Summer 2013

Express

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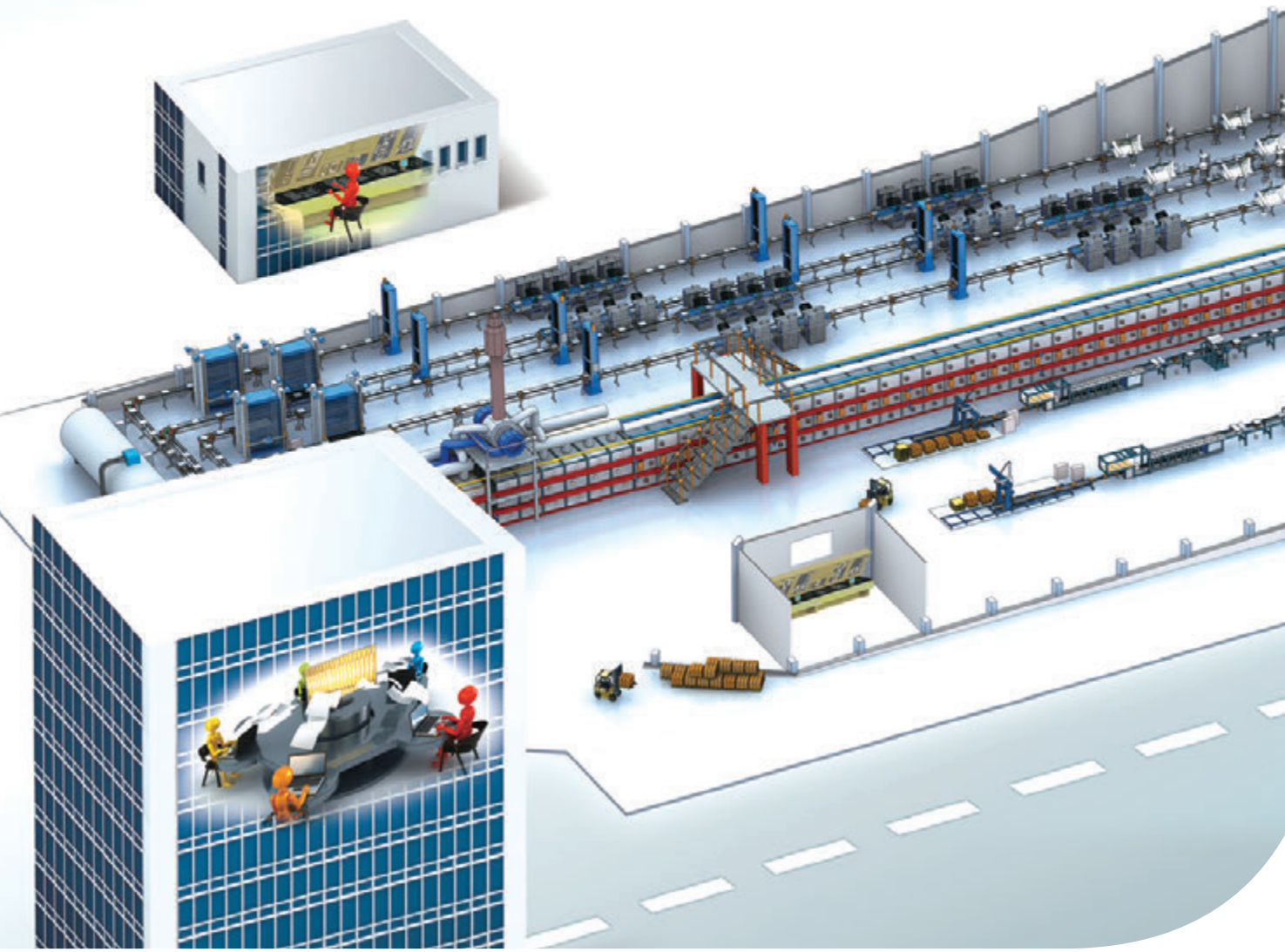
Smart Motion + Smart Factories:

A Winning Formula for Industrial Control



White Paper

Maximize Uptime in the Ethernet-connected Factory

Technology Focus

4th Generation Intel® Core™ Processor

What's New

NEXCOM Integrates Major Fieldbus Technologies to Woo 70% of Factory Automation System Integrate Users

Dear Partners,

In the first 5 months of 2013, NEXCOM experienced 10% growth, compared with the same period of 2012. Thanks to all of your contributions. Every order counts! This means NEXCOM remains on the right track to offset the slow down of world wide economy. It also reflects that the IT trend is still driving the demand on the so-called Intelligent Systems.

In the first half of 2013, we have had lots of marketing activities from the home town Taiwan, to China, to EU, also to the US. Our sales managers, PMs, Executives, even myself, visited or joined almost every major trade show, talking to most partners, and held many seminars for NEXCOM new products and our vision on this industry. We are also engaged with Intel ESF program world wide, leveraging Intel sales/marketing muscle, to develop the brand new application domains together with our partners. So many seeds planted will bring us good harvest in the coming months, even the coming years!

One major progress of NEXCOM is our new platforms and solutions dedicated to the MA/FA market. We joined the Hannover Messe and got very good response on this product line. By bundling the solutions from the well known solution partners like IntervalZero for RTX---the Windows Real Time OS, Hilscher for the series of Fieldbus adapters, even the Petrochemistry champion—the Formosa Plastics---for the DCS applications, NEXCOM is very unique in this market. We also have the motion cards from entry level to very high performance models. All these rich offerings will give us another big opportunity into the booming automation market. Together with the new EtherCAT protocol, we call it the Smart Motion, and the Smart Factory by NEXCOM!

Another spotlighted series will be our IP Cam family. The brand new product line is just in time for the booming surveillance market in the wired/wireless networked world. The IP Cam is the "eye" for any applications needing the live image/video locally or remotely, indoor or outdoors, day and night, entry level or very high performance. Combined with NEXCOM rich platform offerings like VTC for mobiles, NexPOS for retails, IWF for wireless, etc., NEXCOM and all the partners can be very unique through the "solution pack" one stop shopping approach.

For other new platforms like the 4th generation Intel® Core processors, next generation Intel® Atom™ processors, and Rangeley based models, we also push them to be available in line with Intel's announcement date. Each BU has its own product strategy as described in this publication.

The bundling approach, either the MA/FA field, or the IP Cam with various system platforms, will become our new competing edges in the market. Only NEXCOM, and our partners together, have these unique "solution packs" in every market place. Let's make it another growth engine in the 2nd half of 2013. So, with more and more important building blocks from NEXCOM, we can make it! We can stand out!

Clement Lin

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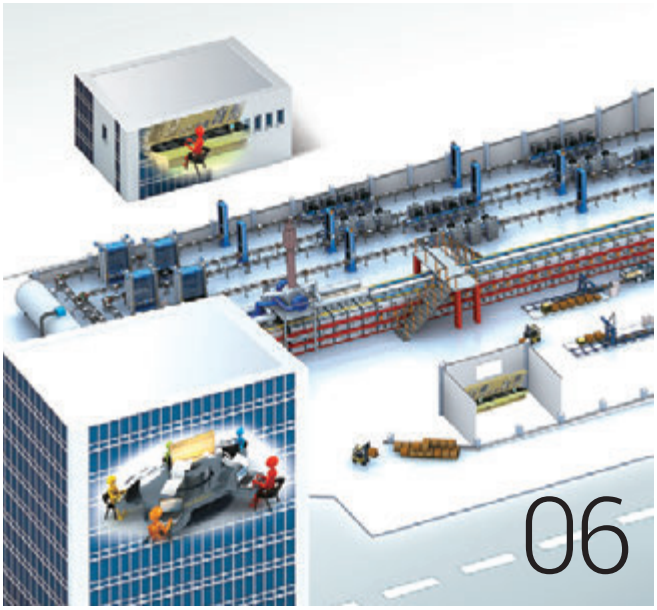


NEXCOM EXPRESS
Summer 2013

Publisher
NEXCOM

Editors
Yihsuan Ho, Liyin Lin, Joe Lai, Stephen Ritchie

Designer
Jason Lee

Web
www.nexcom.com

About NEXCOM

Founded in 1992, NEXCOM has five business units which focus on vertical markets across industrial computer, in-vehicle computer, multimedia, network and communication, and intelligent digital security industries. NEXCOM serves its customers worldwide through its subsidiaries in seven major industrial countries. NEXCOM gains stronghold in vertical markets with its industry-leading products including the rugged fanless computer NISE series, the in-vehicle computer VTC series, the network and security appliance NSA series and the digital signage player NDiS series.

Tekdis

David Willaton
Engineering Manager

Tekdis Delivers the Future

Tekdis is a leading distributor of Embedded Computing solutions with offices in Australia and UK. In 2007 we saw a demand for in-vehicle computers with integrated communication and began offering NEXCOM Mobile Computing Solutions. NEXCOM had the most complete solution available with built in smart ignition and integrated comms including GPS, 3G, Wi-Fi and Bluetooth. By integrating all these technologies, customers could deploy a single unit and save on development, installation and maintenance cost. This leading technology has helped Tekdis to establish the NEXCOM MCS products as the preferred in vehicle computing solution for emergency, mining, fleet management and waste collection services. The growing market for rail services has seen new opportunities arise for NEXCOM's Rail Computers. Train automation, advanced monitoring and onboard surveillance are just some of the application where the nRok series has seen success. At Tekdis, we have to be confident that the product will last. We know that NEXCOM has the ability and experience to make a product that can endure in one of the harshest mobile environments.

"As Engineering Manager, I have supported dozens of customers integrate and get the most value out of the NEXCOM products. It is not just the technology that sells, but the level of support when customers want customised BIOS, MCU code or Embedded OS images that make NEXCOM stand out from the rest. Our access to direct technical support means any issues that arise can be address quickly and professionally. While competitors try to imitate the NEXCOM product, NEXCOM has continued to expand the MCS range with built in CAN Bus, PoE (Power over Ethernet), DIO, Dead Reckoning GPS and features such as Wake on SMS and Wake on RTC to make it the most complete offering"

During the past 6 years Tekdis has continued to work with the other NEXCOM divisions of MMS and ICS. Tekdis has now established NEXCOM as the preferred digital signage player in the Australian market with NEXCOM players in digital signage installation at airports, fast food chains, shopping malls and cafes providing 24/7 operation. Customers want a media player that they can deploy once and never have to go onsite to service. They also want a single supplier who has a full range of players for different applications. It is the quality of the fanless media players and complete portfolio that makes digital signage companies choose NEXCOM.

The ICS products from NEXCOM and in particular the NISE series, have also been well received by customer looking for fanless computing solutions. The design, finish and performance has seen them used in aerial thermal imaging, ANPR, data acquisition and marine installations.

Tekdis prides itself on being 100% customer focused and adds value by understanding the customer's requirements and offering the highest level of sales and technical support. NEXCOM's quality, advanced products and support have allowed us to make this happen. We look forward to a strong partnership for many years to come.

