
021-1BB50	SM 021 - Digital input2 inputsActive low input
021-1BB70	SM 021 - Digital input2 inputsTime stamp
021-1BD00	SM 021 - Digital input4 inputs
021-1BD10	SM 021 - Digital input4 fast inputsInput filter time delay parameterizable 2µs…4ms
021-1BD40	SM 021 - Digital input4 inputsConnect 2/3 wire

021-1BD50	SM 021 - Digital input4 inputsActive low input
021-1BD70	SM 021 - Digital input4 inputsTime stamp
021-1BF00	SM 021 - Digital input8 inputs
021-1BF50	SM 021 - Digital input8 inputsActive low input
021-1SD00	SM 021 - Digital input4 inputsSafety
Digital Output Modules	
022-1BB00	SM 022 - Digital output2 outputsOutput current 0,5 A
022-1BB20	SM 022 - Digital output2 outputsOutput current 2 A
022-1BB50	SM 022 - Digital output2 Low-Side outputsOutput current 0,5 A
022-1BB70	SM 022 - Digital output2 outputsTime stampOutput current 0,5 A
022-1BB90	SM 022 - Digital output2 outputsPWM
022-1BD00	SM 022 - Digital output4 outputsOutput current 0,5 A
022-1BD20	SM 022 - Digital output4 outputsOutput current 2 A
022-1BD50	SM 022 - Digital output4 Low-Side outputsOutput current 0,5 A
022-1BD70	SM 022 - Digital output4 outputsTime stampOutput current 0,5 A
022-1BF00	SM 022 - Digital output8 outputsOutput current 0,5 A
022-1BF50	SM 022 - Digital output8 Low-Side outputsOutput current 0,5 A
022-1HB10	SM 022 - Digital output2 relay outputsDC 30V /AC 230 VOutput current 3 A
022-1SD00	SM 022 - Digital output4 outputsSafetyOutput current 0,5 A
Analog Input Modules	
031-1BB10	SM 031 - Analog input2 inputs 12BitCurrent 4…20 mA2 wire
031-1BB30	SM 031 - Analog input2 inputs 12BitVoltage 0…10 V
031-1BB40	SM 031 - Analog input2 inputs 12BitCurrent 0(4)…20mA
031-1BB60	SM 031 - Analog input2 inputs 12BitCurrent 4…20mA2wire
031-1BB70	SM 031 - Analog input2 inputs 12BitVoltage -10 V…+10 V
031-1BB90	SM 031 - Analog input2 inputs 16BitThermocoupleVoltage -80mV…+80mV
031-1BD30	SM 031 - Analog input4 inputs 12BitVoltage 0…10 V
031-1BD40	SM 031 - Analog input4 inputs 12BitCurrent 0(4)…20mA
031-1BD70	SM 031 - Analog input4 inputs 12BitVoltage -10 V…+10 V
031-1BD80	SM 031 - Analog input4 inputs 16Bit0…3000 ohm resistanceResistance measurement with 2-, 3- and 4-wires
031-1CB30	SM 031 - Analog input2 inputs 16BitCurrent 0(4)…10mA
031-1CB40	SM 031 - Analog input2 inputs 16BitCurrent 0(4)…20mA
031-1CB70	SM 031 - Analog input2 inputs 16BitVoltage -10 V…+10 V
031-1CD30	SM 031 - Analog input4 inputs 16BitVoltage 0…10 V
031-1CD40	SM 031 - Analog input4 inputs 16BitCurrent 0(4)…20mA
031-1CD70	SM 031 - Analog input4 inputs 16BitVoltage -10 V…+10 V
031-1LB90	SM 031 - Analog input2 inputs 16BitThermocoupleVoltage -80mV…+80mV
031-1LD80	SM 031 - Analog input4 inputs 16Bit0…3000 ohm resistanceResistance measurement with 2, 3 and 4-wires
Analog Output Modules	
032-1BB30	SM 032 - Analog output2 outputs 12BitVoltage 0…10 V
032-1BB40	SM 032 - Analog output2 outputs 12BitCurrent 0(4)…20 mA
032-1BB70	SM 032 - Analog output2 outputs 12BitVoltage -10 V…+10 V
