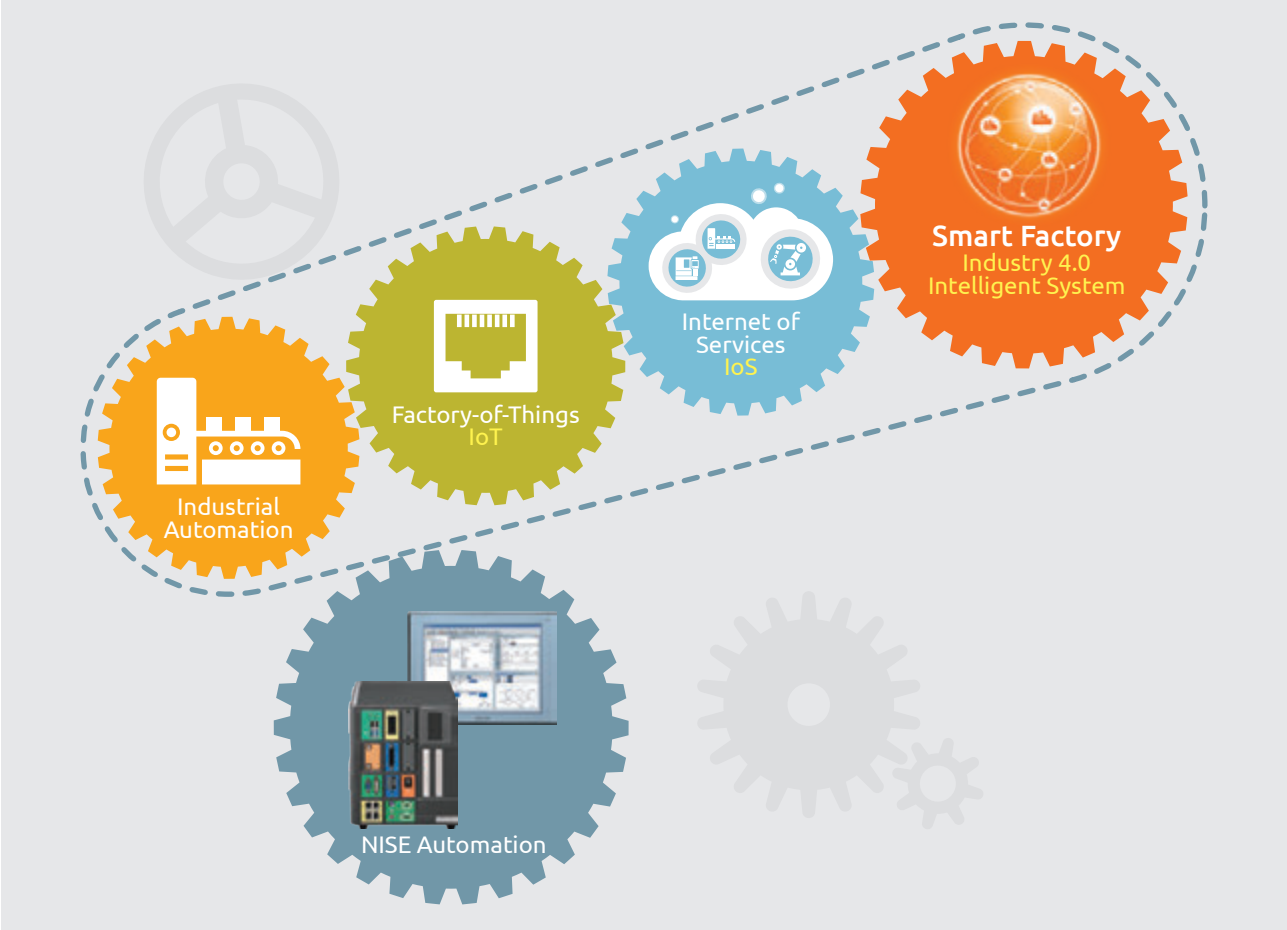
NEXCOM
The Intelligent Systems

Industry 4.0 Innovator

Factory Automation Solution Product Selection Guide

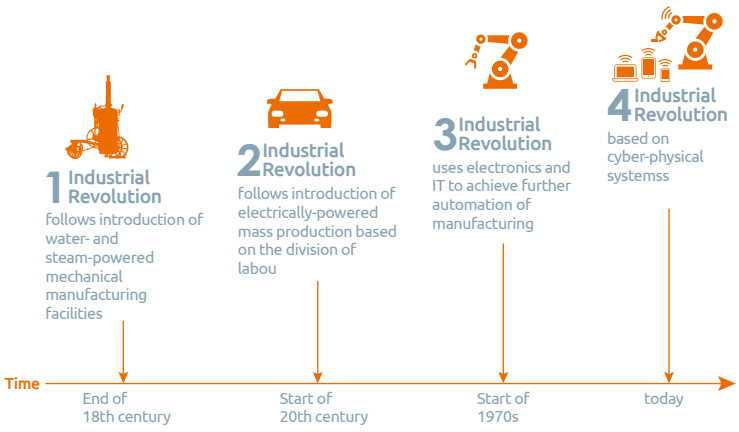
www.nexcom.com

Towards Factory-of-Things Era



Industry 4.0 defines large-scale deployment of all-IP-based technology in the manufacturing levels to seamlessly integrate material handling systems, production automation systems and enterprise IT systems. This smart factory concept brings in cyber-physical systems networking to construct a future of smart, green, and urban production. NEXCOM PC-based intelligent systems offer cost and engineering efficiency, helping users easily upgrade existing legacy automation systems to smart-factory-ready infrastructures. These intelligent systems require IP-based architecture, high computing power, fieldbus protocol communication capability, and flexible programmable automation software tools. NEXCOM NISE Automation solution can provide an answer which traditional PLCs can hardly offer or will cause high cost to meet all demands.

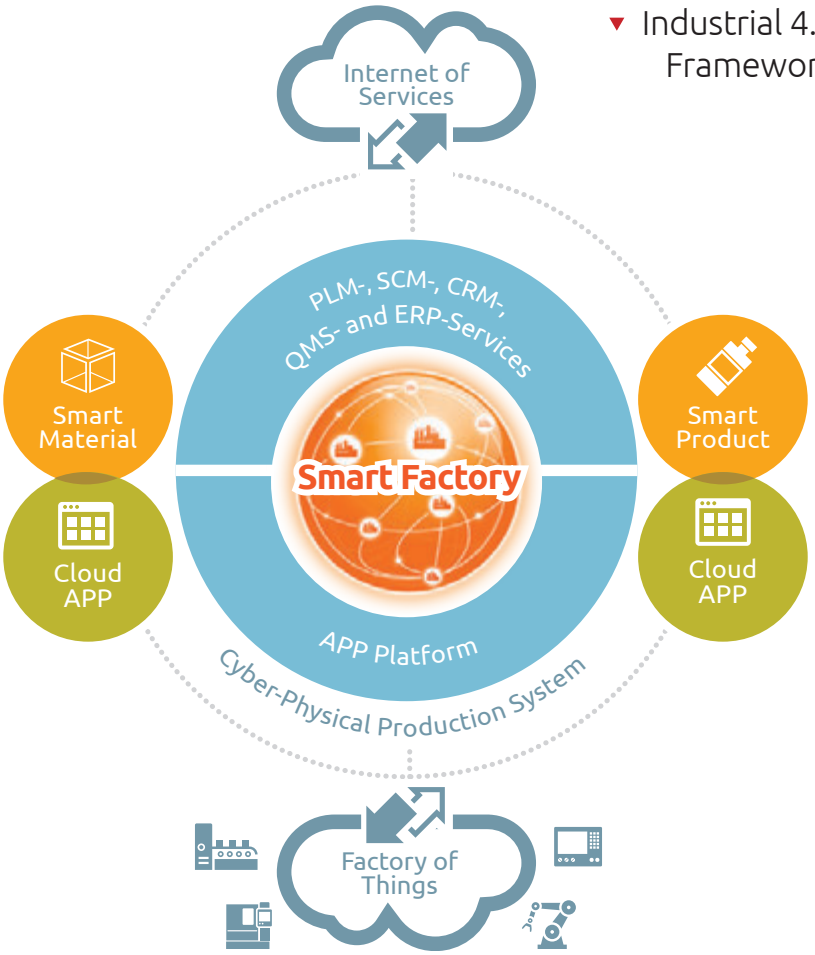
As a long-time provider of industrial automation and computers, NEXCOM consolidates industrial automation fieldbus with softPLC onto its Factory Automation solution to offer highly reliable PC-based automation control system. NEXCOM's NISE Automation solution is not only full IP-based but also compatible with advanced control networks using such as PROFINET, PROFIBUS, Ethernet/IP, DeviceNet and EtherCAT. The NISE Automation solution can easily work with world-class HMI/SCADA software. In addition, as a technical partner of



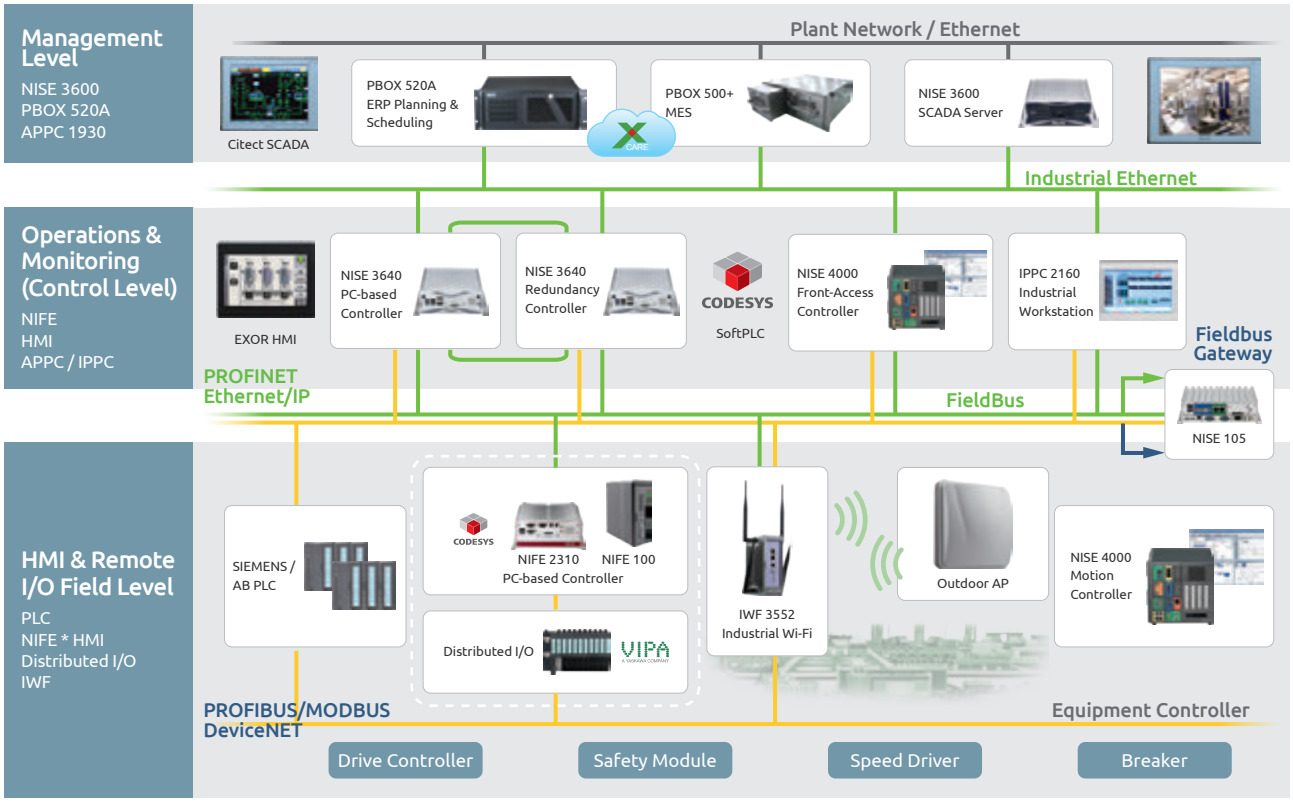
Germany-based 3S-Smart Software Solutions, NEXCOM also provides NISE Automation solution with CODESYS Control RTE, which is the same control kernel used by major automation providers, including Schneider Electric, ABB, Beckhoff, and B&R.

NISE Automation solution integrates multiple fieldbus protocols into a single system and can act as a master or slave automation controller. The NISE Automation solution can seamless integrate world's famous branded PLC systems using PROFINET, PROFIBUS, Ethernet/IP, DeviceNet and EtherCAT protocols. To support IP convergence of manufacturing and enterprise networks, NEXCOM solution helps users build an IP-based smart factory that aligns with the vision of Industry 4.0 era.

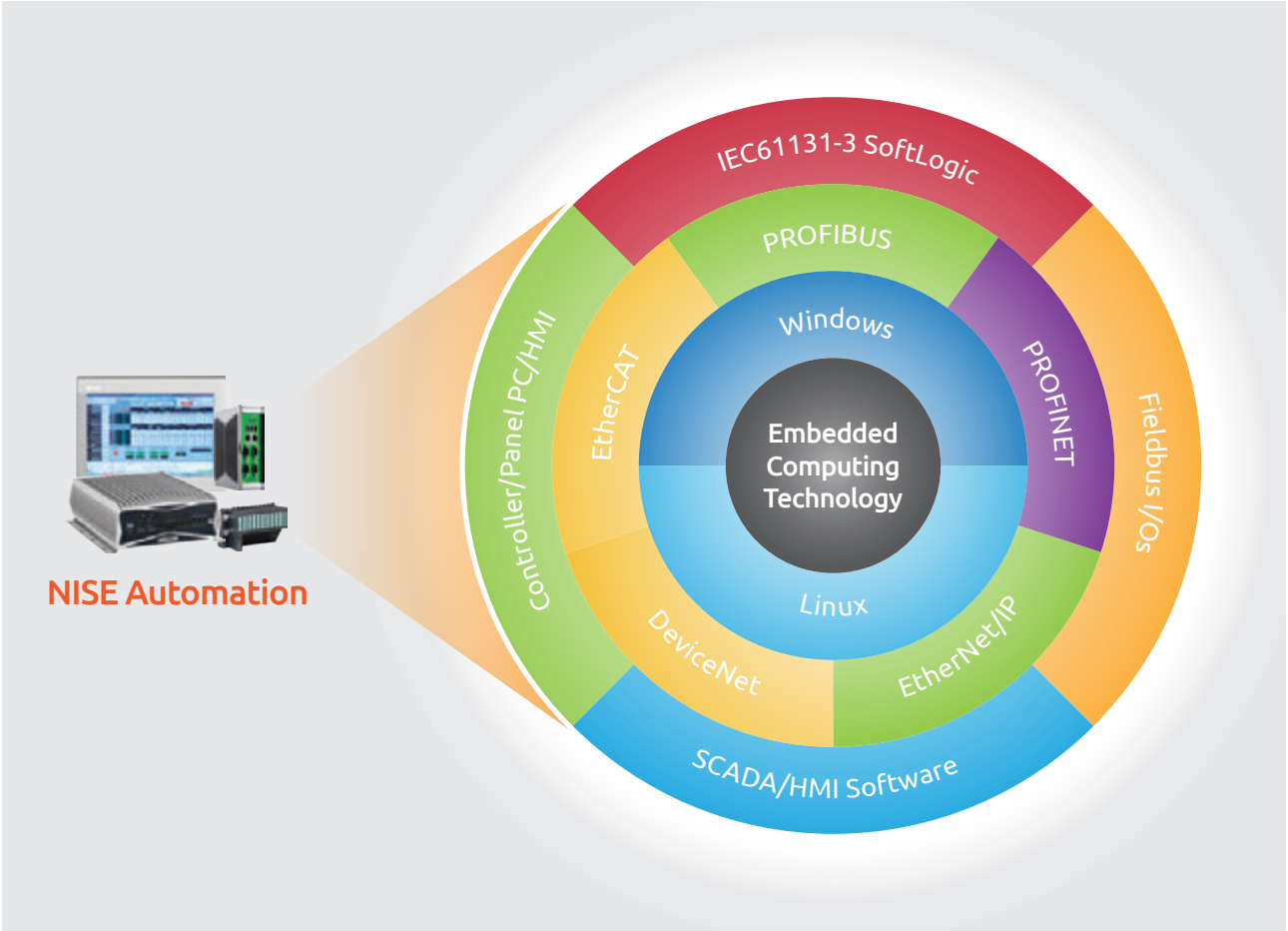
Industrial 4.0 Framework



NISE Automation Solution Map



PC-based Factory Automation Solution Map

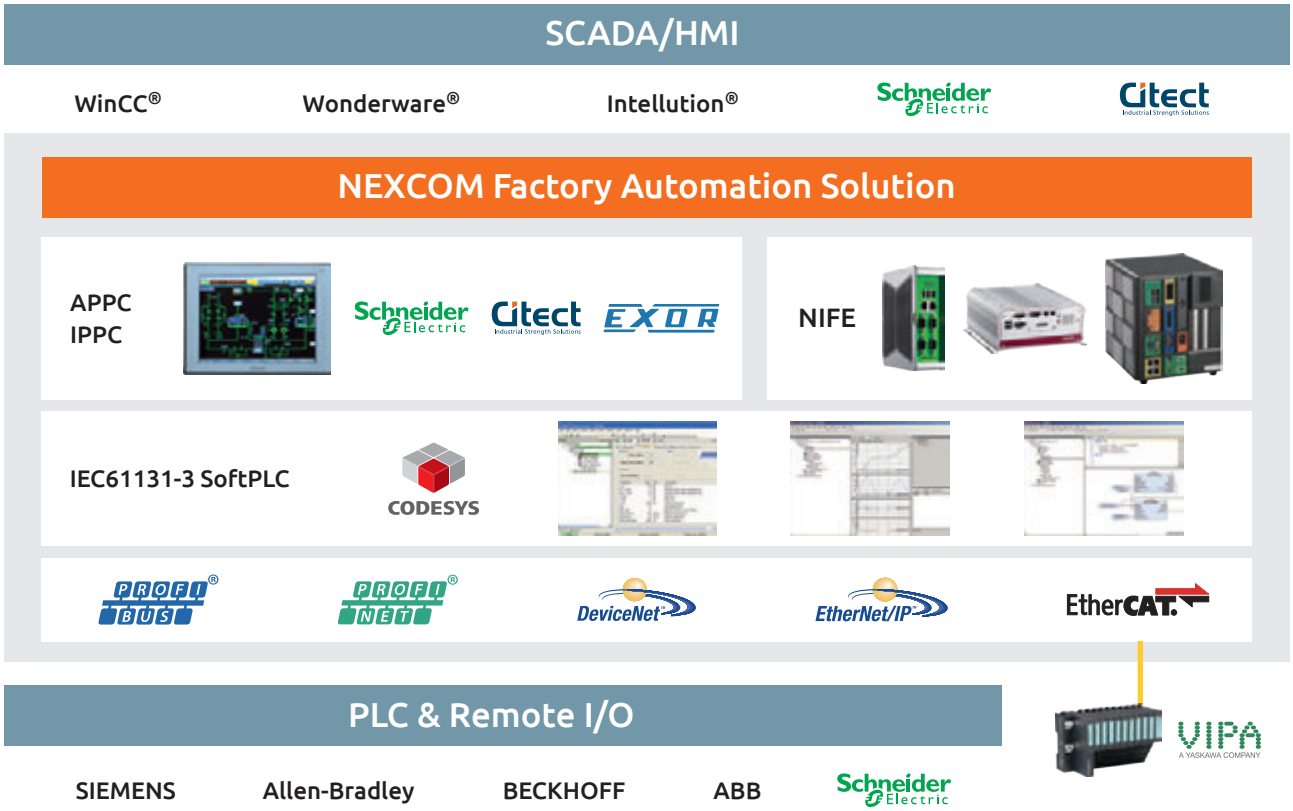


NEXCOM NIFE (NEXCOM Industrial Fieldbus Embedded) controller features a built-in fieldbus master interface and CODESYS Control RTE. The fieldbus interface supports PROFINET, PROFIBUS, Ethernet/IP, DeviceNet and EtherCAT master and slave devices, making NEXCOM NIFE controllers compatible with Siemens, Allen-Bradley and Beckhoff systems. The built-in CODESYS Control RTE allows users to program PLCs using IEC 61131-3 standard; other programming codes such as VC/C++ are also supported. Furthermore, the NIFE controller can be configured as a slave station to collect data from legacy PLCs. The NIFE controller can also act as a fieldbus gateway between PLCs with different protocols.

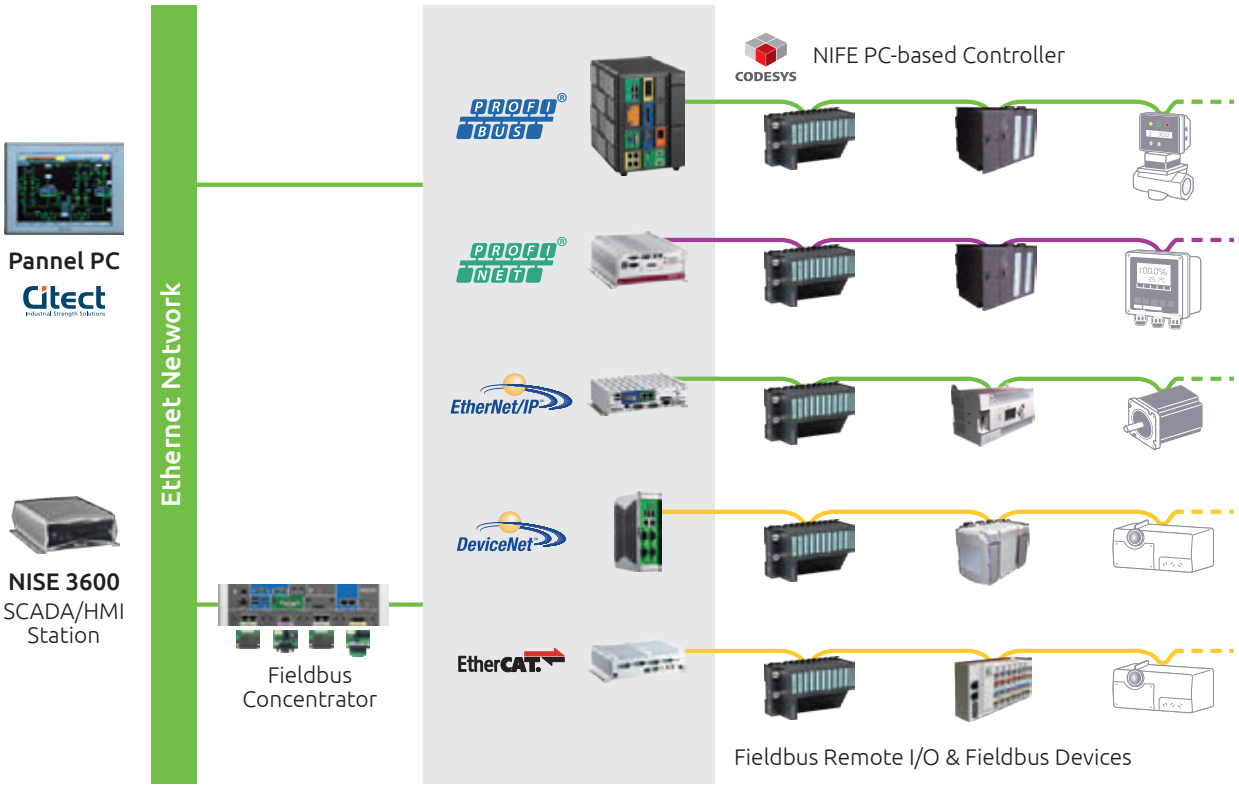
For distributed I/O solutions, NEXCOM partners with VIPA, a German-based provider of remote I/O solutions, to offer modular PC-based controllers incorporating SLIO® modules. These remote I/O modules provide high speed flexible I/O options and fieldbus support, while the modular design enables easy maintenance and spare parts replacement.

For SCADA/HMI applications, NEXCOM's panel PCs offer pre-installed Citech SCADA software package from Schneider Electric. The hardware and software compatibility has been tested to help drive down development time and cost. To leverage the visualization features of Citect SCADA, NEXCOM's panel PCs feature built-in fieldbus interface to enable SCADA/HMI and PLC integration.

NEXCOM's complete solution consists of industrial-grade hardware along with flexible configurations of software, controllers and remote I/O modules, covering all aspects of control, including SCADA solutions for the information layer. More than just a hardware supplier, NEXCOM is a dedicated automation solution provider with a strong focus on PC-based automation and computer solutions. NEXCOM aims to provide PC-based control systems which can highly integrate various branded PLC systems, achieving IP convergence and helping automation users open the doorway to smart factory.

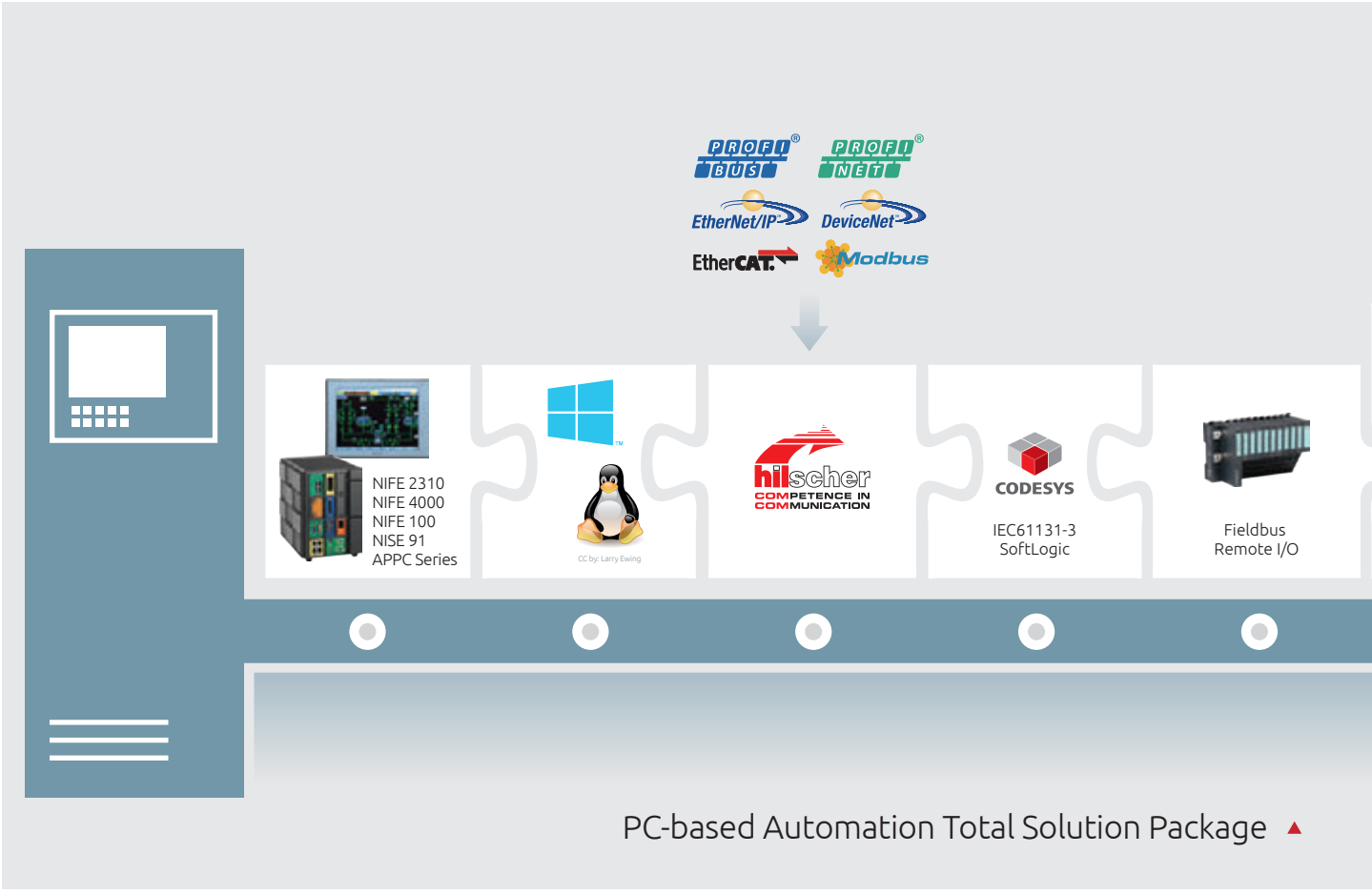


▲ NEXCOM PC-based Factory Automation Building Blocks



▲ NIFE Series Fieldbus Integrated Solutions

PC-based Automation Controller

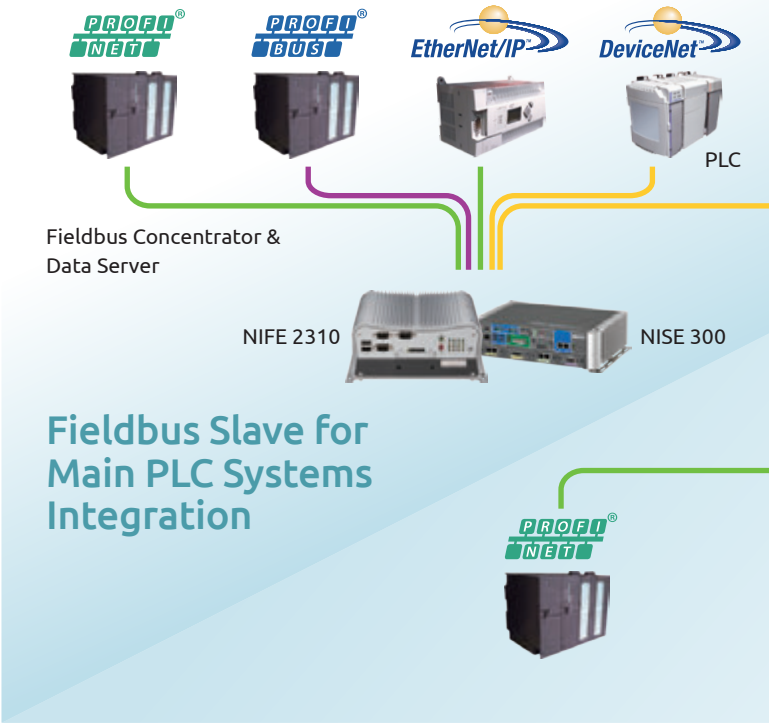


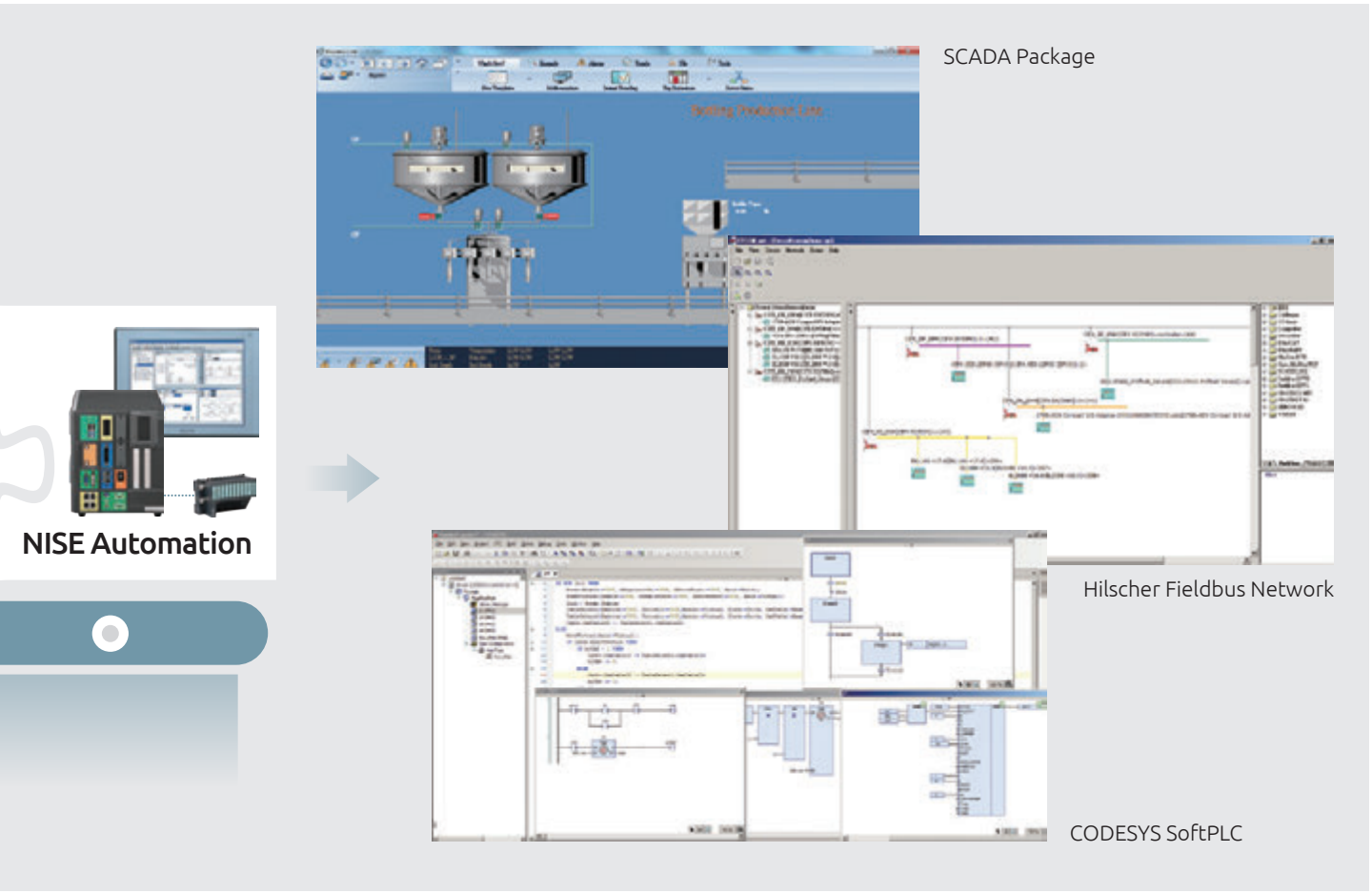
PC-based Automation Total Solution Package ▲

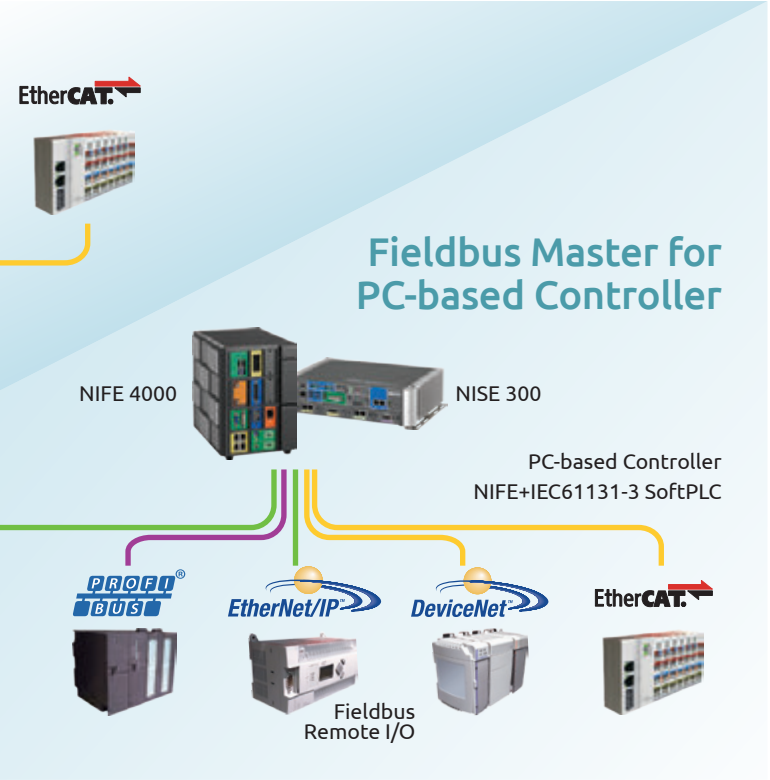
NEXCOM's PC-based controller solution, the NIFE (NEXCOM Industrial Fieldbus Embedded) series, supports fieldbus technologies such as PROFINET, PROFIBUS, EtherNet/IP, DeviceNet and EtherCAT. Unlike most slave-only solutions, NEXCOM's NIFE solution supports both master and slave interfaces, and is certified by Hilscher, an expert in industrial communication, to deliver reliability-proven solutions.