NEXCOM Integrates Major Fieldbus Technologies to

Woo 70% of Factory Automation System Integration Users

NEXCOM has announced innovative NEXCOM Industrial Fieldbus Embedded Computer (NIFE) Series, which integrates widely-used industrial master Fieldbus interfaces including PROFINET, PROFIBUS, DeviceNet, Ethernet/IP and EtherCAT to communicate with programmable logic controllers (PLCs) from major brand-name suppliers. The unprecedented integration is brought about by NEXCOM's strength in developing fanless industrial automation computers and the company's alliance with Hilscher, a world's leading expert in industrial communication. This vertical technology integration gives rise to highly reliable factory automation solutions which can work in conjunction with most of brand-name control systems, reducing costs by at least 30 percent for users while solving the common incompatibility issue arising from system integration.

In the factory automation sector, Siemens and Allen Bradley are two leading PLC suppliers. Yet, the Fieldbus technologies provided by system integrators are dedicated to a single brand. "NEXCOM Industrial Fieldbus Embedded Computer (NIFE) Series can integrate master Fieldbus interfaces in accordance with a customer's existing PLCs. The protocols we support include PROFINET, PROFIBUS, DeviceNet, Ethernet/IP and EtherCAT. This unprecedented integration can change the business model of Taiwan's industrial computer (IPC) industry by meeting the IPC and PLC integration requirement of nearly 70 percent of users." said Joe Lin, General Manager of NEXCOM's Industrial Computing Solutions Business Unit. NEXCOM not only provides one-shop convenience but also solves the hardware-incompatibility issue, yielding more than 30 percent of savings on backend system deployment, explained Lin.

NEXCOM is specialized in hardware development and manufacturing and allies with Hilscher, a world's leading expert in industrial communication. "Combining NEXCOM industrial automation computer and Hilscher industrial communication technology can take the system integration to a brand new level, making a factory automation solution more cost-effective" said Armin Pühringer, Area Sales Manager APAC at of Hilscher GmbH. NEXCOM has built its reputation on industrial computers and based on which developed various compact industrial automaton platforms by integrating Hilscher leading edge Fieldbus technology and real-time Ethernet systems.

NEXCOM and Hilscher signed a system and distribution agreement, targeting at 70% of factory automation system integrate users.

Together with high software compatibility, these compact industrial automaton platforms put its excellent computing power to good use and demonstrate intelligence of a connected network. In addition, functionality of industrial automaton platforms is enhanced to support a wide spectrum of automation control equipment and therefore fulfill different customer requirements for intelligent applications.

"NEXCOM are dedicated to providing market specific technologies to vertical markets and exchanges industrial knowledge and know-how with experts across fields. We develop solutions that continuously respond to market demands and that is how we sustain a double-digit growth year after year" added Lin. In addition, NEXCOM also partners Schneider Electric, an industrial automation giant which develops the world-famous SCADA software Citect with full support for Fieldbus interface drivers. Customers can benefit from a total solution which combines NEXCOM, Hilscher and Schneider Electric product.

NEXCOM, collaborating with Hilscher and key partners, has launched NEXCOM Industrial Fieldbus Embedded Computer (NIFE) Series. The NIFE series are based on NEXCOM well-known NISE industrial automation computer and Panel PC, which are suitable for HMI used in both light and heavy manufacturing industries, integrates assorted Fieldbus technologies and application software and therefore can address the real market needs.

Smart Motion + Smart Factories:
A Winning Formula for Industrial Control

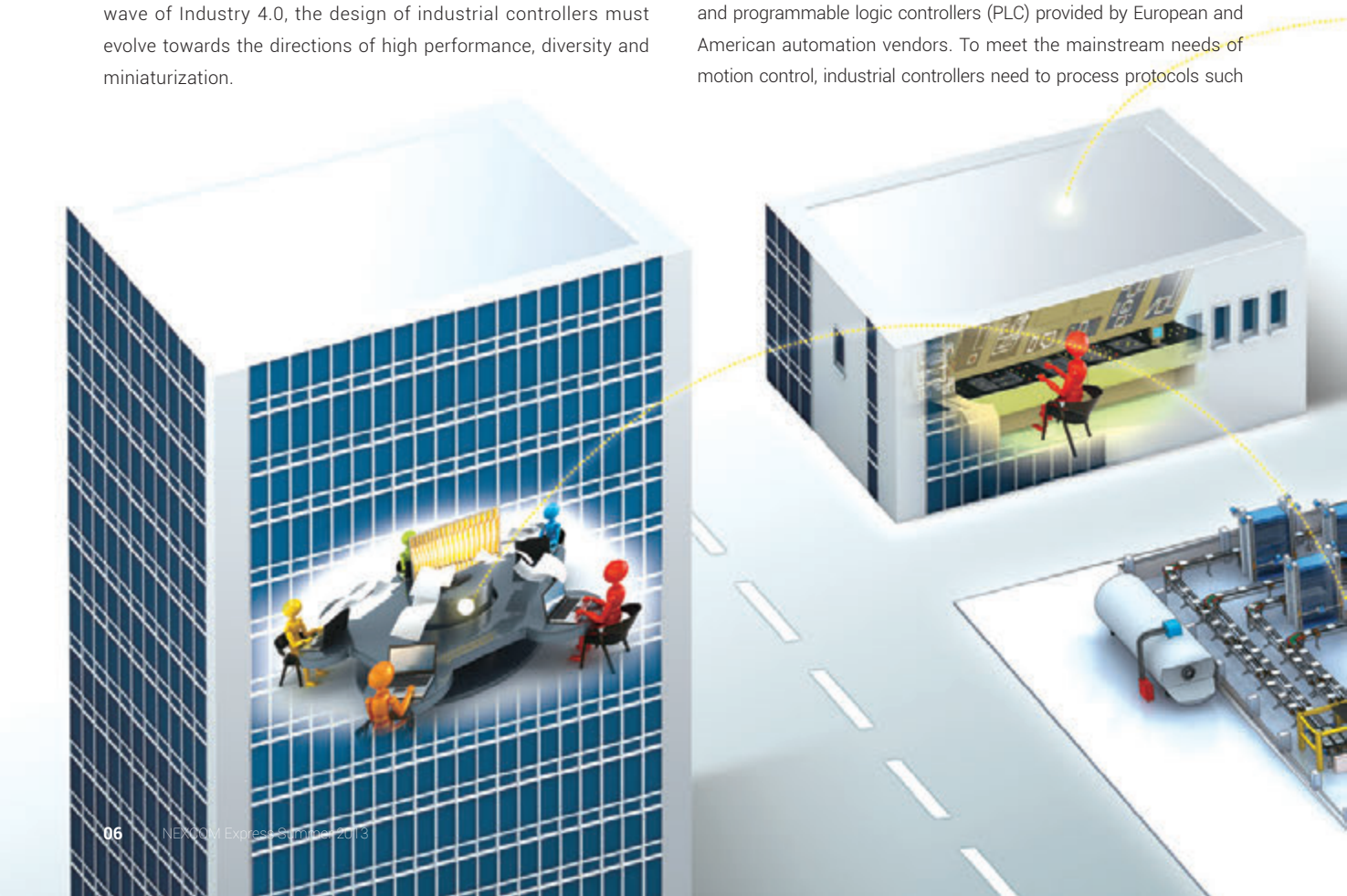
Germany has recently initiated the fourth industrial revolution, Industry 4.0, to advocate Internet of Things and Services (IoTS). This new revolution will streamline production and sales processes in machine to machine (M2M) infrastructures, transforming production mode from build to stock (BTS) into build to order (BTO) that can begin instantly once an order is received. Industry 4.0 helps businesses achieve the goal of Smart Production, Green Production and Urban Production.

Due to labor shortage in China, global warming and energy crisis, manufacturing industries are urged to increase their production efficiencies and maintain competitiveness in a smarter and greener way. With the rise of Industry 4.0, a smart factory is intelligently connected and automated; intelligence is valued by from motion centric machine automation to the factory as a whole. Joe Lin, NEXCOM's General Manager of the Industrial Computing Solutions Business Unit, points out that industrial controllers are the heart of smart factories, and to prepare for this upcoming wave of Industry 4.0, the design of industrial controllers must evolve towards the directions of high performance, diversity and miniaturization.

The Rise of Smart Motion Control and Smart Factory

High performance refers to the computing power of industrial controllers. In the past, the machine automation was designed to replace human labor at individual workstations. Automated machines used to center on motion control and were centralized controlled by a master machine. Nowadays automated machineries are burdened with more complex motion controls. The complexity is further increased when they are integrated with different control stations. Apart from motion control, automated machineries may also process high-precision images, network communications and other application requests. Automated machineries are decentralized control systems, which offload workload from master machines and therefore require high computing performance.

With regard to diversity, industrial controllers need to support a diverse range of industrial Fieldbus protocols, to integrate with the servo motors and programmable logic controllers (PLC) provided by European and American automation vendors. To meet the mainstream needs of motion control, industrial controllers need to process protocols such



as PROFIBUS, PROFINET, EtherNet/IP and DeviceNet. This diversity enables industrial controllers to clear communication barriers between different controllers, and establish a strong foundation for monitoring and controlling of smart factories.

In addition, industrial controllers need to support Ethernet in order to connect with enterprise IT systems such as manufacturing execution system (MES), enterprise resource planning (ERP), product lifecycle management (PLM) and customer relationship management (CRM). By tying these together, production lines can manage resources more efficiently and start production immediately and automatically when a sales order is received, saving manual labor.

