

Formosa Plastics Wins with Open Intel® Architecture and Scalable Roadmap

World-class petrochemical manufacturer deploys
NEXCOM based DCS across control environments



What's New

NEXCOM Won Intel's Technology Innovation
Accelerated Award at IDF14

Technology Focus

Keep Network Secure & Green
In the Era of Internet of Things

White Paper

NEXCOM IoT Controller Solution Brings
Intelligence to Manufacturing

Clement Lin

Chairman & CEO
NEXCOM International Co., Ltd.



Dear Partners,

It seems a good year for our Intelligent Systems market. Actually, whenever the world economy comes back to the right track, the global IT expenditure surges again, especially in the midst of building new IT infrastructures, like the Cloud, the IoT, the Automation, the Industry 4.0, and the 4G deployments, etc. That's why NEXCOM has seen three months with new record-high revenues in the past 3 quarters of 2014.

From any market research companies, the huge scale of the Intelligent Systems and IoT (Internet of Things) market has been recognized. Both market together could already now be worth several trillions in 2014 (\$4.4T by IDC). It might be over 10 trillions in the year 2020! We all know that this is our TAM—the Total Available Market. There is a Chinese saying that states, "One cup of water is enough for me, even three thousands of rivers out there." This is a vertical business. One cup means one vertical application domain. How about two cups, three cups? And more cups in the vast ocean of opportunities?

Based on rich hardware platform experience, NEXCOM has built up many strong product lines like the fanless NISE series, the Network Security NSA series, the In-Vehicle VTC series, and the Digital Signage NDiS series. Our new product lines, like the IP Cam/ NVR series, and the Industrial Wireless series are also mature enough and come with the best cost/performance ratio in the market. The IoT platforms, with SoC and Wireless together, are also in mass delivery to customers. NEXCOM leads in the world IoT business again!

Recently, we have been working on the Automation/ Robot controller solutions aggressively. By combining NEXCOM platforms and partner solutions, we have generated many big success stories, from petrochemical process control (PC-based DCS), to robot arms, even

to thousands of automation machines in Apple and Samsung supply chains. NEXCOM, in all ways, is one of the world leaders in Industry 4.0 and EtherCAT-based solutions.

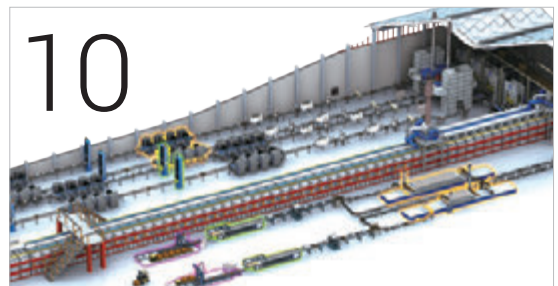
The spotlight features of our Industrial Wireless Solutions include Mesh, Roaming, and Central Control management functions of up to 1000 APs in the field per controller. These unique features make NEXCOM Wireless Solutions the "All Terrain" communication network for mass deployments. We'll extend our applications down to the enterprise/ office environment, providing solutions for campus, building, and even huge deployments of APs for carriers.

One more highlight is our IP camera-based surveillance solutions. NEXCOM is the unique vendor of the "Intel Inside" Smart IP Cam, which features a 3-in-1 function of IP camera, NVR, and Analytics. This not only saves the space, the cost and the electric power, but also saves the bandwidth a lot by sending back the analyzed information instead of the huge raw video data! We also have the so-called Budget Cam with very competitive price and very good features. NEXCOM has the most complete product lines from entry level to very high-end in the IP Cam/ Surveillance application domain.

So, cup by cup, we gradually build up our solution offerings one vertical application domain after another. This is the most solid way to grow our business together in the vast ocean of opportunities from the market of Intelligent Systems and Internet of Things. The economy is good, so is the demand of the IT infrastructure. Let's catch up the rising momentum with NEXCOM rich solution offerings!

Clement Lin

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Liyin Lin, Yihuan Ho, Joe Lai, Jill Lin

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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 five 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.



A Healthier World with IT Revolution

NEXCOM Medical Informatics Solutions

Consider the scenario of clinics 30 years ago, where doctors used pens to record health records and x-ray films to examine bones. Fast forward to today, keyboards, mice, digitizers and high resolution displays occupy the doctors' desks. Yes, IT devices have increasingly become more important than ever, even the clinics nearby your home adopt computerized physician order entry. According to Research and Markets, the North American healthcare IT market is forecast to grow at a CAGR of 7.4 percent, while MarketsandMarkets estimates the global medical informatics market to reach \$56.7 billion by 2017.

Much of this growth is driven by the need to cut healthcare cost and improve medical care. There are already some healthcare IT implementations in place that streamline hospital procedures such as billing, medical imaging and diagnostic information. However, emerging technologies like IoT (Internet of Things), cloud computing and big data analytics are opening up new IT services for the medical business. One example is connected medical devices that can share

clinical data and enable wireless health monitoring.