NEXCOM is a well-known supplier of fanless computers, which are used in various control platforms by many automation system vendors. Available in both standard and OEM/ODM models, NEXCOM's NIFE product line comes in a range of form factors and processor configurations including ARM, Intel® Atom™ and Intel® Core™ processors to suit different application requirements. NEXCOM's solution has also been implemented successfully in critical applications, with quality and reliable results.

NEXCOM's NIFE series combines PC technology, fieldbus interface and fanless design into a single platform. In addition to robust hardware, the NIFE series also comes with a fieldbus





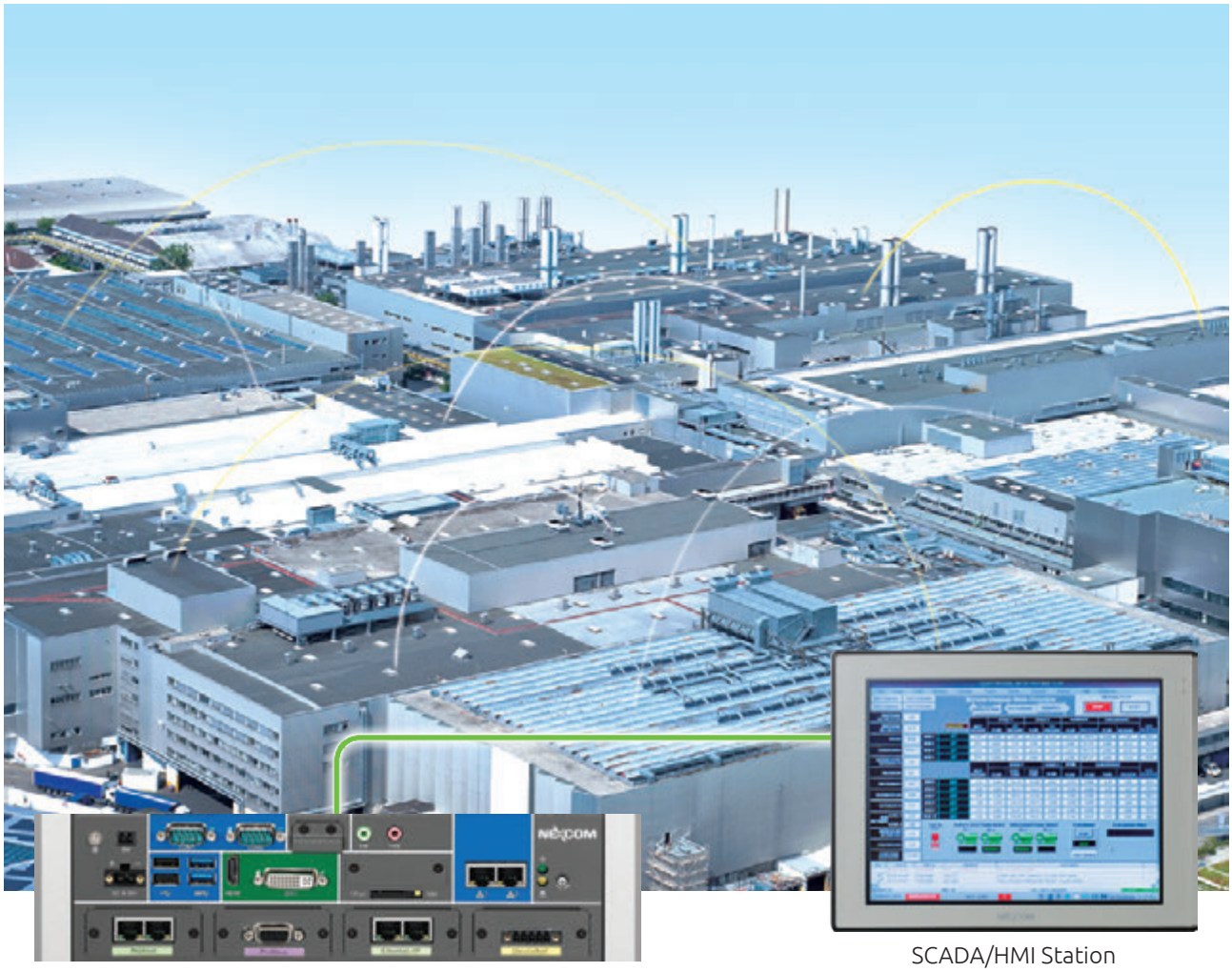


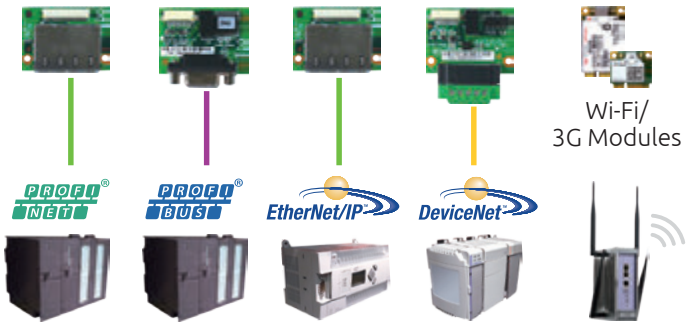
configuration tool similar to common PLC programming software. With an easy-to-use interface, engineers can use the tool to configure all the supported fieldbus protocols without any additional training.

For the control kernel, the NIFE series implements CODESYS Control RTE, which supports real-time control under Windows XP, Windows 7 and Linux operating systems. Designed by 3S-Smart Software Solutions, CODESYS is one of the most popular SoftLogic software in the industry and is used by major automation providers such as Schneider Electric, ABB, Beckhoff and B&R. Using CODESYS, control engineers can flexibly create custom control algorithms for different fieldbuses through a ladder logic approach that control engineers have become used to with traditional PLCs.

◂ Utilizing Hilscher's Leading-edge Fieldbus Technology, NEXCOM Offers Fieldbus Total Solution to Cover 70% Market Coverage

Fieldbus Concentrator Solution

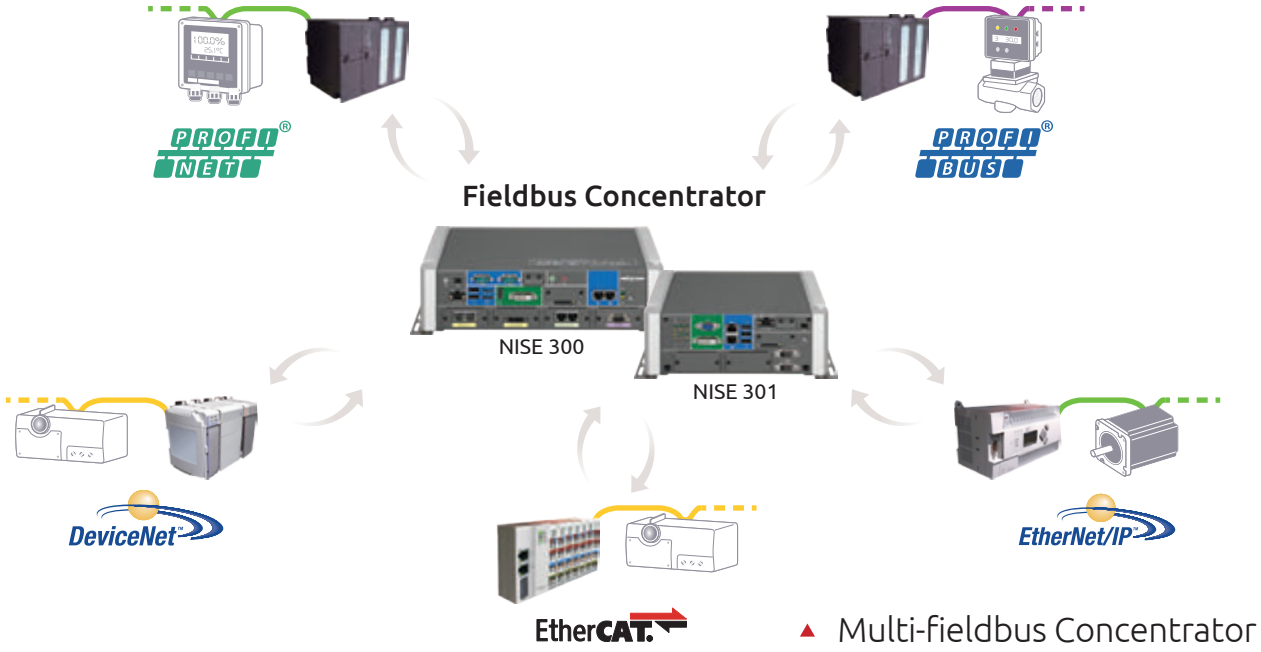




Fieldbus is the key to factory automation systems because it defines a network standard for PLC controllers to communicate with each other and guarantees reliable data transfers. As a result, most control system vendors have developed their own fieldbus protocols to stay competitive and secure businesses. These include PROFINET and PROFIBUS from Siemens, EtherNet/IP and DeviceNet from Allen-Bradley and EtherCAT from Beckhoff, which is popular in machine automation and semiconductor applications.

Because different vendors each have their own specific applications and proprietary protocols, combining different systems within a factory have become costly and time consuming, especially for existing systems that were built with different brands. Only a few numbers of suppliers have offered solutions with such a high level of integration.

To provide cost-effective solution for fieldbus integration, NEXCOM's fieldbus concentrator solution features multiple fieldbus expansion support to provide high flexibility and reliability. NEXCOM's NISE 300 fieldbus concentrator can support up to 5 protocols including PROFINET, PROFIBUS, EtherNet/IP, DeviceNet and EtherCAT, with the flexibility to configure each interface as master or slave depending on users' requirements. With support for various protocols on a single device, NEXCOM's concentrator solution allows users to deploy fewer hardware devices and offers significant cost savings.



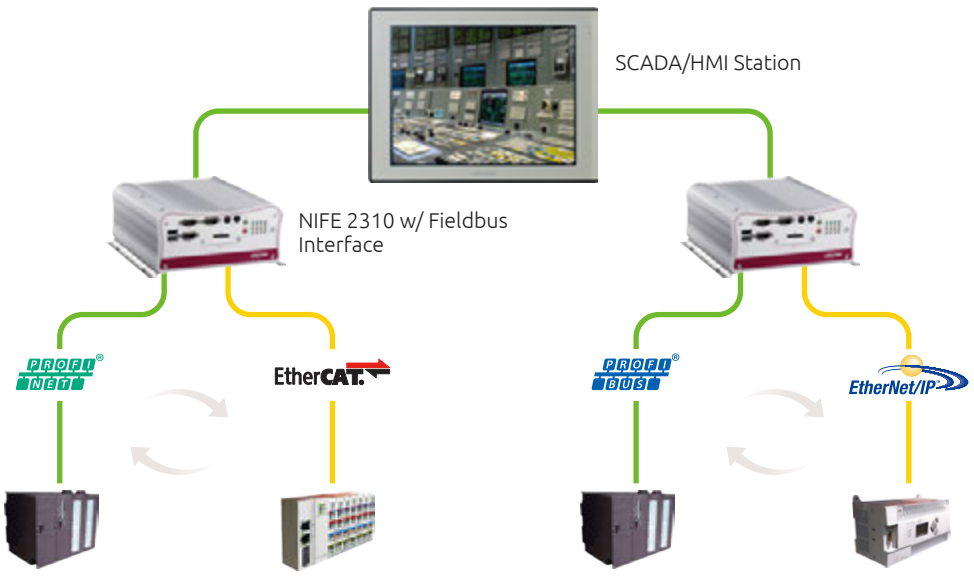
▲ Multi-fieldbus Concentrator

Fieldbus Concentrator Advocates M2M Factory with 6 Mini-PCIe Expansion Capabilities

The fieldbus concentrator NISE 300 is based on the 4th generation Intel® Core™ processor family paired with Intel® 8 Series Chipset. With CPU performance up by 13% and graphical performance by 32%, the fanless box has outstanding system performance for intelligent and industrial computing solutions.

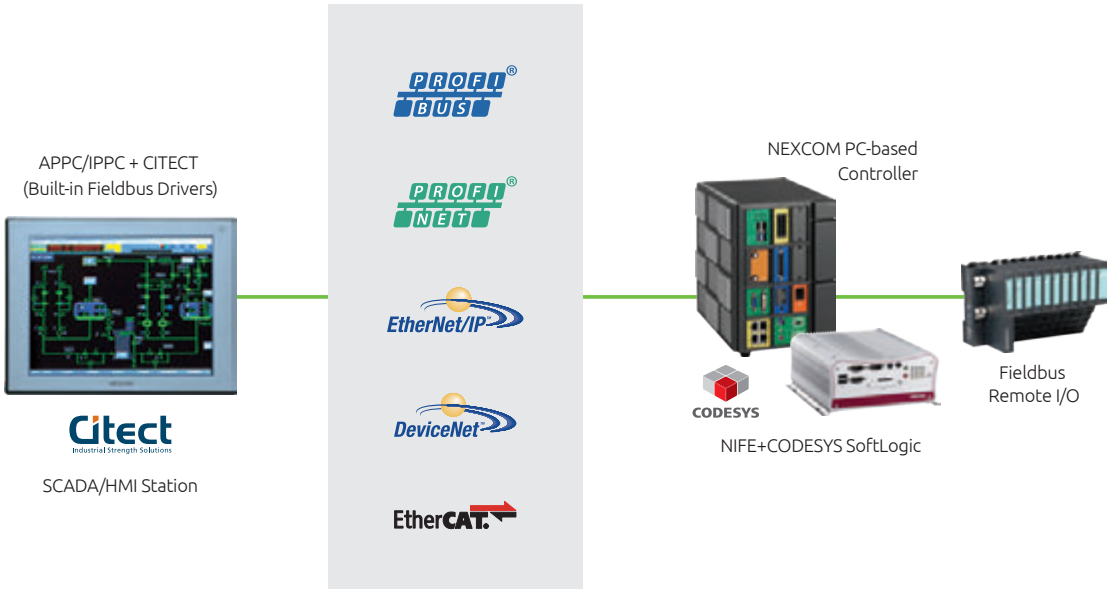
NISE 300 features 8GB DDR3/DDR3L memory, CFast, SATA 3.0, USB 3.0 interfaces. It supports wide range power input 9~30VDC and can operate from -5°C to 55°C under fanless condition. With all I/O aligned on the front side and its compact size, usability is significantly improved for better user experience. Two unit of NISE 300 can fit in a 2U 19" rackmount chassis.

NISE 300 provides rich and swappable I/O interfaces. NISE 300 supports Fieldbus protocols (PROFIBUS, DeviceNet, EtherCAT, PROFINET, CANOpen, MODBUS), network connectivity (GbE LAN, Wi-Fi, GSM), storage (mSATA) and other I/O interfaces (GPIO, RS232/422/485). Along with flexible multiple modular expansions, the versatile NISE 300 can be used for M2M intelligence and factory automation platforms. Another variant, NISE 301, supporting two mini-PCIe expansion is also available with a much compact size.



NEXCOM SCADA/HMI Solution

A SCADA station provides centralized monitoring and management of factory operations, interfacing with different fieldbus PLCs and other industrial process components. As such, SCADA stations require support for various fieldbus protocols and powerful data processing capabilities to run robust SCADA software. To offer a complete hardware and software solution, NEXCOM has combined its industrial-grade fanless Control PCs with Vijeo Citect, a worldwide recognized



SCADA software from Schneider Electric. Users can have reliable hardware and trusted software from NEXCOM one-stop shop service.

Vijeo Citect supports numerous fieldbus protocol drivers and offers a flexible configuration environment to develop sophisticated graphical user interfaces. With the ability to reproduce an intuitive visualization of plant operations, operators can more effectively monitor, manage and optimize industrial processes of factories of any size, making it ideal for numerous applications including the following:

Oil & Gas

Mining, Minerals, Metals

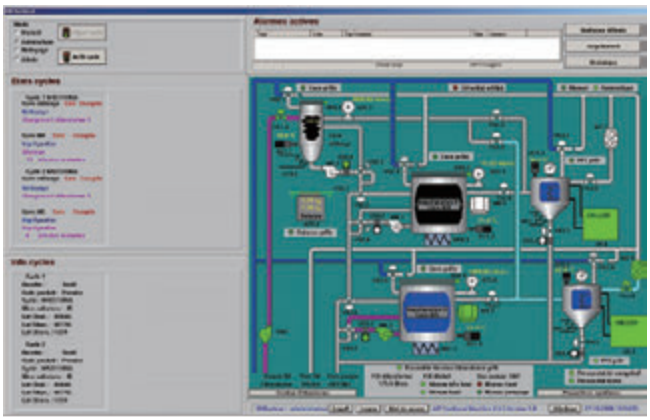
Water & Wastewater

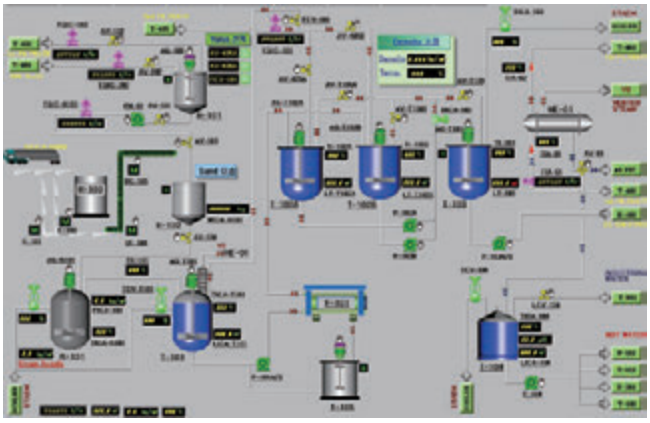
Power

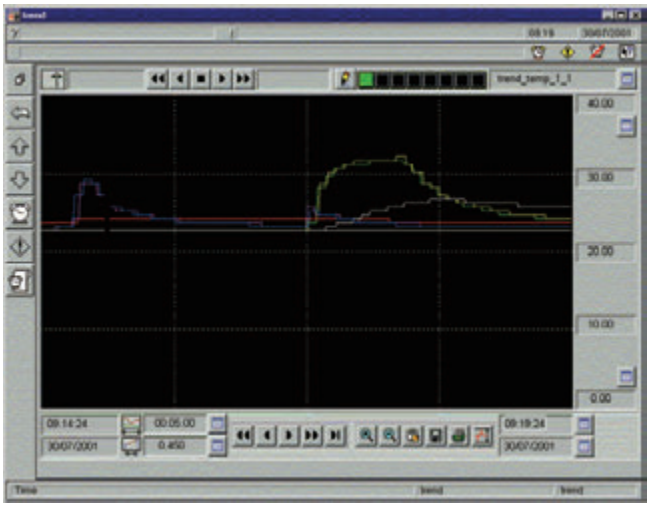
Food and Beverage

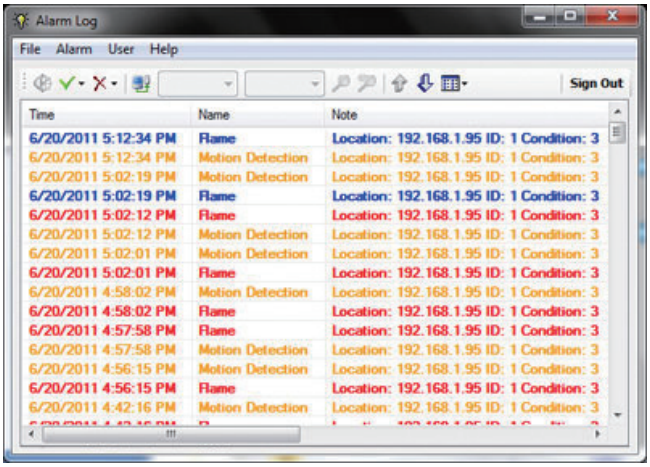
Vijeo Citec's flexibility also makes NEXCOM SCADA/HMI solution suitable for other industries, including steel, petrochemical, and pharmaceutical, oil refinery, and more.

Furthermore, the Vijeo Citect features redundancy mechanisms to ensure mission-critical applications can maintain functionality and performance in the event of hardware failure.

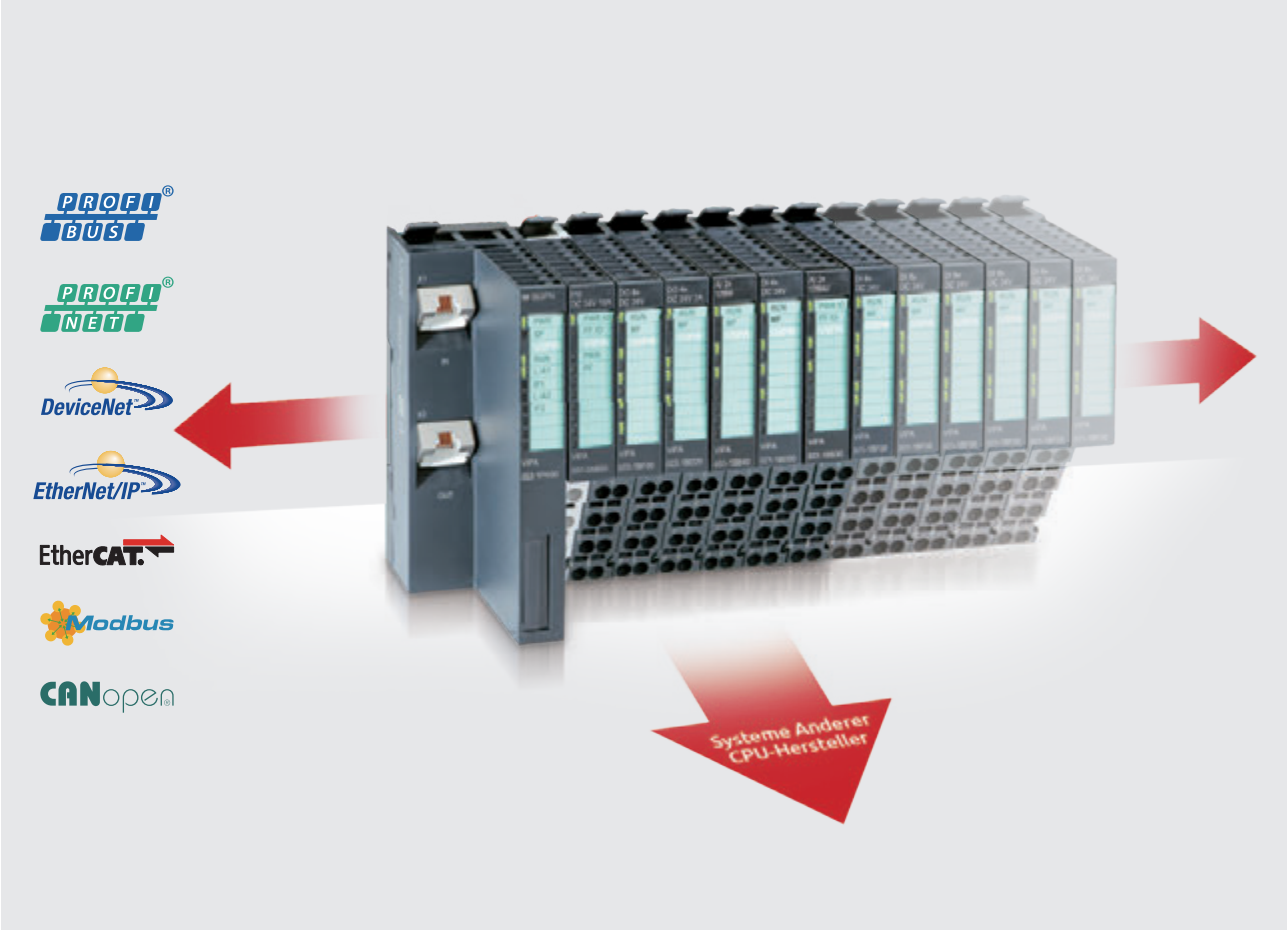






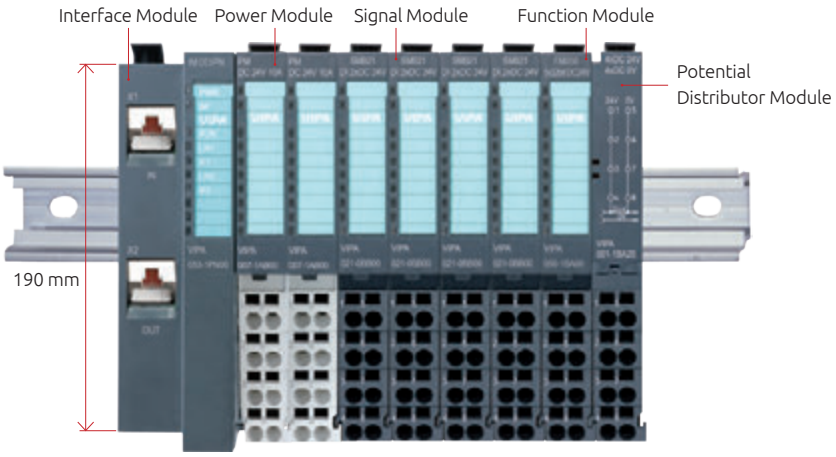


Fieldbus I/O Solution



NEXCOM's I/O solution integrates SLIO® modules from VIPA, a provider of remote I/O modules with vast experience in PLC technology. VIPA SLIO® modules come in micro form factors with high bus speed and wide fieldbus support. It can be fitted with different couplers for different fieldbus networks. By using NEXCOM's NIFE PC-based controller in collaboration with SLIO® modules, users can easily establish a complete PC-based control station.

Equipped with reliable remote I/O technology, the SLIO® modules feature compact size to simplify installation in tight spaces and a modular design to ease maintenance; modules can be replaced easily without any rewiring. In addition, with many different I/O module offerings available, the SLIO® solution can satisfy requirements for any automation applications.



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 performance

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

Diagnoses and channel conditions can be easily seen on the module – due to the universally understandable LED-displays.

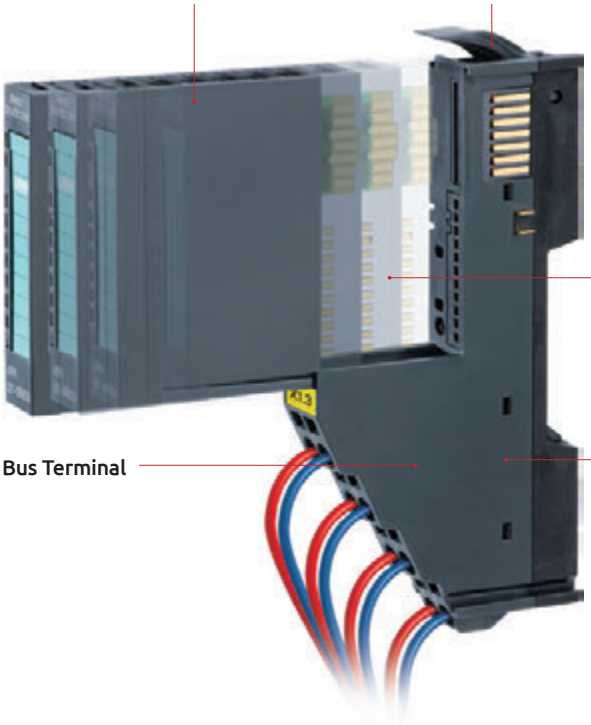
Already when you set up you can clearly indicate which module does what by means of the practical labeling strips.

The clamp terminal assignment is printed under the labeling strips.

All modules have a simple, space-saving, staircase-shaped wiring level.

Electronic Module

Locking Hook



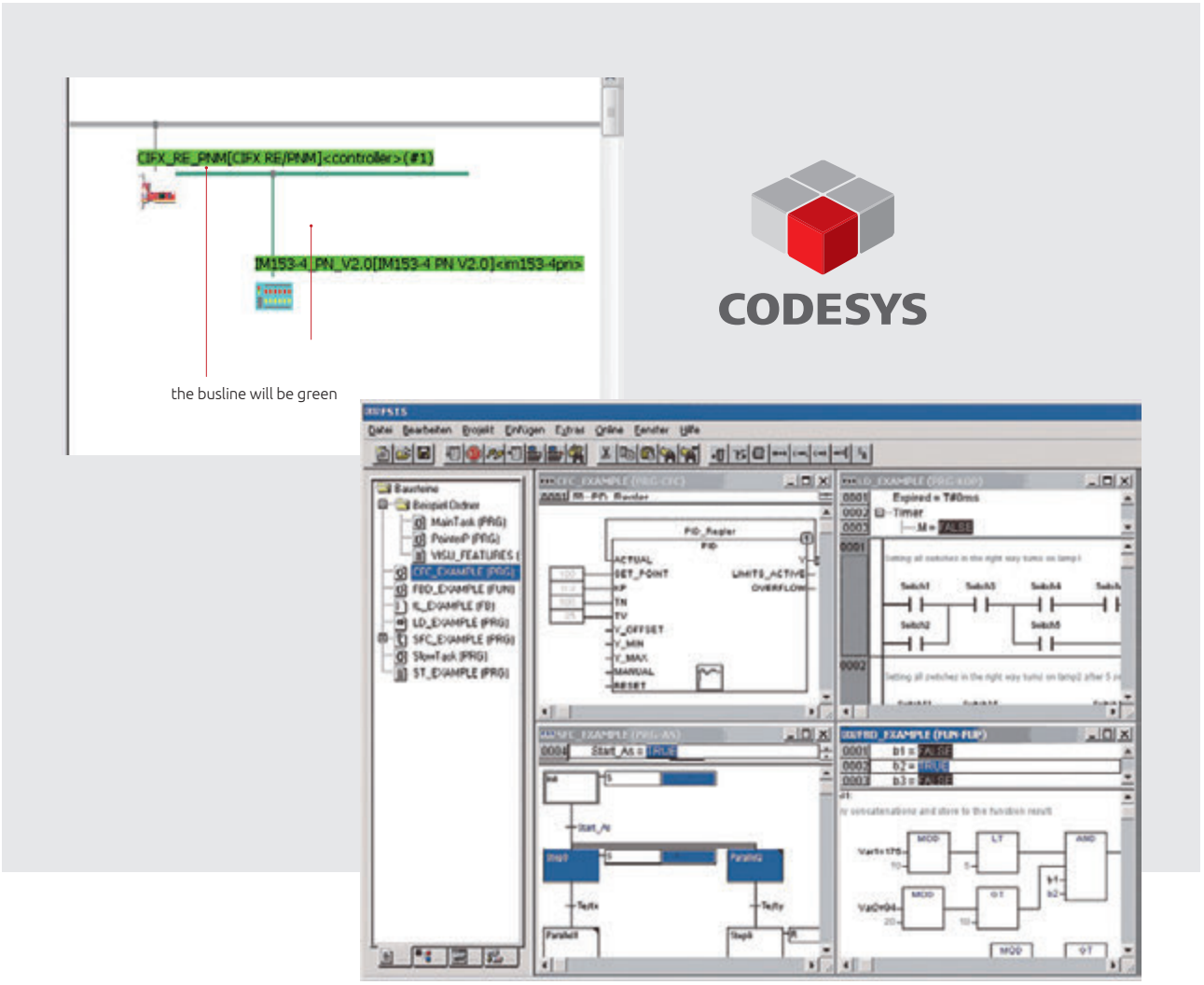
General isolation from electronic and installation level.

Bus Terminal

Optimal placement of the interfaces for space saving connections.

- Galvanic isolation between fieldbus and backplane bus.
- DIP-switches for address configuration with transparent cover.
- Electrical isolation between fieldbus and input/output level.

Control Kernel – SoftLogic



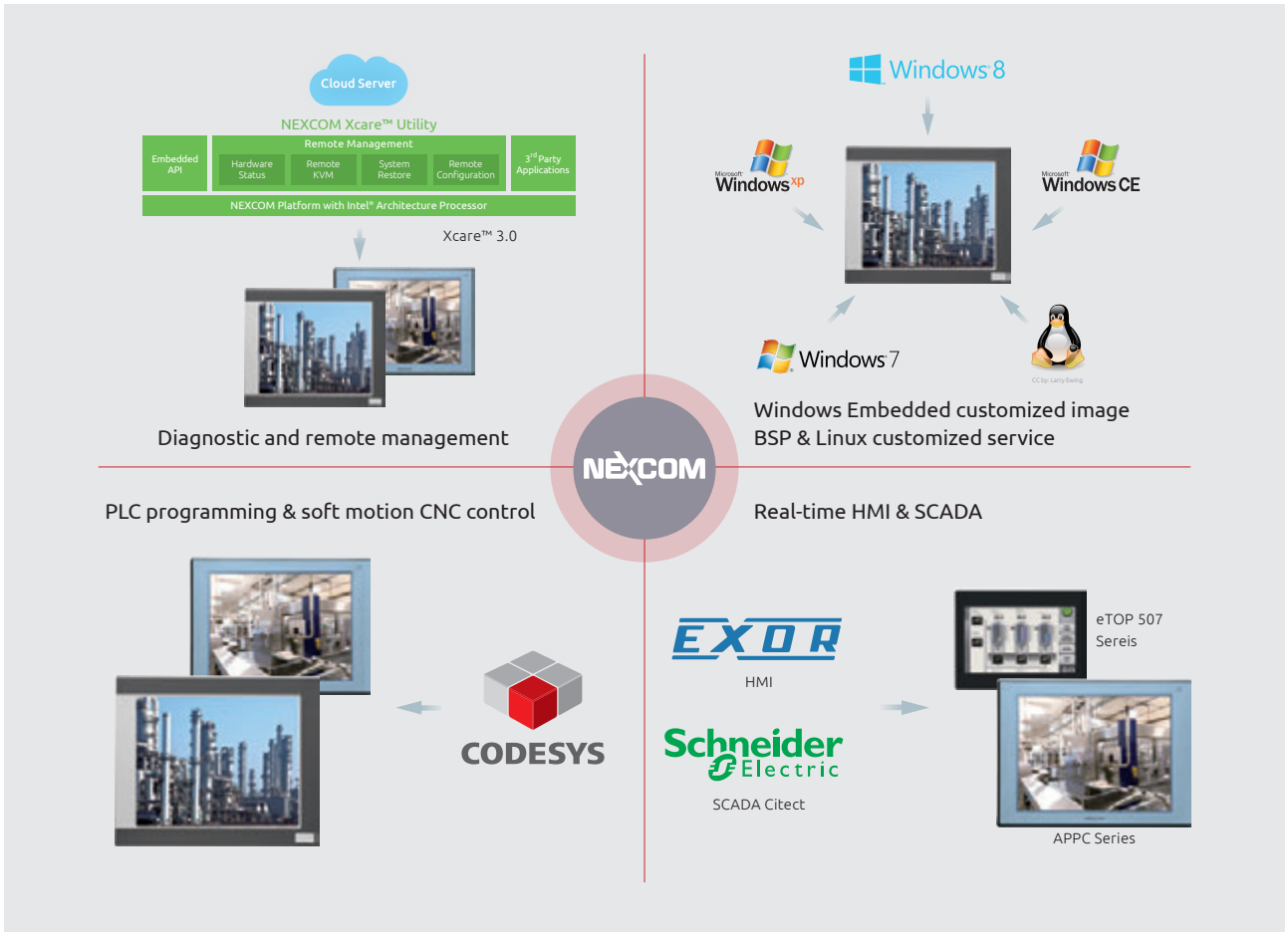
IEC 61131-3 is the most popular control programming language standard for automation applications. It provides automation users with an easy-to-use and easy-to-maintain programming framework. As such, NEXCOM's NIFE PC-based controllers have been implemented with CODESYS SoftLogic as the underlying control kernel. Developed by 3S-Smart Software Solutions GmbH, CODESYS has been well known for its high reliability, multi-fieldbus integration and user-friendly interface.