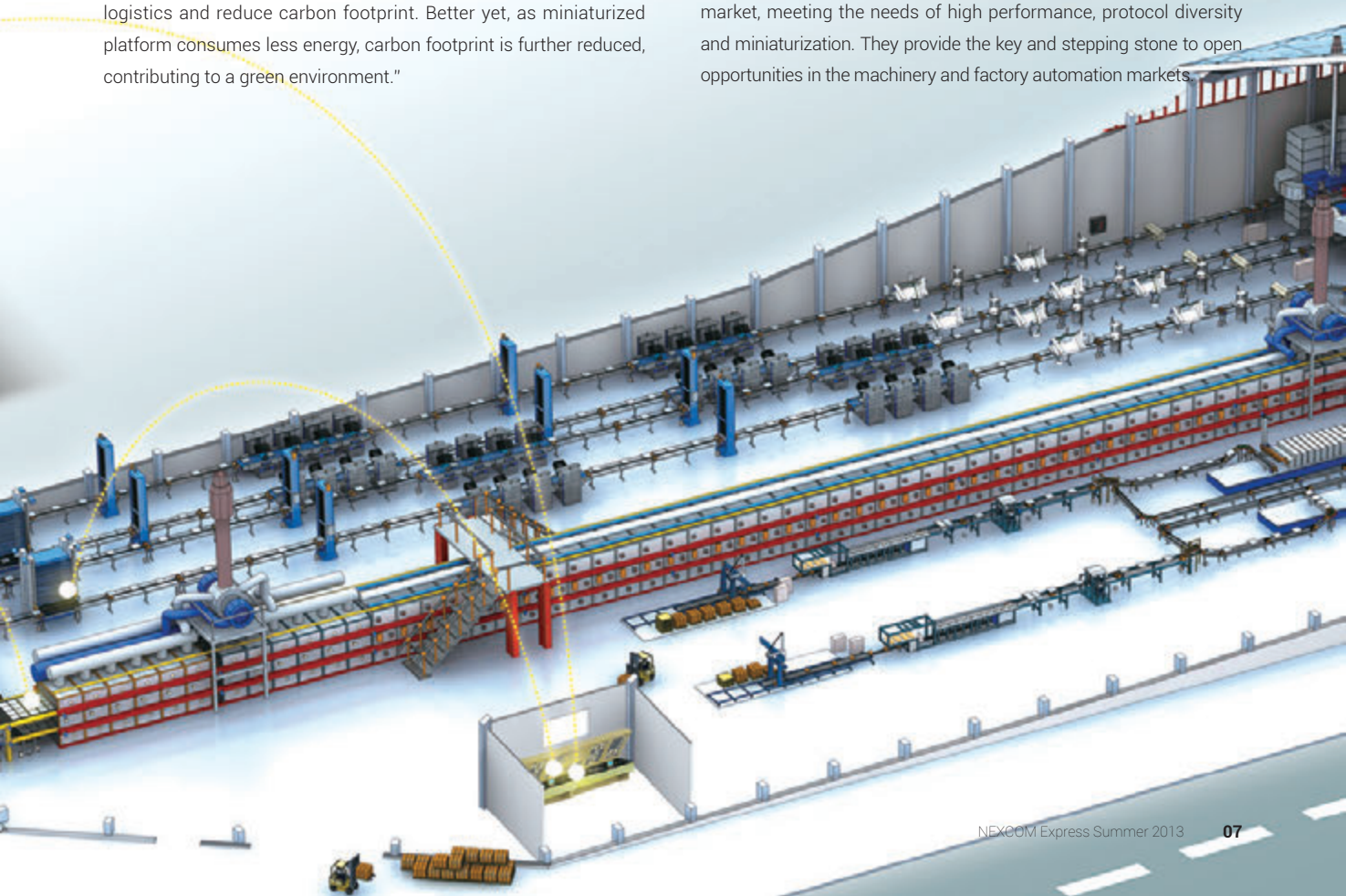
Automation Technology Matures, Machinery Industry Transforms into a Trillion Dollar Industry

In smart factories, industrial controllers are gradually moving away from large plug-in machinery designs toward miniaturization. "This trend in miniaturization decreases factory space usage, and help companies to locate factory in a city, minimizing the impact that labor shortages bring for manufactures," Lin explains. "By starting production immediately and locally once an order arrives, businesses have more control over their inventory, economize logistics and reduce carbon footprint. Better yet, as miniaturized platform consumes less energy, carbon footprint is further reduced, contributing to a green environment."

Traces of automation can be seen almost everywhere, for example, smartphone manufacturing are using high-precision motion controllers and automated optical inspection (AOI) to improve productivity. In addition, some naphtha cracker plant in Taiwan is using first-class PC-based distributed control systems (DCS) to control dozens of different sized factories from a central control room. Using DCS, the revenue per employee reached tens of millions annually, demonstrating the efficiency and value of factory automation. The examples mentioned above all used NEXCOM's NISE series of miniaturized industrial fanless computers as industrial controllers.

Throughout the decades, Taiwanese vendors have developed automation technologies to compete with European and Japanese competitors. Taiwan's machinery industry is forecast to reach one trillion in 2013. Now, various businesses in Asia-Pacific regions are transforming labor-intensive production to automated production. Lin points out that China's automation industry also shows plenty of opportunities, and because of the Economic Cooperation Framework Agreement (ECFA), Taiwan has the benefit of zero-tariff access to Chinese market.

The quality of NEXCOM's NISE series of industrial fanless computers are already tested and proven as a reliable solution in the embedded market, meeting the needs of high performance, protocol diversity and miniaturization. They provide the key and stepping stone to open opportunities in the machinery and factory automation markets.



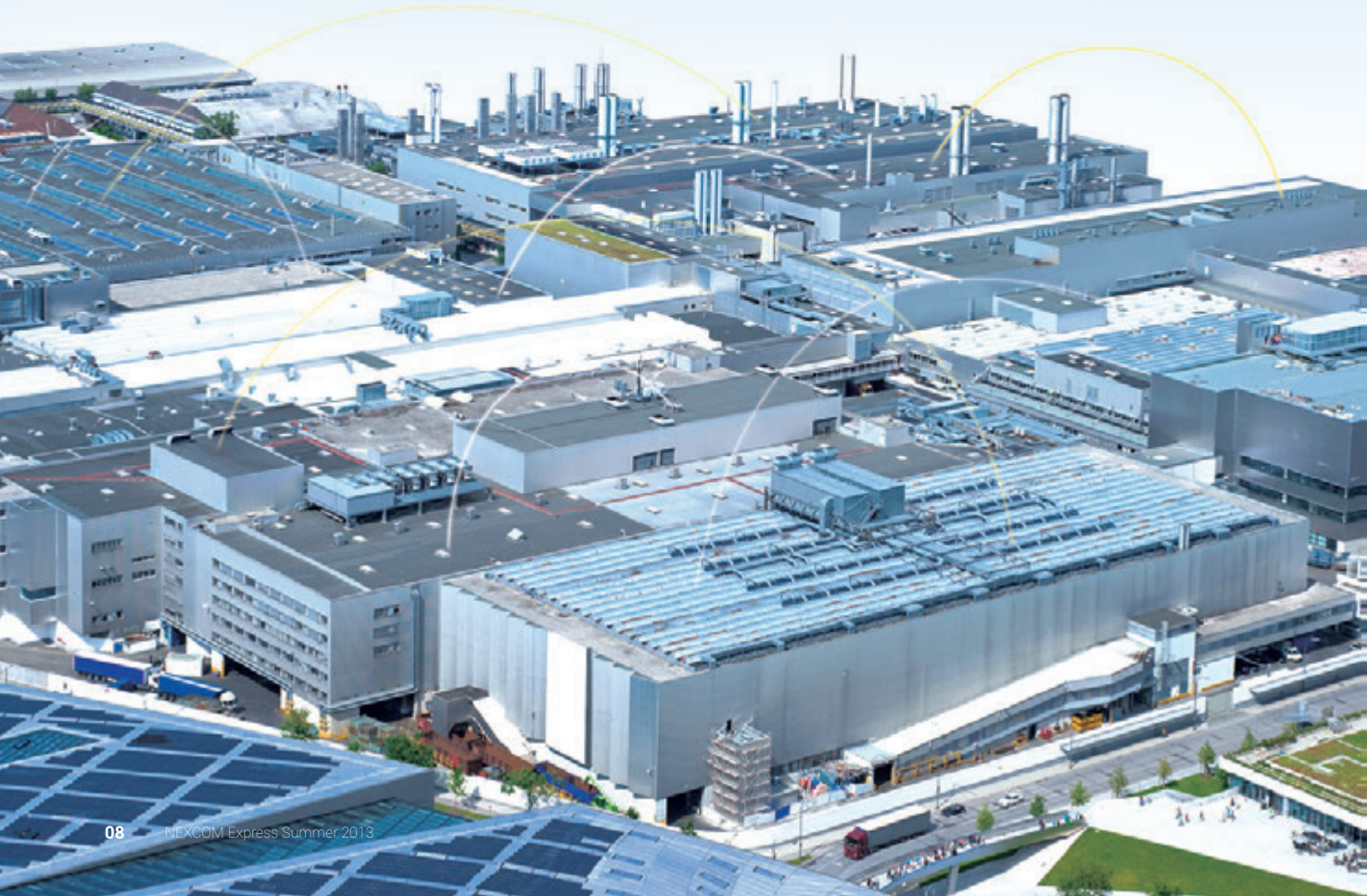
Maximize Uptime in the Connected Factory

Securely Connect and Manage Equipment with NEXCOM XCare and McAfee Solidcore

Reliable operation of machinery is key to productivity in the factory. However, monitoring the many devices that keep today's production lines running in optimal condition is a major challenge, especially when the machines are widely dispersed in different factories.

The Intel® Intelligent System Framework was created to address this challenge. This specification gives developers a standards-based, interoperable platform for connectivity, security, and manageability. Using the framework, an automation controller can not only control manufacturing equipment and its subsidiary systems but also communicate with the supervisory control and data acquisition (SCADA) system in a factory's central control room and with a headquarters office. With this connectivity, factory operators and supervisors can closely monitor daily operation and perform predictive maintenance and real-time diagnostics remotely, simplifying machinery management and maximizing operation uptime. In the meantime, enterprise executives can apply business insights to production plans and make real-time adjustments accordingly.

Using the framework, NEXCOM has developed the NISE 3640 fanless computer that brings together the 3rd generation Intel® Core™ processor, NEXCOM XCare remote monitoring and management software, and McAfee Solidcore security software. This article will explain how the combination of computing and graphics power with cutting-edge connectivity, manageability, and security enables the NISE 3640 to be used as a control and communication gateway that links cross automation hierarchy levels to monitor and control the devices connected to it in real time, enabling the integration of industrial automation and information technology.



The Central Problem

It is the universal goal of factory operators to reduce the frequency and duration of maintenance. Modern factories can meet this need with a combination of automation controllers that run local machinery, and SCADA systems that enable factory-wide management. Together these systems enable predictive maintenance and real-time diagnostics. Both automation controllers and SCADA systems can benefit from industrial computers built on the 3rd generation Intel® Core™ processor family, such as the fanless NEXCOM NISE 3640 (Figure 1).

These processors integrate powerful Intel® HD Graphics, which offer up to 60 percent better 3D graphics performance than their predecessors, along with new support for DirectX® 11. The processors can also drive three independent displays without a discrete graphics card, a considerable advantage with a SCADA system that uses multiple monitors.

Compute power has also been significantly upgraded. Vector processing (such as image processing) is up to 2x faster than the previous generation with Intel® Advanced Vector Extensions (Intel® AVX), which provides 256-bit floating point processing. In addition, overall compute power is increased by 15 percent over earlier processors thanks to enhancements such as the 22 nm process technology with a novel 3-DTri-Gate transistor design. For an automation controller used in machine vision, the improved computing power can translate into more accurate motion control, faster inspection speed, and higher defect coverage, bringing real gains in productivity to machinery ranging from label printing to automated optical inspection (AOI) machines.

In addition to running the manufacturing process, an automation controller will acquire, process, and analyze the captured images and send the results to a SCADA system. The SCADA system will record and further process the field data, and compile the results into a sophisticated factory-wide graphical user interface that includes 3D graphics, trend curves, alarms, and periodic reports on multiple large screens. This information can help a factory operator monitor the operational status of machinery without onsite visits.