032-1BD30	SM 032 - Analog output4 outputs 12BitVoltage 0…10 V
032-1BD40	SM 032 - Analog output4 outputs 12BitCurrent 0(4)…20mA
032-1BD70	SM 032 - Analog output4 outputs 12BitVoltage -10 V…+10 V
032-1CB30	SM 032 - Analog output2 outputs 16BitVoltage 0…10 V
032-1CB70	SM 032 - Analog output2 outputs 16BitVoltage -10 V…+10 V
032-1CD30	SM 032 - Analog output4 outputs 16BitVoltage 0…10 V
032-1CD70	SM 032 - Analog output4 outputs 16BitVoltage -10 V…+10 V
RS232/422/485 - and Other CPs	
040-1BA00	CP 040 - Communication processorRS232 interface
040-1CA00	CP 040 - Communication processorRS422/485 interface
Counter Modules	
050-1BA00	FM 050 - Counter module1 Counter 32 Bit (AB)DC 24 V
050-1BA10	FM 050 - Counter module1 Counter 32 Bit (AB)DC 5 V
050-1BB00	FM 050 - Counter module2 Counter 32 Bit (AB)DC 24V
050-1BB30	FM 050 - Counter module2 Counter 32 Bit (AB)DC 24 V
050-1BB40	FM 050 - Counter module2 Channels 24 Bit (AB)DC 24 V
SSI Modules	
050-1BS00	FM 050S - SSI moduleSSI EncoderMaster or slave modeEncoder frequency 125 kHz…2 MHzµs time stamp for encoder value
Fieldbus Slave Modules without I/Os	
053-1CA00	IM 053CAN - CANopen slaveCANopen slave16Rx and 16 Tx PDOs2SDOsPDO-LinkingPDO-Mapping: fixMax. 64 peripheral modules
053-1DN00	IM 053DN - DeviceNet slaveDeviceNet slaveGroup 2 only DevicePoll only DeviceBaud rate: 125, 250 and 500kbit/sMax. 64 peripheral modules
053-1DP00	IM 053DP - Profibus-DP slavePROFIBUS-DP slave (DP-VO, DP-V1)244 Byte input and 244 Byte output dataMax. 64 peripheral modules
053-1EC00	IM 053EC - EtherCAT slaveEtherCAT slaveRJ45 jack 100BaseTXMax. 64 peripheral modules
053-1IP00	IM 053IP - EtherNet/IP slaveEtherNet/IP slaveCIPMax. 64 peripheral modules
053-1MT00	IM 053MT - Modbus/TCP slaveModbus/TCP slaveI/O configuration via fieldbusAdjustable I/O cycle (0,5…4 ms) Max. 64 peripheral modules
053-1PN00	IM 053PN - PROFINET-IO-SlavePROFINET-IO slaveTransfer rate 100Mbit/sMax. 64 peripheral modules
SLIO StarterKIT	
800-1DK10	SLIO Starter-Kit 1 - IM053DPconsisting of: 1 x IM 053DP - PROFIBUS-DP slave, 1 x CM 001 clamps module (4 x DC 24V, 4 x DC 0V clamps), 1 x SM 021 digital input (DI 8xDC 24V), 1 x SM 021 digital input (DI 4xDC 24V), 1 xSM 022 digital output (DO 4xDC 24V, 0,5A), 1 x SM 031 analog input (AI 2x12Bit, U), 1 x SM 032 analog output (AO 2x12Bit, U)1 x ready to fit profibus cable incl. 2 x PB connector (972-0DP01+972-0DP10), 1 x profile rail, 1 x SLIO USB-Stick (GSD-files, manuals, catalogue (German/English), example program), 1 x transport case
35 mm Profile Rail	
290-1AF00	35 mm profile railLength 2000 mm
290-1AF30	35 mm profile railLength 530 mm
Miscellaneous	
000-0AA00	SLIO bus cover1 piece
000-0AB00	SLIO shield bus carrier10 pieces
000-0AC00	SLIO coding keys100 pieces
000-0DN00	SLIO DeviceNet jack for IMDeviceNet jack for IM053-1DN00Contact surface: gold Pole number: 5 Contact termination: spring force connection