Foreseeing the potential of healthcare IT, NEXCOM has, for a long time, been exploring the possibilities to enter the medical informatics market by developing sensor gateways, networking and cloud computing related technologies. In a recent project, NEXCOM and its partners have successfully developed a total hardware-software solution for healthcare IT and won the first ticket to the dialysis automation market.

The dialysis machines used in this project were stand-alone and unconnected, and required significant man power and effort to operate. Patients had to follow the instructions from nurses and doctors and go through all the check points by themselves, from registration, measurement, to the end of the dialysis process. All procedures were done manually, which was cost ineffective. To computerize the process with IT technology, NEXCOM and its partners built sensor networks and backbone servers that can collect and consolidate clinical data.

With NEXCOM's solution, patients were able to complete the registration and measurement process automatically using RFID cards. All the data collected from the dialysis machines were transferred to a central server through Ethernet, where doctors and nurses can monitor the patient's status remotely on the computer display. At patients' beds, doctors and nurses could also monitor the patients' conditions with medical PADs connected to the network. NEXCOM's solution not only helped the hospital to minimize the cost and effort in maintaining a dialysis center, but also improved the quality of medical care.

With a wealth of IT experience and technological capability, NEXCOM is the perfect IT service provider for the medical informatics market. The hemodialysis automation system in this project is just a beginning. We believe that by combining our expertise in IoT, cloud computing and sensor technology along with hardware and software support from our partners, NEXCOM can play a major role in the medical informatics market.



NEXCOM Won Intel's Technology Innovation Accelerated Award at IDF14

NEXCOM has won Intel's Technology Innovation Accelerated (TIA) Award in the Industrial Solution category at the 2014 Intel Developer Forum (IDF14). Outshining its competitors, NEXCOM is the only Taiwan-based company winning the award and is honored for its NIO 100 industrial Internet of Things (IoT) gateway.

The award-winning NIO 100 industrial IoT gateway is based on Intel® Gateway Solutions for the Internet of Things (Intel® Gateway Solutions for IoT) and integrates Intel® Quark technology. The NIO 100 industrial IoT gateway can address the need of industrial applications, helping the industrial sector embark on a new chapter for industrial IoT.



Worldwide Trade Shows at A Glance October 2014 to April 2015

Month	Exhibitions	Info
10 October	American Public Transportation Association (APTA) Expo	October 13-15, 2014 George R. Brown Convention Center, Houston, TX, USA Booth No. 5400
	IoT Japan 2014	October 15- November 17, 2014 Tokyo Big Sight 3-11-1 Ariake, Koto-ku, Tokyo, Japan 135-0063 Booth No. Intel's booth
11 November	Industrial Automation Show	November 4-8, 2014 Shanghai New International Expo Centre, Shanghai, China Booth No. W1D038
	Highway Techno Fair 2014	November 20-21, 2014 Tokyo Big Sight 3-11-1 Ariake, Koto-ku, Tokyo, Japan 135-0063 Booth No. A-12, West Hall 4
2 February	Integrated Systems Europe (ISE)	February 10-12, 2015 Amsterdam RAI, Europaplein 2-22, 1078 GZ Amsterdam, The Netherlands
3 March	Digital Signage Expo	March 11-12, 2015 Las Vegas Convention Center, Las Vegas, NV, USA Booth No. 3635
	Automate 2015	March 23-26, 2015 McCormick Place, Chicago, IL, USA Booth No. 340
4 April	Hannover Messe	April 13-17, 2015 Convention Center, Messegelände, 30521 Hannover, Germany
	International Security Conference West (ISC West)	April 15-17, 2015 Sands Expo, Las Vegas, NV, USA Booth No. 31107
	RSA Conference	April 21-23, 2015 Moscone Center, San Francisco, CA, USA Booth No. 2244
	Interop	April 28-30, 2015 Mandalay Bay Convention Center, Las Vegas, NV, USA Booth No. 2559

Formosa Plastics Wins with Open Intel® Architecture and Scalable Roadmap

World-class petrochemical manufacturer deploys NEXCOM based DCS across control environments

Introduction

As commerce becomes increasingly global, manufacturers face evermore competitive pressures and threats. Every penny of extra cost must be cut and every ounce of efficiency must be extracted from a plant in order to remain competitive.

To that end, one of NEXCOM's customers examined its smartly tuned network of 300+ factories and plants and asked the question: Where can we save?

Their answer surprised everyone: a distributed control system (DCS) with Intel Inside®. The DCS is widely used around the world for process automation applications. However, for smooth operations, long-term maintenance, and minimum disruptions of obsolescence, an Intel

processor-based DCS solution was selected with the aim of cutting total cost of ownership (TCO) and boosting operational efficiency.