Furthermore, as a partner of Hilscher, CODESYS has integrated Hilscher interface module and various device drivers to drive different fieldbus and remote I/O systems. Using the Hilscher Configurator tool along with SoftLogic programming, control engineers can configure fieldbus devices and program control algorithms in an identical method to a traditional PLC software tool.

In addition to NEXCOM, major automation suppliers such as Schneider Electric, ABB, Beckhoff, B&R and many more have also used CODESYS and Hilscher interface modules in a few of their products. Sharing the same level of quality as these trusted brand names, NEXCOM's NIFE PC-based controllers deliver high reliability at a reasonable cost compared to other highly-priced solutions.

The version of CODESYS that NEXCOM has implemented is CODESYS RTE runtime, which has a real-time engine embedded within the runtime kernel to guarantee deterministic control performance. It supports numerous operating systems to suit different user requirements, including Windows XP, Windows 7, Windows Embedded and Linux, as well as optional software bundles for TagetVisu, SoftLogic and HMI.

Panel PC & HMI Solution



NEXCOM's panel PC solution is not only designed for SCADA monitoring and management, but also complements solutions from EXOR, a major provider of HMI systems, for monitoring field operations. Based on ARM architecture processors, EXOR's HMI panel PCs come in panel sizes ranging from 4" to 15", and meet Class I, Division II requirements for harsh factory environments. For factory communication, the panel PCs include options for PROFIBUS-DP, CAN and MPI interfaces, and feature built-in HMI software, JMobile, to monitor and control remote systems. In addition, the HMI software supports remote web access to enable field site operators to administrate the system using workstations or mobile devices from anywhere at any time.

eTop 507

For larger display requirements, NEXCOM's x86-based control panel PCs offer sizes of 15", 17" and 19". These panel PCs support Intel® Atom™ and Intel® Core™ processors to accommodate different performance levels along with fanless designs for reliable operation. Optional fieldbus interfaces for PROFINET, PROFIBUS, EtherNet/IP, DeviceNet and EtherCAT master and slave devices can be fitted for different PLCs. Furthermore, optional PC version of JMobile software can be installed to provide functions similar to EXOR's HMI panel PCs.

Solution Package

NEXCOM offers a complete solution package for IP-based factory automation systems including fieldbus-enabled PC-based controllers, SCADA/HMI systems, remote I/O, fieldbus concentrators/gateways. Both hardware and software solutions are available to offer customers a one-stop shopping solution.

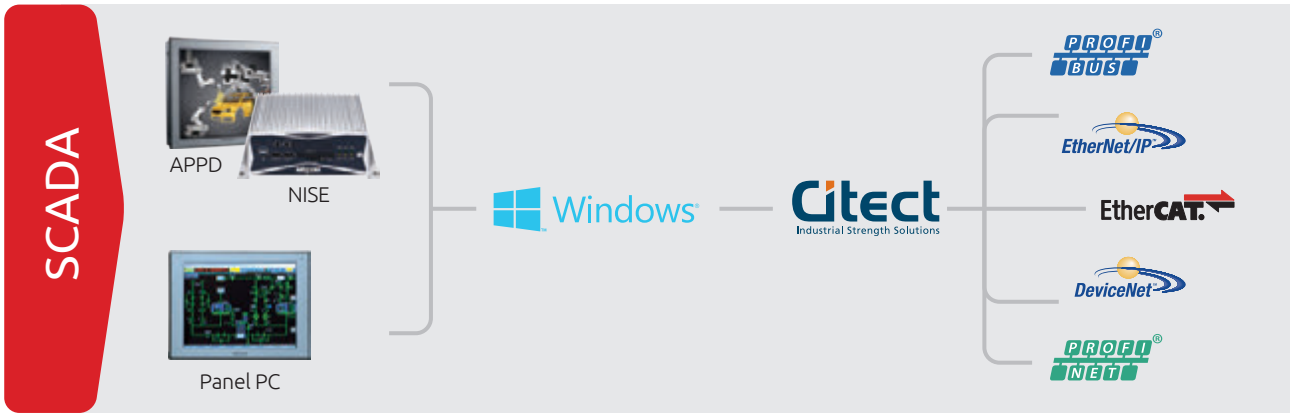
NEXCOM's PC-based controller solution consists of NEXCOM Industrial Fieldbus Embedded (NIFE) series, which are a range of industrial fanless computers with built-in fieldbus interface for control and monitoring. With two options available, the NIFE series can be configured as an IEC 61131-3-compliant

Water Treatment
PC-based Control System

Fieldbus Concentrator Solution
PC-based Control System

HMI Solution
Machinery HMI

Steel Process & AOI Solution
WINCC & CIMATIC Integration

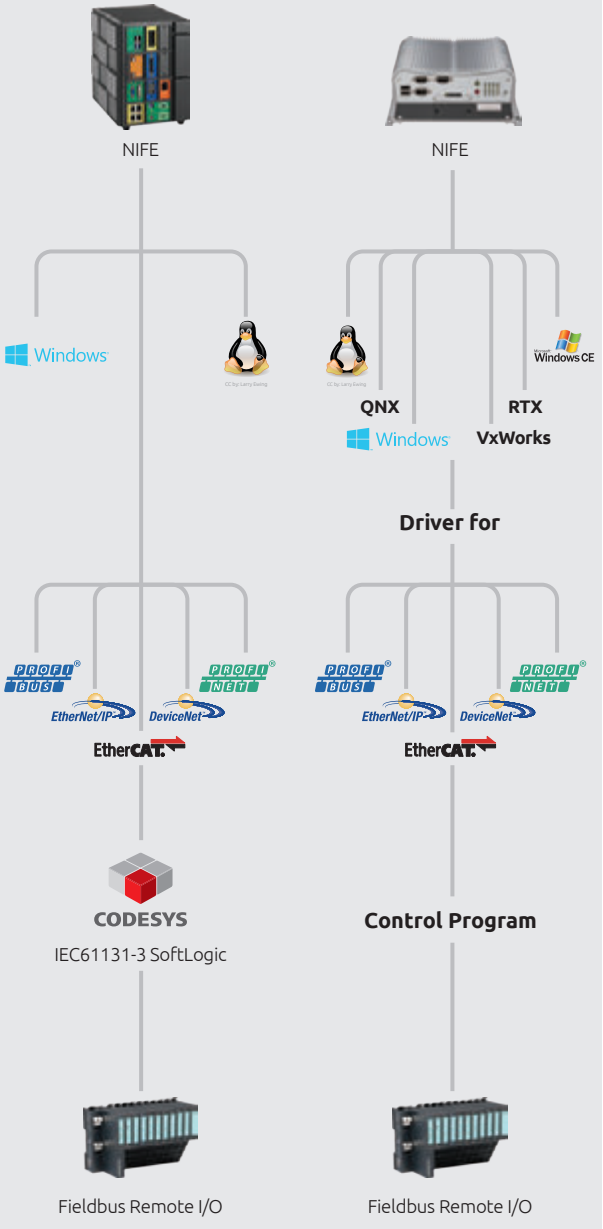


SoftPLC, or configured with customized fieldbus interface drivers that support customer-specific control programs.

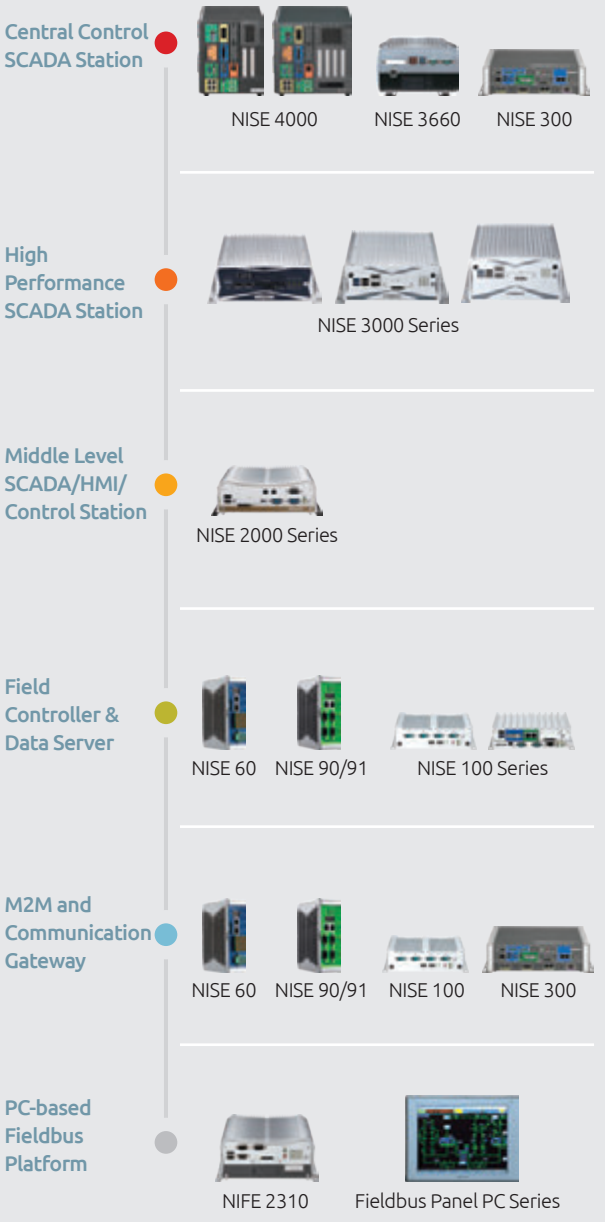
In addition, the built-in fieldbus interface can be equipped with remote I/O modules, enabling the NIFE series to function as a control station. Various VIPA SLIO fieldbus coupler modules are also available to satisfy numerous fieldbus I/O requirements, including support for remote I/O modules from different vendors.

For SCADA/HMI applications, NEXCOM's solution consists of control panel PCs with pre-installed CitectSCADA software package and HMI panels from EXOR. Designed for system monitoring and management of control devices, NEXCOM's SCADA/HMI solution comes with fieldbus communication capability.

PC-based Controller



Automation PC Platfrom



2014 New Products

NISE 105

Intel® Atom™ Processor E3826 Dual Core Fanless System

- Onboard Intel® Atom™ processor E3826 Dual Core, 1.46GHz
- Dual independent display from DVI-I and HDMI
- 2 x Intel® I210IT GbE LAN ports support WoL, Teaming and PXE
- 2 x USB2.0 & 1 x USB3.0, 2 x RS232/422/485
- Support optional Wi-Fi/3.5G/4G/Fieldbus Modules
- Support -20°C ~ 70°C extended operating temperature

NISE 105A

Intel® Atom™ Processor E3826 Dual Core Fanless System

- Onboard Intel® Atom™ processor E3826 Dual Core, 1.46GHz
- Dual independent display from DVI-I and HDMI
- 2 x Intel® I210IT GbE LAN ports support WoL, Teaming and PXE
- 2 x USB2.0 & 1 x USB3.0, 2 x RS232/422/485
- Support optional Wi-Fi/3.5G/4G/Fieldbus Modules
- Support NVRAM 1Mb
- Support -20°C ~ 70°C extended operating temperature

NISE 301

Front Access Intel® Atom™ Fanless Automation System

- Onboard Intel® Atom™ processor E3845 Quad core, 1.91GHz
- Dual independent display from DVI-D and VGA
- 2 x Intel® I210IT GbE LAN ports support WoL, Teaming and PXE
- 3 x USB2.0, 2 x RS232/422/485
- Support optional Wi-Fi/3.5G/4G/Fieldbus Mini-PCIe Modules
- Typical 24V DC input with +/-20% range

NISE 2400

Intel® Atom™ Processor E3827 Dual Core Fanless System

- Onboard Intel® Atom™ processor E3827 Dual Core, 1.75GHz
- Dual independent display from DVI-I and HDMI
- 2 x Intel® I210IT GbE LAN ports support WoL, Teaming and PXE
- 2 x RS232/422/485, 4 x USB2.0, 1 x USB3.0
- 2 x Mini-PCIe socket for optional mSATA/Wi-Fi/3.5G/4G/ Fieldbus modules
- Support -20°C ~ 70°C operating temperature; support 9-30V DC input

NIFE 100

Intel® Atom™ E3826 Factory Automation Fanless System

- Onboard Intel® Atom™ processor E3826 Dual Core, 1.46GHz
- 2 x RS232/422/485 with 2.5KV isolation protection
- 2 x Intel® I210IT GbE LAN ports support WoL, Teaming and PXE
- 1 x Mini-PCIe socket for optional mSATA/Wi-Fi/3.5G/4G/ Fieldbus modules
- Support NVRAM 1Mb
- Support -20°C ~ 70°C operating temperature
- Typical 24V DC input with +/-20% range

PLC & Remote I/O module as the option

NIFE 101

Intel® Atom™ E3826 Factory Automation Fanless System

- Onboard Intel® Atom™ processor E3826 Dual Core, 1.46GHz
- 2 x RS232/422/485 with 2.5KV isolation protection
- 2 x Intel® I210IT GbE LAN ports support WoL, Teaming and PXE
- 1x Mini-PCIe socket for optional Wi-Fi/3.5G/4G modules
- Support NVRAM 1Mb
- Support -20°C ~ 70°C operating temperature
- Typical 24V DC input with +/-20% range

NIFE 100

Intel® Atom™ E3826 Dual Core Factory Automation Fanless System with Fieldbus Expansion Ability

PLC & Remote I/O module as the option

Main Features

- Onboard Intel® Atom™ processor E3826 Dual Core 1.46 GHz
- 1 x DVI display output or 1x VGA converted from DVI-I
- 2 x Intel® I210IT GbE LAN ports support WoL, Teaming and PXE
- 1 x USB2.0 & 1 x USB3.0
- 2x RS232/422/485 with 2.5KV isolation protection
- 1 x Mini-PCIe socket for optional Wi-Fi/3.5G/4G/Fieldbus modules
- Front access CFast socket and RTC battery
- Support NVRAM 1Mb
- Support -20 ~ 70 °C extended operating temperature
- Typical 24V DC input with +/-20% range

Product Overview

Powered by the latest generation of Intel® Atom™ processor E3826 (formerly codenamed "Bay Trail-I"), it presents a brand new opportunity for both intelligent and industrial computing solutions. NIFE100 supports up to 4G DDR3L memory and have several options on storage devices like CFast and SSD. The NIFE 100 support extended operating temperature from -20 upto 70 degree 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 Isolation protect, which makes it a real intelligent system for various applications such as factory automation applications (with optional PROFIBUS, ProfiNET, DeviceNET, EtherCAT, EtherNet/IP master module), network applications (with optional GbE LAN, Wi-Fi, 3.5G/4G LTE module) and communication applications (with optional GPIO, RS232/422/485). NIFE100 is definitely the top choice for M2M intelligent system and factory automation platforms.

Specifications

CPU Support
- Onboard Intel® Atom™ processor E3826 Dual Core 1.46GHz
- Support Intel® Atom™ E3800 processor family from single core E3815, Dual Core E3825/E3826/E3827 and Quad Core E3845 with difference SKUs

Main Memory
- 1 x DDR3L SO-DIMM socket, support DDR3L 1066/1333 4GB RAM max., un-buffered and non-ECC

Display Option
- 1 x DVI display output
- 1 x VGA display output (converted from DVI-I to VGA adapter)

I/O Interface-Front
- ATX power on/off switch
- LEDs for power status, HDD access, battery Low, 2 x programing LEDs, 4x Tx/Rx LEDs
- 1 x External CFast socket
- 1 x SIM card holder
- 2 x Intel® I210IT GbE LAN ports, support WoL, Teaming and PXE
- 1 x DVI-I display output
- 1 x USB 3.0 (900mA per each)
- 1 x USB 2.0 (500mA per each)
- 2 x RS232/422/485 with 2.5KV isolation protection, support auto flow control
  - Jumper-free setting on RS232/422/485
  - Support RI function on COM2
- 1 x 2-pin remote power On/Off switch
- 1 x 3-pic DC input, Typical 24V DC input with +/-20% range

I/O Interface - Internal
- 4 x GPI and 4 GPO (5V, TTL Type)

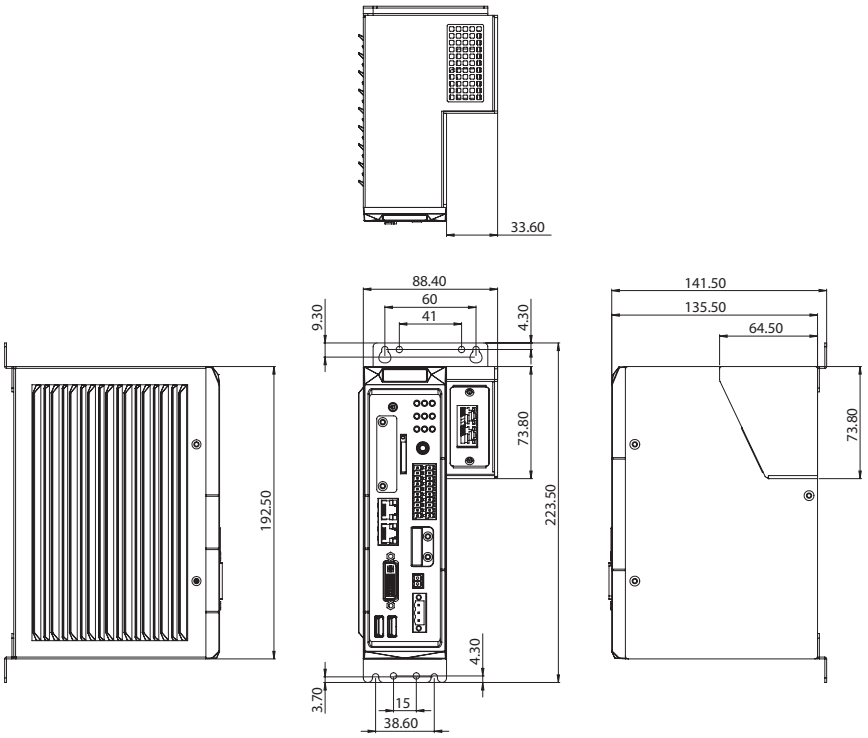
Storage Device
- 1 x CFast (SATA 2.0)
- 1 x 2.5" SSD (SATA 2.0)

Expansion Slot
- 1 x Mini-PCIe socket for optional Wi-Fi/3.5G/4G/Fieldbus modules

Power Requirement
- Typical 24V DC input with +/-20% range
- 1 x optional 24V, 60W power adapter

Support OS
- Windows 8
- Windows Embedded Standard 8
- Windows 7
- Windows Embedded Standard 7
- Windows Embedded Compact 7
- Linux Kernel version 3.8.0

Dimension Drawing



Dimensions
- 192.5mm (H) x 135.5mm (D) x 88.4mm (W)

Construction
- Aluminum and metal chassis with fanless design

Environment
- Operating temperature:
  Ambient with air flow: -20°C to 70°C with industrial grade device (according to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14)
- Storage temperature: -30°C to 85°C
- Relative humidity: 10% to 95% (non-condensing)
- Shock protection:
  - HDD: 20G, half sine, 11ms, IEC60068-27
  - CFast: 50G, half sine, 11ms, IEC60068-27
- Vibration protection w/ HDD condition:
  - Random: 0.5Grms @ 5~500 Hz, IEC60068-2-64
  - Sinusoidal: 0.5Grms @ 5~500 Hz, IEC60068-2-6
- Vibration protection w/ CFast & SSD condition:
  - Random: 2Grms @ 5~500 Hz, IEC60068-2-64
  - Sinusoidal: 2Grms @ 5~500 Hz, IEC60068-2-6

Certifications
- CE
- FCC Class A

Ordering Information

- **NIFE 100 (P/N: 10J70010000X0)**
  Intel® Atom™ processor E3826 Dual Core fanless system
- **24V, 60W AC/DC power adapter w/ o power cord (P/N: TBC)**

Optional Fieldbus kit

88J50090E00X0	FBI 90E-PNM KIT	ProfINET Master Module Kit
88J50090E01X0	FBI 90E-EP KIT	Ethernet IP Master Module Kit
88J50090E02X0	FBI 90E-ECM KIT	EtherCAT Master Module Kit
88J50090E03X0	FBI 90E-PBM KIT	Profibus Master Module Kit
88J50090E04X0	FBI 90E-DNM KIT	DeviceNet Master Module Kit

NIFE 2310

Intel® Atom™ D2550 Factory Automation Fanless System with Fieldbus Expansion Ability

Main Features

- OnBoard Intel® Atom™ Dual Core D2550 processor 1.86 GHz
- Intel® 82801JIR ICH10 RAID
- 1 x DVI-I & 1 x DVI-D display output
- 4 x Intel® 82574IT GbE LAN ports; Support WoL, teaming and PXE
- 4 x RS232/422/485
- 4 x GPI & 4 x GPO
- 6 x USB2.0; 1 x external CFast socket; 1 x SIM card socket
- 1 x internal Mini-PCIe socket
- Support +9V to 36VDC input; Support ATX power mode
- 1 x PCI expansion
- Support optional Fieldbus module kit (PROFIBUS, ProfiNET, DeviceNET, EtherCAT, Ethernet IP master module)

Product Overview

Powered by Intel® Atom™ Dual Core D2550 Processor, NIFE 2310 is designed for industrial fieldbus enable system which can be utilized in most factory automation applications. The fanless NIFE 2310 is also designed to be operated in harsh environment with extended operating temperature feature. Targeting as gateway and SCADA control system, NIFE 2310 is designed with 4 x LAN ports, support WoL, LAN teaming and PXE functions. In addition, NIFE 2310 also provides 4 x COM, 6 x USB2.0, dual independent display and super graphic performance for variety needs and one PCI expansion available. The NIFE 2310 is designed with universal concept to support any one of major fieldbus protocols without extra effort. With this high integration ability, the NIFE 2310 is ease of use, replacement or installation with PROFIBUS, ProfiNET, DeviceNET, EtherCAT or Ethernet IP protocol, mainly for communication protocol in factory automation.

Specifications

CPU Support

- On-Board Intel® Atom™ Dual Core D2550 processor, 1.86GHz, 1M L2 cache
- Intel® 82801JIR ICH10 RAID

Main Memory

- 2 x DDR3 SO-DIMM sockets, support up to 4G DDR3-800/1066/1333 MHz SDRAM, un-buffered and non-ECC

Dual Independent Display Option

- DVI-D + VGA (P/N: 60233VGA50X00, 1.8M cable, from DVI-I to VGA male type)
- DVI-D + DVI-D

I/O Interface-Front

- ATX Power on/off switch
- HDD access/power status LEDs
- 2 x DB9, RS232/422/485 w/ 2.5KV isolation protection
- 2 x USB2.0
- 4 x GPO & 4 x GPI
- 1 x Mic-in and 1 x Line-out
- SIM card socket
- CFast socket
- 1 x FieldBUS Port (for optional PROFIBUS, ProfiNET, DeviceNET, EtherCAT, Ethernet IP master kit)

I/O Interface-Rear

- 1 x 2-pin DC input, Support +9 to 36VDC input
- 1 x DVI-I
- 1 x DVI-D
- 4 x Intel® 82574IT GbE LAN ports; Support WoL, teaming and PXE
- 4 x USB2.0
- 2 x DB9, RS232/422/485

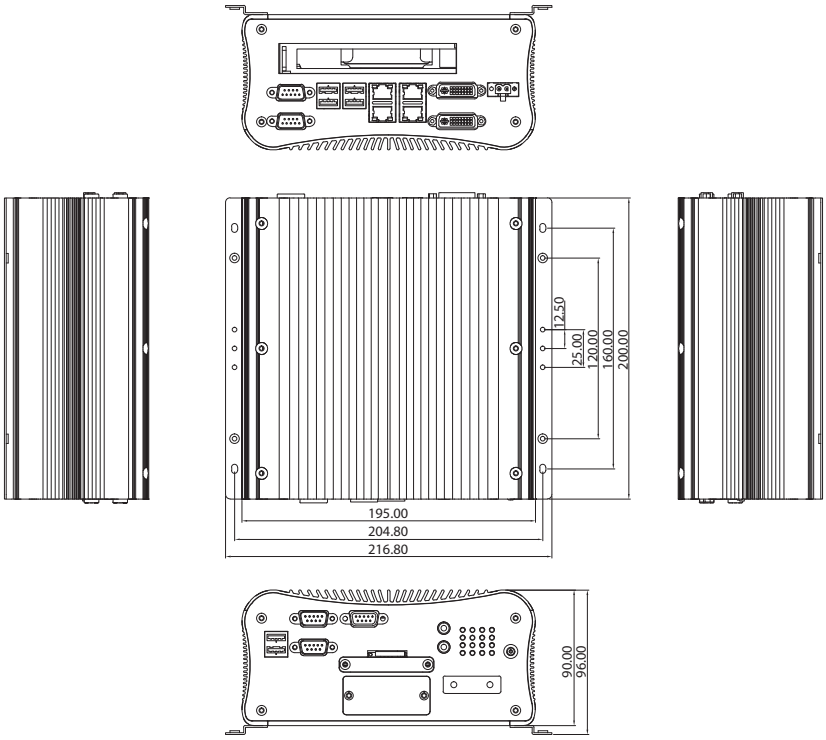
Device

- 1 x 2.5" SATA HDD driver bay
- 1 x External CFast socket

Optional Fieldbus Kit

- FBI90E-PBM: Profibus Master card with cable and universal bracket (P/N: 88J50090E03X0)
- FBI90E-PNM: ProfiNET Master card with cable and universal bracket (P/N: 88J50090E00X0)
- FBI90E-DNM: DeviceNET Master card with cable and universal bracket (P/N: 88J50090E04X0)
- FBI90E-EP: Ethernet IP Master card with cable and universal bracket (P/N: 88J50090E01X0)
- FBI90E-ECM: EtherCAT Master card with cable and universal bracket (P/N: 88J50090E02X0)

Dimension Drawing



Expansion
- NIFE 2310: One PCI Expansion
  Add-on card length: 130mm max.
  Power consumption: 10W/ slot max.

Power Requirements
- Support +9V to 36VDC input; Support ATX power mode

Dimensions
- 195mm (W) x 200mm (D) x 90mm (H) (7.7" x 7.9" x 3.6")

Construction
- Aluminum Chassis with fanless design

Environment
- Operating temperature:
  Ambient with air flow: -20°C to 65°C
- Storage temperature: -30°C to 85°C
- Relative humidity: 10% to 93% (Non-condensing)
- Shock protection:
  - HDD: 20G, half sine, 11ms, IEC60068-2-27
  - CFast: 40G, half sine, 11ms, IEC60068-2-27
- Vibration protection w/ HDD
  - Random: 0.5Grms @ 5~500 Hz according to IEC60068-2-64
  - Sinusoidal: 0.5Grms @ 5~500 Hz according to IEC60068-2-6

Certifications
- CE approval
- FCC Class A

OS Support List
- Windows XP 32bits
- Windows 7 32bits
- WinCE 7.0

Ordering Information

Barebone

- **NIFE 2310 (P/N: A0J70231000X0)**
  Intel® Atom™ Dual Core D2550 Fanless System with DDR3 4 G memory and Universal Fieldbus bracket and one PCI expansion

Optional Fieldbus kit

88J50090E00X0	FBI 90E-PNM KIT	ProfINET Master Module Kit
88J50090E01X0	FBI 90E-EP KIT	Ethernet IP Master Module Kit
88J50090E02X0	FBI 90E-ECM KIT	EtherCAT Master Module Kit
88J50090E03X0	FBI 90E-PBM KIT	Profibus Master Module Kit
88J50090E04X0	FBI 90E-DNM KIT	DeviceNet Master Module Kit

- **19V 65W AC/DC power adapter w/ o power cord**
  (P/N: 7400065009X00)

NIFE 4000

3rd Generation Intel® Core™ i3/i5 rPGA Fanless System with Isolation Power Module and Optional Fieldbus Modules

Main Features

- Support 3rd generation Intel® Core™ i3/i5 rPGA socket type processor
- Intel® QM77 PCH
- 2 x USB3.0 & 2 x USB2.0
- 4 x Intel® GbE LAN Ports
- 1 x DVI-I & 1 x VGA
- 2 x 2.5KV isolated RS232/422/485
- 1 x CFast socket
- Two Mini-PCIe sockets
- Support built-in +24VDC isolation power module
- Support ATX power mode, WoL and PXE function
- Support NVRAM 1Mb

Product Overview

Integrated with Intel® 3rd generation Core™ i3/i5 process, NIFE 4000 offers excellent computing performance. The QM77 PCH provides original USB3.0, which ensures the high throughput and is suitable for the high bandwidth devices, such as industrial cameras. The four Intel® GbE LAN ports provide high communication bandwidth and can be used to access GbE camera for surveillance and industrial automation projects. NIFE 4000 provides built-in optical isolated digital input and digital output, 16 channels respectively. The LED indicators can be configured to show the status of the first four digital outputs. All built-in I/O connectors of NIFE 4000 locate at the front panel. It makes the wiring and maintenance easier for typical installation style for factory automation devices. Alone with well-proven fanless design experience of NEXCOM which ensures the stability, these make NIFE 4000 well fitting with the factory automation applications.

Specifications

CPU Support

- Support 3rd generation Intel® Core™ i5/i3 rPGA socket type processor
  - Core™ i5-3610ME, Dual Core, 2.7GHz, 3M Cache
  - Core™ i3-3120ME, Dual Core, 2.4GHz, 3M Cache
  - Support Three Independent Display with above processor
- Intel® QM77 PCH chipset

Main Memory

- 2 x DDR3/DDR3L SO-DIMM sockets, support dual channel up to 8 GB, DDR3 1333 SDRAM, un-buffered and non-ECC

Display Option

- Dual independent display
  - VGA
  - DVI-D
- Three independent display
  - VGA
  - VGA output via optional Y-cable
  - DVI-D

I/O Interface

- ATX power on/off switch
- Power status LED
- HDD/CFast access LEDs
- RF access LED
- COM ports access LEDs
- 2 x USB2.0 ports & 2 x USB3.0 ports
- 2 x 2.5KV isolated RS232/422/485 terminal connector
- 1 x DB44 for 16CH isolated DI and 16CH isolated DO
- 1 x VGA output & 1 x DVI-I output
- 4 x Intel® GbE LAN ports (with Intel® WG82574L & WG82579LM LAN chip)
- 1 x PS/2 connector for keyboard and mouse
- 1 x Mic-in and 1 x Line-out
- 2-pin remote power on/off switch
- 2 x Optional I/O knockout for additional functions

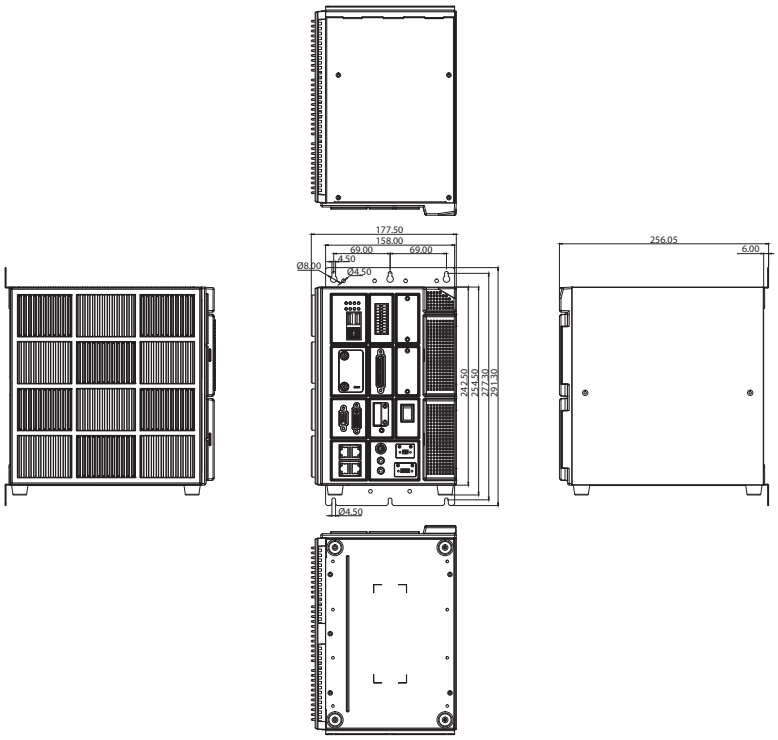
Isolated Digital Input

- 16CH 2.5KV optical isolated Digital Input
  - Digital logic levels
  - 0-24V, non-polarity type
  - Input low voltage (L): 0 ~ 1.5V
  - Input high voltage (H): 5 ~ 24V
  - Input resistance: 1.2kΩ @ 0.5W
  - Max. response frequency: 10KHz @ 50% duty

Isolated Digital Output

- 16CH 2.5KV optical isolated Digital Output
- Output type: Open-collector NPN Darlington transistor
- Supply voltage: 5-35V

Dimension Drawing



- Sink current: 200mA max. for all channel @ 100% duty

Storge Device
- 2 x External 2.5" HDD bay, cold swappable
- 1 x External CFast socket

Expansion Slot
- 2 x Mini-PCIe socket for optional fieldbus modules

Power Requirements
- Built-in +24VDC isolation power module

Dimensions
- 178mm (W) x 250mm (D) x 255mm (H) without wall mount bracket

Environment
- Operating temperature:
  Ambient with air flow: 0°C to 55°C (According to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14)
- Storage temperature: -20°C to 80°C
- Operating humidity: 10% ~ 90% relative humidity, non-condensing
  Limits to be at 90% RH at max 40C
- Shock protection: 20G, half sine, 11ms, IEC60068-2-27 with HDD
- Vibration protection
  Random: 0.5Grms @ 5 ~ 500 Hz according to IEC68-2-64
  Sinusoidal: 0.5 Grms @ 5~500 Hz according to IEC68-2-6

Certifications
- CE Approval
- FCC Class A
- LVD

OS Support Lists
- Windows XP 32bits and 64bits
- Windows 7 32bits and 64bits
- Windows 8.1 32 bits and 64 bits

Ordering Information

- **NIFE 4000 (P/N: 10J70400000X0)**
  3rd Generation Intel® Core™ i3/i5 rPGA Fanless System with Isolation Power Module and Optional Fieldbus Modules

Optional Fieldbus kit

88J50090E00X0	FBI 90E-PNM KIT	ProfINET Master Module Kit
88J50090E01X0	FBI 90E-EP KIT	Ethernet IP Master Module Kit
88J50090E02X0	FBI 90E-ECM KIT	EtherCAT Master Module Kit
88J50090E03X0	FBI 90E-PBM KIT	Profibus Master Module Kit
88J50090E04X0	FBI 90E-DNM KIT	DeviceNet Master Module Kit

- **24V, 120W AC/DC power adapter w/o power cord**
  (P/N: 7400120012X00)

NIFE 4000P2

3rd Generation Intel® Core™ i3/i5 rPGA Fanless System with Optional Fieldbus Modules and Two PCI Expansions

Main Features

- Support 3rd generation Intel® Core™ i3/i5 rPGA socket type processor
- Intel® QM77 PCH
- 2 x USB3.0 & 2 x USB2.0
- 4 x Intel® GbE LAN Ports
- 1 x DVI-I & 1 x VGA
- 2 x 2.5KV isolated RS232/422/485
- 1 x CFast socket
- One PCIex4 and One PCI expansion
- Two Mini-PCIe sockets
- Support +24VDC power input
- Support ATX power mode, WoL and PXE function
- Support NVRAM 1Mb

Product Overview

Integrated with Intel® 3rd generation Core™ i3/i5 process, NIFE 4000P2 offers excellent computing performance. The QM77 PCH provides original USB3.0, which ensures the high throughput and is suitable for the high bandwidth devices, such as industrial cameras. The four Intel® GbE LAN ports provide high communication bandwidth and can be used to access GbE camera for surveillance and industrial automation projects. NIFE 4000P2 provides built-in optical isolated digital input and digital output, 16 channels respectively. The LED indicators can be configured to show the status of the first four digital outputs. Two PCI expansions and two Mini-PCIe sockets are available, providing the expansion for Fieldbus interface. All built-in I/O connectors of NIFE 4000P2 locate at the front panel. It makes the wiring and maintenance easier for typical installation style for factory automation devices. Alone with well-proven fanless design experience of NEXCOM which ensures the stability, these make NIFE 4000P2 well fitting with the factory automation applications.