NISKDIO-8I8O

8-Channels Isolated Digital I/O with mini-PCIe Interface

Main Features

- mini-PCIe full size form factor (dimension: 51 x 30mm) revision 1.2 compliant
- Support adjustable input filter (10μs/1ms/3.2ms/10ms)
- Fast output response time (within 150μsec)
- High over-voltage-protection (47 VDC) and voltage isolation (500 VDC)
- High source current on isolated output channels (200mA/channel)
- Support factory automation system PC applications (NIFE/NISE)
- Support -20~60 degree C operating temperature
- Provide NEXCOM Xcare™ utility 3.1 for NISK-DIO configuration & programming
- Support Microsoft Windows 7/8.1

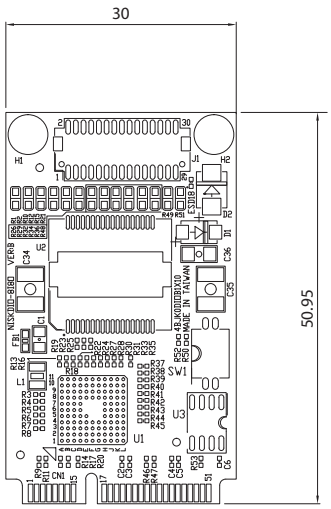
Product Overview

The NISK-DIO includes 8 channels of high-power MOSFET outputs with a 30VDC capability and 8 channels isolated digital inputs, 47V high-voltage protection and easy configuration and efficient programming of the software Xcare™ utility 3.1. For fast output response time and remove noise or chartering signal by adjustable input filter. The NISK-DIO is for industrial applications where factory automation system PC best choice.

Specifications

Isolated Digital Input	
Channels	8
Input OFF Voltage	0~7 VDC max
Input ON Voltage	11~24 VDC max
Input Format	Galvanic isolation input
Response Time	10μsec
Input Filter	10μs/1ms/3.2ms/10ms, select by switch, default 1ms
Isolated Digital Output	
Channels	8
Output Voltage	12~30 VDC
Output Current	200 mA max per channel
Output Format	Galvanic isolation output
Response Time	150μsec
General Specification	
Connector	1 x D-Sub 26pin female connector
Isolation Protection	500 VDC
External Power Supply	24 VDC (±10%)
Operating Temperature	-20°C to 60°C
Storage Temperature	-40°C to 85°C Relative humidity: 5% to 95% (non-condensing)
Dimensions	Full size mini-PCIe type: 51mm (W) x 30mm (D) x 1mm (H)
Certifications	CE approved (EN55022, EN55024) FCC Class A
OS Support	Microsoft® Windows® 7/8.1
Software	Tools & driver: Xcare™ 3.1 tools & API drivers

Dimension Drawing

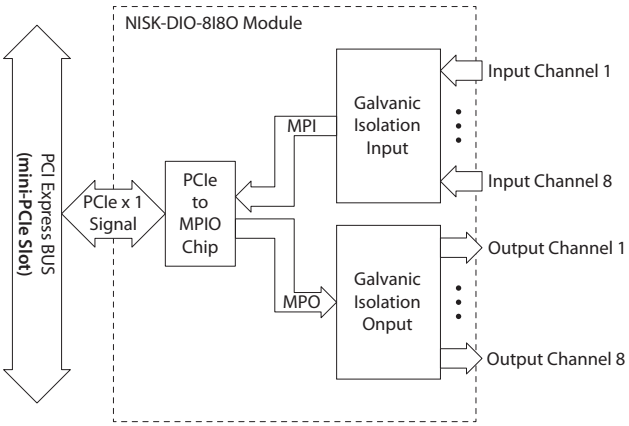


Unit : mm

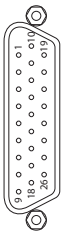
Ordering Information

- **NISKDIO-8I8O (P/N: 10JK00DIO00X0)**
  Digital 8-CH input/8-CH output with cable and bracket