NEXCOM, an Associate member of the Intel® Internet of Things Solutions Alliance, explains that its customer, Formosa Plastics Corp (FPC), called on its substantial manufacturing prowess to discern the inefficiencies in its proprietary DCS system, and address its uncertain product cycle and high-inventory risks. Once identified, FPC began an overhaul of its DCS strategy, which involved development of a custom solution built on non-custom Intel processor-based parts. FPC



Figure 1. The FORMOSA-FX+ DCS uses NEXCOM NISE+ 3660 as an MMI.

expects to realize substantial TCO reductions as a result, along with a significant boost to both operational and maintenance efficiency when all new systems are fully deployed.

Business Need

FPC is a large, world-class petrochemical manufacturer with more than 300 plants dispersed

around the globe. These include oil refineries, steel mills, petrochemical factories, and power plants. To ensure smooth operation of these large-scale facilities, the company used a variety of DCS systems—as many as 26 different brands—to address the varying requirements of different control environments.

While this approach gave FPC the needed versatility for its many different plant types, it was highly inefficient from a maintenance and operational standpoint and also carried a high TCO. An extensive inventory of spare parts and a wide-scale investment in knowing how to maintain these systems only added to operational cost and complexity. Company leaders surmised that a standardized solution, such as an Intel® architecture-based system, could eliminate much of this overhead and boost FPC's overall competitiveness by leveraging its in-house customization capability.

Technology Requirements

The first requirement for a standardized DCS solution was a unified hardware platform that could be used in all of FPC's facilities and configured to provide different features and carry out varying tasks as needed. FPC decided that an open architecture with long-life support and generational compatibility would be essential to its goal of reducing inventory and maintenance costs and lowering overall TCO. Plus, a scalable architecture would allow FPC to craft a single solution with the flexibility to adapt to the specific requirements of different environments—a much easier approach than using a different system for each control scenario, such as MMI, controller, gateway, etc.

Because the DCSs had become a vital tool to ensure smooth plant operations and help



Figure 2. The FORMOSA-FX* system uses NEXCOM NISE* 3660 as a DCS controller.

avoid production interruptions, FPC required built-in mechanisms for high reliability and fault tolerance. In addition, the DCS solution had to support the real-time control units directly and indirectly linked to it; accuracy and precision were key. For these reasons, the company required a computing platform with the ability to handle multiple tasks simultaneously at high clock speed without interruption.

Solution

FPC's standardized solution for DCS, called FORMOSA-FX*, is composed of

several subsystems. Each is made up of multiple units, and all can use the unified hardware platform that was developed in collaboration with NEXCOM. The unified hardware platform itself comprises multiple Intel® processor-based components, including an industrial PC and NEXCOM's NISE* 3660, which plays two roles simultaneously: redundancy controller and man-machine interface (MMI).

With all of the different factory environments in mind, FPC developed a best-of-breed DCS solution that works across multiple control processes, including MMI, control, and I/O. The

solution has been used in power generation, cogeneration processes, and midstream and downstream processes.

NEXCOM Adds Value

FPC selected NEXCOM to help with the development of its custom DCS for multiple reasons, including previous favorable experiences with an earlier generation NEXCOM MMI system. Plus, NEXCOM is one of the only industrial PC companies with DCS expertise, including domain knowledge in DCS architecture hardware design. This expertise, coupled with a long track record of developing fanless PC-based controllers and panel computers for automation environments around the globe, gave NEXCOM the winning edge for this project.

NEXCOM's NISE 3660 redundancy controller and MMI solution (see figure below) is equipped with all the functional interfaces required by both controller and MMI applications and can be used as one or the other depending on the need. In addition, the controller-specific interfaces and MMI-specific interfaces are on two different sides of the NISE 3660. This differs from most currently available, single-purpose controllers or MMI products that require companies to maintain inventories of both items.

For use as a redundancy controller, the NISE 3660 runs a real-time operating system to perform reliable control schemes and Microsoft Windows* for use as an MMI that delivers high-resolution graphics.

The FPC FORMOSA-FX not only provides *controller redundancy* but also *I/O redundancy* as illustrated below. Every active controller is connected to a backup controller with two LANs. Based on NISE 3660, the FORMOSA-FX also supports fieldbus technology to connect to PLCs and remote I/Os; PROFIBUS compatibility has been tested and certified by the customer.