If an automation controller reports an above-average false call rate—that is, if it is detecting non-existent flaws—a factory operator will be informed and empowered to take corrective action. Better still, if an above-average false call rate occurs as a result of faulty equipment with an aging part or a vision tool that is out of specification, a SCADA system enables a factory operator to notice an escalating false call rate and fix the problem before an expensive failure occurs. In comparison with machine inspection at fixed intervals real-time remote monitoring makes possible prompt and immediate

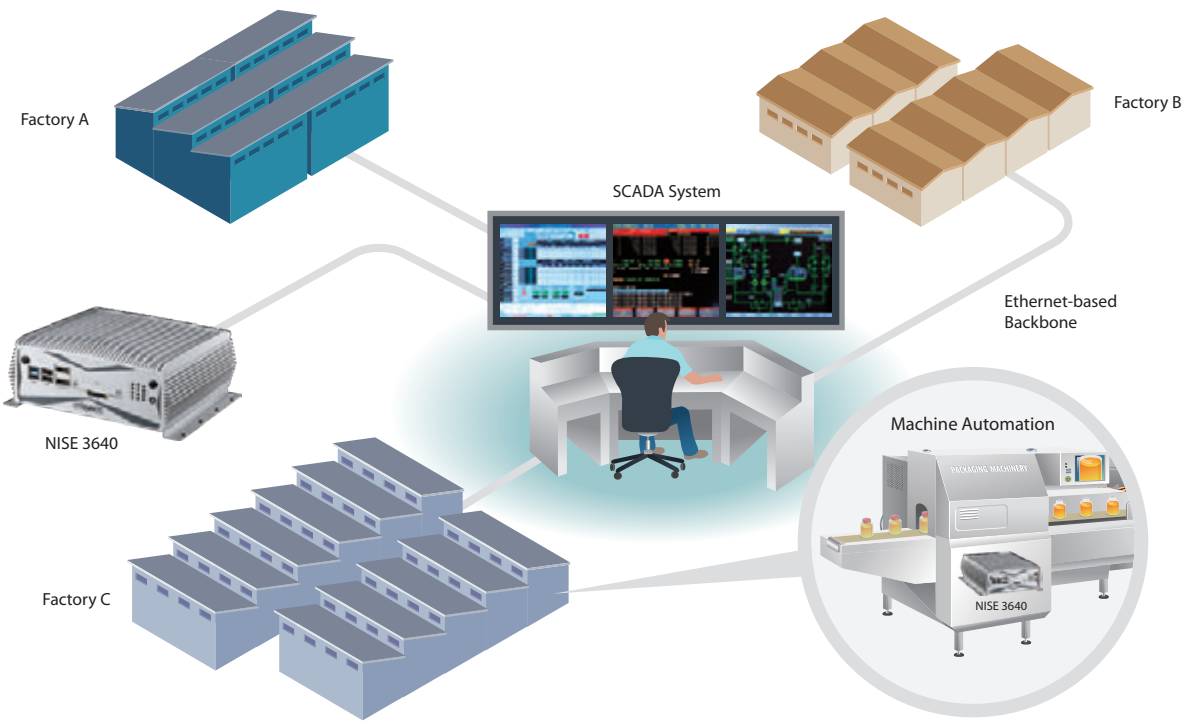


Figure 1: The connected factory enables predictive maintenance and real-time diagnostics remotely. The NEXCOM NISE 3640 can be used in both automation controllers and SCADA systems.

responses, saving the time and cost associated with machine downtime and increasing management efficiency.

Connectivity

While the benefits of this remote monitoring are clear, adoption has been hindered by the extraordinary fragmentation of the industrial device market. The proliferation of unique and proprietary hardware, communications protocols, and software stacks have made it difficult to connect the factory.

The Intel Intelligent Systems Framework can solve this problem by specifying a set of capabilities for hardware, operating systems, and software designed to address connecting, managing, and securing devices in a consistent and scalable manner. The framework can scale across applications, reducing fragmentation and speeding time-to-market.

A range of framework-ready solutions are available today from the Intel® Intelligent Systems Alliance, a global ecosystem of 250+ member companies that collaborate closely with Intel and each other to innovate with the latest technologies. For example, NEXCOM XCare is compatible with other framework-ready Alliance software including Wind River Linux, Microsoft Windows 7, Microsoft Windows Server 2008, and McAfee Embedded Control. These components support the defined framework capabilities, allowing developers to focus on advanced features instead of basic functionality. (NEXCOM, McAfee, Microsoft, and Wind River are all Associate members of the Alliance.)

Under the framework, manufacturing equipment on the factory floor can communicate smoothly with the SCADA system in the control room. With access to real-time status, operators can indentify early indicators of potential problems and analyze the root cause of an existing condition. Operators can reschedule planned maintenance if it is not necessary, or devise a corrective action before taking a field trip to minimize the time and effort needed onsite. As a result the frequency, duration, and the manual effort involved in maintenance can be reduced.

Of course, remote monitoring and control of hundreds of geographically distributed intelligent machines—each with numerous sensors—involves moving and processing a great deal of data in near real time. The NISE 3640 is able to handle the load through the integration of fieldbus and a total of four Gigabit Ethernet ports. With the integrated fieldbus, the NISE 3640 provides assured hardware compatibility with field devices such as programmable logic controller (PLCs). The Ethernet enables forwarding of raw data from factory floors to a SCADA system and to a headquarters office. To ensure a reliable connection, a LAN teaming feature is supported to enable automatic failover and to prevent data loss. The NISE 3640, as a typical M2M solution, also supports wireless connections including Wi-Fi and 3G connections to adapt to different installation environments.

Manageability

So far we have focused on the importance of using industrial computers to maintain equipment. However, it is just as important to ensure that the industrial computers themselves are properly maintained. With that goal in mind NEXCOM has developed XCare, which integrates software applications, API, and a cloud server to support remote monitoring and management of the NISE 3640 and other NEXCOM products (Figure 2). The four main features of the XCare include hardware status check, system restore, remote keyboard/video/mouse (KVM), and remote configuration.

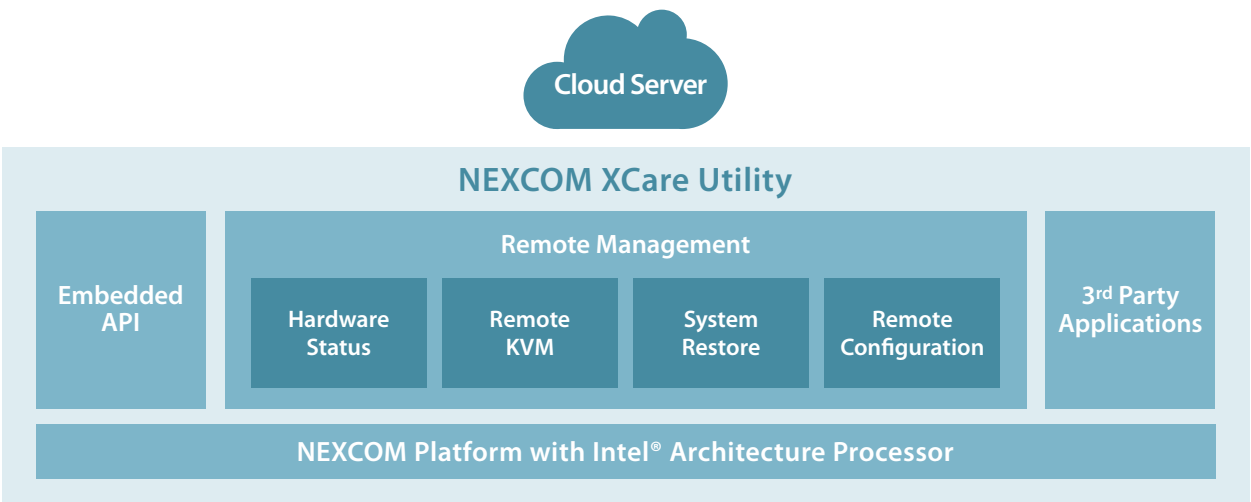


Figure 2: NEXCOM XCare integrates software applications, API, and a cloud server.

Figure 3: NEXCOM XCare gives alerts on issues across the factory (left). Operators can zoom in on individual systems (right) to quickly investigate and repair problems.

BIOS, operating system, system temperature, voltage, hard disk drive, and network connectivity. Second, the system restore can automatically reboot the system, recovering it from a locked-up state. Third, the remote KVM helps a factory operator to upgrade and upload drivers, patches, OS, and applications, as well as to perform troubleshooting. Finally, GPIO configuration and hardware alarm setting can also be set remotely.

XCare enables cost-effective remote management of networked embedded systems. IT personnel can discover, maintain, and protect networked embedded systems, without incurring the expense of onsite support.

XCare can simplify maintenance and increase equipment uptime. For example, XCare can detect an underperforming hard disk drive and show an onscreen alert (Figure 3). An informed factory operator can take advantage of remote KVM to perform system backup, bring the replacement to the factory floor on the first visit, and therefore prevent potential manufacturing equipment breakdown. For glitches that can be solved by system reboot, system restore is a time- and cost-saving method that doesn't requiring the physical presence of a factory operator.

Security

A connected factory is only as strong as its weakest link, so every connected client in the factory needs protection from viruses, malware, and hacking in order to prevent costly interruptions to factory operation. To alleviate such security concerns, XCare's support for McAfee Solidcore integration is intended to block unauthorized applications and changes to automation controllers and the SCADA system.

McAfee Solidcore includes Application Control and Change Control. Application Control adopts a whitelist approach to managing zero-day threats. This approach only allows applications in the whitelist to be installed and to run while blocking the rest. By preventing the installation and execution of unauthorized applications, risks from worms, viruses, spyware, and other malware can be reduced and failed attempts will be logged.

Change Control adopts change policies to prevent unwanted changes and to ensure file integrity. Change Control can detect, verify, and authorize changes to be made. Unauthorized modification to a file made by unauthorized personnel during an unauthorized time will be blocked. Change Control gives strong control over mission-critical devices such as manufacturing equipment.

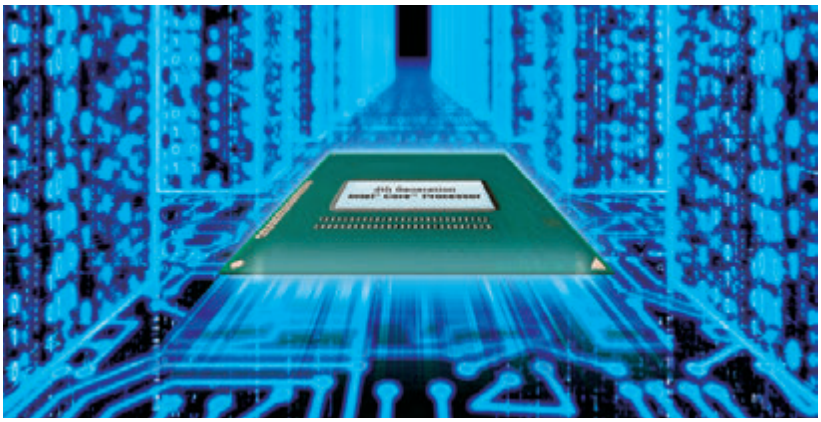
The integration of XCare and McAfee Solidcore provides remote real-time monitoring on both hardware and security threats. For example in the case of a suspicious spike in network workload on an NISE 3640 a factory operator will be alerted to check the event log generated by McAfee Solidcore to monitor a possible ongoing malicious attack.