Block Diagram



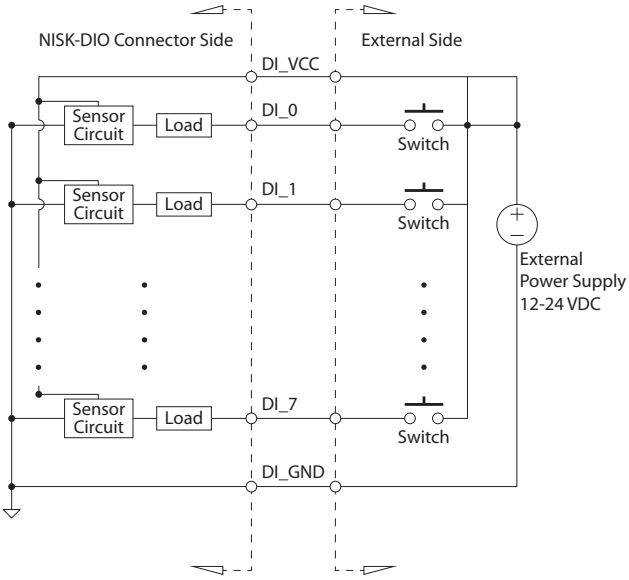
Connector Pin Assignment



Pin Definition					
Pin No.	Definition	Pin No.	Definition	Pin No.	Definition
1	DI_0	10	DO_0	19	DO_VCC
2	DI_1	11	DO_1	20	DO_VCC
3	DI_2	12	DO_2	21	DO_VCC
4	DI_3	13	DO_3	22	DO_VCC
5	DI_4	14	DO_4	23	DO_GND
6	DI_5	15	DO_5	24	DO_GND
7	DI_6	16	DO_6	25	DO_GND
8	DI_7	17	DO_7	26	DO_GND
9	DI_VCC	18	DI_GND		

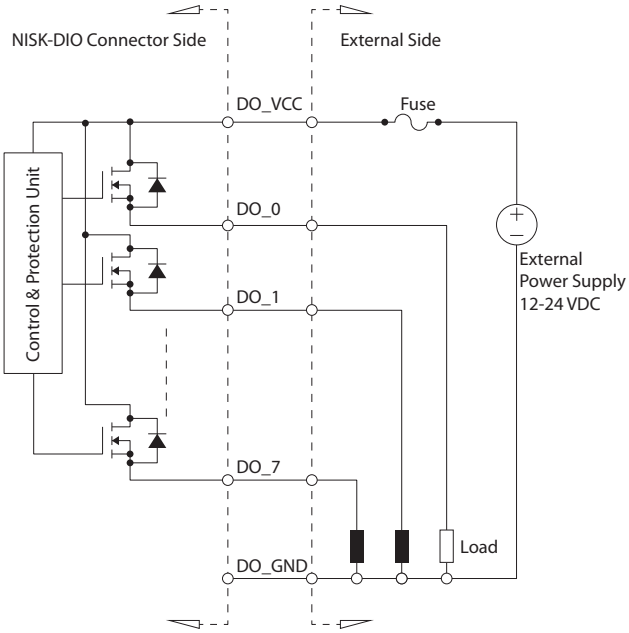
Connect Digital Input Signal

(Sink Type)

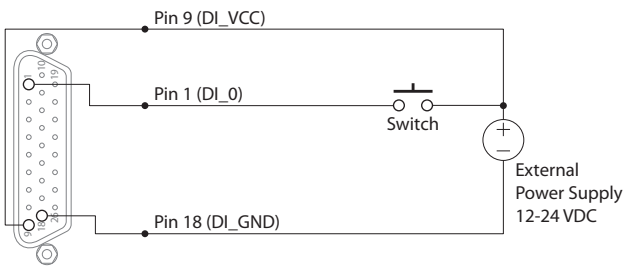


Connect Digital Output Signal

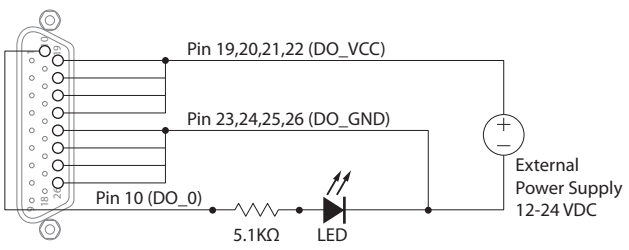
(Source Type)



Device Connect Example – Switch



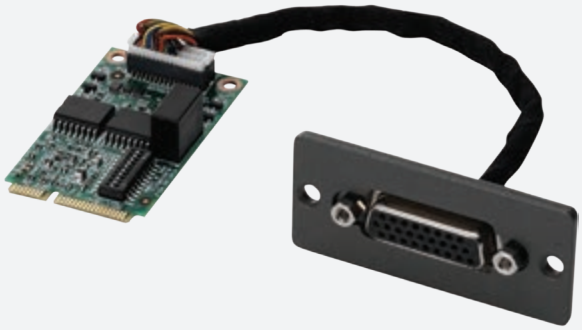
Device Connect Example - LED



* Suggest to connect all "DO_VCC" pin with power source to provide sufficient current.