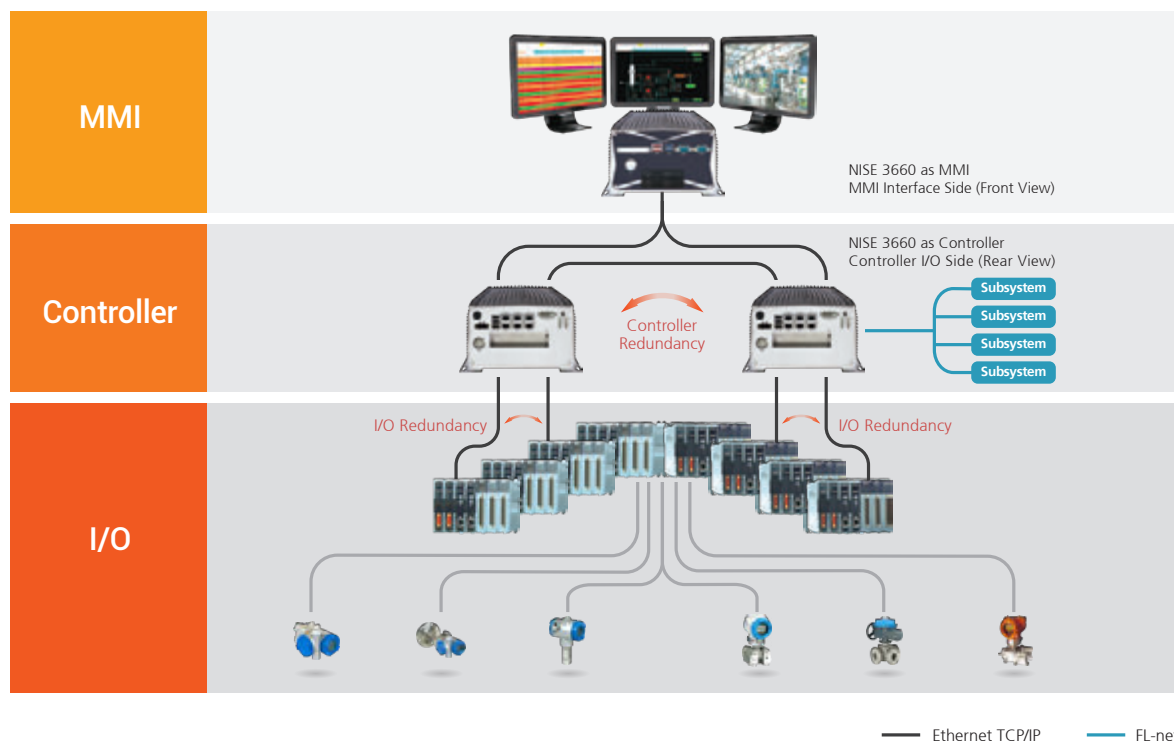


Figure 3. NEXCOM NISE 3660 as deployed in the customer's DCS

Why Intel?

Both NEXCOM and FPC offer multiple reasons for selecting Intel processor-based components for their new DCS design. The reasons include performance, long-life support, generational compatibility, and scalability. For example, multicore Intel processors run at high clock speed and can perform multiple jobs simultaneously—carrying out one major task with one computing core, while performing additional tasks with another. This enables one Intel processor to replace several legacy processors, improving the overall cost/performance (C/P) value of the solution.

FPC also expects to reduce inventory costs, while continuing to deliver the highest C/P value by following the Intel® Embedded Product Roadmap and benefiting from the Intel commitment to long-time product

availability. This enables FPC to reduce inventory for the typical 10-year life cycle of the DCS controller compared to previous solutions. And because the company's plants are different in scale and its control systems have different functions—such as control, protection, and monitoring—DCS solutions with different computing performance requirements are needed. Intel® Core™ and Intel® Atom™ processors are helpful in enabling a single solution that scales appropriately.

Conclusion

FPC is in the process of finalizing the deployments of its new-generation DCS solution. The completed project is expected to yield significant gains in factory and plant efficiency, while dramatically cutting TCO through the adoption of a new Intel®

architecture-based DCS system.

According to FPC's project manager, replacing legacy application-specific integrated circuits (ASIC) with x86 architecture allows the company to deliver products just in time and to achieve about 20 percent of overhead in inventory. Moreover, it reduces the effort of lifetime cycle maintenance and mitigates the risk of obsolete hardware components by about 15 percent to 30 percent. Also, the fanless NISE 3660 consumes little power and helps reduce energy by 40 percent compared to the legacy MMI.

Both NEXCOM and Intel are committed to delivering solutions that help customers build the most modern DCS system and minimize their total cost of ownership. NEXCOM is an authorized distributor of the DCS system for the global market. To learn more, please visit www.intel.com/industrial or www.nexcom.com.

NEXCOM IoT Controller Solution Brings Intelligence to Manufacturing

Enterprises across industries are looking to big data and the Internet of Things (IoT) to help them increase competitiveness, improve the bottom line, and anticipate trends. Manufacturers are no exception. However, building an industrial Internet of Things, or Factory-of-Things, poses many challenges.

In this white paper, NEXCOM will explain how the NEXCOM IoT controller NIFE 100 provides a unique open-architecture solution with the configuration flexibility to surmount communication barriers in building the Factory-of-Things and supporting the necessary data communications for connecting the enterprise domain and the operation domain. We will look at how the NIFE 100 based on the Intel® Atom™ processor E3800 product family can perform a wide variety of tasks expected of Factory-of-Things devices. We will show how the NIFE 100 simplifies factory transformation and maintenance, including enabling factory operation monitoring using mobile devices. And, in addition, we will consider how by supporting the Intel® Gateway Solutions for the Internet of Things (Intel® Gateway Solutions for IoT), the NEXCOM NIFE 100 integrates Wind River® Linux operating system and McAfee® Embedded Control to help manufacturers speed to market of secure Factory-of-Things solutions.