Secure Remote Control

Effectively monitoring, controlling, and connecting machinery that may be several time zones apart is a serious and growing challenge. NEXCOM has found that the Intel Intelligent System Framework provides a stable, secure, and extensible structure on which to design a remote monitoring and control system that can handle many types of devices. The 3rd generation Intel Core processors with integrated Intel HD Graphics—in combination with NEXCOM XCare and McAfee Solidcore software—enable the NISE 3640 to monitor and control the devices connected to it in real time, even when they're half a world away.

The article is also published in the April 2013 issue of Intel Embedded Innovator Magazine.

4th Generation Intel® Core™ Processor



In the connected world, big data, prevalent graphics data and system intelligence weigh on not only system responsiveness but also security concerns while high efficiency in system management can be achieved. To this end, NEXCOM has developed Digital Signage Players and Embedded Boards based on the 4th generation Intel® Core™ processor family.

NDiS B533, NDiS M533

Digital Signage Player

The fanless digital signage player NDiS B533 and OPS-compliant digital signage player M533 are built on the 4th generation Intel® Core™ processor family to meet the needs of customer and context-aware interaction, delivering engaging experience and compelling visuals while securing the content against unauthorized access.

The new Intel processors offer numerous processor and graphic enhancements with integrated technologies. The new extensions in Intel® AVX 2.0 accelerate float point computations to meet rising application demands such as anonymous video analytics; the Intel® HD Graphics 4600/5000 supports Microsoft® DirectX 11.1, OpenCL 1.2 and OpenGL 4.x and provides full hardware-accelerated video decoding to allow for stereoscopic 3D visuals and faster video streaming. Adding the support for multiple displays, the NDiS B533 and M533 can create compelling visual experiences while using the new instructions and enhancements in Intel® AES-NI to protect signage content from being tampered.

In addition to be smart, stunning and secure, the NDiS B533 incorporates a fanless design in an aluminum cover for reliable operation. The NDiS M533 follows Open Pluggable Specification (OPS) and supports Intel® Active Management Technology (AMT), simplifying installation and remote maintenance of large-scale multi-location digital signage network.

ICES 670, NEX Series, PEAK 887VL2

Embedded Board

NEXCOM has developed a series of embedded board based on the 4th generation Intel® Core processors. The ICES 670 is a COM Express Type 6 Basic module which integrates an embedded controller and comes with Embedded Application Programming Interface. The ICES 670 can give system the performance boost and enhance system compatibility.

The NEXC series includes industrial Micro-ATX motherboard NEX 885 and industrial ATX motherboard NEX 981. The NEX 885 and NEX 981 support the latest PCIe, SATA and USB and display interfaces to process high data volume in a fast manner. These boards also support RAID function and Intel® AMT 9.0 to ensure data integrity and facilitate remote management.

The PEAK 887VL2 is a PICMG 1.3 full-size single board computer featuring the 4th generation Intel® Core™ processor paired with Intel® Q87 chipset. Designed for rackmount systems, the PEAK 887VL2 supports extensive expansion of add-on cards required of industrial applications.

4th Generation Intel® Core™ Processor Family at a Glance

- 4th Generation Intel® Core™ Processor Family has high computing power thanks to the enhancements such as the 22 nm process technology with a novel 3D Tri-Gate transistor design.
- Intel® HD Graphics 4600/5000 features more execution units, full hardware-accelerated transcoding and DirectX 11.1 support. It also supports 4K DisplayPort and HDMI for enriched visuals experiences.
- Integrated Technologies including Intel® AVX 2.0, Intel® Active Management Technology and Intel® AES-NI are used to enhance system responsiveness, manageability and data security.

Upcoming Products Outshine the Summer Sun

NISE 4000 Family

In the light of Industry 4.0, NEXCOM, the world-class industrial automation and computing provider, has expanded its NISE product lines with industrial fanless controller – the NISE 4000 family, which provides sufficient expansion, robust design and all IP-factory connectivity which are the fundamentals of smart and green production emphasized by the new epoch of industry 4.0.

The NISE 4000 family embeds most industrial-grade functionalities, such as isolated COM port, optically isolated digital inputs and outputs, non-volatile RAM and dual HDDs with RAID function. Alone with the on-board functionalities, up to 4 PCI/PCIe expansion slots are available on the NISE 4000 which make it possible to install specialized add-on modules such as motion control cards or frame grabbers. Keeping the well-proven fanless design allows NISE 4000 to operate under fanless condition, generate fewer particles, stand for hazardous environment and greatly improve MTBF. The embedded functionalities with up to 4 expansion slots and fanless design allow the NISE 4000 to meet requirements of most industrial control applications.

Featuring fieldbus technologies, the NISE 4000 with two built-in mini-PCIe sockets supports mainstream protocols including PROFIBUS, PROFINET, DeviceNet, EtherNet/IP and EtherCAT. In addition, WWAN and WLAN connectivity are also supported through expansion. With multiple connectivity technologies, the NISE 4000 can is a typical M2M communication controller.

The NISE 4000 is also integrated with NEXCOM Xcare 3.0 software, which supports remote monitoring and management of the NISE 4000 through a cloud server. Positioned as an intelligent system dedicated to factory automation, NISE 4000 can bring the smart production into reality, living up to the Industry 4.0 which advocates internet of things and services.

The complete NISE 4000 family is made up of the NEXCOM Industrial Smart Embedded System NISE 4000 series, NEXCOM Industrial Fieldbus Embedded System NIFE series and Machine Automation Controller MAC 4000 series.

Series Name	Application	Type of bundle module
NISE 4000 Series	General Purpose Industrial Smart Embedded Systems	None
NIFE 4000 Series	Industrial Fieldbus Embedded Systems	Fieldbus interface
MAC 4000 Series	Machine Automation Controller	Motion control card

NISE 4000 Series

High Performance PC-based Industrial Controller

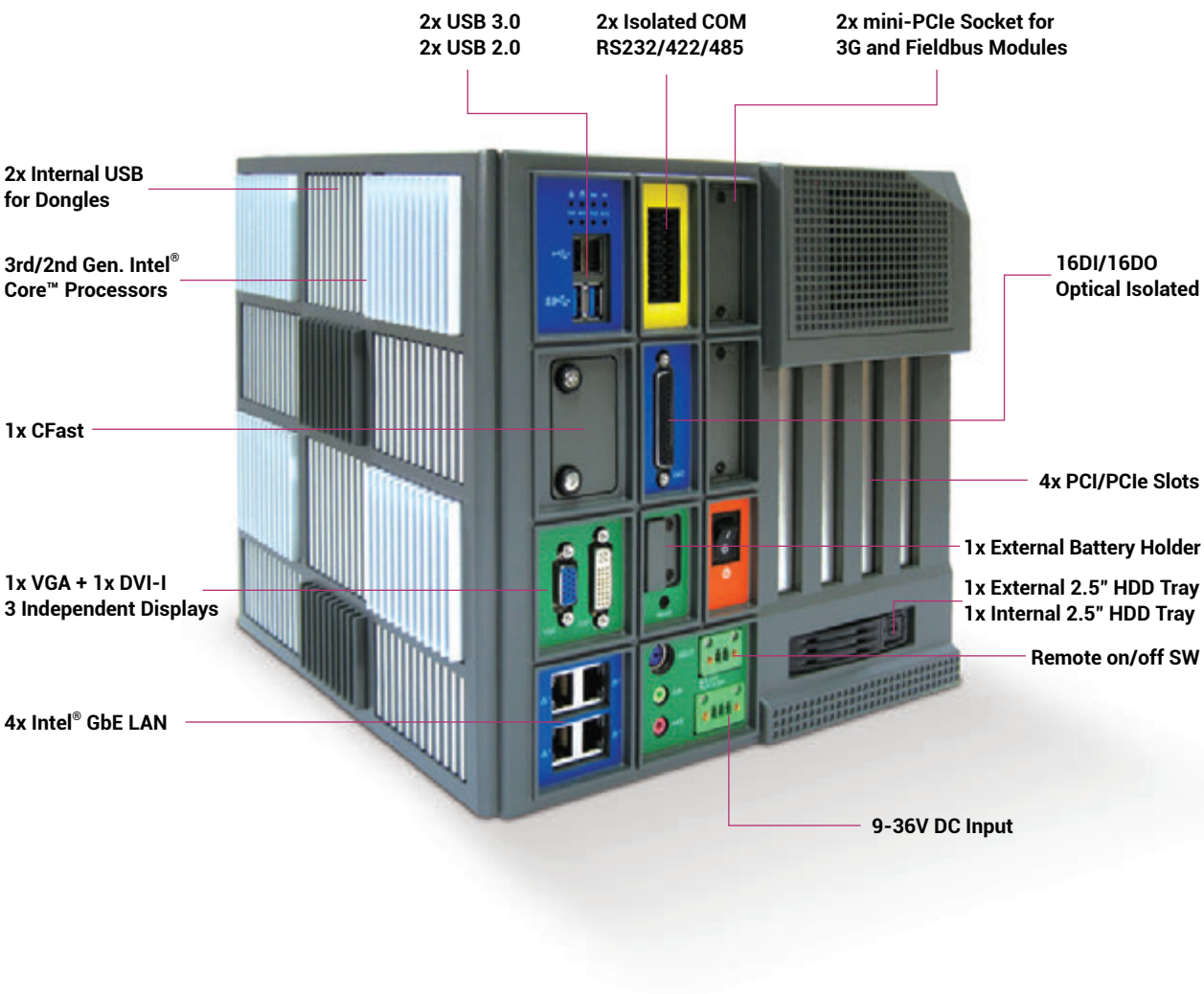
The NISE 4000 series is a high performance x86-based platform targeted at industrial control application. Based on 3rd generation Intel® Core™ processor family, the NISE 4000 series supports up to Intel Core i7 processors paired with mobile Intel® QM77 Express Chipset. The NISE 4000 series supports three independent displays.

To connect to assorted field sensors and devices, the NISE 4000 provides a variety of onboard I/O interfaces to eliminate the need for signal conversion and active cables. Better still, these interfaces offer isolated protection, LAN teaming features and high-current (200mA) capability and can drive relays and solenoid valves.

All connectors of NISE 4000 are grouped and located at the front panel to facilitate wiring and maintenance. The wall-mount style improves the space efficiency of the control cabinet. To meet different requirements, NISE 4000 has three different expansion SKUs, providing 4-slot, 2-slot and also non-slot model.

Moreover, the NISE series features robust fanless design. Under its modern outlook, NISE 4000 features unparalleled performance, industrial-grade I/O and rich expansion, aimed to create a new page for industrial controller.

Model Name	No. of PCIe Slots	No. of PCI Slots
NISE 4000	0	0
NISE 4000P2E	1 (PCIe x8)	1
NISE 4000P4E	1 (PCIe x4)	3



NIFE 4000 Series

Integrated with Advanced Fieldbus Technologies

Aimed at factory automation, NEXCOM Industrial Fieldbus Embedded System (NIFE) Series integrates industrial master Fieldbus interfaces, including PROFINET, PROFIBUS, DeviceNet, EtherNet/IP and EtherCAT to communicate with Fieldbus distributed I/O and programmable logic controllers (PLCs) from major brand-name suppliers. This unprecedented vertical technology integration gives rise to highly reliable factory automation solutions while reducing system integration costs by at least 30 percent for users and solving the common incompatibility issue arising from system integration.