Specifications

CPU Support

- Support 3rd generation Intel® Core™ i5/i3 rPGA socket type processor
  - Core™ i5-3610ME, Dual Core, 2.7GHz, 3M Cache
  - Core™ i3-3120ME, Dual Core, 2.4GHz, 3M Cache
  - Support Three Independent Display with above processors
- Intel® QM77 PCH chipset

Main Memory

- 2 x DDR3/DDR3L SO-DIMM sockets, support dual channel up to 8 GB, DDR3 1333 SDRAM, un-buffered and non-ECC

Display Option

- Dual independent display
  - VGA
  - DVI-D
- Three independent display
  - VGA
  - VGA (output via optional Y-cable)
  - DVI-D (output via optional Y-cable)

I/O Interface

- ATX power on/off switch
- Power status LED
- HDD/CFast access LEDs
- RF access LED
- COM ports access LEDs
- 2 x USB2.0 ports & 2 x USB3.0 ports
- 2 x 2.5KV isolated RS232/422/485 terminal connector
- 1 x DB44 for 16CH isolated DI and 16CH isolated DO
- 1 x VGA output & 1 x DVI-I output
- 4 x Intel® GbE LAN ports (with Intel® WG82574L & WG82579LM LAN chip)
- 1 x PS/2 connector for keyboard and mouse
- 1 x Mic-in and 1 x Line-out
- 2-pin remote power on/off switch
- 2 x Optional I/O knockout for additional functions

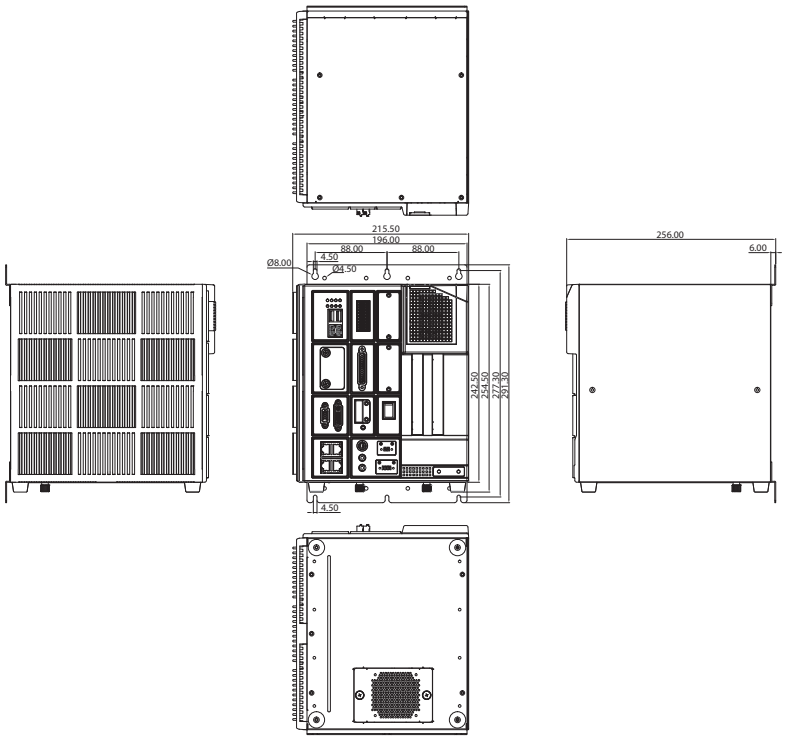
Isolated Digital Input

- 16CH 2.5KV optical isolated Digital Input
- Digital logic levels
  - 0-24V, non-polarity type
  - Input low voltage (L): 0 ~ 1.5V
  - Input high voltage (H): 5 ~ 24V
  - Input resistance: 1.2kΩ @ 0.5W
  - Max. response frequency: 10KHz @ 50% duty

Isolated Digital Output

- 16CH 2.5KV optical isolated Digital Output
- Output type: Open-collector NPN Darlington transistor
- Supply voltage: 5-35V

Dimension Drawing



- Sink current: 200mA max. for all channel @ 100% duty

Storge Device
- 2 x Internal 2.5" HDD bay
- 1 x External CFast socket

Expansion Slot
- 2 x Mini-PCIe socket for optional fieldbus modules
- 2 x PCI expansion (10W max. per slot)
- Add-on card length: 220mm max.

Power Requirements
- Typical DC input: 24VDC (Range: 21.6V ~ 26.4V)

Dimensions
- 216mm (W) x 250mm (D) x 255mm (H) without wall mount bracket

Environment
- Operating temperature:
  Ambient with air flow: 0°C to 55°C (According to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14)
- Storage temperature: -20°C to 80°C
- Operating humidity: 10% ~ 90% relative humidity, non-condensing
  Limits to be at 90% RH at max 40C
- Shock protection: 20G, half sine, 11ms, IEC60068-2-27 with HDD
- Vibration protection
  Random: 0.5Grms @ 5 ~ 500 Hz according to IEC68-2-64
  Sinusoidal: 0.5 Grms @ 5~500 Hz according to IEC68-2-6

Certifications
- CE Approval
- FCC Class A
- LVD

OS Support Lists
- Windows XP 32bits and 64bits
- Windows 7 32bits and 64bits
- Windows 8.1 32 bits and 64 bits

Ordering Information

- **NIFE 4000P2 (P/N: 10J70400005X0)**
  3rd Generation Intel® Core™ i3/i5 rPGA Fanless System with Optional Fieldbus Modules and Two PCI Expansions

Optional Fieldbus kit

88J50090E00X0	FBI 90E-PNM KIT	ProfINET Master Module Kit
88J50090E01X0	FBI 90E-EP KIT	Ethernet IP Master Module Kit
88J50090E02X0	FBI 90E-ECM KIT	EtherCAT Master Module Kit
88J50090E03X0	FBI 90E-PBM KIT	Profibus Master Module Kit
88J50090E04X0	FBI 90E-DNM KIT	DeviceNet Master Module Kit

- **24V, 120W AC/DC power adapter w/o power cord (P/N: 7400120012X00)**

NISE 105/105A

Intel® Atom™ Processor E3826 Dual Core Fanless System

Main Features

- Onboard Intel® Atom™ processor E3826 dual core, 1.46GHz
- Dual Independent Display from DVI-I and HDMI
- 2 x Intel® I210 GbE LAN ports support WoL, Teaming and PXE
- 2 x USB2.0 & 1 x USB3.0
- 4 x RS232/422/485
- Support optional Wi-Fi/3.5G/4G/Fieldbus Mini-PCIe Modules
- External RTC battery holder for easy replacement
- Support -20 ~ 70 degree C extended operating temperature
- Support 9-30VDC input

Product Overview

Powered by the latest generation of Intel® Atom™ processor E3826 (formerly codenamed "Bay Trail-I"), the NISE 105 provides outstanding performance not only on computing but also on graphics, and it presents a brand new opportunity for both intelligent and industrial computing solutions. NISE 105 supports up to 4G DDR3L memory and have several options on storage devices like CFast, HDD and SSD. The NISE 105 is also the 1st system in Compact NISE 100 series to support extended operating temperature from -20 upto 70 degree C with wide DC input range from 9-30VDC. In addition to no cable connection on the NISE 105, it brings NISE 105 the sustainability to work in harsh environment both with temperature and vibration concern. The NISE 105 has high integration ability with optional Mini-PCIe module and 4 x COM ports, which makes it a real intelligent system for various applications such as factory automation applications (with optional PROFIBUS, ProfiNET, DeviceNET, EtherCAT, Ethernet IP master module), network applications (with optional GbE LAN, Wi-Fi, 3.5G/4G LTE module) and communication applications (with optional GPIO, RS232/422/485). NISE 105 is definitely the top choice for M2M intelligent system and factory automation platforms.

Specifications

CPU Support

- Onboard Intel® Atom™ processor E3826 Dual Core, 1.46GHz
- Support Intel® Atom™ E3800 processor family from Single Core E3815, Dual Core E3825/E3826/E3827 and Quad Core E3845 with difference SKUs

Main Memory

- 1 x DDR3L SO-DIMM Socket, Support DDR3L 1066/1333 4GB RAM max., un-buffered and non-ECC

Display Option

- Dual Independent Display
  - HDMI and DVI-D
  - HDMI and VGA (via DVI-I to VGA converter)

I/O Interface-Front

- ATX power on/off switch
- 1 x Power Status/1 x HDD Access/1 x Battery Low/ 1 x Programing LEDs
- 1 x External CFast socket
- 1 x SIM Card holder
- 2 x Intel® I210IT GbE LAN Ports, support WoL, Teaming and PXE
- 1 x DVI-I Display Output
- 1 x USB3.0 (900mA per each)
- 1 x USB2.0 (500mA per each)
- 2 x DB9 for COM1 & COM2, both support RS232/422/485 with auto flow control
  - Jumper-free setting on RS232/422/485
  - Support 5V/12V/Ring function by jumper setting, Ring as the default (COM2 Only)
- 1 x Remote Power ON/OFF Switch
- 1 x 2-pin DC input, support +9 to 30VDC input

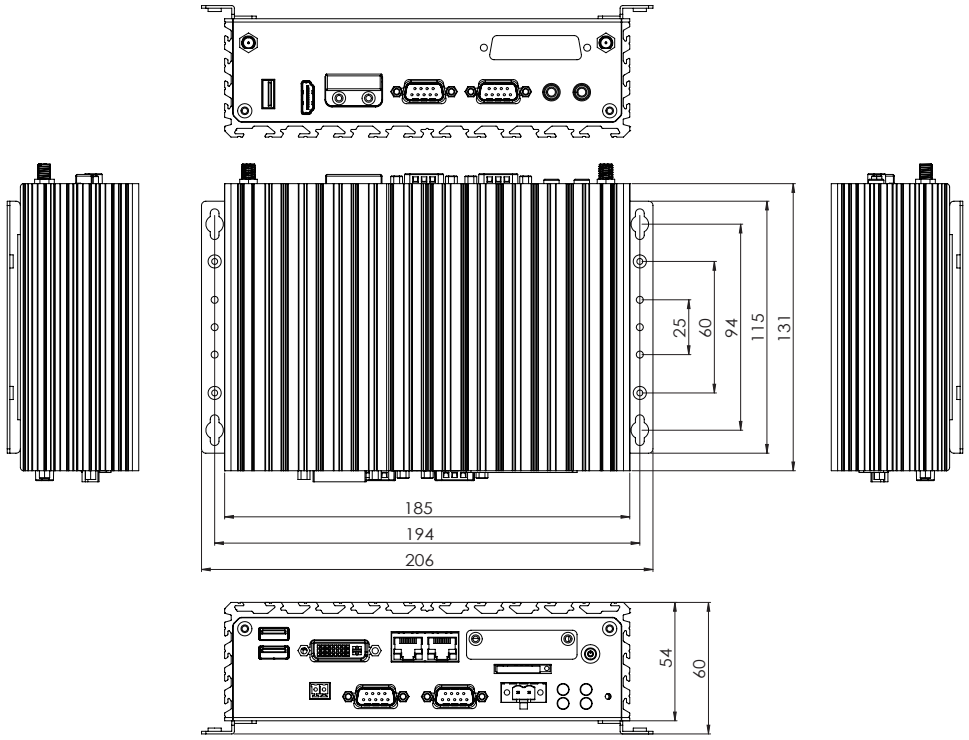
I/O Interface - Rear

- 1 x USB2.0
- 1 x HDMI
- 1 x RTC Battery
- 2 x DB9 for COM3 & COM4, both support RS232/422/485 with auto flow control
- 1 x Mic-in & 1 x Line-out
- 2 x Antenna Holes for optional Wi-Fi/3.5G antenna
- 1 x Optional I/F for optional Mini-PCIe Wi-Fi/3.5G/Hilscher Automation module output

I/O Interface - Internal

- 4 x GPI and 4 GPO (5V, TTL Type)

Dimension Drawing



Storage Device
- 1 x CFast (SATA 2.0)
- 1 x 2.5" HDD (SATA 2.0)
- 1Mb NVRAM (on NISE105A Only)

Expansion Slot
- 1 x Mini-PCIe socket for optional Wi-Fi/3.5G/Fieldbus modules

Power Requirement
- Power input: +9VDC to +30VDC
- 1 x optional 24V, 60W power adapter

Support OS
- Windows 8, 32bit/64bit
- Windows Embedded Standard 8, 32bit/64bit
- Windows 7, 32bit/64bit
- Windows Embedded Standard 7, 32bit/64bit
- Windows Embedded Compact 7, 32bit
- Linux Kernel version 3.8.0

Dimensions
- 185mm (W) x 131mm (D) x 54mm (H) without wall-mount bracket

Construction
- Aluminum and Metal Chassis with fanless design

Environment
- Operating Temperature:
  Ambient with air flow: -20°C to 70°C with industrial grade device
  (According to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14)
- Storage Temperature: -30°C to 85°C
- Relative Humidity: 10% to 95% (non-Condensing)
- Shock Protection:
  - HDD: 20G, half sine, 11ms, IEC60068-27
  - CFast: 50G, half sine, 11ms, IEC60068-27
- Vibration Protection w/ HDD Condition:
  - Random: 0.5Grms @ 5~500 Hz, IEC60068-2-64
  - Sinusoidal: 0.5Grms @ 5~500 Hz, IEC60068-2-6
- Vibration Protection w/ CFast & SSD Condition:
  - Random: 2Grms @ 5~500 Hz, IEC60068-2-64
  - Sinusoidal: 2Grms @ 5~500 Hz, IEC60068-2-6

Certifications
- CE
- FCC Class A

Ordering Information

- **NISE 105 (P/N: 10J00010501X0)**
  Intel® Atom™ Processor E3826 Dual Core Fanless System
- **NISE 105A (P/N: 10J00010500X0)**
  Intel® Atom™ Processor E3826 Dual Core All in one Fanless System
- **24V, 60W AC/DC power adapter w/ o power cord**
  (P/N: 7400060023X00)

NISE 300

4th Generation Intel® Core™ i5 Fanless System with
6 x Mini-PCIe Expansion and Front Access I/O Design

Main Features

- Onboard BGA type 4th Generation Intel® Core™ i5 Processor
- Mobile Intel® QM87 PCH
- 2 x USB3.0; 2 x USB2.0
- 6 x Mini-PCIe, 2 x RS232/422/485 with Auto Flow
- Support 1 x mSATA, 1 x CFast and 2 x 2.5" SATA
- User-friendly I/O Design with all I/O Interface at front
- 6 x Mini-PCIe socket for optional Wi-Fi/3.5G/4G/Fieldbus modules
- Support 9-30V DC input, ATX mode
- Easy Replacement for RTC Battery
- Dual Intel® GbE LAN Ports, Support WoL, Teaming & PXE

Product Overview

The high performance NISE 300, which is integrated with 4th generation Intel® Core™ i5 processor and QM87 PCH, can provide outstanding system performance and presents a brand new opportunity for both intelligent and industrial computing solutions. NISE 300 supports up to 8G un-buffered and non-ECC DDR3/DDR3L memory, CFast , SATA3.0, the latest USB3.0 technology. Support +9V ~ +30VDC input and the operating temperature range is from -5 Celsius degree to 55 Celsius degree. NISE 300 comes with user-friendly I/O design; all I/O interfaces are at front panel and it makes system much easier to use and to expand the functionalities. It's mechanical design also fits with 2U 19" rack-mount dimension. NISE 300 also integrates with 6 Mini-PCIe sockets and 2 COM Port interfaces, which makes it a real versatile box for various applications such as factory automation applications (PROFIBUS, DeviceNet, EtherCAT, PROFINET, Ethernet/IP), network applications (GbE LAN, Wi-Fi, GSM), and storage devices (mSATA). With the latest features and flexible module expansions, NISE 300 is definitely the top choice for M2M intelligence and factory automation platforms.

Specifications

CPU Support

- Onboard BGA type 4th generation Intel® Core™ i5 processor
- Core™ i5-4402E, Dual Core™, 1.6GHz

Main Memory

- 2 x DDR3/DDR3L SO-DIMM Socket, support up to 8GB DDR3/DDR3L 1333/1600 RAM, un-buffered and non-ECC

Display Option

- Three Independent Display
  - VGA+DVI-D (Through DVI-I Y Cable) + HDMI
- Dual Independent Display
  - DVI-D + VGA
  - HDMI + VGA

Front I/O Interface

- ATX power on/off switch
- 1 x Remote Power ON/OFF Switch
- 1 x Power Status/1 x HDD Access LEDs
- 2 x USB3.0 ports (Blue Color, 900mA per each)
- 2 x USB2.0 Ports (500mA per each)
- 1 x DVI-I, 1 x HDMI
- 2 x DB9 for COM1 & COM2
  - support RS232/422/485 with Auto Flow Control
  - support 5V/12V/Ring function by jumper setting
- 2 x Intel® 82574L GbE LAN Ports, Support PXE/Teaming/WoL
- 1 x External CFast socket
- 1 x SIM Card holder
- 1 x External RTC Li-ion Battery holder
- 1 x Line-out and 1 x Mic-in

Internal I/O Interface

- 4 x GPI and 4 GPO (5V, TTL Type)
- 4 x COM Ports Box Header (RS232 only)
- 1 x USB2.0 Internal Connector, for USB dongle
- 2 x USB2.0 Internal Box Header

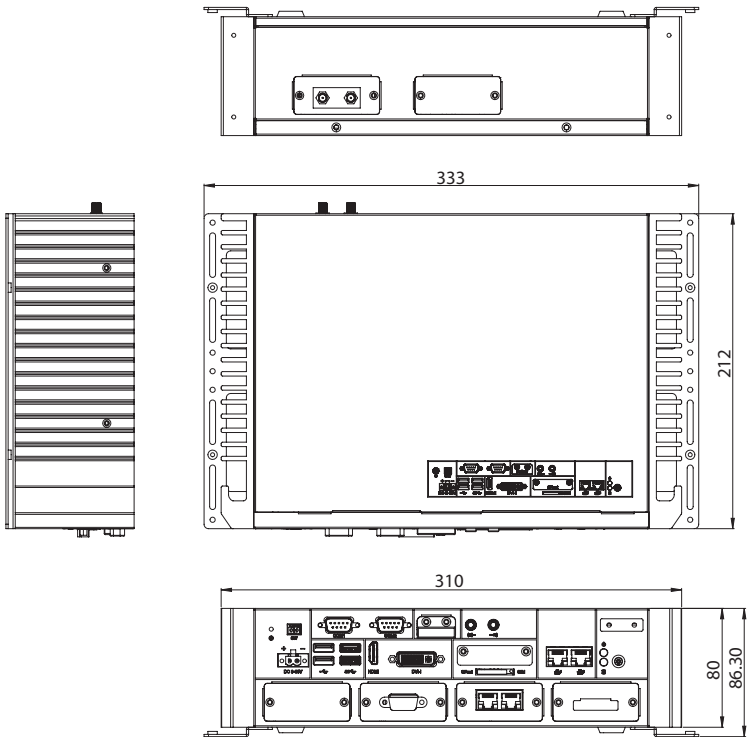
Storage Device

- 1 x CFast (SATA 3.0)
- 1 x mSATA (SATA 3.0)
- 2 x 2.5" HDD (SATA 3.0)

Expansion Slot

- 1 x Mini-PCIe socket for GSM/Wi-Fi
  1 x Mini-PCIe socket for mSATA
  4 x Mini-PCIe socket for expansion modules

Dimension Drawing



Power Requirement
- ATX Power Mode
- Typical +9V ~ +30VDC Input
- Power adapter: Optional AC to DC power adapter (+19VDC, 120W)

Dimensions
- 310mm (W) x 212mm (D) x 80mm (H) without Wall-Mount bracket

Construction
- Aluminum and Metal Chassis with fanless 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: -40°C to 85°C
- Operating humidity: 10% ~ 90% relative humidity, non-condensing
  Limits to be at 90% RH at max 40C
- Shock Protection:
  HDD: 20G, half sine, 11ms, IEC60068-27
  CFast: 50G, half sine, 11ms, IEC60068-27
- Vibration Protection w/ HDD Condition:
  Random: 0.5Grms @ 5~500 Hz, IEC60068-2-64
  Sinusoidal: 0.5Grms @ 5~500 Hz, IEC60068-2-6

Certifications
- CE Approval
- FCC Class A
- LVD

OS Support Lists
- Windows 7 32bits and 64bits
- Windows 8.1 32 bits and 64 bits

Ordering Information

Barebone
- **NISE 300 System (P/N: 10J00030000X0)**
- **19V, 120W AC to DC power adapter w/ o power core (P/N:7400120013X00)**

NISE 301

Intel® Atom ™ Quad Core E3845 Fanless System
with 2 x Mini-PCIe Expansion and Front Access I/O Design

Main Features

- Onboard Intel® Atom™ processor E3845 Quad Core, 1.91GHz
- 2 x Intel® I210AT GbE LAN ports, support WoL, Teaming and PXE
- 2 x RS232/422/485, 3x USB2.0, 1x CFast socket
- 2 x Mini-PCIe socket for optional Wi-Fi /3.5G/4G/Fieldbus modules
- Support Dual Independent Display with VGA and DVI-D
- External RTC Battery Holder
- Typical 24V DC input with +/-20% range

Product Overview

NISE 301 is a new fanless PC designed for space-critical applications. It features Intel® 4th generation Atom™ processor, 2 x mini-PCIe expansions and a front access I/O design. Measuring at 205mm (W) x 160mm (D) x 80mm (H), NISE 301 can fit into any 2U 19" rackmount shelf or cabinet easily.

Designed with versatility and cost efficiency in mind, NISE 301 supports 2 x mini-PCIe expansions that can be configured with different add-on modules to suit different applications. For example, in fieldbus concentrator applications, NISE 301 can be fitted with two different fieldbus interfaces (PROFIBUS, DeviceNet, EtherCAT, PROFINET, and EtherNet/IP protocols) simultaneously and provide master and slave communication with PLC and I/O devices. In IoT applications, NISE 301 can be configured with a WLAN/Wi- Fi/LTE interface and RS232/422/485/GPIO interface for wireless communication and field device control.

In addition, NISE 301 also bundles NEXCOM's latest Xcare™ 3.0 remote management utility to provide advanced provisioning features such as real-time platform monitoring, virus protection and system image restore.

Specifications

CPU Support
- Onboard Intel® Atom™ processor E3845 Quad Core, 1.91GHz

Main Memory
- 1 x DDR3L SO-DIMM Socket, support up to 4GB with un-buffered and non-ECC

Display Option
- Dual Independent Display
  - DVI-D + VGA

Front I/O Interface Status LEDs
- 1 x Power Status, 1 x HDD Access LEDs
- 2 x Tx/Rx LEDs, 1 x C-Fast LEDs
- 4 x GPO Status, 1 x Battery Low LEDs

Front I/O Interface
- 1 x ATX power on/off switch
- 1 x VGA, 1 x DVI-D
- 3 x USB2.0 Ports (500mA per each)
- 2 x Intel® GbE LAN ports (I210AT); Support WoL, Teaming and PXE
- 2 x RS232/422/485 with auto flow control
- 2 x Antenna Holes for Wi-Fi/GSM
- 1 x External C-Fast socket
- 1 x SIM Card holder
- 1 x External RTC Li-ion Battery holder

Expansion Slot
- 2 x Mini-PCIe expansion slots
  - optional PROFIBUS, ProfiNET, DeviceNET, EtherCAT, Ethernet IP master/salve module
  - optional GbE LAN, Wi-Fi, 3.5G module
  - optional GPIO, RS232/422/485 module

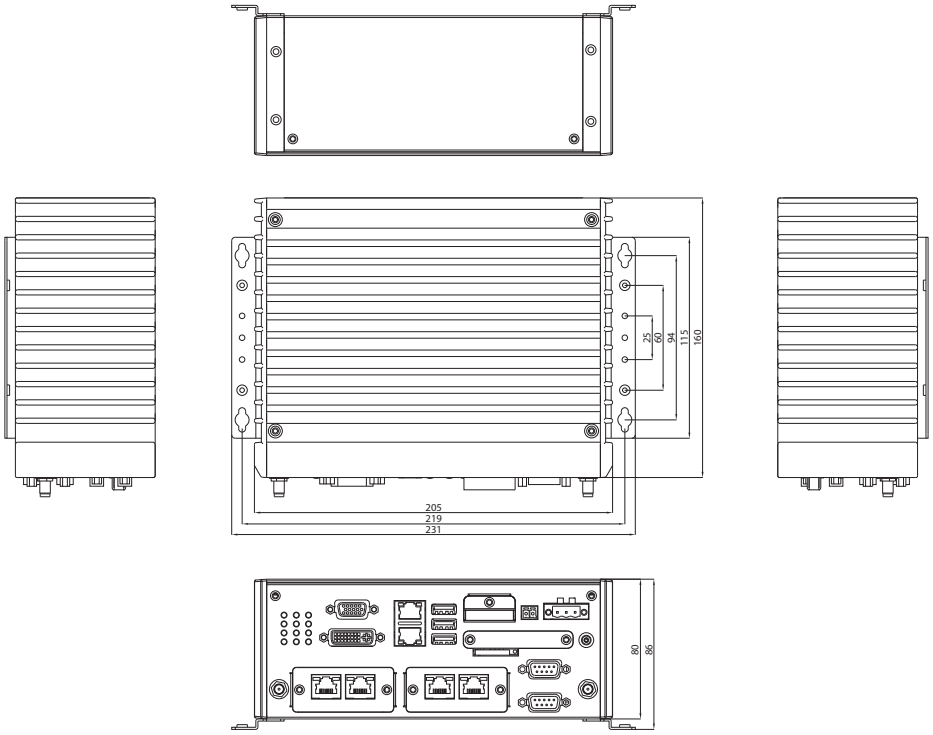
Storage Device
- 1 x CFast (SATA3.0)
- 1 x 2.5" HDD (SATA3.0)

Power Requirement
- ATX Power mode (AT power mode by jumper setting)
- Power input: Typical +24Vdc +/-20%
- Power adapter: Optional AC to DC power adapter (+24Vdc, 60W)

Dimensions
- 205mm (W) x 160mm (D) x 80mm (H) without Wall-Mount bracket

Construction
- Aluminum and Metal Chassis with fanless design

Dimension Drawing



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 85°C
- Relative Humidity: 10% ~ 93% (Non-Condensing)
- Shock Protection:
  HDD: 20G, half sine, 11ms, IEC60068-27
  CFast: 50G, half sine, 11ms, IEC60068-27
- Vibration Protection w/ HDD Condition:
  Random: 0.5Grms @ 5~500 Hz, IEC60068-2-64
  Sinusoidal: 0.5Grms @ 5~500 Hz, IEC60068-2-6

Certifications

- CE Approval
- FCC Class A
- LVD

OS Support Lists

- Windows 7 32bits and 64bits
- Windows 8.1 32 bits and 64 bits

Barebone

- **NISE 301 System (P/N: 10J00030100X0)**
- **24V, 60W AC to DC power adapter w/ o power core (P/N: TBD)**

Ordering Information

NISE 2400

Intel® Atom™ Processor E3827 Dual Core Fanless System

Main Features

- Onboard Intel® Atom™ processor E3827 Dual Core, 1.75GHz
- Dual independent display from DVI-I and HDMI
- 2 x Intel® I210IT GbE LAN ports support WoL, Teaming and PXE
- 4 x USB2.0 & 1 x USB3.0
- 2 x RS232/422/485 with auto flow control
- 2 x Mini-PCIe socket for optional mSATA/Wi-Fi/4G/3.5G/Fieldbus modules
- Support -20 ~ 70 degree Celus extended operating temperature
- Support 9-30V DC input

Product Overview

Powered by Intel® Atom™ Bay Trail Dual Core processor E3827, 1.75GHz. Driven by the latest Dual Core Intel® Atom™ processor, NISE 2400 can provide excellent computing power and is more power-efficient than the platforms based on the previous generation Intel® Atom™ product family.

NISE 2400 supports up to 8G DDR3L memory and have several options on storage devices like C-Fast, HDD, SSD or mSATA . The NISE2400 comes with 1 x HDMI, 1 x DVI-I, 2 x Gigabit LAN ports, 2x COM port with RS232/422/485 and 5x USB ports including one USB3.0. NISE 2400 supports 9~30V DC input, and can be operated in an extended operating temperature range from -20 to 70 degrees Celsius. This Fanless system supports two Mini-PCIe modules, Which can be an excellent platform for network applications (with optional GbE LAN, Wi-Fi, 3.5G/4G LTE module) and communication applications such expansion versatility makes NISE 2400 a perfect platform for factory automation and M2M intelligence applications.

Specifications

CPU Support

- Onboard Intel® Atom™ processor E3827 Dual Core, 1.75GHz
- Support Intel® Atom™ E3800 processor family from single core E3815, dual core E3825/E3826/E3827 and quad core E3845 with difference SKUs

Main Memory

- 2 x DDR3L SO-DIMM socket, support DDR3L 1066/1333 8GB RAM max., un-buffered and non-ECC

Display Option

- Dual independent display
  - HDMI and DVI-D
  - HDMI and VGA (via DVI-I connector)

Front I/O Interface

- ATX power on/off switch
- 1 x Power Status, 1 x HDD access, 1 x battery low, 4 x programming LEDs, 4 x Tx / Rx LEDs, 2 x LAN LEDs
- 2 x DB9 RS232 for COM1 & COM2
- 1 x External CFast socket
- 1 x SIM card holder
- 1 x USB3.0 (900mA per each)
- 1 x Mic-in & 1 x Line-out
- 2 x antenna holes for optional Wi-Fi/3.5G antenna

I/O Interface - Rear

- 4 x USB2.0
- 1 x DVI-I display output
- 1 x HDMI display output
- 1 x remote power on/off switch
- 2 x Intel® I210IT GbE LAN ports, support wake on LAN, Teaming and PXE
- 2 x DB9 for COM3 & COM4, both support RS232/422/485 with auto flow control
  - Jumper-free setting on RS232/422/485
- 1 x 3-pin DC input, support +9 to 30VDC input

I/O Interface - Internal

- 4 x GPI and 4 GPO (5V, TTL Type)

Storage Device

- 1 x CFast card socket
- 1 x 2.5" HDD space
- 1 x mSATA from miniPCI socket if SATA HDD is not installed

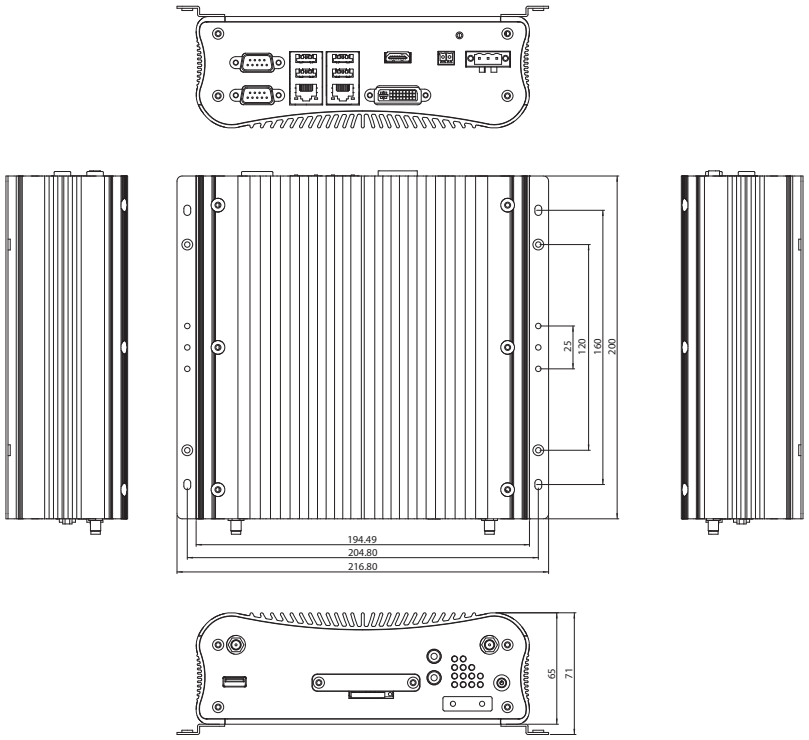
Expansion Slot

- 2 x Mini-PCIe socket for optional Wi-Fi/4G/3.5G/Fieldbus modules

Power Requirement

- Power input: +9Vdc to +30Vdc
- 1 x optional 24V, 60W power adapter

Dimension Drawing



Dimensions
- 191mm (W) x 200mm (D) x 60mm (H) without wall-mount bracket

Construction
- Aluminum and metal chassis with fanless design

Environment
- Operating Temperature:
  Ambient with air flow: -20°C to 70°C (According to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14)
- Storage temperature: -30°C to 85°C
- Relative humidity: 10% to 95% (non-condensing)
- Shock Protection:
  HDD: 20G, half sine, 11ms, IEC60068-27
  CFast: 50G, half sine, 11ms, IEC60068-277
- Vibration Protection w/ HDD Condition:
  Random: 0.5Grms @ 5~500 Hz, IEC60068-2-64
  Sinusoidal: 0.5Grms @ 5~500 Hz, IEC60068-2-6
- Vibration protection w/ CFast & SSD condition:
  Random: 2Grms @ 5~500 Hz, IEC60068-2-64
  Sinusoidal: 2Grms @ 5~500 Hz, IEC60068-2-6

Certifications
- CE
- FCC Class A

OS Support Lists
- Windows 8
- Windows Embedded Standard 8
- Windows 7
- Windows Embedded Standard 7
- Windows Embedded Compact 7
- Linux Kernel version 3.8.0

Ordering Information

Barebone
- **NISE 2400 (P/N: TBD)**

NISE 3600E

3rd Generation Intel® Core™ i7/i5/i3 Fanless System
with one PCIex4 Expansion

Main Features

- Support 3rd generation Intel® Core™ i7/i5/i3 rPGA socket type processor
- Mobile Intel® QM77 PCH
- Support 1 x 2.5" SATA HDD or 2 x SATA DOM
- 1 x VGA, 1 x DVI-D and 2 x Display port with Independent Display support
- Dual Intel® GbE LAN ports; Support WoL, teaming & PXE
- 4 x USB3.0, 2 x USB2.0, 5 x RS232 and 1 x RS232/422/485
- 1 x internal Mini-PCIe socket support optional Wi-Fi or 3.5G module
- 1 x external CFast socket & 1 x SIM card socketSupport
- Support +9V to 30VDC input; Support ATX power mode
- One PCIex4 expansion

Product Overview

Integrated with 3rd generation Intel® Core™ i7/i5/i3 with QM77 PCH platform, NISE series evolve to a new generation called NISE 3600E series. It is not only sustained its good reputation on quality and user friendly features but also innovated its mechanical design.