Speak the Same Language

Manufacturers are enthusiastic about tapping the power of big data and ad-hoc analysis, but face a significant barrier in gaining access to field data. In most cases, a factory is full of legacy field devices including machinery, robots, PLCs, and sensors. These field devices use different communication protocols and run independently. If a factory network exists for these devices, the network is usually built on a closed-loop intranet that is separate from the Internet.

To make the data flow and realize all the advantages of the Factory-of-Things, manufacturers must find a way to lift the communication barriers among these field devices and connect them to the Internet.

Connecting Legacy Devices to the Internet

The NEXCOM IoT controller NIFE 100 uses the Intel Gateway Solutions for the IoT to deliver an open-architecture solution for providing cross-protocol communication capabilities to fieldbus modules to support both downstream and upstream data communication.

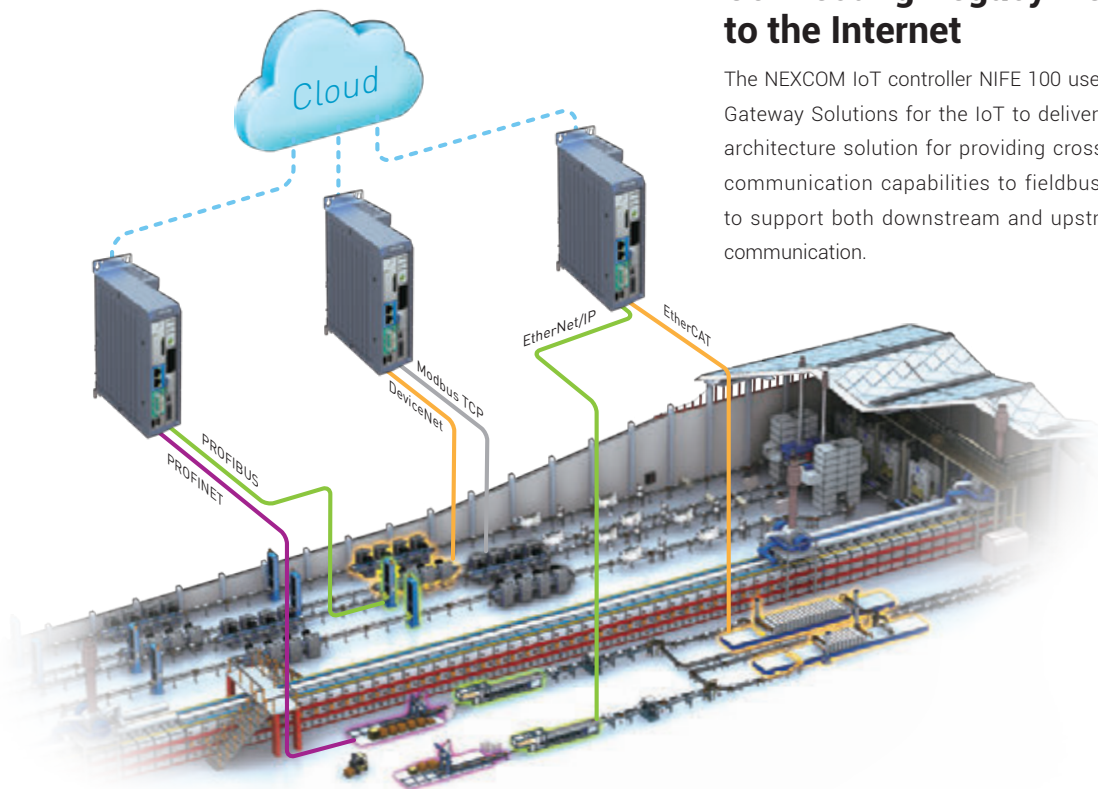


Figure 1. Manufacturers face a significant barrier in gaining access to field data.

Intel Gateway Solutions for the IoT are the result of a collaboration with McAfee and Wind River. By providing *pre-integrated, pre-validated* hardware and software building blocks, the gateways connect legacy and new systems, and enable seamless and secure data flow between edge devices and the cloud. Intel Gateway Solutions for the IoT offer factories a key ingredient for enabling the connectivity of legacy industrial devices and other systems to the IoT. It integrates technologies and protocols for networking, embedded control, enterprise-grade security, and easy manageability on which application-specific software can run.

To aggregate downstream data, the NIFE 100 supports serial communication and fieldbus protocols at the same time. Given the fact that different communication protocols are used from factory to factory, the fieldbus protocols supported by the NIFE 100 include PROFINET, PROFIBUS, EtherNet/IP, DeviceNet, EtherCAT, CANopen, and Modbus. The NIFE 100 can act as a fieldbus contractor and provide the last-mile connection for field devices. The NIFE 100 also supports LAN, Wi-Fi, and 3G/4G networking to enable the upstream data traffic.