NISKECOM3

Mini-PCIe to 4 Serial Ports with 2.5KV Isolation protection



Main Features

- Mini-PCIe Form Factor
- Easy and User-Friendly Configurations
- 2.5KV Galvanic Isolation for four ports
- DB26 Connector Interface

Product Overview

NISKECOM3 with universal I/O bracket is specifically designed with all NISE models for serial port expansions. Based on four independent UART channel, NISKECOM3 can support four independent RS232/RS422/RS485 auto ports via cables with DB26 connector type, with 2.5KV Galvanic Isolation protection.

Specifications

Form Factor

- Mini-PCIe Form Factor

Dimensions

- 30mm (W) x 51mm (L) x 10mm (H)
- At least 20mm height for installation

Interface and Operation

- PCIe 2.0 Gen 1 compliant
- Data read/write 32-bit operation

Isolation Protection

- 2.5KV Galvanic Isolation for four ports

UART and Register

- Support four independent UART channels controlled with
  - 16550 compatible register Set
  - 256-byte TX and RX FIFOs
  - Programmable TX and RX Trigger Levels
  - TX/RX FIFO Level Counters
  - Fractional baud rate generator
  - Automatic RTS/CTS or DTR/DSR hardware
  - flow control with programmable hysteresis with programmable turn-around delay

Environment

- Environment Operating Temperature: 0°C to 70°C
- Storage Temperature: -20°C to 75°C

OS Support

- Windows XP 32bits and 64bits
- Windows 7 32bits and 64bits

Ordering Information

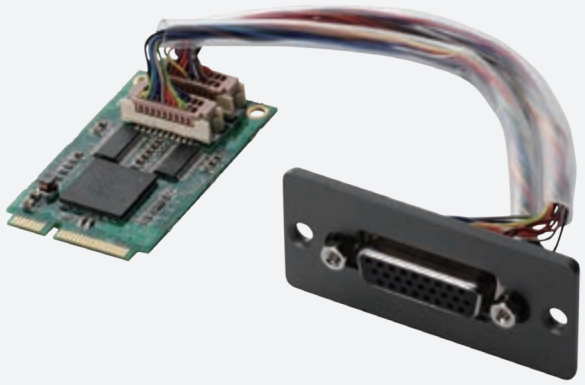
Barebone

- **NISKECOM3 UNIVERSAL KIT (DB26)**

  (P/N: 10JK0ECOM04X0)
  miniPCIe to 4xCOM Module (RS232/422/485 auto) w/ 2.5KV Isolation via internal DB26 cable w/ Universal Bracket (Cable Length:25cm)

NISKECOM4

4 x RS232 Module kits



Main Features

- Mini-PCIe Form Factor
- Easy and User-Friendly Configurations
- DB26 Connector Interface

Product Overview

NISKECOM4 with universal I/O bracket is specifically designed with all NISE models for serial port expansions. Based on four independent UART channel, NISKECOM4 can support four independent RS232 ports via cables with DB26 connector type.

Specifications

Form Factor

- Mini-PCIe Form Factor

Dimensions

- 30mm (W) x 51mm (L)

Interface and Operation

- Expansion bus interface
- PCIe 2.0 Gen 1 Compliant
- x 1 Link, Dual Simplex, 2.5Gbps in each direction
- Data read/write 32-bit operation

UART and Register

- Global interrupt status register for all four UARTs
- Up to 25Mbps serial data rate
- 16 multi-purpose inputs/outputs(MPIOs)
- 16-bit general purpose timer/counter
- Four independent UART channels controlled with
  - 16550 compatible register Set
  - 256-byte TX and RX FIFOs
  - Programmable TX and RX Trigger Levels
  - TX/RX FIFO Level Counters
  - Fractional baud rate generator
  - Automatic RTS/CTS or DTR/DSR hardware flow control with programmable hysteresis
  - Automatic Xon/Xoff software flow control

Environment

- Environment Operating Temperature: 0°C to 70°C
- Storage Temperature: -20°C to 75°C

OS Support

- Windows XP 32bits and 64bits
- Windows 7 32bits and 64bits

Ordering Information

Barebone

- **NISKECOM4 UNIVERSAL KIT (DB26)**

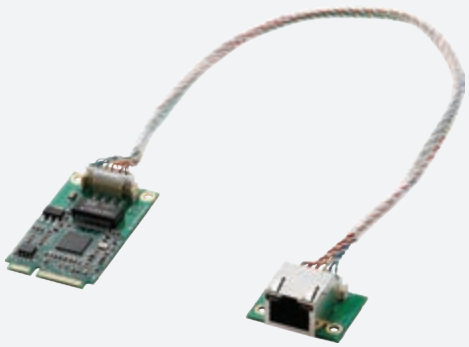
  (P/N: 10JK0ECOM06X0)
  miniPCIe to 4 PORT RS232 via internal DB26 connector w/ Universal Bracket (Cable Length:25cm)