With computing and graphic performance enhancement, NISE 3600E series supports 2 x display port, 1 x VGA port and 1 x DVI-D port to fulfill the graphic intensive or computing oriented applications, including Auto Optical Inspection, Machinery Automation, ePolice infotainment, Surveillance or Image Processing equipment and Healthcare industry. In addition, NISE 3600E series offers 4 x USB3.0 and 2 x USB2.0, greater expansion capability with 2 x Intel® GbE LAN ports, 6 x COM ports, and 1 x external CFast socket for front accessible availability. NISE 3600E series is sufficient to support wide range of DC input from +9 to 30V and ATX power; it is a new generation to meet most application requirements.

Specifications

CPU Support

- Support 3rd Generation Intel® Core™ i7/i5/i3 rPGA Socket Type Processor
  - Core™ i7-3612QM, Quad Core, 3.1 GHz, 6M Cache
  - Core™ i5-3610ME, Dual Core, 2.7GHz, 3M Cache
  - Core™ i3-3120ME, Dual Core, 2.4GHz, 3M Cache
  - Support Three Independent Display with above processors
- Support 2nd generation Intel® Core™ i5/i3 rPGA Socket Type Processor
  - Core™ i5-2510E, Dual Core, 2.5GHz, 3M Cache
  - Celeron® B810, Dual Core, 1.6GHz, 2M Cache
  - Support Dual Independent Display with above processors

Main Memory

- 2 x DDR3 SO-DIMM socket, supports up to 8GB DDR3/DDR3L 1333/1600 SDRAM, with un-buffered and non-ECC

Display Option

- Three Independent Display (only support on 3rd Generation Processor)
  - Two Display Port and 1 x VGA
  - Two Display Port and 1 x DVI-D
- Dual Independent Display
  - VGA and DVI-D
  - Display Port and VGA
  - Display Port and DVI-D
  - Display Port and Display Port

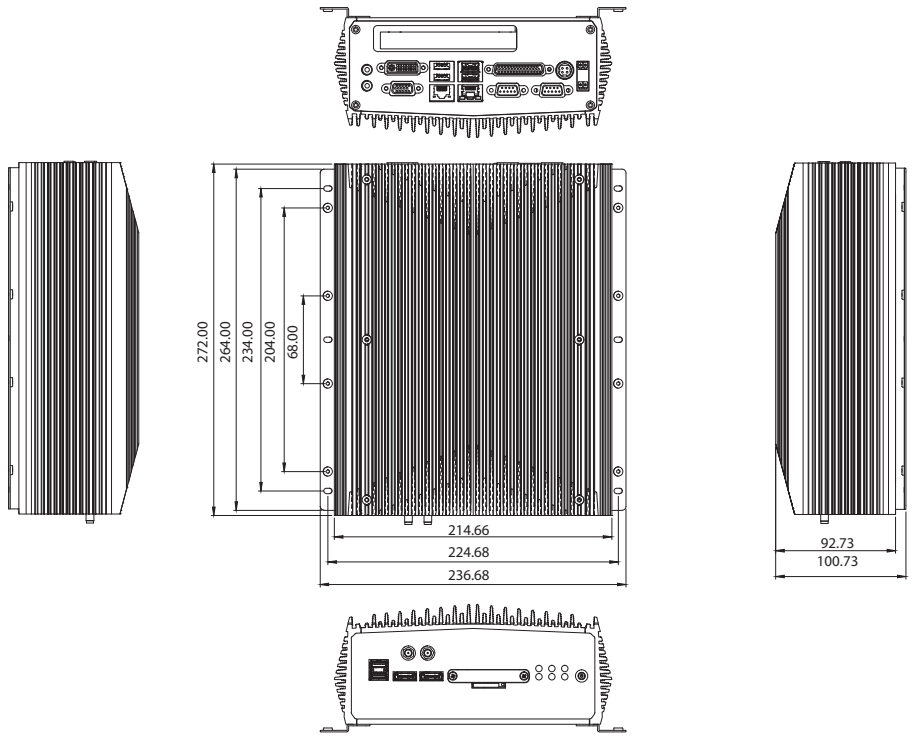
I/O Interface-Front

- ATX power on/off switch
- HDD Access/Power status LEDs
- 2 x USB3.0 ports (Blue Color)
- 2 x Display Port (Can be converted to DVI-D or HDMI via active cables)
- 2 x Antenna holes
- 1 x external CFast
- 1 x SIM card socket

I/O Interface-Rear

- 2 x DB9 for COM5 & COM6 (RS232)
- 1 x DB44 Serial Port for 4 x COM port
  - COM1/COM3/COM4: RS232
  - COM2: RS232/422/485
- 2 x Intel® GbE LAN ports (Intel® 82574L and 82579LM); Support WoL, teaming and PXE
- 2 x USB2.0 ports
- 2 x USB3.0 ports (Blue Color)
- 1 x DB15 VGA port
- 1 x DVI-D port
- 1 x Line-out and 1 x Mic-in
- 2-pin Remote Power on/off switch
- +9V to 30VDC input

Dimension Drawing



Storage Device
- 1 x CFast socket
- 1 x 2.5" SATA HDD or 2 x SATA DOM
- SATA DOM: support 90°C horizontal type only

Expansion Slot
- One PCIex4 Expansion Slot
  - Add-on card length: 169mm max.
  - Power consumption: 10W/ slot max.
- 1 x Mini-PCIe socket (support optional Wi-Fi or 3.5G module)

Power Requirements
- ATX power mode
- OnBoard DC to DC power support from 9V to 30VDC
- Optional power adapter

Dimensions
- 215mm (W) x 272mm (D) x 93mm (H) without wall mount bracket (8.5" x 10.7" x 4.5")

Construction
- Aluminum Chassis with fanless design

Environment
- Operating temperature:
  Ambient with air flow: -5°C to 55°C
  Ambient with air flow: -5°C to 50°C if using Core™ i7-3612QM
  (According to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14)
- Storage temperature: -20°C to 80°C
- Relative humidity: 95% at 40°C
- Shock protection:
  - HDD: 20G, half sine, 11ms, IEC60068-2-27
  - CFast: 50G, half sine, 11ms, IEC60068-2-27
- Vibration protection w/ HDD Condition
  - Random: 0.5Grms @ 5~500 Hz according to IEC60068-2-64
  - Sinusoidal: 0.5Grms @ 5~500 Hz according to IEC60068-2-6

Certifications
- CE approval
- FCC Class A
- UL

OS Support Lists
- Windows XP 32bits and 64bits
- Windows 7 32bits and 64bits
- Windows 8.1 32 bits and 64 bits

Ordering Information

Barebone
- **NISE 3600E (P/N: 10J00360000X0)**
  3rd Generation Intel® Core™ i5/i3 rPGA Fanless System with one PCIex4 Expansion
- **NISE 3600E2 (P/N: 10J00360001X2)**
  3rd Generation Intel® Core™ i5/i3 rPGA Fanless System with two PCIex4 Expansion
- **NISE 3600P2 (P/N: 10J00360002X0)**
  3rd Generation Intel® Core™ i5/i3 rPGA Fanless System with two PCI Expansion
- **NISE 3600P2E (P/N: 10J00360003X0)**
  3rd Generation Intel® Core™ i5/i3 rPGA Fanless System with one PCI Expansion and one PCIex4 Expansion
- **19V, 120W AC/DC power adapter w/ o power core**
  (P/N: 7410120002X00)

NISE 3640E2/P2/P2E

3rd Generation Intel® Core™ i7 Fanless System
with 4 x LANs, 6 x COMs and PCI/PCIe Expansion

Main Features

- OnBoard 3rd generation Intel® Core™ i7 BGA processor
- Mobile Intel® QM77 PCH
- Support 1 x 2.5" SATA HDD or 2 x SATA DOM
- 2 x Display Port; 1 x VGA; 1 x DVI-D; 2 x USB3.0; 2 x USB2.0
- 4 x Intel® 82574IT GbE LAN ports; Support WoL, teaming and PXE
- 2 x DB9 for RS232/422/485; 1 x DB44 Serial Port for 4 x RS232
- 2 x Mini-PCIe sockets (Top side Mini-PCIe Socket support optional Wi-Fi or 3.5G module)
- 1 x CFast socket; 1 x SIM card socket
- Support +24VDC input; Support ATX Power mode
- Support PCI or PCIe expansion

Product Overview

Integrated with 3rd generation Intel® Core™ i7 with QM77 PCH platform, NISE 3640E2/P2/P2E designed with 4 x Intel® 82574IT GbE LAN controllers which can supports up to 4 cameras and better throughput; besides, 3640E2/P2/P2E also supports WoL, LAN teaming and PXE function. With computing and graphic performance enhancement, NISE 3640E2/P2/P2E supports 3 independent display and delivers a level of performance ideal for image and vision measurement on traffice control, overspeed monitoring, real time update and ePlice. More, NISE 3640E2/P2/P2E supports 2 x RS232/422/485, 4 x RS232, 2 x USB3.0, 2 x USB2.0, 1 x CFast socket, 1 x SIM card socket, and 1 x internal Mini-PCIe socket supports optional Wi-Fi or 3.5G module. In NISE 3640E series, multiple chooses for PCI or PCIe expansion is also supported here.

Leveraging a reliable fanless, durable cable-free design and wide operating temperature, 3640E2/P2/P2E can be exhibited in harsh environments, where severe temperature variation and vibration may exist.

Specifications

CPU Support

- OnBoard 3rd generation Intel® Core™ i7 BGA processor CoreTM i7-3517UE, Dual Core, 1.7GHz, 4M Cache
- Mobile Intel® QM77 PCH

Main Memory

- On-board 2 x DDR3/DDR3L SO-DIMM, supports up to 8GB DDR3/DDR3L 1333/1600 SDRAM, with un-buffered and non-ECC
- Pre-install 4G Industrial Grade Memory as the manufacture configuration for shipment

Display Option

- Three Independent Display (only support on 3rd Generation Processor)
  - Two Display Port and 1 x VGA
  - Two Display Port and 1 x DVI-D
- Dual Independent Display
  - VGA and DVI-D
  - Display Port and VGA

I/O Interface-Front

- ATX power on/off switch
- HDD access/Power status/LAN status LEDs
- 2 x USB3.0 (Blue color)
- 2 x USB2.0
- 2 x Display Port (Can be converted to DVI-D or HDMI via active cables)
- 1 x CFast socket
- 1 x SIM card socket
- 2 x Antenna holes

I/O Interface-Rear

- 2 x DB9 for RS232/422/485
- 1 x DB44 for 4 x RS232
- 4 x Intel® 82574IT GbE LAN ports; Support WoL, teaming and PXE
- 1 x DB15 VGA port
- 1 x DVI-D
- 1 x Line-out and 1 x Mic-in
- 2-pin Remote Power on/off switch
- +24VDC Input

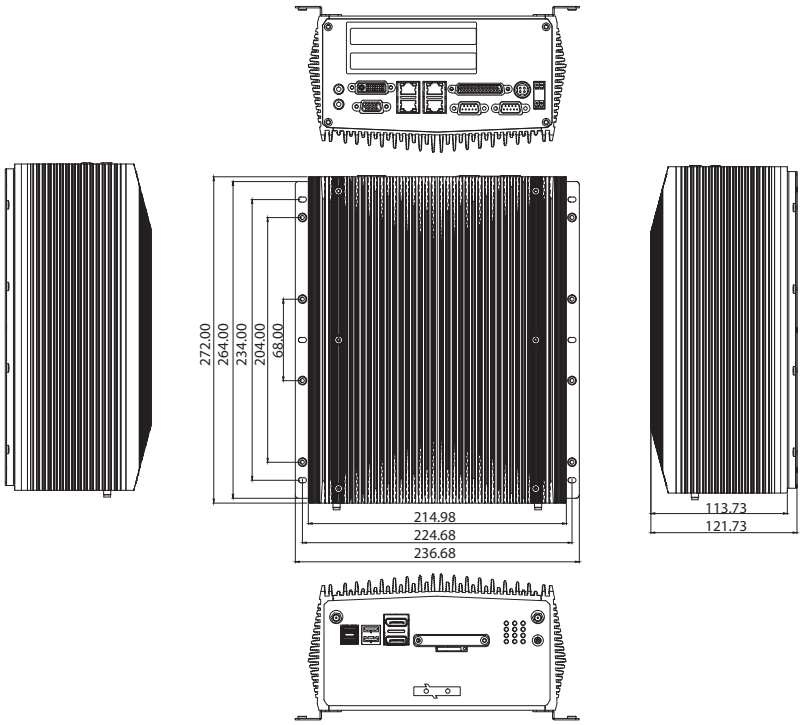
Storage Device

- 1 x 2.5" SATA HDD or 2 x SATA DOM (support 90°C horizontal type only)
- 1 x CFast socket

Expansion Slot

- NISE 3640E2: Two PCIex4 expansion
  - Add-on card length: One 169mm max. and One 240mm max.
  - Power consumption: 10W/ slot max.

Dimension Drawing



- NISE 3640P2: Two PCI expansion
  - Add-on card length: One 169mm max. and One 240mm max.
  - Power consumption: 10W/ slot max.
- NISE 3640P2E: One PCI expansion and One PCIex4 expansion
  - Add-on card length: 169mm max. for PCIex4 and 240mm max. for PCI expansion
  - Power consumption: 10W/ slot max.
- 2 x Mini-PCIe sockets (Top side Mini-PCIe Socket support optional Wi-Fi or 3.5G module)

Power Requirements

- ATX Power mode
- Support +24VDC Input
- Optional power adapter

Dimensions

- 215mm (W) x 272mm (D) x 114mm (H) without wall mount bracket (8.5" x 10.7" x 4.5")

Construction

- Aluminum Chassis with fanless design

Environment

- Operating temperature:
  Ambient with air flow: -20°C to 60°C with industrial grade device (According to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14)
- Storage temperature: -20°C to 80°C
- Relative humidity: 95% at 40°C
- Shock protection:
  - HDD: 20G, half sine, 11ms, IEC60068-2-27
  - CFast: 50G, half sine, 11ms, IEC60068-2-27
- Vibration protection w/ HDD Condition
  - Random: 0.5Grms @ 5~500 Hz according to IEC60068-2-64
  - Sinusoidal: 0.5Grms @ 5~500 Hz according to IEC60068-2-6

Certifications

- CE approval
- FCC Class A

OS Support Lists

- Windows XP 32bits and 64bits
- Windows 7 32bits and 64bits
- Windows 8.1 32 bits and 64 bits

Ordering Information

Barebone

- **NISE 3640E (P/N: 10J00364000X0)**
  3rd Generation Intel® Core™ i7 Fanless System with One PCIex4 Expansion
- **NISE 3640E2 (P/N: 10J00364001X0)**
  3rd Generation Intel® Core™ i7 Fanless System with Two PCIex4 Expansion
- **NISE 3640P2 (P/N: 10J00364002X0)**
  3rd Generation Intel® Core™ i7 Fanless System with Two PCI Expansion
- **NISE 3640P2E (P/N: 10J00364003X0)**
  3rd Generation Intel® Core™ i7 Fanless System with One PCI Expansion and One PCIex4 Expansion
- **24V, 120W AC/DC power adapter w/ o power cord (P/N: 7400120001X00)**

APPC 1230T/1231T

12.1" TFT SVGA 4:3 Flush Panel PC with Intel® Atom™ D2550, 1.86GHz, Touch Screen, 2GB DDR3, 4 x USB, 4 x COM and VGA

APPC 1231T

APPC 1232T

Main Features

- 4:3 12.1" SVGA Fanless LED Panel Computer
- Intel® Atom™ D2550, Dual Core, Low Consumption CPU
- Flush Panel by 5-wire Touch Screen
- Dual GbE/2nd display-VGA/Line-in/Line-out/MIC-in/PS2 KB/MS
- USB x 4/2 x Mini-PCIe sockets/1 x CFast/2 x RS232/422/485
- Optional 3.5G/Wi-Fi Module/2.5" HDD/2 x COMs/GPIO/DIO
- DDR3 2GB/2.5" HDD Bracket
- IP65 Compliant Front Panel
- Mounting Support: Panel/Wall/Stand/VESA 100mm x 100mm
- Wide Range Power Input 12V~30VDC

Product Overview

The 12.1" fanless panel PC APPC 1230T/1231T incorporating an industrial motherboard is intended for versatile industrial applications. APPC 1230T/1231T has a touch screen LED backlight LCD panel with 800 x 600 (SVGA) resolution and 450-nit brightness. The front panel which adopts flush design and complies with IP65 standard makes it the perfect fit in industrial applications.

This APPC series supports WWAN/WLAN expansion and others via dual Gigabit Ethernet connectors, two Mini-PCIe slots and one SIM card holder. With support for wide power input of 12V~30V, this APPC series can gain a strong foothold in industrial field and machine devices. In addition, this APPC series can hook 2nd display via a VGA port for dual independent display. APPC 1231T has two isolated RS232/422/485 ports, two RS232 ports supporting 5V and 12V power feed, four isolated channels of DI and DO, and two channels of GPI and GPO.

Specifications

Panel

- LED Size: 12.1", 4:3
- Resolution: SVGA 800 x 600
- Luminance: 450cd/m^2
- Contrast ratio: 700
- LCD color: 16.2M
- Viewing Angle: 65(U), 75(D), 80(L), 80(R)
- Backlight: LED

Touch Screen

- 5-wire resistive (flush panel type)
- Light transmission: 80%
- Interface: USB

System

- CPU: On-board Intel® Atom™ Dual Core processor D2550, 1.86GHz, 1M L2 Cache
- BIOS: AMI BIOS
- System chipset: Intel® NM10 Express chipset
- System memory: 2 x 204-pin DDR3 SO-DIMM socket, 2GB DDR3 (Default),Support up to 4GB DDR3-800/1066, Non-ECC and Un-buffered
- Storage Device:
  - 1 x external locked CFast socket
  - 1 x hard drive bay: optional 1 x 2.5" SATA HDD or 1 x SATA DOM
- Watchdog timer: Watchdog timeout can be programmable by software from 1 second to 255 seconds and from 1 minute to 255 minutes (Tolerance 15% under room temperature 25˚C)
- H/W status monitor: Monitoring system temperature, and voltage
- Expansion: 2 x Mini-PCIe sockets (support optional Wi-Fi or 3.5G module)
- Panel backlight control button: Increase brightness/decrease brightness/Backlight On/Off (For APPC 1231T only)

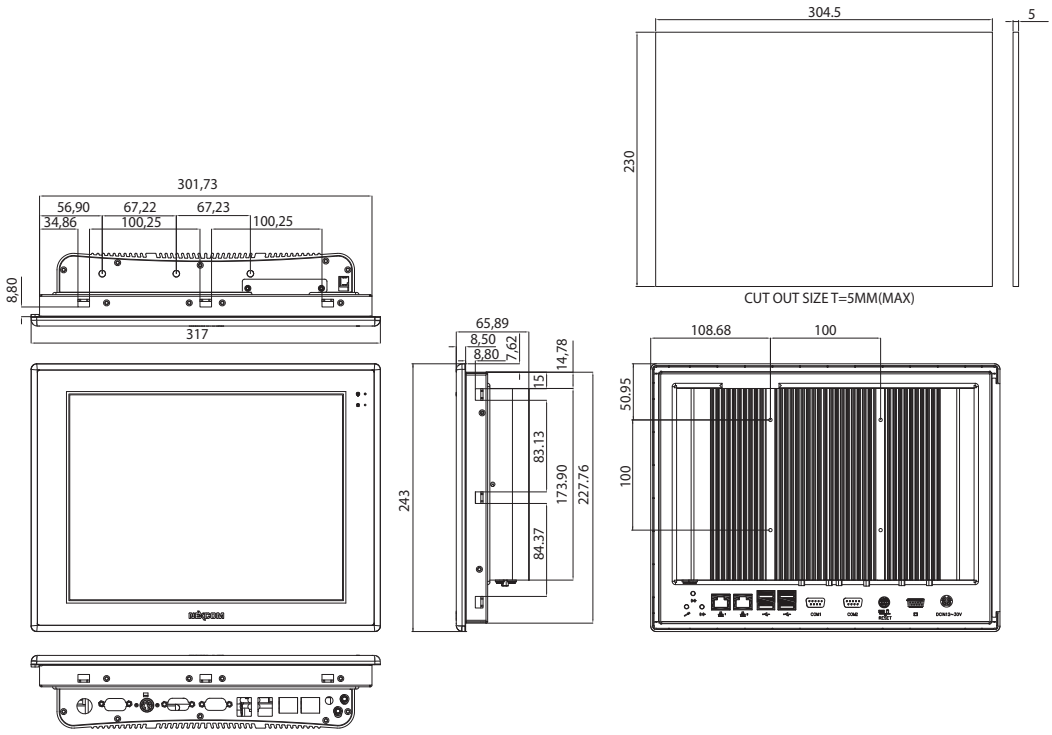
Rear I/O

- Ethernet: 2 x RJ45
- 2nd display VGA port: 1 x DB15
- Audio port: 1 x Line-out; 1 x Line-in; 1 x MIC-in
- USB: 4 x USB2.0
- PS2 keyboard/mouse
- Power switch/Reset button
- COM #1: RS232/422/485 w/ RI or 5V selection
- COM #2: RS232/422/485 w/ RI or 12V selection

For APPC1231T only

- DIO w/ 2.5kv isolated:
- 4 x Digital Input (Source type)
  - Input Voltage (Dry Contact): Logic 0: Close to GND
  - Logic 1: Open
  - Input Voltage: Logic 0: 3V max
  - Logic 1: +5V ~ +30V
- 4 x Digital Output (Sink type)

Dimension Drawing



- Output Voltage: 3.6V ~ 5V
- Sink current: 200 mA max. per channel

- GPIO: 2 x digital in/2 x digital out
- COM #1: RS232/422/485 w/ 2.5kv isolated
- COM #2: RS232/422/485 w/ 2.5kv isolated
- COM #3: RS232 w/ RI or 5V selection
- COM #4: RS232 w/ RI or 12V selection

Audio

- AC97 codec: Realtek ALC886-GR
- Audio interface: Line-out/Line-in/MIC-in Audio Jack

Ethernet

- LAN chip: dual Intel® 82574L Gigabit LAN
- Ethernet interface: 10/100/1000 Based-Tx Ethernet compatible

Mechanical & Environment

- Color: pantone black\RAL 15 00 front bezel w/ Pantone 400C\RAL 090 80 10 metal style membrane
- IP protection: IP65 front
- Mounting: panel/wall/stand/VESA 100mm x 100mm
- Power input: 12V~ 30VDC
- Power adapter: Optional AC to DC power adaptor (+12V, 60W)
- Vibration:
  - IEC 68 2-64 (w/ HDD)
  - 1Grms @ sine, 5~500Hz, 1hr/axis (HDD Operating)
  - 2Grms @ sine, 5~500Hz, 1hr/axis (CFast Operating)
  - 2.2Grms @ random condition, 5~500Hz, 0.5hr/axis (Non-operating)
- Shock:
  - IEC 68 2-27
  - HDD: 20G@wall mount, half sine, 11ms
- Operating temperature: -5°C to 60°C
- Storage temperature: -20°C to 75°C
- Operating humidity: 10%~90% relative humidity, non-condensing Limits to be at 90% RH at max 50°C
- Dimension: 317 x 243 x 65.89mm
- Weight: 3.9 Kg

Certifications

- CE approval
- FCC Class A

Ordering Information

Barebone

- **APPC 1230T-2G (P/N: 10IA1230T02X0)**
  12.1" SVGA LED Backlight Touch Panel PC, Intel® Atom™ D2550 1.86 GHz, touch screen, 2GB DDR3, 2 x RS232/422/485
- **APPC 1231T-2G (P/N: 10IA1231T02X0)**
  12.1" SVGA LED Backlight Touch Panel PC, Intel® Atom™ D2550 1.86 GHz, touch screen, 2GB DDR3, 2 x RS232/422/485 and 4 x 4 DI/O with isolated protection, 2 x RS232, 2 x 2 GPI/O, Brightness adjustment buttons
- **APPC 1232T-FBI (P/N: A0IA1232T00X0)**
  12.1" SVGA LED Backlight Touch Panel PC, Intel® Atom™ D2550 1.86 GHz, touch screen, 4GB DDR3, 2 xRS232/422/485 and 4 x 4 DI/O with isolated protection, Brightness adjustment buttons, fieldbus module installed
- **APPC 1237T-FBI (P/N: A0IA1237T00X0)**
  12.1" XGA LED Backlight Touch Panel PC, Intel® Atom™ D2550 1.86 GHz, touch screen, 4GB DDR3, 2 x RS232/422/485 and 4 x 4 DI/O with isolated protection, Brightness adjustment buttons, fieldbus module installed
- **ProfiNET Master Interface: FBI90E-PNM for APPC (Protocol Option P/N: 88IA1932T00X0)**
- **Ethernet/IP Interface: FBI90E-EP for APPC (Protocol Option P/N: 88IA1932T01X0)**
- **EtherCAT Master Interface: FBI90E-ECM for APPC (Protocol Option P/N: 88IA1932T02X0)**
- **Profibus Master Interface: FBI90E-PBM for APPC (Protocol Option P/N: 88IA1932T03X0)**
- **DeviceNet Master Interface: FBI90E-DNM for APPC (Protocol Option P/N: 88IA1932T04X0)**

Options

- **12V, 60W AC/DC power adapter w/ o power cord (P/N: 7400060017X00)**

APPC 1530T/1531T

15" TFT XGA 4:3 Flush Panel PC with Intel® Atom™ D2550, 1.86GHz, Touch Screen, 2GB DDR3, 4 x USB, 4 x COM and VGA

APPC 1531T

APPC 1532T

Main Features

- 4:3 15" XGA Fanless LED Panel Computer
- Intel® Atom™ D2550, Dual Core, Low Consumption CPU
- Flush Panel by 5-wire Touch Screen
- Dual GbE/2nd display-VGA/Line-in/Line-out/MIC-in/PS2 KB/MS
- USB x 4/2 x Mini-PCIe sockets/1 x CFast/2 x RS232/422/485
- Optional 3.5G/Wi-Fi Module/2.5" HDD/2 x COMs/GPIO/DIO
- DDR3 2GB/2.5" HDD Bracket
- IP65 Compliant Front Panel
- Mounting Support: Panel/Wall/Stand/VESA 100mm x 100mm
- Wide Range Power Input 12V~30VDC

Product Overview

The 15" fanless panel PC APPC 1530T/1531T incorporating an industrial motherboard is intended for versatile industrial applications. The panel PC has a touch screen LED backlight LCD panel with 1024 x 768 (XGA) resolution and 400-nit brightness. The front panel which adopts flush design and complies with IP65 standard makes it the perfect fit in industrial applications.

The APPC 1530T/1531T supports WWAN/WLAN expansion and others via dual Gigabit Ethernet connectors, two Mini-PCIe slots and one SIM card holder. With support for wide power input of 12V~30V, APPC 1530T/1531T can gain a strong foothold in industrial field and machine devices. In addition, APPC 1530T/1531T can hook 2nd display via a VGA port for dual independent display. APPC 1531T has two isolated RS232/422/485 ports, two RS232 ports supporting 5V and 12V power feed, four isolated channels of DI and DO, and two channels of GPI and GPO.

Specifications

Panel

- LED Size: 15", 4:3
- Resolution: XGA 1024 x 768
- Luminance: 400cd/m²
- Contrast ratio: 700
- LCD color: 16.2M
- Viewing Angle: 60 (U), 80(D), 80(L), 80(R)
- Backlight: LED

Touch Screen

- 5-wire resistive (flush panel type)
- Light transmission: 80%
- Interface: USB

System

- CPU: On-board Intel® Atom™ Dual Core processor D2550, 1.86GHz, 1M L2 Cache
- BIOS: AMI BIOS
- System chipset: Intel® NM10 Express chipset
- System memory: 2 x 204-pin DDR3 SO-DIMM socket, 2GB DDR3 (Default),Support up to 4GB DDR3-800/1066, Non-ECC and Un-buffered
- Storage Device:
  - 1 x external locked CFast socket
  - 1 x hard drive bay: optional 1 x 2.5" SATA HDD or 1 x SATA DOM
- Watchdog timer: Watchdog timeout can be programmable by software from 1 second to 255 seconds and from 1 minute to 255 minutes (Tolerance 15% under room temperature 25°C)
- H/W status monitor: Monitoring system temperature, and voltage
- Expansion: 2 x Mini-PCIe sockets (support optional Wi-Fi or 3.5G module)
- Panel backlight control button: Increase brightness/decrease brightness/Backlight On/Off (For APPC1531T only)

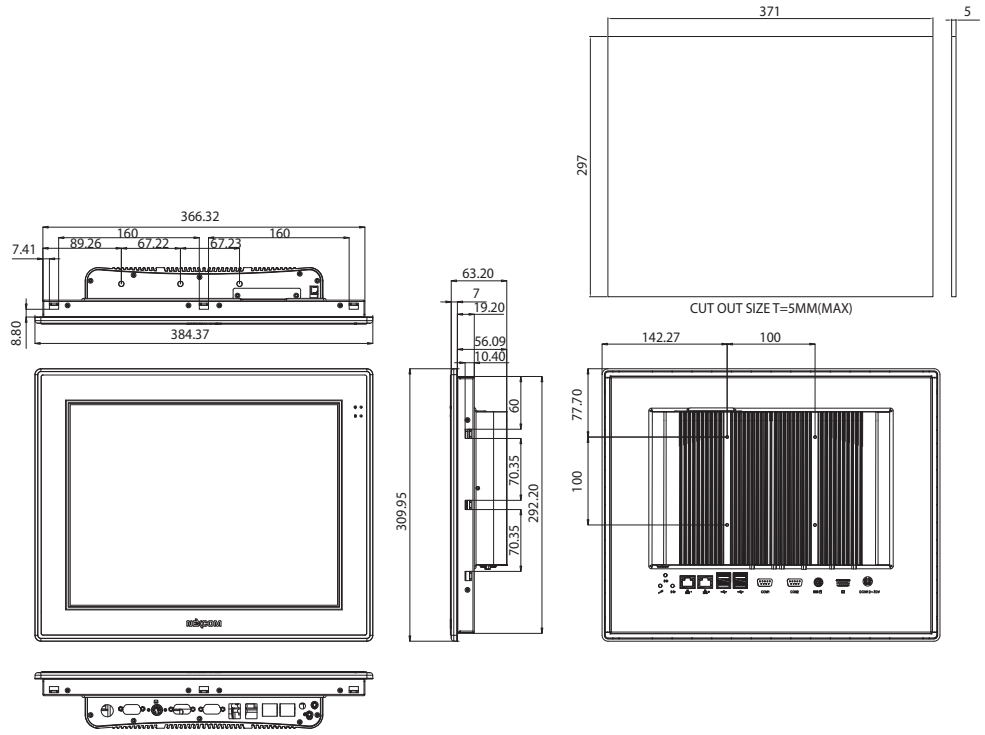
Rear I/O

- Ethernet: 2 x RJ45
- 2nd display VGA port: 1 x DB15
- Audio port: 1 x Line-out; 1 x Line-in; 1 x MIC-in
- USB: 4 x USB2.0
- PS2 keyboard/mouse
- Power switch
- Reset button
- COM #1: RS232/422/485 w/ RI or 5V selection
- COM #2: RS232/422/485 w/ RI or 12V selection

For APPC 1531T only

- DIO w/ 2.5kv isolated:
  - 4 x Digital Input (Source type)
  - Input Voltage (Dry Contact): Logic 0: Close to GND
  - Logic 1: Open
  - Input Voltage: Logic 0: 3V max
  - Logic 1: +5V ~ +30V
  - 4 x Digital Output (Sink type)

Dimension Drawing



- Output Voltage: 3.6V~5V
- Sink current: 200 mA max. per channel

- GPIO: 2 x digital in/2 x digital out
- COM #1: RS232/422/485 w/ 2.5kv isolated
- COM #2: RS232/422/485 w/ 2.5kv isolated
- COM #3: RS232 w/ RI or 5V selection
- COM #4: RS232 w/ RI or 12V selection

Audio

- AC97 codec: Realtek ALC886-GR
- Audio interface: Line-out/Line-in/MIC-in Audio Jack

Ethernet

- LAN chip: dual Intel® 82574L Gigabit LAN
- Ethernet interface: 10/100/1000 Based-Tx Ethernet compatible

Mechanical & Environment

- Color: pantone black\RAL 15 00 front bezel w/ Pantone 400C\RAL 090 80 10 metal style membrane
- IP protection: IP65 front
- Mounting: panel/wall/stand/VESA 100mm x 100mm
- Power input: 12V~30VDC
- Power adapter: Optional AC to DC power adaptor (+12V, 60W)
- Vibration:
  - IEC 68 2-64 (w/ HDD)
  - 1Grms @ sine, 5~500Hz, 1hr/axis (HDD Operating)
  - 2Grms @ sine, 5~500Hz, 1hr/axis (CFast Operating)
  - 2.2Grms @ random condition, 5~500Hz, 0.5hr/axis (Non-operating)
- Shock:
  - IEC 68 2-27
  - HDD: 20G@wall mount, half sine, 11ms
- Operating temperature: -5°C to 60°C
- Storage temperature: -20°C to 75°C
- Operating humidity: 10%~90% relative humidity, non-condensing Limits to be at 90% RH at max 50°C
- Dimension: 384.37 x 309.95 x 63.2mm
- Weight: 5 Kg

Certifications

- CE approval
- FCC Class A

Ordering Information

Barebone

- **APPC 1530T-2G (P/N: 10IA1530T02X0)**
  15" XGA LED Backlight Touch Panel PC, Intel® Atom™ D2550 1.86 GHz, touch screen, 2GB DDR3,2 x RS232/422/485
- **APPC 1531T-2G (P/N: 10IA1531T02X0)**
  15" XGA LED Backlight Touch Panel PC, Intel® Atom™ D2550 1.86 GHz, touch screen, 2GB DDR3, 2 x RS232/422/485 and 4 x 4 DI/O with isolated protection, 2 x RS232, 2 x 2 GPI/O, Brightness adjustment buttons
- **APPC 1532T-FBI (P/N: A0IA1532T00X0)**
  15" XGA LED Backlight Touch Panel PC, Intel® Atom™ D2550 1.86 GHz, touch screen, 4GB DDR3, 2 x RS232/422/485 and 4 x 4 DI/O with isolated protection, Brightness adjustment buttons, fieldbus module installed
- **ProfiNET Master Interface: FBI90E-PNM for APPC (Protocol Option P/N: 88IA1932T00X0)**
- **Ethernet/IP Interface: FBI90E-EP for APPC (Protocol Option P/N: 88IA1932T01X0)**
- **EtherCAT Master Interface: FBI90E-ECM for APPC (Protocol Option P/N: 88IA1932T02X0)**
- **Profibus Master Interface: FBI90E-PBM for APPC (Protocol Option P/N: 88IA1932T03X0)**
- **DeviceNet Master Interface: FBI90E-DNM for APPC (Protocol Option P/N: 88IA1932T04X0)**

Options

- **12V, 60W AC/DC power adapter w/ o power cord (P/N: 7400060017X00)**

APPC 1730T/1731T

17" TFT SXGA 4:3 Flush Panel PC with Intel® Atom™ D2550, 1.86GHz, Touch Screen, 2GB DDR3, 4 x USB, 4 x COM and VGA

APPC 1731T

APPC 1732T

Main Features

- 4:3 17" SXGA Fanless Panel Computer
- Intel® Atom™ D2550, Dual Core, Low Consumption CPU
- Flush Panel by 5-wire Touch Screen
- Dual GbE/2nd display-VGA/Line-in/Line-out/MIC-in/PS2 KB/MS
- USB x 4/2 x Mini-PCIe sockets/1 x CFast/2 x RS232/422/485
- Optional 3.5G/Wi-Fi Module/2.5" HDD/2 x COMs/GPIO/DIO
- DDR3 2GB/2.5" HDD Bracket
- IP65 Compliant Front Panel
- Mounting Support: Panel/Wall/Stand/VESA 100mm x 100mm
- Wide Range Power Input 12V~30VDC

Product Overview

The 17" fanless panel PC APPC 1730T/1731T incorporating an industrial motherboard is intended for versatile industrial applications. The panel PC has a touch screen LCD panel with 1280 x 1024 (SXGA) resolution and 380-nit brightness. The front panel which adopts flush design and complies with IP65 standard makes it the perfect fit in industrial applications.