With the NIFE 100, manufacturers can build a Factory-of-Things that integrates PLCs, remote I/Os, and legacy field devices using different protocols and across different control subsystems. Manufacturers

can also send field data to the cloud for big data analytics and remote monitoring of factory operations.

To help manage the amount of data sent to the cloud for processing, some control and analytic workloads can be delegated to edge devices such as IoT controllers and industrial gateways on the factory floor, supporting Industry 4.0 and the movement to the Smart Factory based on cyber-physical systems.

Cyber-Physical Systems (CPS)

The term cyber-physical systems refer to a new generation of systems with integrated computational and physical capabilities that can interact with human processes through many new modalities. The ability to interact with and expand the capabilities of the physical world through computation, communication, and control is a key enabler for future technology development.[1]

To address the needs of computation, communication and control in the manufacturing sector, the NIFE 100 integrates Intel Atom E3800 processor product family, CODESYS and OPC server software, and distributed I/O modules.

The multi-core architecture of Intel® Atom™ processors equips the NIFE 100 with outstanding computing performance to collect and process input data and command field devices to take appropriate actions. The NIFE 100 is available with up to quad-core computing power to accelerate response time, control a large volume of field devices, and perform more complicated control schemes.

The built-in soft logic programming tool CODESYS is based on the IEC 61131-3 standard. This programming tool can facilitate programming across multiple controllers and allow the NIFE 100 to adapt to different factory settings. The NIFE 100 provides the interoperability necessary for CPS and sets up a solid foundation for Factory-of-Things operations, transforming a factory to a Smart Factory without costly factory overhaul.



Figure 2. To aggregate field data, the NIFE 100 supports fieldbus communication and 3G/LTE/Wi-Fi networking at the same time.

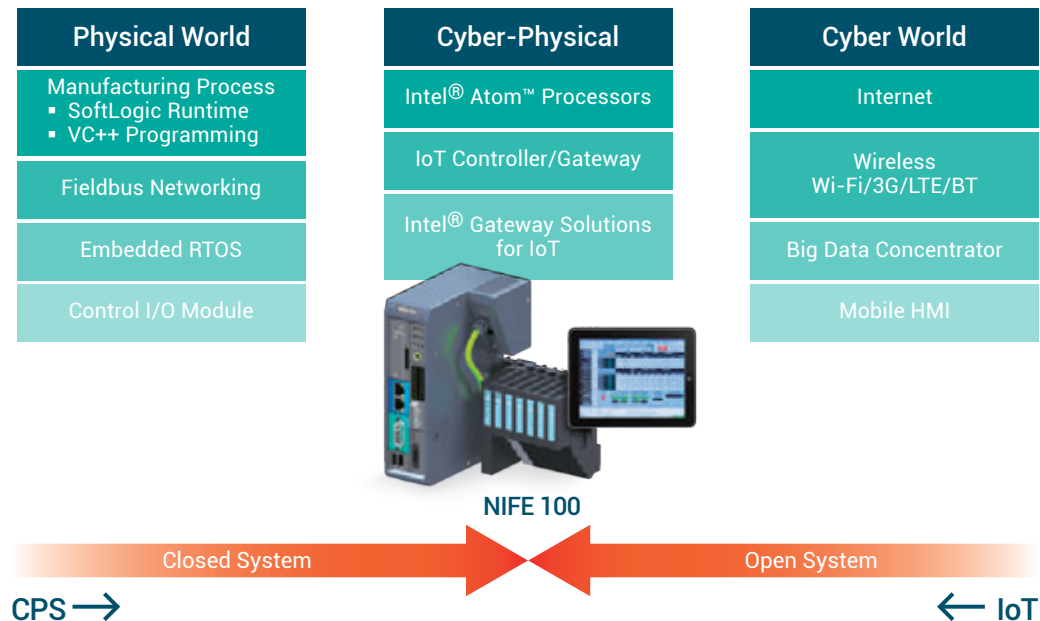


Figure 3. NEXCOM PC-based factory automation building blocks

Take pharmaceutical manufacturing for example. The NIFE 100 can monitor the pressure level of a reactor when excipients are added. As soon as the pressure reaches a certain level, the NIFE 100 can close inlet valves and activate a motor to spin an impeller to start the blending process. All is done automatically without manual effort.

Remote Management

So far, we have discussed the importance of cross-communication capabilities and interoperability to realize the Factory-of-Things and smart manufacturing. However, it is just as important to simplify the management and maintenance of the Factory-of-Things operations.

To this end, the NIFE 100 is available with a mobile HMI App JMobile. This app provides remote access to real-time monitoring and control of factory operation. Starting a new manufacturing process only takes a few taps on a tablet or a smartphone. Instead of being confined to a desk in a factory control room, a factory operator can check a factory anytime anywhere, making a virtual appearance on the factory floor.

This mobile app is bundled with NEXCOM Xcare™ 3.0 Suite. This remote management utility integrates software applications and a cloud server to support remote hardware status checks, remote system restore, remote keyboard/video/mouse (KVM) operation, and remote configuration of the NIFE 100.