Combining PC-based control algorithm program such as SoftLogic control software, the NIFE series is a powerful controller that supervises the Fieldbus network. The NIFE series supports a wide range of operating systems, including the real time OS QNX®, RTX, VxWorks® and more to be used in critical control applications.

NEXCOM also offers the OPC server for NIFE's Fieldbus interface. Installed with SCADA/HMI software, the NIFE series allows users to control and monitor the connected PLCs, field Instrumentations and local devices. Along with the robustness rooted from its fanless design and support for multiple Fieldbus interfaces, the NIFE series is a highly reliable PC-based controller and can be used as a communication gateway or SCADA station.

MAC 4000 Series

Motion Control for Machinery Automation

Targeted at machine automation applications, the Machine Automation Controller 4000 series is capable of motion control, machine vision and HMI.

At the core of machine automation lies the motion control which arranges axes of movement and motors according to a planned sequence and trajectory. As required control capabilities vary from machine to machine, the MAC 4000 series is made up of five modules to provide different combination of number of axis control and control schemes. In the meanwhile, the MAC 4000 series is equipped with high computing power and high speed GbE and USB 3.0 interfaces to perform image acquisition and analysis.

In addition, the MAC 4000 series is packed with a wide variety of interfaces, including multiple channels of DI/O to control and monitor photo-sensors, buttons, switches, relays and solenoid valves. The outputs support up to 200mA per channel with NPN interface; the number of I/O channels can be increased through module expansion.

To access many legacy serial port devices which have been widely used in industrial control application, the MAC 4000 has two isolated COM ports with configurable RS-232/422/485 interface. The on-board RS-485 supports auto-flow control which lowers the programming complexity and ensures communication between MAC 4000 and certain RS-485 devices.

	MAC 4013GTS	MAC 4013GTS8	MAC 4013GTP	MAC 4013GTP8	MAC 4013AX0
Number of Axes	4	8	4	8	4
P2P	●	●	●	●	●
P2P S-curve	●	●	●	●	●
Jog	●	●	●	●	●
Position Override	●	●	●	●	●
Velocity Override	●	●	●	●	●
Linear Interpolation	●	●	●	●	●
Circular Interpolation	●	●	●	●	
E-Gear	●	●	●	●	
E-Cam	●	●	●	●	
PT	●	●	●	●	
PVT	●	●	●	●	
Closed-loop control	●	●			

Model Name	Description
MAC 4013GTS	High performance machine automation controller for V-mode advanced 4 axes
MAC 4013GTS8	High performance machine automation controller for V-mode advanced 8 axes
MAC 4013GTP	High performance machine automation controller for P-mode advanced 4 axes
MAC 4013GTP8	High performance machine automation controller for P-mode advanced 8 axes
MAC 4013AX0	High performance machine automation controller for V-mode standard 4 axes
QVL modules (only bundle selling)	
AXE-5004	Standard 4-Axis pulse type motion control card
AIO-121602AL-PCI	16 Ch 12-bit Multi-function board w/ Gain Amp. for PCI
PIO-16/16L(PCI)H	Isolated Digital I/O Board for PCI

NISE 300

Fanless Computer Advocates M2M Factory

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. 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.

- 4th generation Intel® Core™ processor family paired with Intel® 8 Series Chipset
- Multiple and flexible mini-PCIe module expansion
- Swappable I/O interfaces
- Support factory automation (PROFIBUS, DeviceNet, EtherCAT, PROFINET, CANOpen, MODBUS)
- Support M2M application (Wi-Fi, GSM, GbE LAN)

APPD 1200T/ 1205T/ 1500T/ 1700T/ 1900T

Touch Monitors Make Cleaning Easy

NEXCOM APPD series are IP65 industrial touch monitors designed for use on manufacturing sites where regular cleaning is required, making cleaning easy for food and chemical industries.

The APPD series features 5-wire resistive touch screen and has four screen sizes with a maximum resolution of 1280 x 1024. Thinner than 55mm, the industrial touch monitors can be fitted into most environments and used for sophisticated HMI visualization.

The APPD series has an IP65 flush front panel, which can keep water and dust off the surface. The ease of clean feature can help users meet hygiene standards that food, beverage, chemical, pharmaceutical and biotechnology industries are obliged to observe.

The APPD series supports VGA and DVI-D display inputs, RS-232 and USB touch screen interfaces and allows users to choose from panel, wall, stand and VESA mounts based on different installation environments.

Industrial applications call for industrial-grade devices. As the thinner twin of NEXCOM applied panel PC APPC series, the APPD series is ideally used as a second display of the APPC series or in conjunction with NEXCOM fanless computer NISE series.

- Front IP65 compliant plastic front bezel with flush 5-wire resistive touch screen
- Dual display input interface: analog VGA and DVI-D
- Dual touch interface: RS-232 and USB
- Multilanguage OSD function
- Wide Range Power input +12V to 24V DC

IPPC 1960TF/ 1960T-DC/ 1960T-AC

Heavy Industrial Panel PC Gives Thoughts to Hazardous Environments

IPPC 1960T series are heavy industrial panel PC equipped with powerful 2nd/ 3rd generation Intel® Core™ processor. The NEMA4/ IP66 rated heavy-duty front bezel and the vibration-resistant rugged chassis are specially design for harsh industrial environment. It provides two expansion slots to support additional function PCI or PCIe card. This is Fieldbus enable system with EtherCAT, PROFINET, EtherNet/IP and DeviceNet mini-PCIe cards to fulfill MA/FA market.

IPPC 1960T has the same cut-out size as SIMATIC Panel PC and can easily replace it to provide better performance. IPPC 1960T series has fan, fanless, wide range DC power input and full range 100-240V AC input with fuse protection models for use in oil, gas rig, wind farm, chemical factories, pharmaceutical factories and any environment application.

- 4:3 19" 1280 x 1024 fanless panel computer
- Power by 2nd/3rd generation Intel® Core™ i7/ i5/ i3 processors
- Metal housing with robust aluminum front bezel for harsh environment
- 2x expansion slots for add-on PCI or/and PCIe cards
- Front accessible USB 2.0 for ease of field maintenance

NPPC 0730P

Marine Panel PC Assures Clear Sailing

NPPC 0730P is a 7" fanless marine panel PC for use in assorted vessels. The NPPC 0730P features the Intel® Atom™ processor N2800 paired with Intel® NM10 Express Chipset and supports 4GB of DDR3 Memory. The NPPC 0730P has a 7" 16:9 P-Cap touchscreen, supporting multi-touch function and a resolution of 1024 x 600.

The sleek NPPC 0730P has an aluminum front bezel to resist acidic or alkaline corrosion at sea. The NPPC 0730P supports panel mounting by default and can be configured as flush mounting after the front bezel is removed. With the mounting, the NPPC 0730 offers IP65 protection on the front side and IP20 protection on the rear side. Better still, the NPPC 0730P is designed by EN60945 Protected B and IACS E10 standards.

The NPPC 0730P supports 100 dimming levels (0~100%) which can be adjusted with two brightness buttons. This feature allows the screen brightness to be reduced to about 5 nits to make it more comfortable to view in the dark sea. The NPPC 0730P is equipped with VGA port to support 2nd display. The two USB ports on the front side conform to IP65 standard without cover, which can be used to scan USB dongles for virus. Meanwhile 1x USB and 4x LAN ports support network redundancy are located on the rear.

- 7" 16:9 1024x600 fanless panel computer
- Multi-touch P-Cap touch screen
- Low power Intel® Atom™ Processor N2800
- Panel Mount/ flush mount compliance
- Comply with EN60945 protected b / comply with IACS E10

MPPC 2130P/ 2130T

Full HD Multi-Media Panel PC Makes A Visual Feast

Fanless multimedia panel PC MPPC 2130T/ 2130P features a 21.5" Vertical Alignment (VA) LCD touch screen, which can provide exceptional visual experiences at wide viewing angles. The fanless MPPC 2130T/2130P uses LED backlighting, which consumes very little power, and is equipped with a low power dual core Intel® Atom™ D2550 Processor (1.86GHz) and DDR3 memory to handle multimedia streaming and interactive touch selection tasks simultaneously.

MPPC 2130T/2130P also has backlight control button for power-saving and any indoor lighting brightness environment. The MPPC 2130P uses multi-touch P-Cap Touch with flush zero bezel in a 100% flat surface which is elegant outlook and smooth touch feeling.

- 16:9 21.5" fanless panel computer with Intel® Atom™ D2550 Processor
- Panel mount/ VESA mount compliance
- Wide range power input +12V~30V DC
- Multi-touch P-Cap touch (MPPC 2130P)
- Zero bezel flush front design (MPPC 2130P)

Computing Platforms Based on 4th Generation Intel® Core™ Processor

Makes Big Forays to Intelligent Systems

NEXCOM has expanded its industrial computing platforms based on the 4th generation Intel® Core™ processors. The new lineup includes COM Express module ICES 670, Micro-ATX NEX 885, Standard ATX NEX 981 and PICMG 1.3 SBC PEAK 887VL2, poising to grasp a foothold in intelligent system used in industrial automation, medical imaging, security surveillance and telecommunication applications.

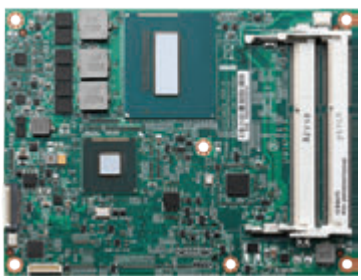
Besides off-the-shelf computing platforms, revision control, product longevity support and embedded software customization are offered by NEXCOM Embedded Pro Services, helping lay the digital infrastructure for an intelligent future.

ICES 670

ICES 670 is a COM Express Type 6 basic module (95 x 125mm) based on the BGA-type 4th generation Intel® Core™ i7/i5/i3/Celeron® processors. This module follows COM.0 Rev. 2.0.

The ICES 670 supports up to 16GB of 1333/1600MHz DDR3L memory with ECC function and the latest I/O interfaces including PCIe 3.0, SATA 3.0, and USB 3.0.

ICES 670 is integrated with Intel® HD Graphics for powerful graphic processing and three-display capability through display interfaces like HDMI/ DVI / DisplayPort/ CRT, and dual channels of LVDS.

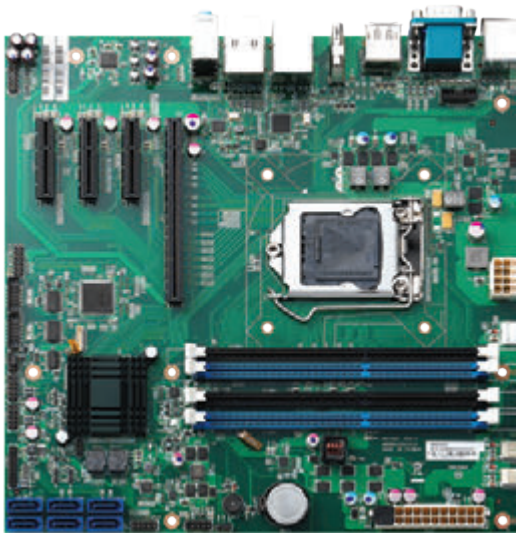


ICES 670 features a built-in embedded controller with uniform I/O address and protocol to provide flexible power distribution control, enabling ME ROM backup, super I/O, and hardware monitor interface. ICES 670 offers Embedded Application Programming Interface (eAPI) from PICMG for advanced multi-level programming watchdog, multi-control I2C, SMBus, GPIO interface, power saving, data security and brightness control.