The APPC 1730T/1731T supports WWAN/WLAN expansion and others via dual Gigabit Ethernet connectors, two Mini-PCIe slots and one SIM card holder. With support for wide power input of 12V~30V, APPC 1730T/1731T can gain a strong foothold in industrial field and machine devices. In addition, APPC 1730T/1731T can hook 2nd display via a VGA port for dual independent display. APPC 1731T has two isolated RS232/422/485 ports, two RS232 ports supporting 5V and 12V power feed, four isolated channels of DI and DO, and two channels of GPI and GPO.

Specifications

Panel

- LED Size: 17", 4:3
- Resolution: SXGA 1280 x 1024
- Luminance: 380cd/m^2
- Contrast ratio: 1000
- LCD color: 16.7M
- Viewing Angle: 80(U), 80(D), 85(L), 85(R)
- Backlight: CCFL

Touch Screen

- 5-wire resistive (flush panel type)
- Light transmission: 81%
- Interface: USB

System

- CPU: On-board Intel® Atom™ Dual Core processor D2550, 1.86GHz, 1M L2 Cache
- BIOS: AMI BIOS
- System chipset: Intel® NM10 Express chipset
- System memory: 2 x 204-pin DDR3 SO-DIMM socket, 2GB DDR3 (Default)
- Support up to 4GB DDR3-800/1066, Non-ECC and Un-buffered
- Storage Device:
  - 1 x external locked CFast socket
  - 1 x hard drive bay: optional 1 x 2.5" SATA HDD or 1 x SATA DOM
- Watchdog timer: Watchdog timeout can be programmable by software from 1 second to 255 seconds and from 1 minute to 255 minutes (Tolerance 15% under room temperature 25°C)
- H/W status monitor: Monitoring system temperature, and voltage
- Expansion: 2 x Mini-PCIe sockets (support optional Wi-Fi or 3.5G module)
- Panel backlight control button: Increase brightness/decrease brightness/Backlight On/Off (For APPC1731T only)

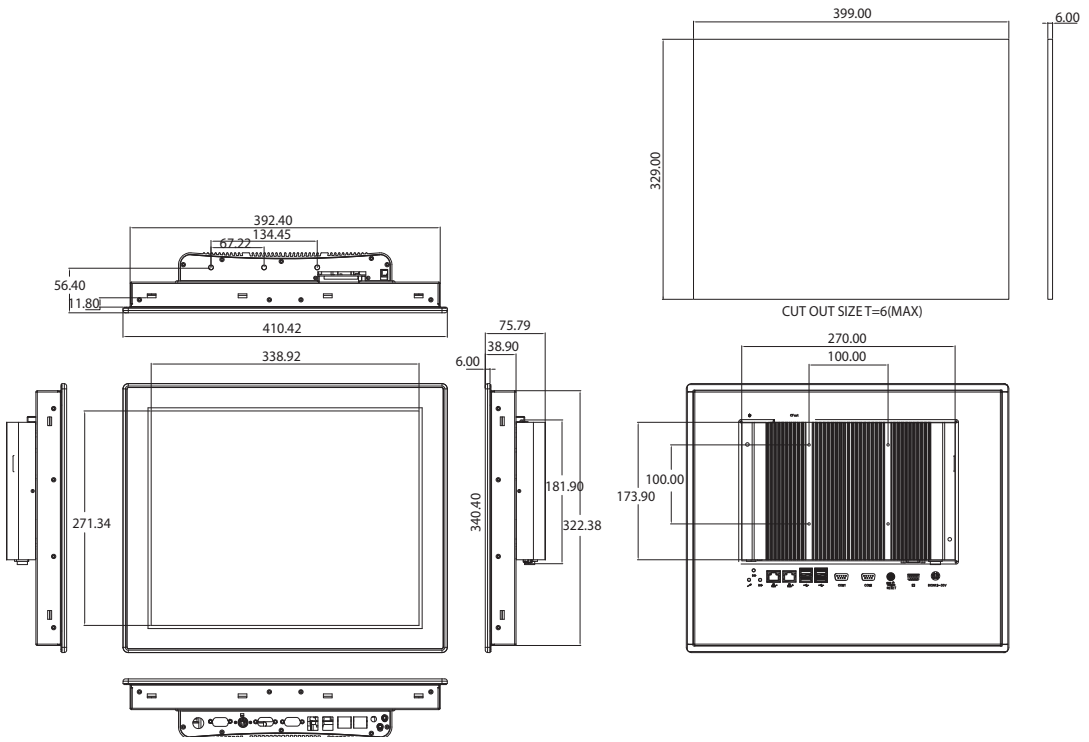
Rear I/O

- Ethernet: 2 x RJ45
- 2nd display VGA port: 1 x DB15
- Audio port: 1 x Line-out; 1 x Line-in; 1 x MIC-in
- USB: 4 x USB2.0
- PS2 keyboard/mouse
- Power switch
- Reset button
- COM #1: RS232/422/485 w/ RI or 5V selection
- COM #2: RS232/422/485 w/ RI or 12V selection

For APPC1731T only

- DIO w/ 2.5kv isolated:
  - 4 x Digital Input (Source type)
  - Input Voltage (Dry Contact): Logic 0: Close to GND
  - Logic 1: Open
  - Input Voltage: Logic 0: 3V max

Dimension Drawing



- Logic 1: +5V ~ +30V
- 4 x Digital Output (Sink type)
- Output Voltage: 3.6V~5V
- Sink current: 200 mA max. per channel

- GPIO: 2 x digital in/2 x digital out
- COM #1: RS232/422/485 w/ 2.5kv isolated
- COM #2: RS232/422/485 w/ 2.5kv isolated
- COM #3: RS232 w/ RI or 5V selection
- COM #4: RS232 w/ RI or 12V selection

Audio

- AC97 codec: Realtek ALC886-GR
- Audio interface: Line-out/Line-in/MIC-in Audio Jack

Ethernet

- LAN chip: dual Intel® 82574L Gigabit LAN
- Ethernet interface: 10/100/1000 Based-Tx Ethernet compatible

Mechanical & Environment

- Color: pantone black\RAL 15 00 front bezel w/ Pantone 400C\RAL 090 80 10 metal style membrane
- IP protection: IP65 front
- Mounting: panel/wall/stand/VESA 100mm x 100mm
- Power input: 12V~30VDC
- Power adapter: Optional AC to DC power adaptor (+12V, 60W)
- Vibration:
  - IEC 68 2-64 (w/ HDD)
  - 1Grms @ sine, 5~500Hz, 1hr/axis (HDD Operating)
  - 2Grms @ sine, 5~500Hz, 1hr/axis (CFast Operating)
  - 2.2Grms @ random condition, 5~500Hz, 0.5hr/axis (Non-operating)
- Shock:
  - IEC 68 2-27
  - HDD: 20G@wall mount, half sine, 11ms
- Operating temperature: -5°C to 50°C
- Storage temperature: -20°C to 75°C
- Operating humidity: 10%~90% relative humidity, non-condensing Limits to be at 90% RH at max 50°C
- Dimension: 410.4 x 340.4 x 75.79mm
- Weight: 6.6 Kg

Certifications

- CE approval
- FCC Class A

Ordering Information

Barebone

- **APPC 1730T-2G (P/N: 10IA1730T03X0)**
  17" SXGA CCFL Backlight Touch Panel PC, Intel® Atom™ D2550 1.86 GHz, touch screen, 2GB DDR3, 2 x RS232/422/485
- **APPC 1731T-2G (P/N: 10IA1731T02X0)**
  17" SXGA CCFL Backlight Touch Panel PC, Intel® Atom™ D2550 1.86 GHz, touch screen, 2GB DDR3, 2 x RS232/422/485 and 4 x 4 DI/O with isolated protection, 2 x RS232, 2 x 2 GPI/O, Brightness adjustment buttons
- **APPC 1732T-FBI (P/N: A0IA1732T00X0)**
  17" SXGA CCFL Backlight Touch Panel PC, Intel® Atom™ D2550 1.86 GHz, touch screen, 4GB DDR3, 2 x RS232/422/485 and 4 x 4 DI/O with isolated protection, Brightness adjustment buttons, fieldbus module installed
- **ProfiNET Master Interface: FBI90E-PNM for APPC (Protocol Option P/N: 88IA1932T00X0)**
- **Ethernet/IP Interface: FBI90E-EP for APPC (Protocol Option P/N: 88IA1932T01X0)**
- **EtherCAT Master Interface: FBI90E-ECM for APPC (Protocol Option P/N: 88IA1932T02X0)**
- **Profibus Master Interface: FBI90E-PBM for APPC (Protocol Option P/N: 88IA1932T03X0)**
- **DeviceNet Master Interface: FBI90E-DNM for APPC (Protocol Option P/N: 88IA1932T04X0)**

Options

- **12V, 60W AC/DC power adapter w/ o power cord (P/N: 7400060017X00)**

APPC 1930T/1931T

19" TFT SXGA 4:3 Flush Panel PC with Intel® Atom™ D2550, 1.86GHz, Touch Screen, 2GB DDR3, 4 x USB, 4 x COM and VGA

APPC 1931T

APPC 1932T

Main Features

- 4:3 19" SXGA Fanless LED Panel Computer
- Intel® Atom™ D2550, Dual Core, Low Consumption CPU
- Flush Panel by 5-wire Touch Screen
- Dual GbE/2nd display-VGA/Line-in/Line-out/MIC-in/PS2 KB/MS
- USB x 4/2 x Mini-PCIe sockets/1 x CFast/2 x RS232/422/485
- Optional 3.5G/Wi-Fi Module/2.5" HDD/2 x COMs/GPIO/DIO
- DDR3 2GB/2.5" HDD Bracket
- IP65 Compliant Front Panel
- Mounting Support: Panel/Wall/Stand/VESA 100mm x 100mm
- Wide Range Power Input 12V~ 30VDC

Product Overview

The 19" fanless panel PC APPC 1930T/1931T incorporating an industrial motherboard is intended for versatile industrial applications. The panel PC has a touch screen LED backlight LCD panel with 1280 x 1024 (SXGA) resolution. The front panel which adopts flush design and complies with IP65 standard makes it the perfect fit in industrial applications.

The APPC 1930T/1931T supports WWAN/WLAN expansion and others via dual Gigabit Ethernet connectors, two Mini-PCIe slots and one SIM card holder. With support for wide power input of 12V~30V, APPC 1930T/1931T can gain a strong foothold in industrial field and machine devices. In addition, APPC 1930T/1931T can hook 2nd display via a VGA port for dual independent display. APPC 1931T has two isolated RS232/422/485 ports, two RS232 ports supporting 5V and 12V power feed, four isolated channels of DI and DO, and two channels of GPI and GPO.

Specifications

Panel

- LED Size: 19", 4:3
- Resolution: SXGA 1280 x 1024
- Luminance: 350cd/m^2
- Contrast ratio: 1000
- LCD color: 16.7M
- Viewing Angle: 80(U), 80(D), 85(L), 85(R)
- Backlight: LED

Touch Screen

- 5-wire resistive (flush panel type)
- Light transmission: 81%
- Interface: USB

System

- CPU: On-board Intel® Atom™ Dual Core processor D2550, 1.86GHz, 1M L2 Cache
- BIOS: AMI BIOS
- System chipset: Intel® NM10 Express chipset
- System memory: 2 x 204-pin DDR3 SO-DIMM socket, 2GB DDR3 (Default),Support up to 4GB DDR3-800/1066, Non-ECC and Un-buffered
- Storage Device:
  - 1 x external locked CFast socket
  - 1 x hard drive bay: optional 1 x 2.5" SATA HDD or 1 x SATA DOM
- Watchdog timer: Watchdog timeout can be programmable by software from 1 second to 255 seconds and from 1 minute to 255 minutes (Tolerance 15% under room temperature 25°C)
- H/W status monitor: Monitoring system temperature, and voltage
- Expansion: 2 x Mini-PCIe sockets (support optional Wi-Fi or 3.5G module)
- Panel backlight control button: Increase brightness/decrease brightness/Backlight On/Off (For APPC 1931T only)

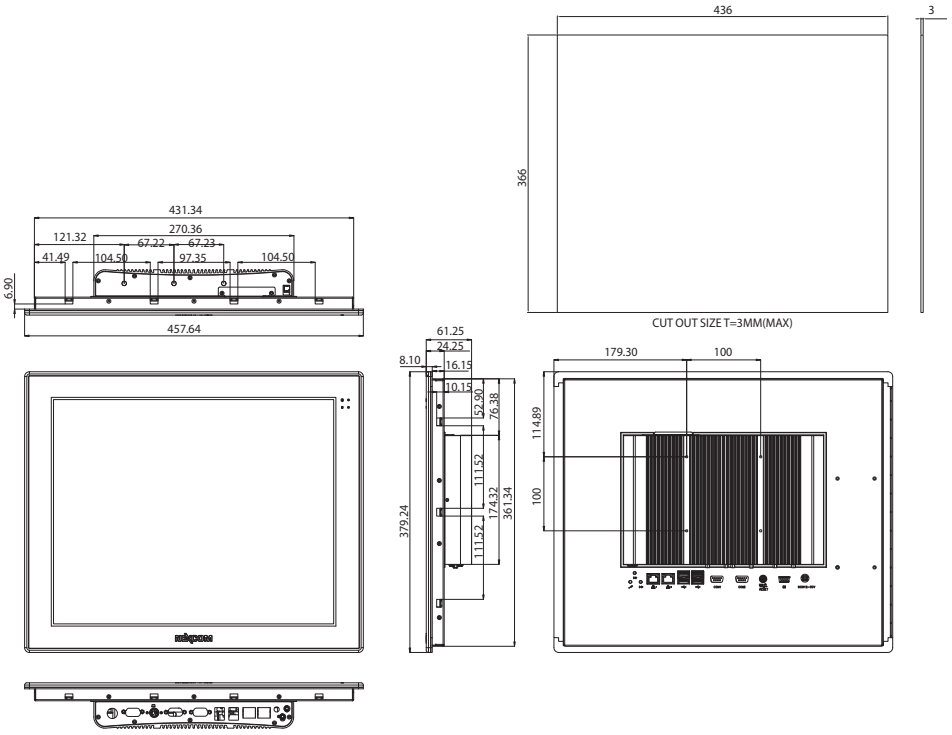
Rear I/O

- Ethernet: 2 x RJ45
- 2nd display VGA port: 1 x DB15
- Audio port: 1 x Line-out; 1 x Line-in; 1 x MIC-in
- USB: 4 x USB2.0
- PS2 keyboard/mouse
- Power switch
- Reset button
- COM #1: RS232/422/485 w/ RI or 5V selection
- COM #2: RS232/422/485 w/ RI or 12V selection

For APPC1931T only

- DIO w/ 2.5kv isolated:
  - 4 x Digital Input (Source type)
  - Input Voltage (Dry Contact): Logic 0: Close to GND
  - Logic 1: Open
  - Input Voltage: Logic 0: 3V max
  - Logic 1: +5V~+30V

Dimension Drawing



- 4 x Digital Output (Sink type)
- Output Voltage: 3.6V~5V
- Sink current: 200 mA max. per channel

- GPIO: 2 x digital in/2 x digital out
- COM #1: RS232/422/485 w/ 2.5kv isolated
- COM #2: RS232/422/485 w/ 2.5kv isolated
- COM #3: RS232 w/ RI or 5V selection
- COM #4: RS232 w/ RI or 12V selection

Audio

- AC97 codec: Realtek ALC886-GR
- Audio interface: Line-out/Line-in/MIC-in Audio Jack

Ethernet

- LAN chip: dual Intel® 82574L Gigabit LAN
- Ethernet interface: 10/100/1000 Based-Tx Ethernet compatible

Mechanical & Environment

- Color: pantone black\RAL 15 00 front bezel w/ Pantone 400C\RAL 090 80 10 metal style membrane
- IP protection: IP65 front
- Mounting: panel/wall/stand/VESA 100mm x 100mm
- Power input: 12V~30VDC
- Power adapter: Optional AC to DC power adaptor (+12V, 60W)
- Vibration:
  - IEC 68 2-64 (w/ HDD)
  - 1Grms @ sine, 5~500Hz, 1hr/axis (HDD Operating)
  - 2Grms @ sine, 5~500Hz, 1hr/axis (CFast Operating)
  - 2.2Grms @ random condition, 5~500Hz, 0.5hr/axis (Non-operating)
- Shock:
  - IEC 68 2-27
  - HDD: 20G@wall mount, half sine, 11ms
- Operating temperature: -5°C to 50°C
- Storage temperature: -20°C to 75°C
- Operating humidity: 10%~90% relative humidity, non-condensing Limits to be at 90% RH at max 50°C
- Dimension: 457.64 x 379.24 x 61.25mm
- Weight: 6.5 Kg

Certifications

- CE approval
- FCC Class A

Ordering Information

Barebone

- **APPC 1930T-2G (P/N: 10IA1930T04X0)**
  19" SXGA LED Backlight Touch Panel PC, Intel® Atom™ D2550 1.86 GHz, touch screen, 2GB DDR3, 2 x RS232/422/485
- **APPC 1931T-2G (P/N: 10IA1931T02X0)**
  19" SXGA LED Backlight Touch Panel PC, Intel® Atom™ D2550 1.86 GHz, touch screen, 2GB DDR3, 2 x RS232/422/485 and 4 x 4 DI/O with isolated protection, 2 x RS232, 2 x 2 GPI/O, Brightness adjustment buttons
- **APPC 1932T-FBI (P/N: A0IA1932T00X0)**
  19" SXGA LED Backlight Touch Panel PC, Intel® Atom™ D2550 1.86 GHz, touch screen, 4GB DDR3, 2 x RS232/422/485 and 4 x 4 DI/O with isolated protection, Brightness adjustment buttons, fieldbus module installed
- **ProfiNET Master Interface: FBI90E-PNM for APPC (Protocol Option P/N: 88IA1932T00X0)**
- **Ethernet/IP Interface: FBI90E-EP for APPC (Protocol Option P/N: 88IA1932T01X0)**
- **EtherCAT Master Interface: FBI90E-ECM for APPC (Protocol Option P/N: 88IA1932T02X0)**
- **Profibus Master Interface: FBI90E-PBM for APPC (Protocol Option P/N: 88IA1932T03X0)**
- **DeviceNet Master Interface: FBI90E-DNM for APPC (Protocol Option P/N: 88IA1932T04X0)**

Options

- **12V, 60W AC/DC power adapter w/ o power cord (P/N: 7400060017X00)**

IPPC 1560T

15" TFT XGA 4:3 Heavy Industrial Panel PC with
3rd Generation Intel® Core™ i5, 2.7GHz

IPPC 1560TP2E-DC

IPPC 1560TP2E-AC

IPPC 1560TE

Main Features

- 4:3 15" XGA Fanless Panel Computer
- Powerful 2nd/3rd generation Intel® Core™ processor
- Two expansion slots for add-on PCI or/and PCIe cards
- Optional 3.5G/Wi-Fi module/2.5" HDD/3 x Coms/GPIO/DIO/ Dimming Control Button
- Front accessible USB2.0 for easy of field maintenance
- Metal housing with robust aluminum front bezel for harsh environment
- IP65 compliant front panel
- Support fieldbus module, JMobile HMI, Citect SCADA and CODESYS SoftLogic (optional)
- Optional: wide range DC power input model/isolation protection DC power input model

Product Overview

IPPC 1560T is a heavy industrial panel PC equipped with powerful 2nd/3rd generation Intel® Core™ processor, TFT LCD panel with LED backlight and user-friendly touch screen. It provides two expansion slots to support PROFINET, PROFIBUS, DeviceNet, EtherNet/IP and EtherCAT protocols. The NEMA4/IP66 rated heavy-duty aluminum front bezel and the vibration-resistant rugged chassis are specifically designed for outdoor and harsh industrial environments. IPPC 1560T is ideal for use in oil and gas rig, wind farms, chemical factories, pharmaceutical factories, and hazardous working area.

Specifications

System

- CPU: Support 2nd/3rd gen. Intel® Core™ processor family, rPGA 988
  - Intel® Core™ i7-3520ME (2 x 2.9GHz, 4M cache, Max. TDP 35W)
  - Intel® Core™ i5-3610ME (2 x 2.7GHz, 3M cache, Max. TDP 35W) (Default)
  - Intel® Core™ i3-3120ME (2 x 2.4GHz, 3M cache, Max. TDP 35W)
  - Intel® Celeron® B810 (2 x 1.6GHz, 2M cache, Max. TDP 35W)
  - Intel® Pentium® B950 (2 x 2.1GHz, 2M cache, Max. TDP 35W)
- BIOS: AMI BIOS
- System chipset: Intel® HM76 Express chipset
- System memory: 1 x 204-pin DDR3 SO-DIMM socket, 4G DDR3 (Default), support up to 8GB DDR3-1066/1333, non-ECC and un-buffered
- Storage device:
  - 1 x external locked CFast socket
  - 2 x hard drive bay: optional 2 x 2.5" SATA HDD
  - 1 x SATA DOM (optional)
- Watchdog timer: Watchdog timeout can be programmable by software from 1 second to 255 seconds and from 1 minute to 255 minutes (Tolerance 15% under room temperature 25°C)
- H/W status monitor: monitoring system temperature, and voltage
- Expansion:
  2 x Mini-PCIe sockets (support optional Wi-Fi or 3.5G module)
  2 x expansion slots for add-on PCI or/and PCIe cards
  - 1 x PCI and 1 x PCIex4 slots (Default)
  - 2 x PCIex4 slots
  - 2 x PCI slots
- Panel backlight control button: increase brightness/decrease brightness/backlight on/off (for IPPC 1560TP2E-AC only)

Rear I/O

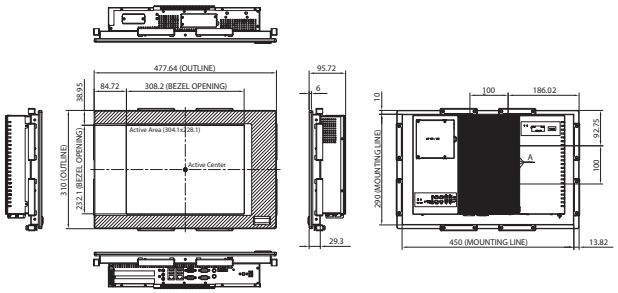
For All
- 2 x PS2 keyboard/mouse
- 2nd display VGA port: 1 x DB15
- Ethernet: 2 x RJ45

For IPPC 1560TP2E-DC only
- USB: 5 x USB2.0 (1 in front)
- Audio port: 1 x Line-out; 1 x Line-in; 1 x MIC-in
- COM #1: RS232/422/485 w/ RI or 5V or 12V selection
- COM #2: RS232/422/485 w/ RI or 5V or 12V selection
- COM #3: RS232 w/ RI or 5V or 12V selection
- ATX power switch
- Reset button

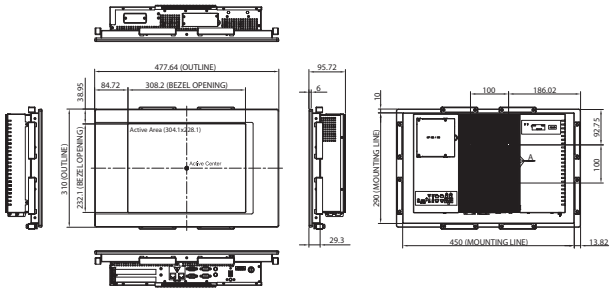
For IPPC 1560TP2E-AC only
- USB: 5 x USB2.0 (1 in front)
- Audio port: 1 x Line-out; 1 x Line-in; 1 x MIC-in
- COM #1: RS232/422/485 w/ 2.5kv isolated protection
- COM #2: RS232/422/485 w/ 2.5kv isolated protection
- COM #3: RS232 w/ RI or 5V or 12V selection
- COM #4: RS232 w/ RI or 5V or 12V selection
- COM #5: RS232
- COM #6: RS232
- DIO w/ 2.5kv isolated protection:
  - 4 x Digital Input (Source type)
  - 4 x Digital Output (Sink type)
- GPIO: 4 x digital in/4 x digital out
- LPT: Parallel port
- AC Power switch
- Reset button

For IPPC 1560TE only

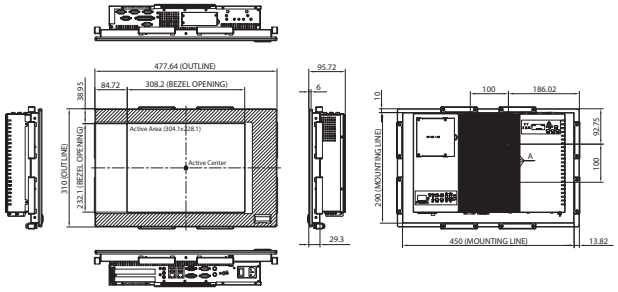
Dimension Drawing



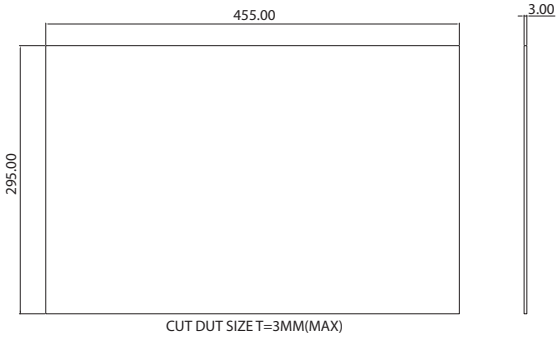
IPPC 1560TP2E-DC



IPPC 1560TE



IPPC 1560TP2E-AC



- USB: 4 x USB2.0 (Hidden)
- COM #1: RS232/422/485 w/ 2.5kv isolated protection
- COM #2: RS232/422/485 w/ 2.5kv isolated protection
- COM #3: RS232 w/ RI or 5V or 12V selection
- ATX Power switch
- Reset button

Audio

- AC97 codec: Realtek ALC886-GR
- Audio interface: Line-out/Line-in/MIC-in audio Jack

Ethernet

- LAN chip: dual Intel® 82574L Gigabit LAN
- Ethernet interface: 10/100/1000 Based-Tx Ethernet compatible

Fieldbus

- IPPC 1560TP2E-DC/IPPC 1560TE: support up to two fieldbus module (1 universal kit and 1 special kit)
- IPPC 1560TP2E-AC: support one special fieldbus module kit

Mechanical & Environment

- Color: pantone 432C\ RAL 70 24 front bezel
- Enclosure: aluminum front bezel with SPPC nickel plated housing
- IP protection: IP65 front
- Mounting: panel/wall/stand/VESA 100mm x 100mm
- Power

For IPPC 1560TP2E-DC
  - Power Input: +9 to 30VDC
  - Power Adapter: optional AC to DC DIN rail power adapter (+24V, 120W)

For IPPC 1560TP2E-AC
  - Power input: 100-240V~, 1.5A, 50-60Hz; fuse: 250VAC/3A
  - Power connector: AC inlet (IEC60320 C14)
  - Power supply: 120W

For IPPC 1560TE
  - Power input: +24V DC+-20% with 1.5kv isolated protection
  - Fuse: 250V/10A

- Vibration:
  - IEC 68 2-64 (w/ HDD)
  - 1Grms @ sine, 5~500Hz, 1hr/axis (HDD operating)
  - 2Grms @ sine, 5~500Hz, 1hr/axis (CFast operating)
  - 2.2Grms @ random condition, 5~500Hz, 0.5hr/axis (non-operating)
- Shock:
  - IEC 68 2-27
  - HDD: 20G @ wall mount, half sine, 11ms
- Operating temperature: -10°C to 50°C
  * Intel® Core™ i7/Intel® Celeron® B810/Intel® Pentium® B950: -10°C to 40°C
- Storage temperature: -20°C to 75°C
- Operating humidity: 10%~90% relative humidity, non-condensing Limits to be at 90% RH at max 50°C

Certifications

- CE (including EN61000-6-2/EN61000-6-4)
- FCC Class A

Ordering Information

System

- **IPPC 1560TP2E-DC (P/N: 10II1560T00X0)**
  15" XGA LED backlight fanless touch panel PC, Intel® Core™ i5-3610ME 2.7GHz, touch screen, 4GB DDR3, 3 x COMs, DC power input
- **IPPC 1560TP2E-AC (P/N: 10II1560T01X0)**
  15" XGA LED backlight fanless Touch panel PC, Intel® Core™ i5-3610ME 2.7GHz, touch screen, 4GB DDR3, 6 x COMs, 4 x 4GPIO, 4 x 4DIO with isolated protection, AC power input
- **IPPC 1560TE (P/N: 10II1560T02X0)**
  15" XGA LED backlight fanless touch panel PC, Intel® Core™ i5-3610ME 2.7GHz, touch screen, 4GB DDR3, 3 x COMs, isolated protection DC Power

Optional

- **24V/5A, 120W AC to DC DIN rail power adapter w/ o power cord (P/N: 7440120001X00) (for IPPC 1560TP2E-DC and IPPC 1560TE)**
- **Riser card 2 x PCI slots (P/N: 20JK036P200X0)**
- **Riser card 2 x PCIex4 slots (P/N: 20JK036E200X2)**
- **Fieldbus module universal kit (for IPPC 1560TP2E-DC and IPPC 1560TE)**

88J50090E00X0	FBI 90E-PNM kit (w/ 25 cm cable)	PROFINET master
88J50090E01X0	FBI 90E-EP kit (w/ 25 cm cable)	EtherNet/IP master
88J50090E02X0	FBI 90E-ECM kit (w/ 25 cm cable)	EtherCAT master
88J50090E03X0	FBI 90E-PBM kit (w/ 25 cm cable)	PROFIBUS master
88J50090E04X0	FBI 90E-DNM kit (w/ 25 cm cable)	DeviceNET master

IPPC 1632P

15.6" TFT WXGA 16:9 Heavy Industrial Panel PC with Intel® Atom™ D2550, 1.86GHz, Multi-Touch Screen, 4GB DDR3, 4 x USB, 2 x COM and VGA

Main Features

- Intel® Atom™ D2550, dual core, low power consumption CPU
- Metal housing with robust aluminum front zero bezel for harsh environment
- 10 points P-Cap multi-touch with zero bezel flush front design
- Dual GbE/2nd display-VGA/Line-out
- USB x 4/2 x Mini-PCIe sockets/1 x CFast/2 x RS232/422/485
- DDR3 4GB/2.5" HDD bracket
- IP66 compliant front panel
- Support fieldbus module, JMobile HMI, Citect SCADA and CODESYS SoftLogic (optional)
- Mounting support: panel/wall/stand/VESA 100mm x 100mm
- Wide range power input 12V~ 30V DC

Product Overview

The 15.6" fanless panel PC IPPC 1632P incorporating an industrial motherboard is intended for versatile industrial applications. The panel PC has a touch screen LED backlight LCD panel with 1366 x 768 (HD; WXGA) resolution. The front panel which adopts flush design and complies with IP66 standard makes it the perfect fit in industrial applications.

The IPPC 1632P supports WWAN/WLAN expansion and others via dual Gigabit Ethernet connectors, two Mini-PCIe slots and one SIM card holder. With support for wide power input of 12V~30V, IPPC 1632P can gain a strong foothold in industrial field and machine devices. In addition, IPPC 1632P can hook 2nd display via a VGA port for dual independent display. IPPC 1632P has two isolated RS232/422/485 ports, four isolated channels of DI and DO, and optional fieldbus ports.