- **NISKECOM4 UNIVERSAL KIT (DB9)**

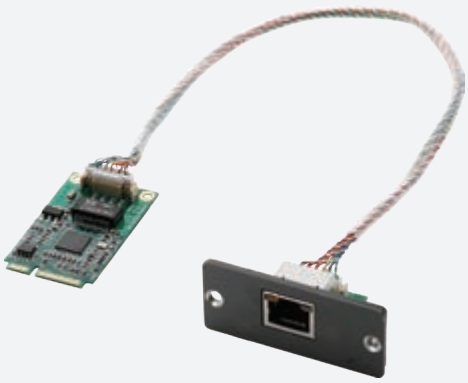
  (P/N: 10JK0ECOM05X0)
  miniPCIe to 4 PORT RS232 MODULE w/ Universal Bracket (Cable Length:25cm)

NISKLAN01

Single Gigabit LAN module, Intel® 82574L



NISKLAN01 without bracket, Cable Length 250mm (P/N: 10JKLAN0100X0)



NISKLAN01 with universal I/O bracket, Cable Length 250mm (P/N: 10JKLAN0101X0)

Main Features

- Mini-PCIe Form Factor
- Easy and User-Friendly Configurations
- One RJ45 Ethernet Interface

Product Overview

NISKLAN01 with universal I/O bracket is specifically designed with NISE/NIFE models for network connectivity expansions. It provides one Intel® Gigabit Ethernet ports with 82574L controller, which gives great network connectivity. The LAN Port supports WOL, PXE and teaming functions for managing network activities.

Specifications

Form Factor

- Mini-PCIe Form Factor

Chipset

- Intel® Ethernet Controller 82574L
- Compliant with IEEE802.3, 802.3u, and 802.ab

Transfer Rate

- Support 10/100/1000 Mbps transfer rates

Functions

- Support WOL, PXE and Teaming Functions

Dimensions

- Dimensions 30mm (W)x 51mm (L)

LAN LED Definitions

LAN Speed	Activity LED	Link type LED
10/100 Mbps	Orange (Left, Flashing)	Orange (Right, permanent)
1000 Mbps (Gigabit)	Orange (Left, Flashing)	Green (Right, permanent)

Environment

- Environment Operating Temperature: 0°C to 70°C
- Storage Temperature: -20°C to 75°C

OS Support

- Windows 7 32bits and 64bits
- Windows 8 32bits and 64bits

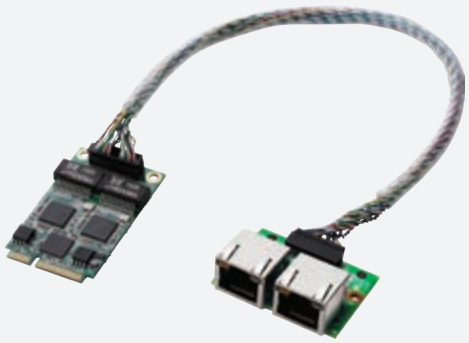
Ordering Information

Barebone

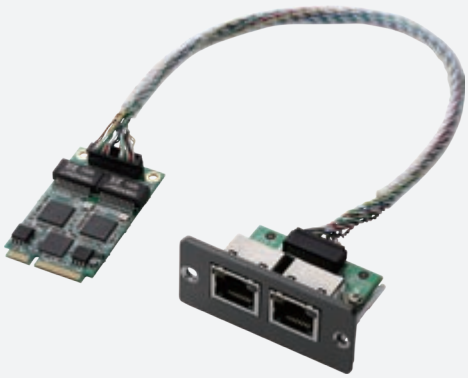
- **NISKLAN01 Universal Kit (P/N: 10JKLAN0101X0)**
  miniPCIe to one GbE LAN module w/Universal Bracket (Cable Length:25cm, LAN Controller:82574L)
- **NISKLAN01 Kit (P/N: 10JKLAN0100X0)**
  miniPCIe to one GbE LAN module w/o Bracket (Cable Length:25cm, LAN Controller:82574L)