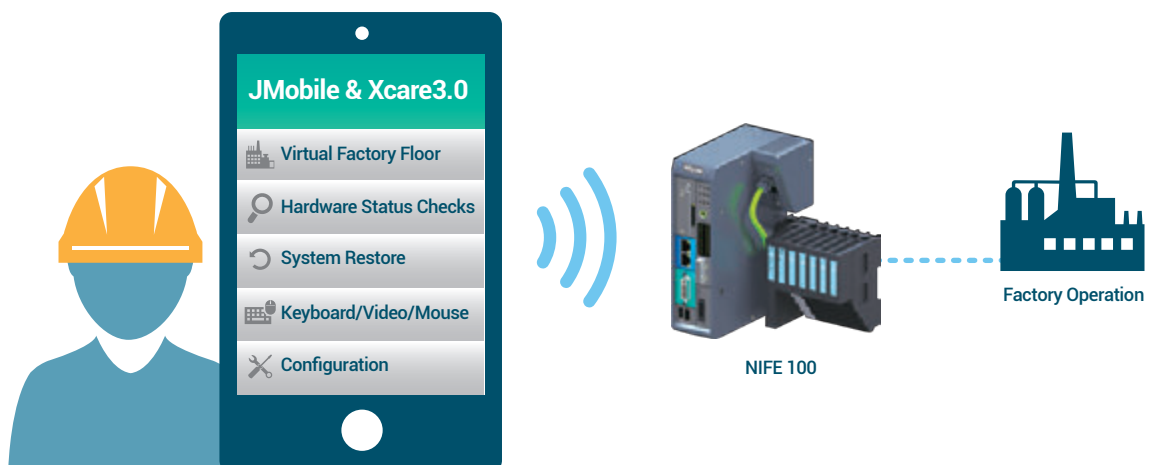


Figure 4. The NIFE 100 simplifies factory transformation and maintenance, including enabling factory operation monitoring using mobile devices.

The benefits of Xcare 3.0 Suite are huge. For example, the remote hardware status check gives factory IT staff an opportunity to detect a potential problem before a costly failure occurs. The system restore and remote KVM functions enable immediate response, making possible preventive actions and maintenance of the NIFE 100 to reduce downtime and increase management efficiency.

A Secure and Instant Solution

As factories adopt the Factory-of-Things model to achieve smart manufacturing, it is critical that they also include security mechanisms to protect operations and productivity.

The Intel® Atom™ processor E3800 product family plays a key role here. It offers security enhancements not available on previous Intel® Atom™ processors. It delivers fast hardware-assisted data encryption and decryption through Intel® Advanced Encryption Standard New Instructions (Intel® AES-NI) and supports Secure Boot to allow only trusted software to run on a device. It also supports error correcting code (ECC) for extra reliability. Intel® Virtualization Technology (Intel® VT) is also available to provide near-native performance of virtualized workloads for greater reliability, security, investment protection, and flexible resource management.

The NIFE 100 can also benefit from McAfee Embedded Control, a key ingredient of the Intel Gateway Solutions for the IoT. This endpoint software uses whitelisting to allow only authorized software to run, blocking malware from execution and installation

on the NIFE 100. Given the fact that an IoT controller like NIFE 100 is a purpose-built appliance that executes only a limited set of applications, the whitelisting approach is more effective at protecting against zero-day attacks than traditional anti-virus software. In addition, to assist with regulatory compliance, McAfee Embedded Control only allows policy-based changes that are expected and authorized.

Conclusion

By supporting Intel Gateway Solutions for the IoT, NEXCOM NIFE 100 is an application-ready solution that can enable business transformation based on Factory-of-Things. Packed with cross-communication capabilities, high performance computing, remote manageability, and security mechanisms, the NIFE 100 exemplifies how a smart factory can be built based on legacy devices, preventing costly factory overhauls.

With its open architecture, the NIFE 100 can play many roles—from data acquisition server to high-level IoT automation controller—to securely connect the Ethernet-based business domain and the fieldbus-based factory domain. Using the NIFE 100, industrial companies can begin to transform their factories by taking advantage of big data analytics. Equally important, they can immediately reduce business costs and improve operations with a simplified control scheme, simplified control network architecture, and reduced maintenance efforts.

[1] R. Baheti and H. Gill. Cyber-physical systems. In *The Impact of Control Technology*, 2011.