Specifications

Panel

- LED size: 15.6", 16:9
- Resolution: WXGA 1366 x 768
- Luminance: 300cd/m^2
- Contrast ratio: 500
- LCD color: 16.7M
- Viewing angle: 80(U), 80(D), 85(L), 85(R)
- Backlight: LED

Touch

- Ten points P-Cap (Projected Capacitive Touch)
- Touch light transmission: 87%
- Anti-scratch surface: 7H hardness
- Touch interface: USB
- Windows 8 compliance

System

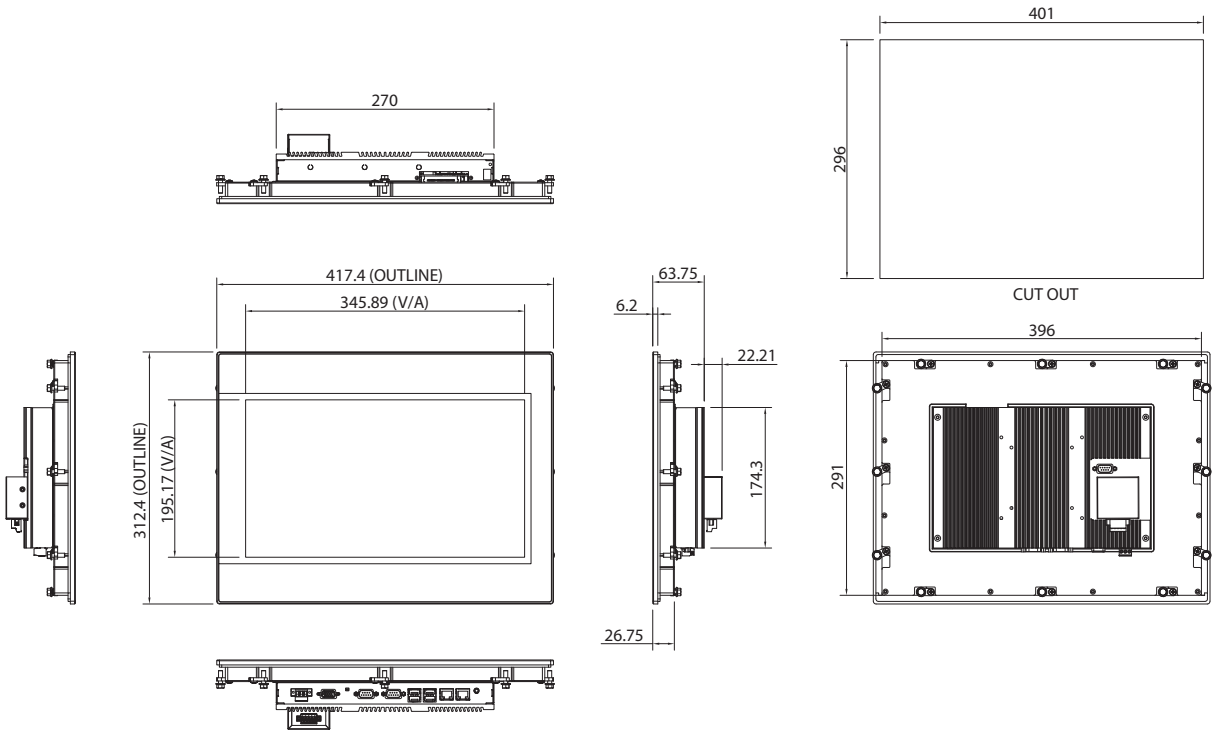
- CPU: On-board Intel® Atom™ dual core processor D2550, 1.86GHz, 1M L2 Cache
- BIOS: AMI BIOS
- System chipset: Intel® NM10 Express chipset
- System memory: 2 x 204-pin DDR3 SO-DIMM socket, 4GB DDR3 (Default),Support up to 4GB DDR3-800/1066, Non-ECC and Un-buffered
- Storage Device:
  - 1 x external locked CFast socket
  - 1 x hard drive bay: optional 1 x 2.5" SATA HDD or 1 x SATA DOM
- Watchdog timer: Watchdog timeout can be programmable by software from 1 second to 255 seconds and from 1 minute to 255 minutes (tolerance 15% under room temperature 25°C)
- H/W status monitor: monitoring system temperature, and voltage
- Expansion: 2 x Mini-PCIe sockets (support optional Wi-Fi, 3.5G module or fieldbus card)
- Panel backlight control button: increase brightness/decrease brightness/backlight on/off
- Front Logo LED indicator to show operating status

Rear I/O

- Ethernet: 2 x RJ45
- 2nd display VGA port: 1 x DB15
- Audio port: 1 x Line-out
- USB: 4 x USB 2.0
- Power switch
- Reset button
- DIO w/ 2.5kv isolated:
  4 x Digital Input (source type)
  - Input voltage (dry contact): Logic 0: Close to GND
  - Logic 1: Open
  - Input voltage: Logic 0: 3V max
  - Logic 1: +5V ~ +30V

  4 x Digital Output (sink type)
  - Output voltage: 3.6V ~ 5V

Dimension Drawing



- Sink current: 200 mA max. per channel
- COM #1: RS232/422/485 w/ 2.5kv isolated
- COM #2: RS232/422/485 w/ 2.5kv isolated
- Fieldbus: (protocol interface optional)

Model	Protocol	Connector
FBI90E-PNM	ProfiNET master	Dual RJ-45
FBI90E-EP	Ethernet/IP master	
FBI90E-ECM	EtherCAT master	
FBI90E-PBM	Profibus master	DB9
FBI90E-DNM	DeviceNet master	5-pins Phoenix Contact terminal

Audio

- AC97 codec: Realtek ALC886-GR
- Audio interface: Line-out/Line-in/MIC-in audio Jack

Ethernet

- LAN chip: dual Intel® 82574L Gigabit LAN
- Ethernet interface: 10/100/1000 Based-Tx Ethernet compatible

Mechanical & Environment

- Color: Pantone 425C\RAL 70 24 front bezel
- IP protection: IP66 front
- Mounting: panel/wall/stand/VESA 100mm x 100mm
- System with panel mounting kit w/ o panel mounting hole
- Power input: 12V~30VDC
- Power adapter: optional AC to DC power adaptor (+12V, 60W)
- Vibration:
  - IEC 68 2-64 (w/ HDD)
  - 1Grms @ sine, 5~500Hz, 1hr/axis (HDD operating)
  - 2Grms @ sine, 5~500Hz, 1hr/axis (CFast operating)
  - 2.2Grms @ random condition, 5~500Hz, 0.5hr/axis (non-operating)
- Shock:
  - IEC 68 2-27
  - HDD: 20G@wall mount, half sine, 11ms
- Operating temperature: -10°C to 60°C
- Storage temperature: -20°C to 75°C
- Operating humidity: 10%~90% relative humidity, non-condensing
- Dimension: 417.8mm x 312.8mm x 63.75mm
- Weight: 6.4Kg

Certifications

- CE (including EN61000-6-1/EN61000-6-2/EN61000-6-3/EN61000-6-4)
- FCC Class B
- cUL 60950

Ordering Information

Barebone

- **IPPC 1632P (P/N: 10II1632P00X0)**
  15.6" WXGA LED backlight touch panel PC, Intel® Atom™ D2550 1.86 GHz, touch screen, 4GB DDR3, 2 x RS232/422/485 and 4 x 4 DI/O with isolated protection, brightness adjustment buttons, optional fieldbus module

Options

- **12V, 60W AC/DC power adapter w/ o power cord (P/N: 7400060019X00)**
- **PROFINET master interface module: FBI90E-PNM for APPC (P/N: 88IA1932T00X0)**
- **EtherNet/IP master interface module: FBI90E-EP for APPC (P/N: 88IA1932T01X0)**
- **EtherCAT master interface module: FBI90E-ECM for APPC (P/N: 88IA1932T02X0)**
- **PROFIBUS master interface module: FBI90E-PBM for APPC (P/N: 88IA1932T03X0)**
- **DeviceNet master interface module: FBI90E-DNM for APPC (P/N: 88IA1932T04X0)**

IPPC 1960T

19" TFT SXGA 4:3 Heavy Industrial Panel PC with
3rd Generation Intel® Core™ i5, 2.7GHz

IPPC 1960TP2E-DC

IPPC 1960TP2E-AC

Main Features

- 4:3 19" SXGA Fanless Panel Computer
- Powerful 2nd/3rd generation Intel® Core™ processor
- Two expansion slots for add-on PCI or/and PCIe cards
- Optional 3.5G/Wi-Fi module/2.5" HDD/3 x Coms/GPIO/DIO/ Dimming Control Button
- Front accessible USB2.0 for easy of field maintenance
- Metal housing with robust aluminum front bezel for harsh environment
- IP66 compliant front panel
- Support fieldbus module, JMobile HMI, Citect SCADA and CODESYS SoftLogic (optional)
- Wide range DC power input model

Product Overview

IPPC 1960T is a heavy industrial panel PC equipped with powerful 2nd/3rd generation Intel® Core™ processor, TFT LCD panel with LED backlight and user-friendly touch screen. It provides two expansion slots to support PROFINET, PROFIBUS, DeviceNet, EtherNet/IP and EtherCAT protocols. The NEMA4/IP66 rated heavy-duty aluminum front bezel and the vibration-resistant rugged chassis are specifically designed for outdoor and harsh industrial environments. IPPC 1960T is ideal for use in oil and gas rig, wind farms, chemical factories, pharmaceutical factories, and hazardous working area.

Specifications

System

- CPU: Support 2nd/3rd gen. Intel® Core™ processor family, rPGA 988
  - Intel® Core™ i7-3520ME (2 x 2.9GHz, 4M cache, Max. TDP 35W)
  - Intel® Core™ i5-3610ME (2 x 2.7GHz, 3M cache, Max. TDP 35W) (Default)
  - Intel® Core™ i3-3120ME (2 x 2.4GHz, 3M cache, Max. TDP 35W)
  - Intel® Celeron® B810 (2 x 1.6GHz, 2M cache, Max. TDP 35W)
  - Intel® Pentium® B950 (2 x 2.1GHz, 2M cache, Max. TDP 35W)
- BIOS: AMI BIOS
- System chipset: Intel® HM76 Express chipset
- System memory: 1 x 204-pin DDR3 SO-DIMM socket, 4G DDR3 (Default), support up to 8GB DDR3-1066/1333, non-ECC and un-buffered
- Storage device:
  - 1 x external locked CFast socket
  - 2 x hard drive bay: optional 2 x 2.5" SATA HDD
  - 1 x SATA DOM (optional)
- Watchdog timer: Watchdog timeout can be programmable by software from 1 second to 255 seconds and from 1 minute to 255 minutes (tolerance 15% under room temperature 25°C)
- H/W status monitor: monitoring system temperature, and voltage
- Expansion:
  2 x Mini-PCIe sockets (support optional Wi-Fi or 3.5G module)
  2 x expansion slots for add-on PCI or/and PCIe cards
  - 1 x PCI and 1 x PCIex4 slots (default)
  - 2 x PCIex4 slots
  - 2 x PCI slots
- Panel backlight control button: increase brightness/decrease brightness/backlight on/off (for IPPC 1960TP2E-AC only)

Rear I/O

For All
- 2 x PS2 keyboard/mouse
- 2nd display VGA port: 1 x DB15
- Ethernet: 2 x RJ45
- USB: 5 x USB2.0 (1 in front)
- Audio port: 1 x Line-out; 1 x Line-in; 1 x MIC-in

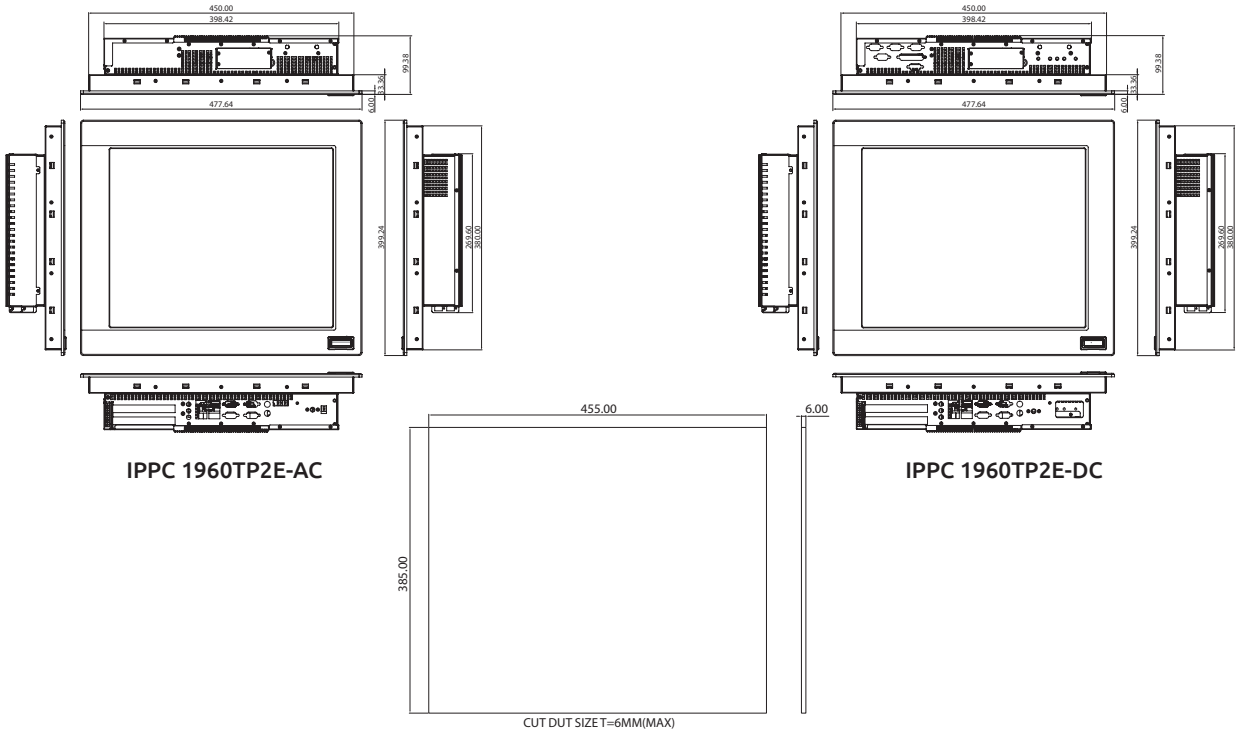
For IPPC 1960TP2E-DC only
- COM #1: RS232/422/485 w/ RI or 5V or 12V selection
- COM #2: RS232/422/485 w/ RI or 5V or 12V selection
- COM #3: RS232 w/ RI or 5V or 12V selection
- ATX power switch
- Reset button

For IPPC 1960TP2E-AC only
- COM #1: RS232/422/485 w/ 2.5kv isolated protection
- COM #2: RS232/422/485 w/ 2.5kv isolated protection
- COM #3: RS232 w/ RI or 5V or 12V selection
- COM #4: RS232 w/ RI or 5V or 12V selection
- COM #5: RS232
- COM #6: RS232
- DIO w/ 2.5kv isolated protection:
  - 4 x digital input (source type)
  - 4 x digital output (sink type)
- GPIO: 4 x Digital In/4 x Digital Out
- LPT: parallel port
- AC power switch
- Reset button

Audio

- AC97 codec: Realtek ALC886-GR
- Audio interface: Line-out/Line-in/MIC-in audio Jack

Dimension Drawing



IPPC 1960TP2E-AC

IPPC 1960TP2E-DC

Ethernet
- LAN chip: dual Intel® 82574L Gigabit LAN
- Ethernet interface: 10/100/1000 Based-Tx Ethernet compatible

Fieldbus
- IPPC 1960TP2E-DC: support up to two Fieldbus Module (1 universal Kit and 1 special kit)
- IPPC 1960TP2E-AC: support one special Fieldbus Module kit

Mechanical & Environment
- Color: pantone 432C\ RAL 70 24 front bezel
- Enclosure: aluminum front bezel with SPPC nickel plated housing
- IP protection: IP66 front
- Mounting: panel/wall/stand/VESA 100mm x 100mm
- Power

For IPPC 1960TP2E-DC
  - Power input: +9 to 30VDC
  - Power adapter: optional AC to DC DIN rail power adapter (+24V, 120W)

For IPPC 1960TP2E-AC
  - Power input: 100-240V~, 1.5A, 50-60Hz; Fuse: 250VAC/3A
  - Power connector: AC inlet (IEC60320 C14)
  - Power supply: 120W

- Vibration:
  - IEC 68 2-64 (w/ HDD)
  - 1Grms @ sine, 5~500Hz, 1hr/axis (HDD operating)
  - 2Grms @ sine, 5~500Hz, 1hr/axis (CFast operating)
  - 2.2Grms @ random condition, 5~500Hz, 0.5hr/axis (non-operating)
- Shock:
  - IEC 68 2-27
  - HDD: 20G @ wall mount, half sine, 11ms
- Operating temperature: -10°C to 50°C

  * Intel® Core™ i7/Intel® Celeron® B810/Intel® Pentium® B950: -10°C to 40°C
- Storage temperature: -20°C to 75°C
- Operating humidity: 10%~90% relative humidity, non-condensing Limits to be at 90% RH at max 50°C

Certifications
- CE (including EN61000-6-2/EN61000-6-4)
- FCC Class A

Ordering Information

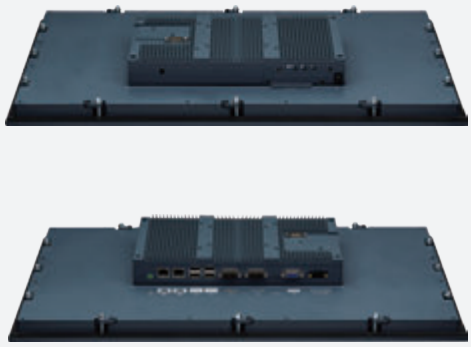
System
- **IPPC 1960TP2E-DC (P/N: 10II1960T00X0)**
  19" SXGA LED backlight fanless touch panel PC, Intel® Core™ i5-3610ME 2.7GHz, touch screen, 4GB DDR3, 3 x COMs, DC power input
- **IPPC 1960TP2E-AC (P/N: 10II1960T01X0)**
  19" SXGA LED backlight fanless touch panel PC, Intel® Core™ i5-3610ME 2.7GHz, touch screen, 4GB DDR3, 6 x COMs, 4 x 4GPIO, 4 x 4DIO with isolated protection, AC power input

Optional
- **24V/5A, 120W AC to DC DIN rail power adapter w/ o power cord (P/N: 7440120001X00) (for IPPC 1960TP2E-DC only)**
- **Riser card 2 x PCI slots (P/N: 20JK036P200X0)**
- **Riser card 2 x PCIex4 slots (P/N: 20JK036E200X2)**
- **Fieldbus module universal kit (for IPPC 1960TP2E-DC only)**

88J50090E00X0	FBI 90E-PNM kit (w/ 25 cm cable)	PROFINET master
88J50090E01X0	FBI 90E-EP kit (w/ 25 cm cable)	EtherNet/IP master
88J50090E02X0	FBI 90E-ECM kit (w/ 25 cm cable)	EtherCAT master
88J50090E03X0	FBI 90E-PBM kit (w/ 25 cm cable)	PROFIBUS master
88J50090E04X0	FBI 90E-DNM kit (w/ 25 cm cable)	DeviceNET master

IPPC 2132P

21.5" TFT WXGA 16:9 Heavy Industrial Panel PC with Intel® Atom™ D2550, 1.86GHz, Multi-Touch Screen, 4GB DDR3, 4 x USB, 2 x COM and VGA



Main Features

- Intel® Atom™ D2550, dual core, low power consumption CPU
- Metal housing with robust aluminum front zero bezel for harsh environment
- 10 points P-Cap multi-touch with zero bezel flush front design
- Dual GbE/2nd display-VGA/Line-out
- USB x4/2 x Mini-PCIe sockets/1 x CFast/2 x RS232/422/485
- DDR3 4GB/2.5" HDD bracket
- IP66 compliant front panel
- Support fieldbus module, JMobile HMI, Citect SCADA and CODESYS SoftLogic (optional)
- Mounting Support: panel/wall/stand/VESA 100mm x 100mm
- Wide range power input 12V~ 30V DC

Product Overview

The 21.5" fanless panel PC IPPC 2132P incorporating an industrial motherboard is intended for versatile industrial applications. The panel PC has a touch screen LED backlight LCD panel with 1920 x 1080 (Full HD) resolution. The front panel which adopts flush design and complies with IP66 standard makes it the perfect fit in industrial applications.

The IPPC 2132P supports WWAN/WLAN expansion and others via dual Gigabit Ethernet connectors, two Mini-PCIe slots and one SIM card holder. With support for wide power input of 12V~30V, IPPC 2132P can gain a strong foothold in industrial field and machine devices. In addition, IPPC 2132P can hook 2nd display via a VGA port for dual independent display. IPPC 2132P has two isolated RS232/422/485 ports, four isolated channels of DI and DO, and optional fieldbus ports.

Specifications

Panel

- LED size: 21.5", 16:9
- Resolution: Full HD 1920 x 1080
- Luminance: 300cd/m^2
- Contrast ratio: 5000
- LCD color: 16.7M
- Viewing angle: 89(U), 89(D), 89(L), 89(R)
- Backlight: LED

Touch

- Ten points P-Cap (Projected Capacitive Touch)
- Touch light transmission: 87%
- Anti-scratch surface: 7H hardness
- Touch interface: USB
- Windows 8 compliance

System

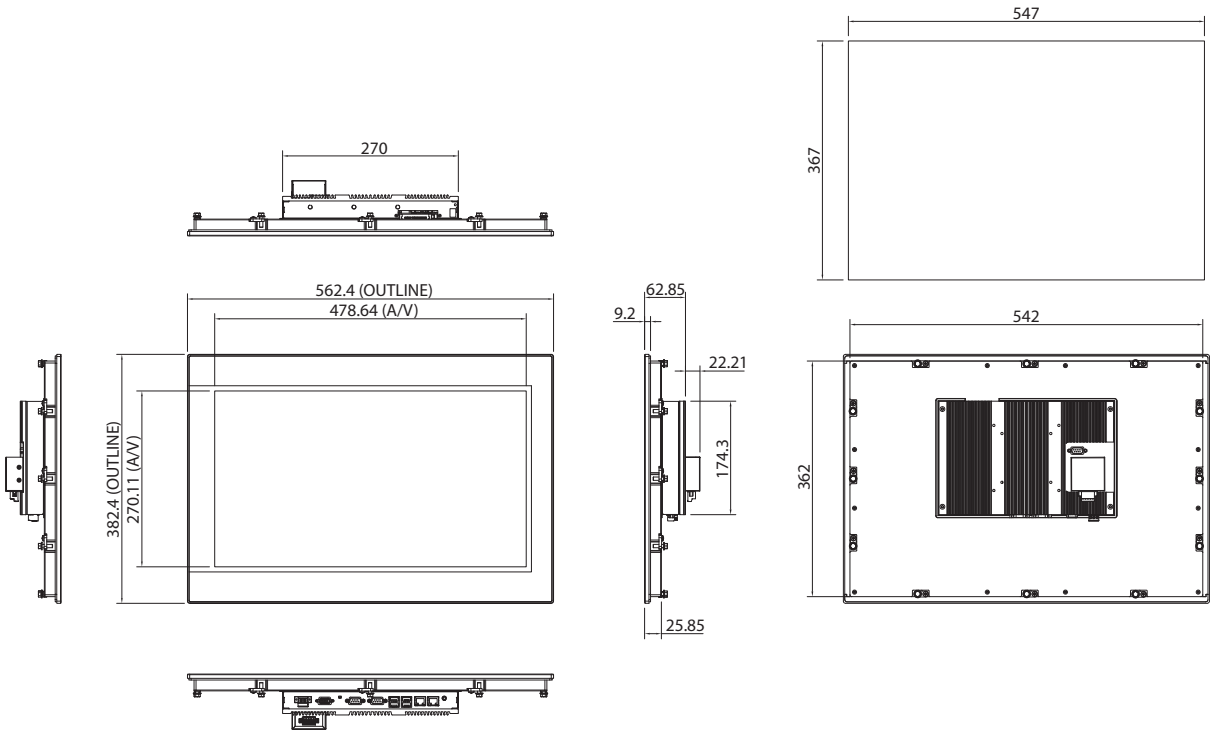
- CPU: On-board Intel® Atom™ dual core processor D2550, 1.86GHz, 1M L2 Cache
- BIOS: AMI BIOS
- System chipset: Intel® NM10 Express chipset
- System memory: 2 x 204-pin DDR3 SO-DIMM socket, 4GB DDR3 (default), support up to 4GB DDR3-800/1066, non-ECC and un-buffered
- Storage device:
  - 1 x external locked CFast socket
  - 1 x hard drive bay: optional 1 x 2.5" SATA HDD or 1 x SATA DOM
- Watchdog timer: Watchdog timeout can be programmable by software from 1 second to 255 seconds and from 1 minute to 255 minutes (tolerance 15% under room temperature 25°C)
- H/W status monitor: monitoring system temperature, and voltage
- Expansion: 2 x Mini-PCIe sockets (support optional Wi-Fi, 3.5G module or fieldbus card)
- Panel backlight control button: Increase brightness/decrease brightness/backlight on/off
- Front Logo LED Indicator to show operating status

Rear I/O

- Ethernet: 2 x RJ45
- 2nd display VGA port: 1 x DB15
- Audio port: 1 x Line-out
- USB: 4 x USB 2.0
- Power switch
- Reset button
- DIO w/ 2.5kv isolated:
  4 x Digital Input (source type)
  - Input voltage (dry contact): Logic 0: Close to GND
  - Logic 1: open
  - Input voltage: Logic 0: 3V max
  - Logic 1: +5V ~ +30V

  4 x digital output (sink type)

Dimension Drawing



- Output voltage: 3.6V ~ 5V
- Sink current: 200 mA max. per channel

- COM #1: RS232/422/485 w/ 2.5kv isolated
- COM #2: RS232/422/485 w/ 2.5kv isolated
- Fieldbus: (protocol interface optional)

Model	Protocol	Connector
FBI90E-PNM	PROFINET master	Dual RJ-45
FBI90E-EP	EtherNet/IP master	
FBI90E-ECM	EtherCAT master	
FBI90E-PBM	PROFIT master	DB9
FBI90E-DNM	DeviceNet master	5-pins Phoenix Contact terminal

Audio

- AC97 codec: Realtek ALC886-GR
- Audio interface: Line-out/Line-in/MIC-in audio Jack

Ethernet

- LAN chip: dual Intel® 82574L Gigabit LAN
- Ethernet interface: 10/100/1000 Based-Tx Ethernet compatible

Mechanical & Environment

- Color: Pantone 425C\RAL 70 24 front bezel
- IP protection: IP66 front
- Mounting: panel/wall/stand/VESA 100mm x 100mm
- System with panel mounting kit w/ o panel mounting hole
- Power input: 12V~30VDC
- Power adapter: Optional AC to DC power adaptor (+12V, 60W)
- Vibration:
  - - IEC 68 2-64 (w/ HDD)
  - 1Grms @ sine, 5~500Hz, 1hr/axis (HDD operating)
  - 2Grms @ sine, 5~500Hz, 1hr/axis (CFast operating)
  - 2.2Grms @ random condition, 5~500Hz, 0.5hr/axis (non-operating)
- Shock:
  - IEC 68 2-27
  - HDD: 20G@wall mount, half sine, 11ms
- Operating temperature: -10°C to 60°C
- Storage temperature: -20°C to 75°C
- Operating humidity: 10%~90% relative humidity, non-condensing
- Dimension: 562.4mm x 382.4mm x 62.85mm
- Weight: 9.26Kg

Certifications

- CE (including EN61000-6-1/EN61000-6-2/EN61000-6-3/EN61000-6-4)
- FCC Class B
- UL 60950

Ordering Information

Barebone

- **IPPC 2132P (P/N: 10II2132P00X0)**
  21.5" Full HD LED backlight touch panel PC, Intel® Atom™ D2550 1.86 GHz, touch screen, 4GB DDR3, 2 x RS232/422/485 and 4 x 4 DI/O with isolated protection, brightness adjustment buttons, optional fieldbus module options
- **12V, 60W AC/DC power adapter w/ o power cord (P/N: 7400060019X00)**
- **PRONET master interface module: FBI90E-PNM for APPC (P/N: 88IA1932T00X0)**
- **EtherNet/IP master interface module: FBI90E-EP for APPC (P/N: 88IA1932T01X0)**
- **EtherCAT master interface module: FBI90E-ECM for APPC (P/N: 88IA1932T02X0)**
- **PROFIBUS master interface module: FBI90E-PBM for APPC (P/N: 8IA1932T03X0)**
- **DeviceNet master interface module: FBI90E-DNM for APPC (P/N: 88IA1932T04X0)**

IPPC 2160P

21.5" TFT Full HD 16:9 Heavy Industrial Panel PC with 3rd Generation Intel® Core™ i5, 2.7GHz, Multi-Touch

Main Features

- 16:9 21.5" Full HD fanless LED panel computer
- Powerful 2nd/3rd generation Intel® Core™ processor
- Two expansion slots for add-on PCI or/and PCIe cards
- Optional 3.5G/Wi-Fi module/2.5" HDD/3 x Coms/GPIO/DIO/ Dimming control button
- 10 points P-Cap multi-touch with zero bezel flush front design
- Metal housing with robust aluminum front bezel for harsh environment
- IP66 compliant front panel
- Anti-scratch surface: 7H hardness
- Support fieldbus module, JMobile HMI, Citect SCADA and CODESYS SoftLogic (optional)
- Optional: AC power input model/DC power input model

Product Overview

IPPC 2160P is a heavy industrial panel PC equipped with powerful 2nd/3rd generation Intel® Core™ processor, TFT LCD panel with LED backlight and user-friendly touch screen. It provides two expansion slots to support PROFINET, PROFIBUS, DeviceNet, EtherNet/IP and EtherCAT protocols. The NEMA4/IP66 rated heavy-duty aluminum front bezel and the vibration-resistant rugged chassis are specifically designed for outdoor and harsh industrial environments. IPPC 2160P is ideal for use in oil and gas rig, wind farms, chemical factories, pharmaceutical factories, and hazardous working area. IPPC 2160P has two isolated RS232/422/485 ports and fieldbus ports.

Specifications

Panel

- LED size: 21.5", 16:9
- Resolution: Full HD 1920 x 1080
- Luminance: 300cd/m^2
- Contrast ratio: 5000
- LCD color: 16.7M
- Viewing angle: 89(U), 89(D), 89(L), 89(R)
- Backlight: LED

Touch

- Ten points P-Cap (Projected Capacitive Touch)
- Touch light transmission: 87%
- Anti-scratch surface: 7H hardness
- Touch interface: USB
- Windows 8 compliance

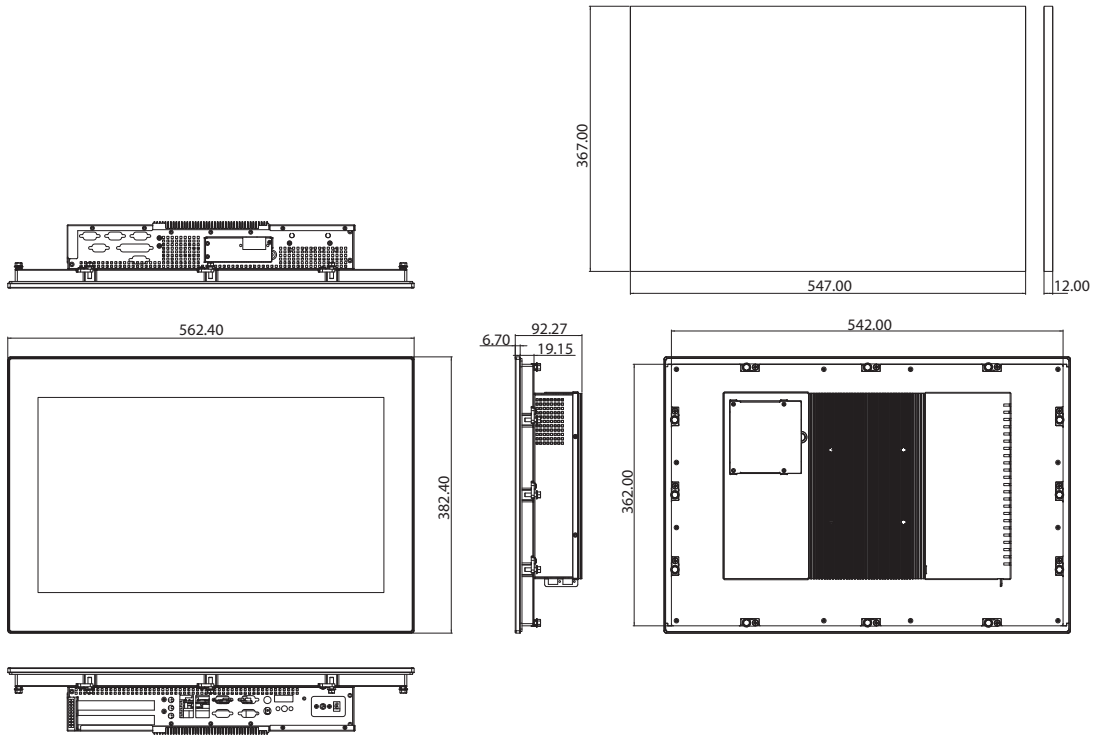
System

- CPU: support 2nd/3rd gen. Intel® Core™ processor family, rPGA 988
  - Intel® Core™ i7-3520ME (2 x 2.9GHz, 4M cache, Max. TDP 35W)
  - Intel® Core™ i5-3610ME (2 x 2.7GHz, 3M cache, Max. TDP 35W) (default)
  - Intel® Core™ i3-3120ME (2 x 2.4GHz, 3M cache, Max. TDP 35W)
  - Intel® Celeron® B810 (2 x 1.6GHz, 2M cache, Max. TDP 35W)
  - Intel® Pentium® B950 (2 x 2.1GHz, 2M cache, Max. TDP 35W)
- BIOS: AMI BIOS
- System chipset: Intel® HM76 Express chipset
- System memory: 1 x 204-pin DDR3 SO-DIMM socket, 4G DDR3 (default), Support up to 8GB DDR3-1066/1333, non-ECC and un-buffered
- Storage device:
  - 1 x external locked CFast socket
  - 2 x hard drive bay: optional 2 x 2.5" SATA HDD
  - 1 x SATA DOM (optional)
- Watchdog timer: Watchdog timeout can be programmable by software from 1 second to 255 seconds and from 1 minute to 255 minutes (tolerance 15% under room temperature 25°C)
- H/W status monitor: monitoring system temperature, and voltage
- Expansion: 2 x Mini-PCIe sockets (support optional Wi-Fi or 3.5G module)
  - 2 x expansion slots for add-on PCI or/and PCIe cards
  - 1 x PCI and 1 x PCIex4 slots (default)
  - 2 x PCIex4 slots
  - 2 x PCI slots
- Panel backlight control button: increase brightness/decrease brightness/backlight on/off

Rear I/O

- Ethernet: 2 x RJ45
- 2nd display VGA port: 1 x DB15
- Audio port: 1 x Line-out; 1 x Line-in; 1 x MIC-in
- USB: 4 x USB 2.0
- 2 x PS2 keyboard/mouse
- AC power switch
- Reset button

Dimension Drawing



- DIO w/ 2.5kv isolated protection:
  4 x digital input (source type)
  - Input voltage (dry contact): Logic 0: Close to GND
    Logic 1: open
  - Input voltage: Logic 0: 3V max.
    Logic 1: +5 to 30V

  4 x digital output (Sink type)
  - Output voltage: +3.6 to 5V
  - Sink current: 200mA max. per channel
- GPIO: 4 x digital in/4 x digital out
- COM #1: RS232/422/485 w/ 2.5kv isolated protection
- COM #2: RS232/422/485 w/ 2.5kv isolated protection
- COM #3: RS232 w/ RI or 5V or 12V selection
- COM #4: RS232 w/ RI or 5V or 12V selection
- COM #5: RS232
- COM #6: RS232
- LPT: 1 x parallel port

Audio
- AC97 codec: Realtek ALC886-GR
- Audio interface: Line-out/Line-in/MIC-in audio Jack

Ethernet
- LAN chip: dual Intel® 82574L Gigabit LAN
- Ethernet interface: 10/100/1000 Based-Tx Ethernet compatible

Fieldbus
- Support one special fieldbus module kit

Mechanical & Environment
- Color: pantone 432C\ RAL 70 24 front bezel
- Enclosure: aluminum front bezel with SPPC nickel plated housing
- IP protection: IP66 front
- Mounting: panel/wall/stand/VESA 100mm x 100mm
- System with panel mounting kit w/ o Panel mounting hole
- Power input: 100-240V~,1.5A,50-60Hz; Fuse: 250VAC/3A
  Power connector: AC inlet (IEC60320 C14)
  Power supply: 120W
- Vibration:
  - IEC 68 2-64 (w/ HDD)
  - 1Grms @ sine, 5~500Hz, 1hr/axis (HDD operating)
  - 2Grms @ sine, 5~500Hz, 1hr/axis (CFast operating)
  - 2.2Grms @ random condition, 5~500Hz, 0.5hr/axis (non-operating)
- Shock:
  - IEC 68 2-27
  - HDD: 20G @ wall mount, half sine, 11ms
- Operating temperature: -10°C to 50°C
  * Intel® Core™ i7/Intel® Celeron® B810/Intel® Pentium® B950: -10°C to 40°C
- Storage temperature: -20°C to 75°C
- Operating humidity: 10%~90% relative humidity, non-condensing
- Dimension: 562.4mm x 382.4mm x 92.27mm
- Weight: 12.51Kg

Certifications
- CE (including EN61000-6-1/EN61000-6-2/EN61000-6-3/EN61000-6-4)
- FCC Class B

Ordering Information

System
- **IPPC 2160PP2E-AC (P/N: 10II2160P00X0)**
  21.5" Full HD LED backlight fanless touch panel PC, Intel® Core™ i5-3610ME 2.7GHz, ten points P-Cap touch screen, 4GB DDR3, 6 x COMs, 4 x 4 GPIO, 4 x 4 DI/O with isolated protection, AC power input

Option
- **Riser card 2 x PCI slots (P/N: 20JK036P200X0)**
- **Riser card 2 x PCIex4 slots (P/N: 20JK036E200X2)**

eTOP 504

4.3" TFT WVGA HMI Panel PC with Touch Screen

Main Features

- 4.3" TFT color display, LED backlight
- 480 x 272 pixel resolution, 64K colors
- Resistive touchscreen
- 2 Ethernet ports with switch function
- USB Host ports
- SD Card Slot
- Multistandard Serial Port
- Connection to fieldbus systems and I/O using optional plug-in modules

Product Overview

As a partner of well-known EXOR International S.p.A., NEXCOM integrates EXOR's HMI solution into eTOP HMI series. The eTOP Series 500 HMI products combine state-of-the-art features and top performance with an outstanding design. They are the ideal choice for all demanding HMI applications including factory and building automation. The eTOP 504 features a bright 4:3" TFT widescreen display with a fully dimmable LED backlight. The JMobile software offers full vector graphic capabilities and plenty of connectivity options.