NISKLAN04

Dual Gigabit LAN Module, Intel® I210-AT



NISKLAN04 without universal I/O bracket, cable length 250mm (P/N: 10JKLAN0400X0)



NISKLAN04 with universal I/O bracket, cable length 250mm (P/N: 10JKLAN0401X0)

Main Features

- Mini-PCIe form factor
- Easy and user-friendly configurations
- Dual RJ45 EtherNet interface

Product Overview

NISKLAN04 with universal I/O bracket is specifically designed with all NISE models for network connectivity expansions. It provides dual Intel® gigabit EtherNet ports with latest I210-AT controllers, which gives great network connectivity and less power consumption compared to the previous generation Intel® I210-AT controllers. The dual LAN ports on NISKLAN04 supports WOL, PXE and teaming functions for managing network activities.

Specifications

Form Factor

- Mini-PCIe form factor

Chipset

- Intel® EtherNet controller I210AT
- Compliant with IEEE802.3, 802.3u, and 802.ab

Transfer Rate

- Support 10/100/1000 Mbps transfer rates

Functions

- Support WOL, PXE and teaming functions
  (When PXE function is enabled, please enter BIOS setting page by DEL key, not ESC key)

Dimensions

- Dimensions 30mm (W) x 51mm (L)

LAN LED Definitions

LAN speed	Activity LED	Link type LED
10/100 Mbps	Orange (left, flashing)	Orange (right, permanent)
1000 Mbps (gigabit)	Orange (left, flashing)	Green (right, permanent)

Environment

- Environment operating temperature: 0°C to 70°C
- Storage temperature: -20°C to 75°C

OS Support

- Windows 7 32bits and 64bits
- Windows 8 32bits and 64bits

Ordering Information

Barebone

- **NISKLAN04 Universal Kit (P/N: 10JKLAN0401X0)**
  Mini-PCIe to two GbE LAN module w/ universal bracket
  (cable length: 25cm, LAN controller: I210-AT)
- **NISKLAN04 Kit (P/N: 10JKLAN0400X0)**
  miniPCIe to two GbE LAN module w/ o bracket
  (cable length: 25cm, LAN controller: I210-AT)

IoT Studio: Industrial Gateway Builder

IoT is transforming business across industries with innovative applications. To spur more innovations, NEXCOM IoT Studio, a web-based configuration tool, demonstrates how developers can swiftly implement customized features by taking advantage of pre-integrated functions with simple clicks, drags, and drops. Developing IoT applications with reduced efforts enables immediate testing of innovative ideas, turning proof-of-concept inventions into wide-scale deployment.

1.Powered by IBM Node-RED

NEXCOM IoT Studio is a GUI tool powered by Node.js and IMB Node-RED(*1). Through drag-and-drop operations, a node can be easily linked to other nodes which could be a process node for data parsing or other operations. At the end of a link node, a node will be added to determine where information users need should be sent.

2.Built-in NEXCOM drivers and algorithms

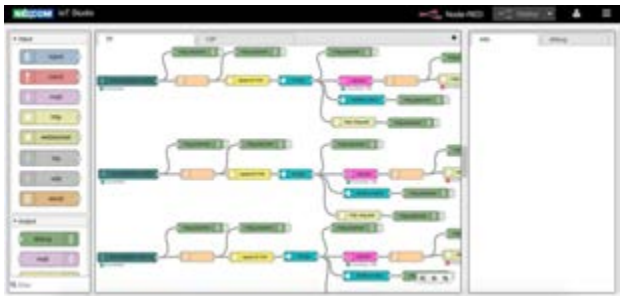
With built-in NEXCOM drivers and algorithms(*2), the core logic treats devices and sensors as data generators and refers to each data extracted from the devices and sensors as a node. Based on tags, raw data, and pre-defined patterns, these nodes are collected, identified, categorized, and represented on a data node board in NEXCOM IoT Studio. Nodes are categorized based on data format, protocol, and other attributes and shown in different colors and texts so they are very distinguishable.

4.Pre-configured cloud service

Furthermore, to build enterprise-level manageability into a wide-area sensor network will require internet access and cloud services. Cloud services offer more practical and comprehensive solutions for processing the high volume of device-generated data so implementing cloud services becomes more important than ever. To help users integrate cloud services without going through complicated setting and configuration steps, NEXCOM Xcare-RM is designed to make implementing cloud services as easy as navigating through a self-service menu. We provide built-in connections to public and private cloud services including Microsoft Azure and IBM Bluemix.