ICES 670 is ideal for high-performance display-driven, I/O rich applications and server appliances focusing on the cloud-computing as telecom, finance, medical, gaming, digital signage, video conference, and networking as embedded/ digital infrastructure solution.

NEX 885

NEX 885 is an industrial motherboard with Micro-ATX form factor, built-in Intel® Q87 Express Chipset to support Socket H3/ LGA1150 as 4th generation Intel® Core™ i7/i5/i3 and Celeron® processors which are designed specially to optimize the power savings and performance benefits on the improved 22 nm process. NEX 885 supports dual channel DDR3 memory in four long DIMM slots up to 32GB.

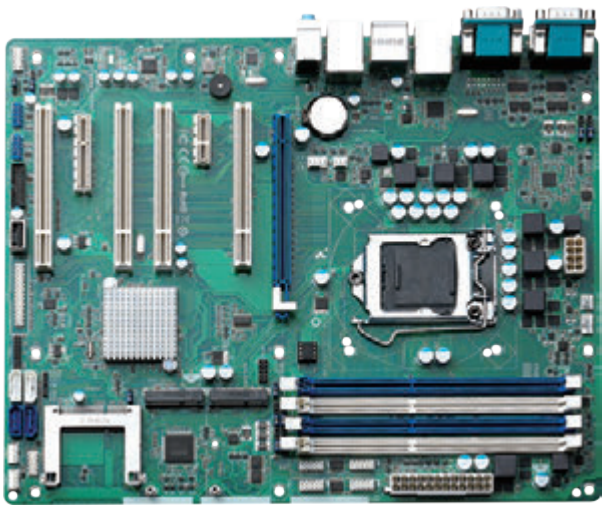


NEX 885 supports three independent displays by 2x HDMI, DisplayPort and VGA. Intel® Q87 Express Chipset manages up to 6x SATA 3.0 to support software RAID 0/1/5/10 and performs up to 10x USB (3x USB3.0/ USB2.0 and 4x USB 2.0) NEX 885 supports PCIex16, 2x PCIex1, PCIex4 slots, dual Intel GbE ports with I217LM to support Intel® AMT 9.0 and I210 for 2nd GbE port and up to 4x series ports including 1x RS-232/422/485 pre-selected in the BIOS.

NEX 981

NEX 981 is an industrial motherboard with Standard ATX form factor, which support 4th generation Intel® Core™ i7/i5/i3 Celeron® processors. NEX 981 supports dual channel DDR3 memory in four long DIMMs up to 32GB system memory and PCIex16 (3.0/ 2.0 by CPU)

The Intel® Q87 chipset supports multiple displays HDMI/ DP ports as well as legacy VGA. Intel® Q87 chipset manages up to 4x SATA 3.0 with software RAID 0/1/5/10 supported and performs up to 12x USB (4x USB3.0/ 8x USB2.0) ports. NEX 981 supports PCIex 16, PCIex4, PCIex1 and legacy 3x PCI slots, dual Intel GbE ports with I217LM for Intel® AMT 9.0 and I210 for 2nd GbE port and supports up to 6x COM ports including 2x RS-232/422/485 ports.



PEAK 887VL2

The PEAK 887VL2 is a PICMG1.3 full-size single computing board featuring Intel® Q87 chipset and 4th generation Intel® Core™ processor with dual DDR3 DIMM sockets for up to 16GB DDR3 1333/ 1600MHz SDRAM with non-ECC support and integrated HD Graphic controller. The Intel® Q87 Express Chipset manages up to 6x SATA 3.0 ports, 4x USB 3.0 and dual GbE ports.

NEXCOM provides in-house designed PICMG 1.3 compliant backplane, NBP 14570-BX 14-slot Backplane (1x SHB, 7x PCI Slots, 4x PCIex1, 1x PCIex16) and NBP 2U220, 2U Butterfly Backplane (1x SHB, 2x PCI Slots, 1x PCIex4, 1x PCIe x16), for PEAK887VL2 to be integrated into 2U/ 4U rack mount barebone system solution for widely industrial applications in the new era of digital infrastructure with NEXCOM.

Model	ICES 670	NEX 885	NEX 981	PEAK 887VL2
Form Factor	COM Express, T6 125 x 95mm	Micro-ATX Standard 244 x 244mm	ATX Standard 305 x 244 mm	PICMG 1.3 Standard 338 x 126mm
Processor	BGA-type 4th Gen. Intel® Core™ processors (mobile)	LGA-type 4th Gen. Intel® Core™ Processors		
Chipset	Intel® QM87 Express Chipset	Intel® Q87 Express Chipset		
Memory	Up to 16GB ECC-DDR3L/ SO-DIMM	Up to 32GB Non-ECC-DDR3/ DIMM	Up to 32GB Non-ECC-DDR3/ DIMM	Up to 16GB Non-ECC-DDR3/ DIMM
PCIex16	1	1	1	1
PCIex4	0	1	1	4
PCIex1	7	2	1	1
PCI (v2.3)	0	0	4	By PICMG 1.3 backplane
Gigabit Ethernet	1	2	2	2
SATA 3.0	4	6	4	6
USB 3.0	4	3	4	4
USB 2.0	8	7	8	4
Series Ports (UART)	2x UART	4 (incl. 1x RS232/422/485)	6 (incl. 2x RS232/422/485)	4 (incl. 1x RS232/422/485)

NDiS B533

High Performance Digital Signage Player for Engaging, Interactive User Experiences

NDiS B533 is based on the 4th generation Intel® Core™ processor family and Intel® Q87 chipset. This fanless digital signage player supports up to 16GB of DDR3 memory, VESA/wall mounting, three independent displays with HDMI interface and network connections including LAN, Wi-Fi and 3.5G. USB 3.0 interfaces and mini-PCIe slot are also provided for custom function and peripheral expansion.

The NDiS B533 is designed to redefine customer experience in a smart stunning and secure way. NDiS B533, based on the 4th generation Intel® Core™ processor family, offers improved computing and graphic performance as well as enhanced security in a reliable design. NDiS 533 can address the needs of customer and context-aware interaction, delivering engaging experience and compelling visuals while securing the content against unauthorized access.

- 4th generation Intel® Core™ processor family
- Intel® HD Graphic 4600
- 3x HDMI independent displays
- USB 3.0, dual GbE LAN support
- WWAN/ WLAN/ TV Tuner support

NDiS M533

OPS-compliant Player Simplifies Installation & Maintenance of Digital Signage Network

NDiS M533 is based on the 4th generation Intel® Core™ processor family and follows the electrical and mechanical specifications of the Open Pluggable Specification (OPS). M533 can be plugged into any OPS-complaint display devices to render rich multimedia contents. Thanks to the modular and cable-less design and advanced built-in remote management function, M533 satisfies the need for quick deployment and hassle-free maintenance of large digital signage network dispersed in different geographical locations.

M533 is powered by the 4th generation Intel® Core™ processor family paired with mobile Intel® QM87 Express Chipset. The digital signage player has an integrated Intel® HD Graphics 5000 and supports Microsoft® DirectX 11.1. Taking advantage of the latest Intel technology, M533 can accelerate 3D rendering, image processing and video decoding to provide highly personalized information based on the result of audience measurement to deliver accurate marketing message to target audience.

- 4th generation Intel® Core™ processor family
- Intel® HD Graphics 5000 with DirectX 11.1 support
- Dual DDR3 SO-DIMM support up to 16GB
- WWAN/ WLAN/ TV Tuner support
- Support for Intel® AMT 9.0 and CEC function

nROK 5500

Train Computer for Improved Passenger Entertainment & Safety

nROK 5500 is designed to address the need of solid and powerful computer platform to improve passenger service experience for information, entertainment, and safety in the rolling stock market. nROK 5500 is packed in a fanless 2U standard rack-mount enclosure and features with secure lock mechanism for power, data network, and control signal connection. It can take 24VDC or 110VDC power feed and can work flawlessly under EN50155 Tx operating temperature criteria.

nROK 5500 comes with large data storage, powerful processor, and multi-path network connections and is fully compliant to the criteria of installation and operation in rolling stock vehicles, e.g. rapid transit system, metropolitan rail, commuter rail, high speed rail, tram, and train. It features powerful 3rd generation Intel® Core™ i7/ i5 processor, 4x removable storages with secure lock, 8x Power-over-Ethernet LAN ports, and multiple choices of Wireless LAN, cellular network options.

The power, data, and control signal connections are designed with secure lock to withstand the vibration and impact introduced in the rolling stock operating environment. It is an ideal hardware platform to work as a central server for passenger information, network access service, on-board entertainment, and surveillance applications in rolling stock market.

- 3rd generation Intel® Core™ i7/ i5 processor
- Support ignition controlled power On/Off with programmable delay-timer
- Removable 2.5" SSD with RAID 0/1/5/10 support
- Secure and isolated RS-232/422/485, GPIO and 24/110 VDC power input
- Support 8 channels PoE with IEEE802.3af
- 2x PCI Express x8 slots for I/O expansion
- Certified by EN50155 with Tx grade operation temperature

VTC 1010

Highly Connected In-vehicle Computer Built around Telematics

VTC 1010 is packed rugged, fanless, and 1 DIN compact enclosure. It is specifically designed to comply with stringent MIL-STD-810G military standard for the harsh in-vehicle application. VTC 1010 features powerful graphic and multimedia enhancement. VTC 1010 comes with built-in CAN bus 2.0B interface and optional OBDII (J1939/J1908) port to monitor the vehicle operating status real-time and trouble-shoot a non-working vehicle.

VTC 1010 features rich PAN, WLAN and WWAN wireless connectivity. With dual SIM card design, VTC 1010 allows choice of the best service carrier network and minimizes roaming cost. VTC 1010 can be configured to work with two independent WWAN connections and can effectively increase the bandwidth for faster massive data transfer over the air. In addition to data connectivity over the air, VTC 1010 also supports two-way voice communication.

Equipped with intelligent vehicle power management, VTC 1010 can be waked up on by ignition, timer, or remote dial-up for flexible operation or maintenance. By integrating the varieties of I/O and multiple expansion sockets, VTC 1010 can flexibly adapt to the demand for versatile telematics applications, such as infotainment, fleet management, dispatching system and mobile video surveillance.