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

Panel

- LED Size: 4:3"
- Resolution: WVGA 480 x 272
- Luminance: 150cd/m^2
- LCD color: 64K
- Active display area: 4.3" diagonal (95.4 x 53.9mm)
- Backlight: LED

System Resources

- Operating System: Microsoft Windows CE6.0
- User Memory: 128MB Flash
- RAM: 256MB DDR

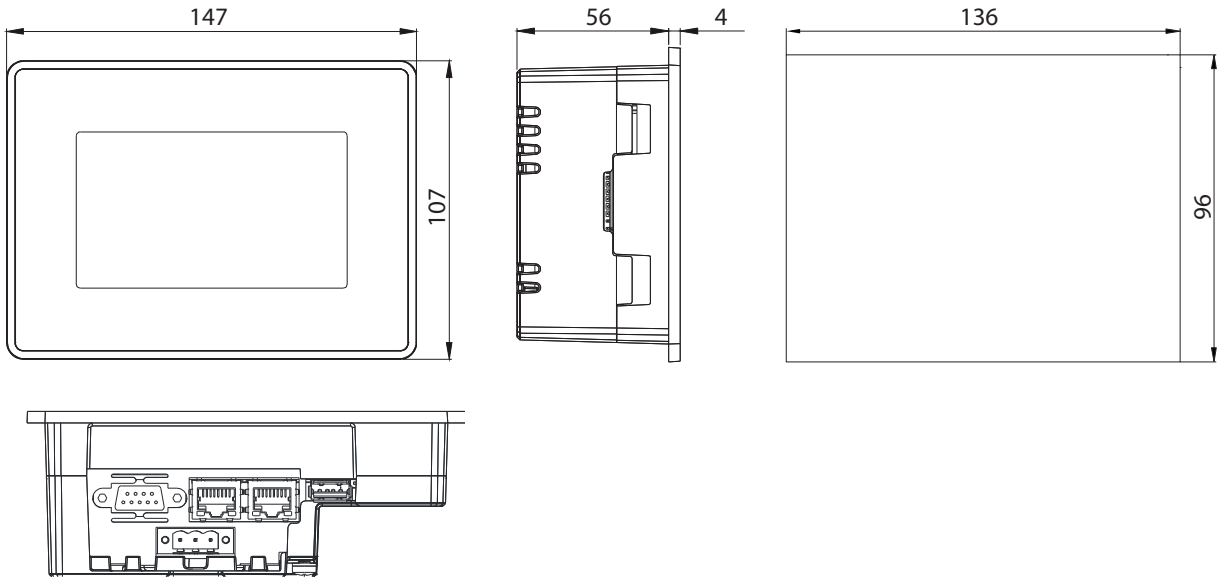
Operator Interface

- Touchscreen: Analog resistive
- LED indicators: 1 (dual color)

Interface

- Ethernet: 2 10/100Mbit with integrated Switch
- USB: 1 Host Interface

Dimension Drawing



- Serial: RS232/422/485 software configuration
- Expansion Slot: 1 Optional plug-in
- Memory Card: SD Card Slot

Functionality

- Vector Graphic: Yes, includes SVG support
- Object dynamics: Yes, Visibility, opacity, position, size, rotation for most object types
- TrueType Font: Yes
- Multiple driver communication: Yes
- Data acquisition and trend presentation: Yes, Flash memory storage limited only by available memory
- Multilanguage: Yes, with runtime language switching
- Recipes: Yes, Flash memory storage limited only by available memory
- Alarms: Yes
- Historical event list: Yes
- Users and Passwords: Yes
- Hardware Real Time Clock: Yes, with battery back-up
- Screen saver: Yes
- Buzzer: Yes, audible feedback for touch screen

Ratings

- Power supply voltage: 24Vdc (10 to 32 Vdc)
- Current consumption: 0.55A at 24Vdc (max.)
- Fuse: Automatic
- Weight: Approx. 1Kg
- Battery: Rechargeable Lithium battery, not user- replaceable

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: 56 + 4mm

Certifications

- CE (Emission EN61000-6-4; Immunity EN61000-6-2 for installation in industrial environments)
- DNV Type Approval Certificate
- cULus (UL508 Listed Haz. Loc. Class I, Division 2, Group A,B,C, and D)
- C-Tick

Ordering Information

- **eTOP 504 (P/N: 79IE050401X00) +ETOP504U3P1**
  7" widescreen TFT color touchscreen with Ethernet and USB interfaces. JMobile run-time.

eTOP 507

7" TFT WVGA HMI Panel PC with Touch Screen

Main Features

- 7" TFT color display, LED backlight
- 800 x 480 pixel (WVGA) resolution, 64K colors
- Resistive touchscreen
- 2 Ethernet ports with switch function
- 2 USB Host ports
- SD Card Slot
- Connection to fieldbus systems and I/O using optional plug-in modules
- Slim design. Mounting depth less than 50mm

Product Overview

As a partner of well-known EXOR International S.p.A., NEXCOM integrates EXOR's HMI solution into eTOP HMI series. The eTOP Series 500 HMI products combine state-of-the-art features and top performance with an outstanding design. They are the ideal choice for all demanding HMI applications including factory and building automation. The eTOP 507 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.

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

Panel

- LED Size: 7", 16:9
- Resolution: WVGA 800 x 480
- Luminance: 300cd/m^2
- LCD color: 64K
- Active display area: 7" diagonal
- Backlight: LED

System Resources

- Operating System: Microsoft Windows CE6.0
- User Memory: 128MB Flash
- RAM: 256MB DDR

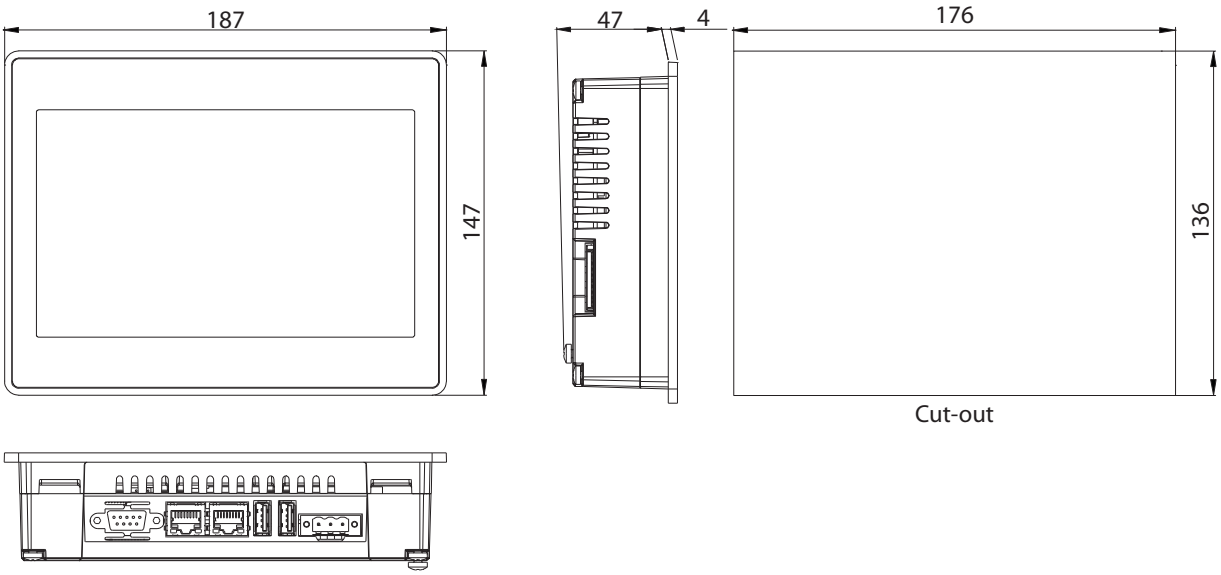
Operator Interface

- Touchscreen: Analog resistive
- LED indicators: 1 (dual color)

Interface

- Ethernet: 2 10/100Mbit with integrated Switch
- USB: 2 Host Interface (1 version 2.0, 1 version 2.0 and 1.1)

Dimension Drawing



- Serial: RS232/422/485 software configuration
- Expansion Slot: 2 Optional plug-in
- Memory Card: SD Card Slot

Functionality

- Vector Graphic: Yes, includes SVG support
- Object dynamics: Yes, Visibility, opacity, position, size, rotation for most object types
- TrueType Font: Yes
- Multiple driver communication: Yes
- Data acquisition and trend presentation: Yes, Flash memory storage limited only by available memory
- Multilanguage: Yes, with runtime language switching
- Recipes: Yes, Flash memory storage limited only by available memory
- Alarms: Yes
- Historical event list: Yes
- Users and Passwords: Yes
- Hardware Real Time Clock: Yes, with battery back-up
- Screen saver: Yes
- Buzzer: Yes, audible feedback for touch screen

Ratings

- Power supply voltage: 24Vdc (10 to 32 Vdc)
- Current consumption: 0.65A at 24Vdc (max.)
- Fuse: Automatic
- Weight: Approx. 1Kg
- Battery: Rechargeable Lithium battery, not user- replaceable

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 147mm
- Cutout AxB: 176 x 136mm
- Depth D+T: 47 + 4mm

Certifications

- CE (Emission EN61000-6-4; Immunity EN61000-6-2 for installation in industrial environments)
- DNV Type Approval Certificate
- cULus (UL508 Listed Haz. Loc. Class I, Division 2, Group A,B,C, and D)
- C-Tick
- GL (Germanischer Lloyd Type Approval Certificate)

Ordering Information

- **eTOP 507 (P/N: 79IE050701X00) +ETOP507U3P3**
  7" widescreen TFT color touchscreen with Ethernet and USB interfaces. JMobile run-time.

eTOP 510

10.4" TFT SVGA HMI Panel PC with Touch Screen

Main Features

- 10.4" TFT color display, LED backlight
- 800 x 600 pixel (SVGA) resolution, 64K colors
- Resistive touchscreen
- 2 Ethernet ports with switch function
- 2 USB Host ports
- SD Card Slot
- Connection to fieldbus systems and I/O using optional plug-in modules
- Slim design. Mounting depth less than 50mm

Product Overview

As a partner of well-known EXOR International S.p.A., NEXCOM integrates EXOR's HMI solution into eTOP HMI series. The eTOP Series 500 HMI products combine state-of-the-art features and top performance with an outstanding design. They are the ideal choice for all demanding HMI applications including factory and building automation. The eTOP 510 features a bright 10.4" TFT display with a fully dimmable LED backlight. The JMobile software offers full vector graphic capabilities and plenty of connectivity options.

JMobile runtime included. Full compatibility with JMobile Studio.

- Full vector graphic support. Native support of SVG graphic objects. Transparency and alpha blending.
- Full object dynamics: control visibility and transparency, move, resize, rotate any object on screen. Change properties of basic and complex objects.
- 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

Panel

- LED Size: 10.4"
- Resolution: SVGA 800 x 600
- Luminance: 300cd/m^2
- LCD color: 64K
- Active display area: 10.4" diagonal
- Backlight: LED

System Resources

- Operating System: Microsoft Windows CE6.0
- User Memory: 256MB Flash
- RAM: 256MB DDR

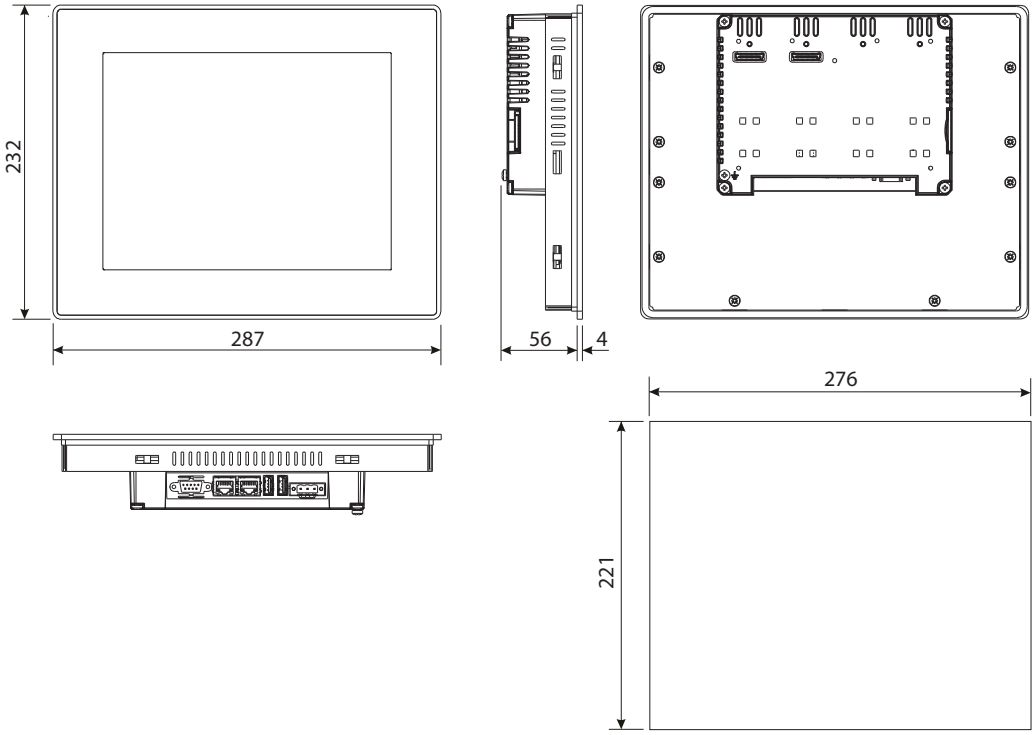
Operator Interface

- Touchscreen: Analog resistive
- LED indicators: 1 (dual color)

Interface

- Ethernet: 2 10/100Mbit with integrated Switch
- USB: 2 Host Interface (1 version 2.0, 1 version 2.0 and 1.1)
- Serial: RS232/422/485 software configuration
- Expansion Slot: 2 Optional plug-in

Dimension Drawing



- Memory Card: SD Card Slot

Functionality

- Vector Graphic: Yes, includes SVG support
- Object dynamics: Yes, Visibility, opacity, position, size, rotation for most object types
- TrueType Font: Yes
- Multiple driver communication: Yes
- Data acquisition and trend presentation: Yes, Flash memory storage limited only by available memory
- Multilanguage: Yes, with runtime language switching
- Recipes: Yes, Flash memory storage limited only by available memory
- Alarms: Yes
- Historical event list: Yes
- Users and Passwords: Yes
- Hardware Real Time Clock: Yes, with battery back-up
- Screen saver: Yes
- Buzzer: Yes, audible feedback for touch screen

Ratings

- Power supply voltage: 24Vdc (10 to 32 Vdc)
- Current consumption: 0.95A at 24Vdc (max.)
- Fuse: Automatic
- Weight: Approx. 2.1Kg
- Battery: Rechargeable Lithium battery, not user- replaceable

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: 287 x 232mm
- Cutout AxB: 276 x 221mm
- Depth D+T: 56 + 4mm

Certifications

- CE (Emission EN61000-6-4; Immunity EN61000-6-2 for installation in industrial environments)
- DNV Type Approval Certificate
- cULus (UL508 Listed Haz. Loc. Class I, Division 2, Group A,B,C, and D)
- C-Tick

Ordering Information

- **eTOP 510 (P/N: 79IE051001X00) +ETOP510U3P1**
  10"4 TFT color touchscreen with Ethernet and USB interfaces. JMobile run-time.

HMI Product Selection

eTOP506

5.7” TFT color display, LED backlight

- 320 x 240 pixel (QVGA) resolution, 64K colors, resistive touchscreen
- 2 Ethernet ports with switch function
- 2 USB Host ports, 1 x SD card slot
- Connection to bus systems using optional plug-in modules
- Slim design. Mounting depth less than 50mm
- Powerful and intuitive programming with JMobile software
- Available in three front colors (White/Black/Silver)
- CE, DNV, cULus Class I, Div. 2

eTOP512

12”1 SVGA TFT color display, LED backlight

- 800 x 600 pixel (SVGA) resolution, 64K colors, 256MB Flash, resistive touchscreen
- 2 Ethernet ports with switch function
- 2 USB Host ports, 1 x SD card slot, 1 x PDF reader
- Connection to bus systems using optional plug-in modules
- Slim design. Mounting depth less than 50mm
- Powerful and intuitive programming with JMobile software
- Available in three front colors (White/Black/Silver)
- CE, DNV, cULus Class I, Div. 2

eTOP513

13”3 WXGA TFT wide color display, LED backlight

- 1280 x 800 pixel resolution, 64K colors, 256MB Flash, resistive touchscreen
- 2 Ethernet ports with switch function
- 2 USB Host ports, 1 x SD card slot, 1 x PDF reader
- Connection to bus systems using optional plug-in modules
- Slim design. Mounting depth less than 50mm
- Powerful and intuitive programming with JMobile software
- Available in three front colors (White/Black/Silver)
- CE, DNV, cULus Class I, Div. 2

eTOP515

15" XGA TFT color display, LED backlight

- 1024 x 768 pixel resolution, 64K colors, 256MB Flash, resistive touchscreen
- 2 Ethernet ports with switch function
- 2 USB Host ports, 1 x SD card slot, 1 x PDF reader
- Connection to bus systems using optional plug-in modules
- Slim design. Mounting depth less than 50mm
- Powerful and intuitive programming with JMobile software
- Available in three front colors (White/Black/Silver)
- CE, DNV, cULus Class I, Div. 2

FBI90E-DNM

DeviceNet Master Mini-PCIe Interface Card

FBI90E-DNM (P/N: 10J50090E03X0)

FBI 90E-DNM Universal Kit (P/N: 10J50090E10X0)

Main Features

- Support DeviceNet Master Interface
- Mini-PCIe Form Factor
- Fully Compatible with DeviceNet I/O Modules and Slave Devices
- Driver Support for Windows, WinCE, RTX, QNX, VxWorks, Linux
- 1 x 5-pins Phoenix Contact Connectors
- User Friendly Configuration Utility
- OPC Server Support (Optional)

Product Overview

DeviceNet is the communication protocol developed by Allen-Bradley. It is the typical protocol used in the Allen-Bradley compatible slave devices and remote I/O modules. It is very popular in factory automation application in American and Asian area. By using this interface card in PC-based platform, it can easily to establish the Allen-Bradley compatible PC-based control system.

Specifications

Form Factor
- Mini-PCIe card with separated connector board

Slaves Max.
- 63

Cyclic Data Max.
- 7168, 255 Bytes/Slave

Acylic Data
- Get/Set_Attribute

I/O Connections
- Poll
- Change-of-State
- Cyclic
- Bit-Strobe

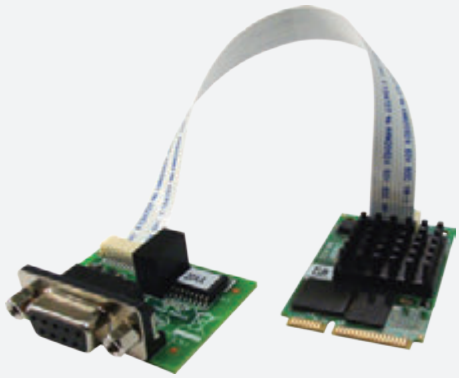
Functions
- Predefined Master-Slave
- Connection Set
- UCMM supported

Ordering Information

- **FBI90E-DNM (P/N: 10J50090E03X0)**
  Mini-PCIe DeviceNet master card
  Cable length: 15cm
- **FBI 90E-DNM Universal Kit (P/N: 10J50090E10X0)**
  Mini-PCIe DeviceNet master module kit w/ universal bracket
  Cable length: 25cm

FBI90E-PBM

Profibus Master Mini-PCIe Interface Card



FBI90E-PBM (P/N: 10J50090E01X0)

FBI 90E-PBM Universal Kit (P/N:10J50090E09X0)

Main Features

- Support Profibus-DP Master Interface
- Mini-PCIe Form Factor
- Fully Compatible with Profibus Remote I/O Modules and Slave Devices
- Driver Support for Windows, WinCE, RTX, QNX, VxWorks, Linux
- 1 x DB-9 Connectors
- User Friendly Configuration Utility
- OPC Server Support (Optional)

Product Overview

The Profibus is the protocol developed by Siemens. It is the major communication protocol in Siemens system and it is almost the most popular industrial communication protocol in worldwide. In factory automation application system, this protocol is with over 40% marketing share. And it is the basic network protocol for Siemens system. By equipping this interface, it can be compatible with lots of the Siemens systems in factory automation application.

Specifications

Form Factor
- Mini-PCIe card with separated connector board

I/O Devices Max.
- 125

Cyclic Data Max.
- 7168, 244 Bytes/Slave

Acylic Data
- 240 Bytes/Request

DPVI Class 1, 2
- Yes

Configuration Data
- 244 Bytes/Slave

Appl. Specific Parameter
- 237 Bytes/Slave

Ordering Information

- **FBI90E-PBM (P/N: 10J50090E01X0)**
  Mini-PCIe Profibus master card
  Cable length: 15cm
- **FBI 90E-PBM Universal Kit (P/N:10J50090E09X0)**
  Mini-PCIe Profibus master module kit w/ universal bracket
  Cable length: 25cm

FBI90E-REM

Industrial Real Time Ethernet Fieldbus
ProfiNET/Ethernet IP/EtherCAT Master Interface card

FBI90E-REM (P/N: 10J50090E00X0)

FBI 90E-REM Universal Kit (P/N:10J50090E08X0)

Main Features

- Support ProfiNET, Ethernet/IP, EtherCAT Master Interface (depends on the downloaded firmware)
- Real Time Ethernet Communication
- Mini-PCIe Form Factor
- Driver Support for Windows, WinCE, RTX, QNX, VxWorks, Linux
- Fully Compatible with ProfiNET, Ethernet/IP, EtherCAT Controllers and I/O Modules
- 2 x RJ45 Connectors
- User Friendly Configuration Utility
- OPC Server Support (Optional)

Product Overview

The FBI 90E-REM is the Fieldbus module supports industrial real time Ethernet Fieldbus protocols for ProfiNET, Ethernet/IP, EtherCAT. Users can download the required firmware to make this card as the master interface for these protocols. By equipping this interface card, it can enable the platform to be the control station for the ProfiNET, Ethernet/IP, EtherCAT slave devices.

Specifications

Form Factor

- Mini-PCIe card with separated connector board

ProfiNET Master

- I/O Devices max.: 128
- Cyclic Data max.: 11472 Bytes
- Acylic Data : Read/Write Record max 4096 Bytes/Request
- Functions:
  Alarmtreatment
  DCP
  Minimum cycle time 1 ms

Ethernet/IP

- Cyclic Data max.: 11472 Bytes
- Unscheduled Data max.: 504 Bytes per Telegram
- Functions:
  Max. 64 connections
  Cyclic Connection
  UCMM class 3 supported
  DHCP, BOOTP
- Server Service
  Get_Attribute_Single/All
  Set_Attribute_Single/All

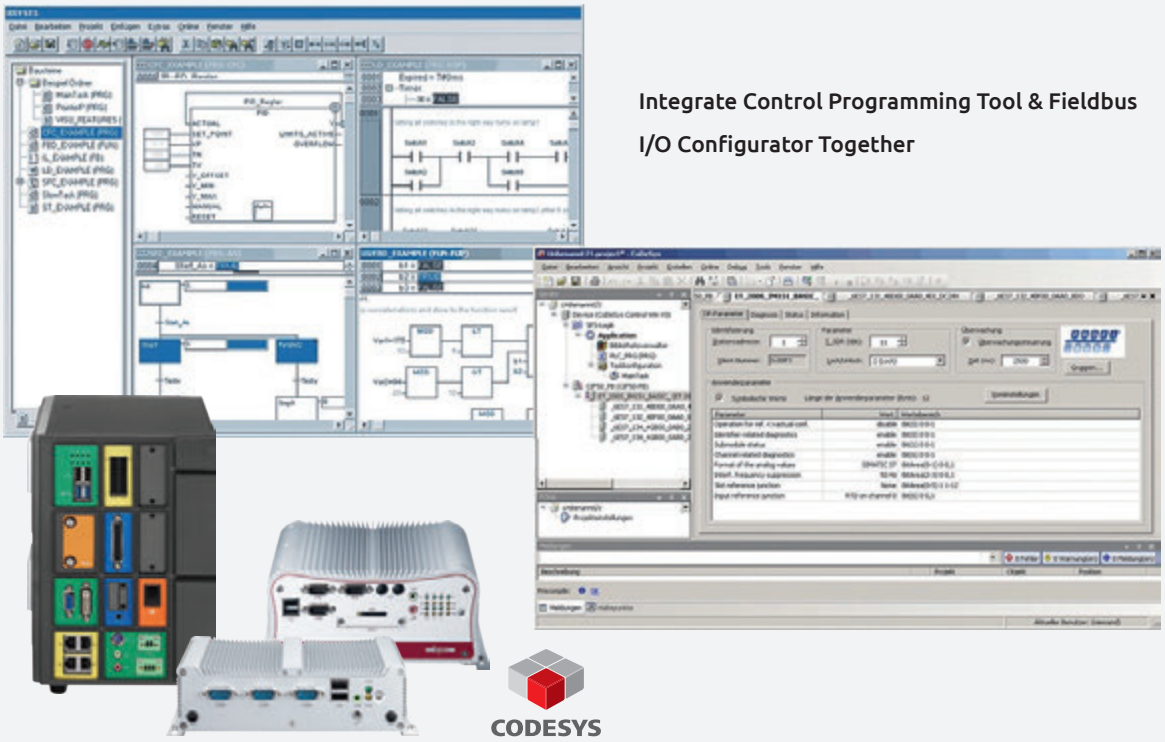
EtherCAT Master

- Slaves max.: 200
- Cyclic Data max.: 11520 Bytes
- Acylic Data: CoE (CANopen over EtherCAT)
  Up-/Download max. 1500 Bytes
- Functions:
  Get OD List
  Emergency
  Topology Line

Ordering Information

- **FBI90E-REM (P/N: 10J50090E00X0)**
  Mini-PCIe ProfiNET/Ethernet IP/EtherCAT master card
  Cable length: 15cm
- **FBI 90E-REM Universal Kit (P/N:10J50090E08X0)**
  Mini-PCIe ProfiNET/Ethernet IP/EtherCAT master module kit w/ universal bracket
  Cable length: 25cm

IEC61131-3 SoftLogic



Integrate Control Programming Tool & Fieldbus I/O Configurator Together

Product Overview

IEC61131-3 is the most popular standard for control programming language for automation application. It defines the easy to use and easy to maintain program language standard for automation users. NEXCOM implement the CODESYS SoftLogic as control kernel for NIFE PC-based controller. CODESYS is developed by 3S-Smart Software Solution GmbH. It is well known by its high reliability, high integration with Fieldbus communication and user friendly interface.

3S is the alliance partner of Hilscher for Fieldbus technology. CODESYS integrated the Hilscher interface and driver to drive the Fieldbus device and remote I/O. It merges the Hilscher Fieldbus Configurator tool and SoftLogic programmer together. So users can just use CODESYS software to configure the Fieldbus and program the control algorism. It is 100% the same as typical PLC controller software tool. NIFE PC-based controller is also with this feature.

CODESYS is also implemented as control kernel for some product lines by Schneider, ABB, BECKHOFF, B&R and so on. In these product lines, Hilscher Fieldbus technology is also built-in as the communication interface. It means NEXCOM NIFE PC-based controller is the same level as these trusted brands. Users won't have only choice for high price European PC-based control systems, they can use the reasonable cost to have the high quality, high reliability PC-based control solution.

The version of CODESYS that NEXCOM implemented is CODESYS RTE runtime. It is with real time engine for runtime kernel to guarantee the control performance. The supported OS covers Windows XP/7/embedded and Linux. Users can choose the OS depends their requirement. We also provide the option for bundling the TagetVisu software module. It can provide the SoftLogic and HMI bundle solution.

NEXCOM offer the package for CODESYS runtime includes the below listed versions.

For Windows XP/7 (X86 Platform)

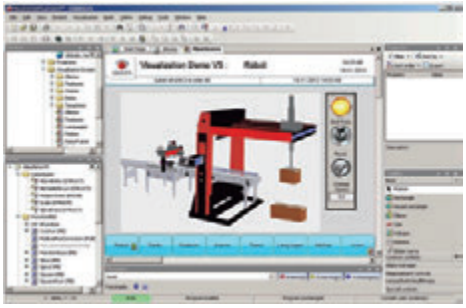
- CODESYS SoftLogic RTE Runtime
- CODESYS SoftMotion Runtime

For Linux (X86 Platform)

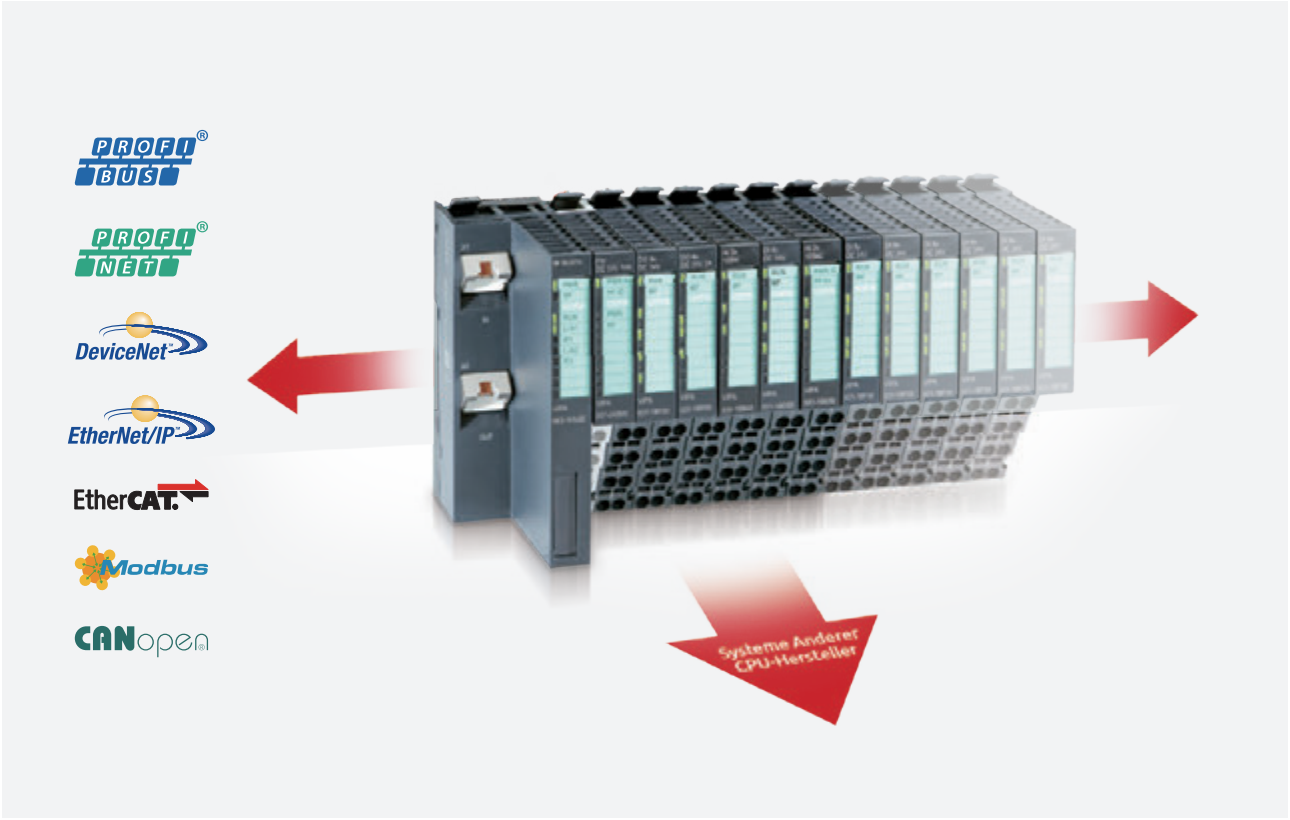
- CODESYS SoftLogic RTE Runtime
- CODESYS SoftLogic+TargetVisu Runtime
- CODESYS SoftMotion CNC Runtime
- CODESYS SoftMotion CNC+TargetVisu Runtime

CODESYS SoftLogic

CODESYS SoftMotion CNC+TargetVisu



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

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