3.Self-defined dashboard

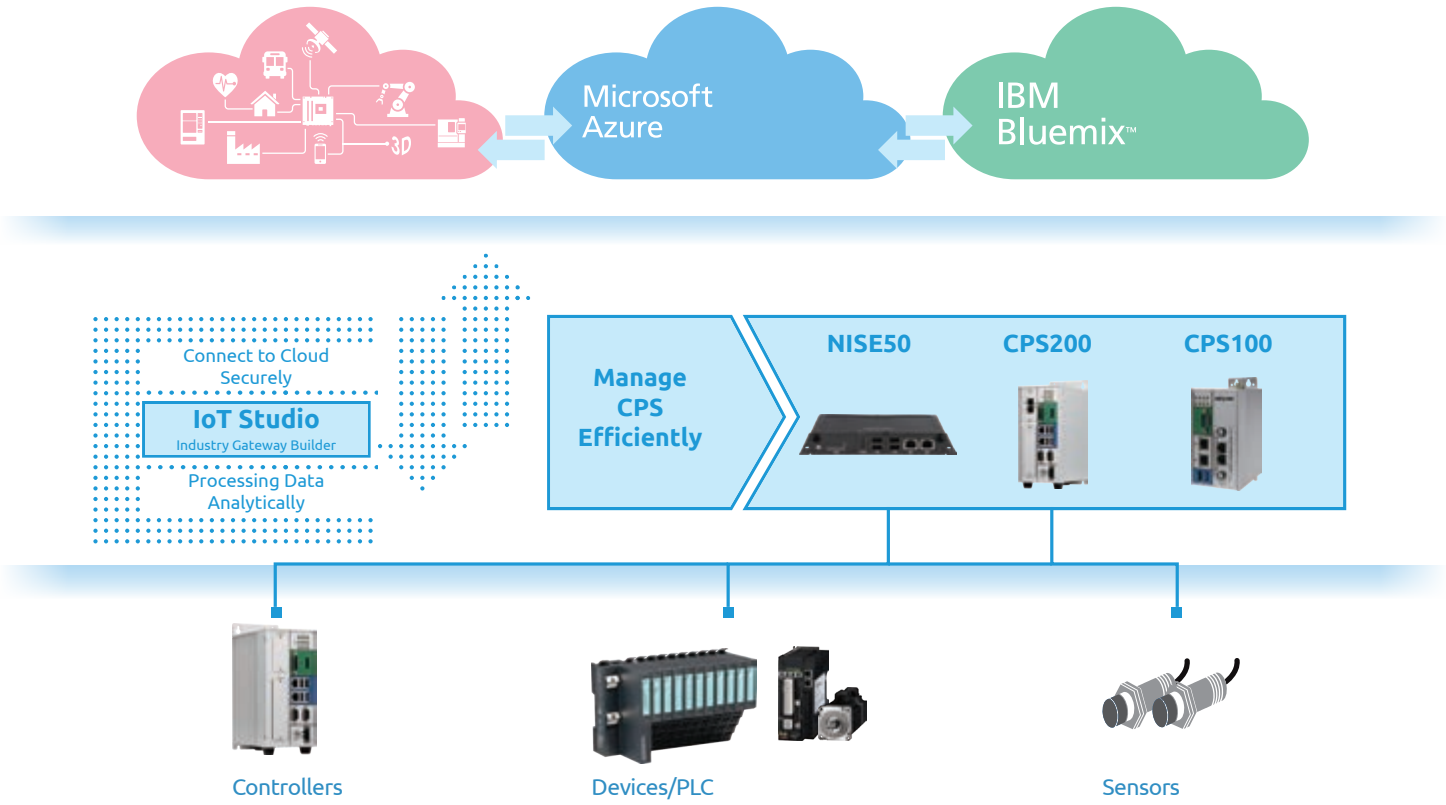
After data flow is set, users can create a custom dashboard to view information, such as pressure readings, temperature measurements etc. It may be enough for local management.



NEXCOM IOT Studio's GUI provides users a single unified interface to manage gateways, sensors and clouds. In other words, users can define data flow and create dashboards and applications within a single GUI, focusing on their core competitiveness and value creation.

*1. Node-RED is a visual tool for wiring the Internet of Things and a creation of IBM Emerging Technologies

*2. Gateways pre-built with IoT Studio include NISE50, CPS200, NIO101



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