- Wide range DC input from 9~36VDC
- Built-in CAN bus 2.0B, optional OBDII function (J1939/J1908)
- Dual SIM cards + dual WWAN modules support
- Built-In GPS, optional dead reckoning support
- Built-In G-sensor and Gyroscope
- Intelligent vehicle power management. Waked on by ignition, RTC timer and remote dial-up
- mini-PCIe expansion sockets, DP and VGA display interface, 7.1 channels audio, LAN, COM, USB and regulated 12VDC output
- Compliant with MIL-STD-810G

VMD 3002

Robust Vehicle Mount Display Increases Situation Awareness

VMD 3002 is a robust 10.4-inch TFT LCD monitor with enhanced brightness, projected capacitive touchscreen, and high performance loud speaker. VMD 3002 is designed with a single cable to consolidate power, display, and other control signal to ease the installation and secure the connection. Thanks to its standard VGA interface, VMD 3002 can work as a display device for most of vehicle computers in the market. VMD 3002 also features dual analog video inputs to feed the real time video from the rear view cameras to the display. This is a handful feature to prevent blind spots when driving a large vehicle and therefore improve the driving experience.

VMD 3002 has very robust mechanical design and is compliant to IP65. This important nature makes it hassle free to operate under outdoor or other extreme environment operation. VMD 3002 can take with wide range power input and can operate under extended operating temperature. With the 1000nits ultra high brightness display and adaptive brightness control, it is an ideal solution for in-vehicle and outdoor applications.

- 10.4" XGA TFT LCD with 1000cd/m^2 brightness
- P-Cap touch screen with multi-touch capability
- Wide range DC input from 9~36V
- Support standard VGA display input
- Support two CVBS video inputs for side/rear view camera
- Compliant with IP65

IP Cameras

Integrated Advance Technologies Reveal Every Detail





	NCi-311/ NCi-311-R	NCr-301-VHR	NCb-301	NCb-311	NCi-312
Varifocal lens can allow user to change 3-10 mm focus and zoom to simplify installation and easy for different using case scenario.	●				
Smart IR is superior to the traditional IR by automatically adjusting IR output in response to the distance of the object in view. The closer the object, the dimmer the IR will be. This will avoid object over-exposure commonly seen in camera using traditional IR function.	●	●			
Support high-performance H.264/MJPEG compression technology and offer extra smooth video at up to 60 fps in 1080p and 30fps @ 3megapixels		●	●		
Support high-performance H.264/MJPEG compression technology and offer extra smooth video at up to 30 fps in 1080p and 20 fps @ 3megapixels.	●			●	●
Motorized focus function allows users to remotely control focus and zoom to simplify installation and reduce labor cost.		●	●		
The DWDR (Digital wide dynamic range) feature is very useful in overcoming challenges in various lighting conditions. It works by capturing both the dark and bright part of an image, then combining the differences into one frame to generate a highly realistic image.	●			●	●
The True WDR (wide dynamic range/100db which offer by sensor chip) feature is very useful in overcoming challenges in various lighting conditions. It works by capturing both the dark and bright part of an image, then combining the differences into one frame to generate a highly realistic image.		●	●		
P-iris function works by a stepper motor controlled via software to automatically provide the best iris position for best exposure time in all lighting conditions. The result is a clearer image with better contrast and depth of field.		●	●		
A compact design and a easy installation wing for saving labor cost while worker setup the camera position					●
Offer default 3.6 mm lens and option 2.8 mm lens					●
Offer RJ45 PoE+, combining power supply and image transmission with a single cable, reducing installation effort and cost		●	●		
Support -40°C~60°C/-40°F~140°F operation temperature which can satisfy indoor using case in variety surveillance environment		●			

NEXCOM Impressed **Industrial Automation PROs at Hannover Messe 2013**

NEXCOM market-oriented products addressed the application needs and shone at Hannover Messe 2013.

NEXCOM's market-oriented NIFE Series PC-based factory automation, NexMotion Series machine automation, a variety of panel PCs, and IWF Series industrial wireless solutions impressed different field professionals at Hannover Messe!

In the factory automation sector, the Fieldbus technologies provided by system integrators are dedicated to a single brand. Combining Hilscher's communication technology, the just debuted NIFE Series can integrate master Fieldbus interfaces in accordance with a customer's existing PLCs. The protocols NIFE series supports include PROFINET, PROFIBUS, DeviceNet, Ethernet/IP and EtherCAT. It solves the common incompatibility issue, and the unprecedented integration nearly meets the IPC and PLC integration requirement of nearly 70 percent of users.

On the rise of smart motion, the complexity of automated machineries is further increased when they are integrated with different control stations. NexMotion series motion controllers feature industrial Ethernet, full closed-loop, and multi-axis and multi-tasking. Integrating Googel's motion card and IntervalZero RTX software, this dedicated MA system can process high-precision images, network communications and other application requests to fulfill 100+ applications.

Speaking of panel PCs, NEXCOM's PPC series are designed to meet specific application requirements from light industrial, heavy industrial, Kiosk to multimedia applications. Even though application varies, all NEXCOM PPC series sings the same tune of high reliability through its robust design, which is always the major concern of application users. The Industrial Panel PC won the praise in conquering harsh operating environments.

Though consumer type Wi-Fi routers still dominate the markets, the urging demands in outdoor mobile applications and industrial environment applications are soaring. With rugged enclosure, IWF Series outdoor AP is designed for applications such as surveillance camera, Hot spot, wirlessHART, and WDS. With wide-temperature operating feature, IWF industrial AP raises the interests of the players, such as, in steel manufacturing, refining, and chemical processing fields.

Make Differences in **Worldwide Security Surveillance Shows**

A very strong growth in IP video surveillance was the trend in 2012. The strong demand for megapixel IP cameras has set the increase to almost 35%. The growth in IP surveillance will come from small to medium market size deployments. Yet, this isn't the only trend that leads the security surveillance industry. As the demands to monitor vehicle fleet to ensure safety and smooth operation, in-vehicle surveillance is gaining its weight.

Frank Yang, the Product Management Director of NEXCOM Intelligent Digital Security Business Unit, observes that Europe markets are looking for differentiation. In terms of IP cameras, 2megapixel, smaller housing, low light and high frame range are favored features.

In 2013 ISC West, Secutech and IFSEC, NEXCOM NCm-301 and NCi-312 IP cameras are in the spotlight to meet the surging trends. These two models support high-performance H.264/MJPG compression technology and offer extra smooth video at 30fps to 60fps at 2megapixel. In the low light conditions, the True WDR (Wide Dynamic Range/100db) is able to generate high realistic image. Better yet, NCm-301 and NCi-312 are in small housing which are ideal for commercial vehicle installation.

Except for eye-catching new IP cams, NEXCOM's Mobile NVR solution interests industry majority. The onsite demonstration presents that NViS 3542 series can support real-time playback and recording; it enables 16 channels of high resolution surveillance videos to be instantly transmitted from IP cameras to surveillance platforms and remote sites. Combing the megapixel IP cam, mobile NVR NViS 3542, vehicle mount display VMD series and Outdoor Access Point IWF 5320 with partner's VMS, NEXCOM shows its capabilities in offering total solutions for in-vehicle security.

Frank Yang further shares, "We see the demand in keeping it simple. Customers want solutions that are easy to install, integrate, operate and maintain. We now have a full range of hardware in IP cams and NVR system. And most of them have been certified by many key VMS providers. We are not only on the edge of surveillance technologies, but provide the most profound and practical solutions to customers."

Mobile, megapixel and simple are NEXCOM's secrets to making difference in the worldwide security surveillance shows.

Headquarters

NEXCOM International Co., Ltd.
15F, No. 920, Chung-Cheng Rd., ZhongHe District, New Taipei City, 23586, Taiwan, R.O.C.
Tel: +886-2-8226-7786
Fax: +886-2-8226-7782
www.nexcom.com

America

USA
NEXCOM USA
2883 Bayview Drive,
Fremont CA 94538, USA
Tel: +1-510-656-2248
Fax: +1-510-656-2158
Email: sales@nexcom.com
www.nexcom.com

Asia

Taiwan
Central Taiwan Office
16F, No. 250, Sec. 2, Chongde Rd.,
Beitun Dist.,
Taichung City 406, R.O.C.
Tel: +886-4-2249-1179
Fax: +886-4-2249-1172
Email: sales@nexcom.com.tw
www.nexcom.com.tw

Japan
NEXCOM Japan
9F, Tamachi Hara Bldg.,
4-11-5, Shiba Minato-ku,
Tokyo, 108-0014, Japan
Tel: +81-3-5419-7830
Fax: +81-3-5419-7832
Email: sales@nexcom-jp.com
www.nexcom-jp.com

China

NEXCOM China
2F, Block 4, Venus Plaza, Bldg. 21,
ZhongGuanCun Software Park, No. 8,
Dongbeiwang West Rd., Haidian District,
Beijing, 100193, China
Tel: +86-10-8282-6599
Fax: +86-10-8282-5955
Email: sales@nexcom.cn
www.nexcom.cn

Shanghai Office
Room 1505, Greenland He Chuang Bldg.,
No. 450 Caoyang Rd.,
Shanghai, 200062, China
Tel: +86-21-6150-8008
Fax: +86-21-3251-6358
Email: sales@nexcom.cn
www.nexcom.cn

Nanjing Office
Hall C, Block 17, Tian Xing Cui Lang Bldg.,
No. 49 Yunnan North Rd.,
Nanjing, 210018, China
Tel: +86-25-8315-3486
Fax: +86-25-8315-3489
Email: sales@nexcom.cn
www.nexcom.cn

Shenzhen Office
Room1707, North Block, Pines Bldg.,
No.7 Tairan Rd., Futian Area,
Shenzhen, 518040, China
Tel: +86-755-8332 7203
Fax: +86-755-8332 7213
Email: sales@nexcom.cn
www.nexcom.cn

Wuhan Office
1-C1804/1805, Mingze Liwan, No. 519
South Luoshi Rd., Hongshan District,
Wuhan, 430070, China
Tel: +86-27-8722-7400
Fax: +86-27-8722-7400
Email: sales@nexcom.cn
www.nexcom.cn

Chengdu Office
9F, Shuxiangxie, Xuefu Garden,
No.12 Section 1, South Yihuan Rd.,
Chengdu, 610061, China
Tel: +86-28-8523-0186
Fax: +86-28-8523-0186
Email: sales@nexcom.cn
www.nexcom.cn

Europe

France
NEXCOM France
La Grande Arche-Paroi Nord,
92044 Paris La Défense, France
Tel: +33 (0) 1 40 90 33 35
Fax: +33 (0) 1 40 90 31 01
Email: sales.fr@nexcom.eu
www.nexcom.eu

Germany
NEXCOM GmbH
Leopoldstraße Business Centre,
Leopoldstraße 244,
80807 Munich, Germany
Tel: +49-89-208039-278
Fax: +49-89-208039-279
Email: sales.de@nexcom.eu
www.nexcom.eu

Italy
NEXCOM ITALIA S.r.l
Via Gaudenzio Ferrari 29,
21047 Saronno (VA), Italia
Tel: +39 02 9628 0333
Fax: +39 02 9286 9215
Email: nexcomitalia@nexcom.eu
www.nexcomitalia.it

United Kingdom
NEXCOM EUROPE
10 Vincent Avenue,
Crownhill Business Centre,
Milton Keynes, Buckinghamshire
MK8 0AB, United Kingdom
Tel: +44-1908-267121
Fax: +44-1908-262042
Email: sales.uk@nexcom.eu
www.nexcom.eu

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