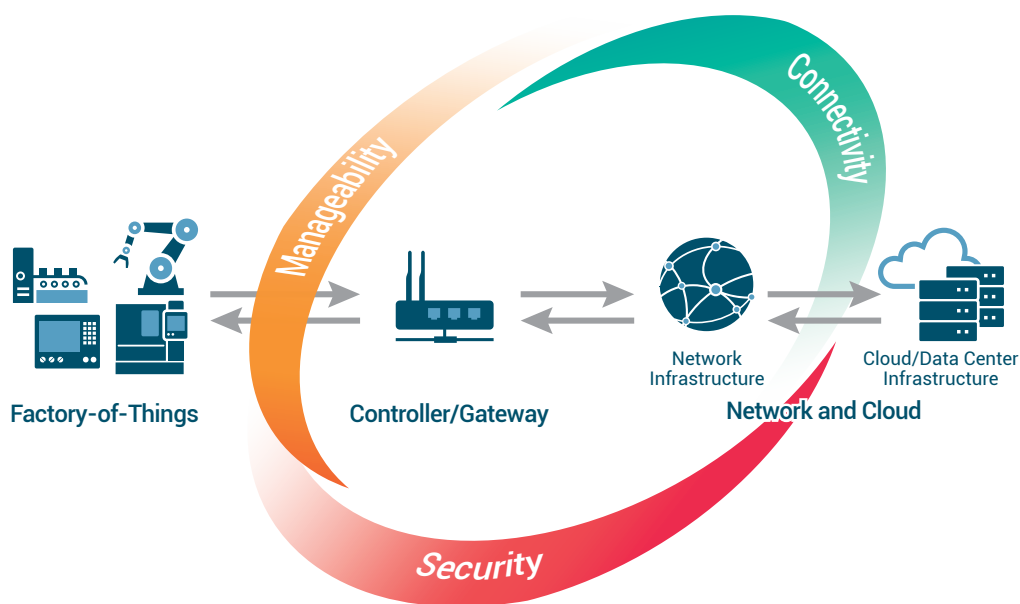


Figure 5. Intel® Gateway Solutions for the IoT brings together essential solutions including security, manageability and network connectivity.

Keep Network Secure & Green In the Era of Internet of Things

The complexity and volume of network traffic have increased significantly due to the burgeoning Big Data and Internet of Things (IoT) applications. To this end, NEXCOM has built NSA 7130, a dual-socket network security appliance, with Intel® Xeon® E5-2600 v3 product family and Intel® Ethernet Controller XL710-AM2 to provide enhancements including computing performance, system responsiveness, I/O throughput, and hardware design. The NSA 7130 can take on more security workloads and lower energy consumption, protecting network traffic for both enterprises and telecommunication carriers in a green way.

The NSA 7130 is a dual-socket network security appliance with support for the full range of Intel® Xeon® E5-2600 v3 product family and up to 512GB of DDR4 memory. The NSA 7130 is equipped with high speed network interfaces including four 10GbE ports, eight 1GbE copper ports, and eight 1GbE fiber ports. With two third generation PCIe x8 slots and room for flexible configuration, the NSA 7130 can build on extra performance, storage, and LAN density with NEXCOM SmartNIC, LAN, and HDD



modules and facilitate scaling in, scaling up, and scaling out of applications.

The power efficient design is another highlight of the NSA 7130. To reduce energy waste, the NSA 7130 uses a common redundant power supply (CRPS) module with

80 PLUS Gold certification. With a short depth of 450mm, the NSA 7130—approximately 20 percent smaller than most popular 19-inch rackmount network appliances on the market—can dissipate heat more easily and is suited for use in telecommunication environments.



Intel® Xeon® E5-2600 v3 at a Glance

- Enhanced performance delivered by up to twelve computing cores, DDR4 2133 support, and Intel® Advanced Vector Extensions (Intel® AVX) 2.0 for massive parallel processing and heavy data workloads
- Enhanced Security by using Intel® QuickAssist Acceleration Technology and Intel® Data Plane Development Kit (DPDK) for accelerated cryptography, data compression, and pattern matching while reserving computing resources for network security applications
- High bandwidth supported by 1/10 Gigabit Ethernet to provide high throughput required for high volume of data traffic
- Enhanced virtualization performance offered by Intel® Virtualization Technology (Intel® VT) to offer faster virtualization performance for software-based network functions

Upcoming New Products

1

NIFE 101

PC-based Automation Controller Advocates to IoT Application



NIFE 101

The fanless computer NIFE 101 is powered by the latest generation Intel® Atom™ processor E3826 (formerly codenamed "Bay Trail-I"). Designed for PC-based controllers in factory automation applications, NIFE 101 offers a wide operating temperature range of -20 to 70 degrees Celsius and supports a power input of 24V DC \pm 20%.

NIFE 101 also features optional mini-PCIe module and 2 x COM ports with 2.5kv isolation protection to meet different communication requirements in factory automation applications, M2M applications (with optional GbE LAN, Wi-Fi, 3.5G/4G LTE module) and communication applications (with optional GPIO, RS232/422/485). The built-in 128KB of NVRAM can ensure the data is saved in case of sudden power outage. Supporting the latest Xcare™ 3.0 remote management utility with robust provisioning, NIFE 101 is the ideal IoT device of choice for intelligent systems and factory-of-things platforms.

- Onboard dual core Intel® Atom™ processor E3826, 1.46GHz
- 2 x RS232/422/485 ports, 2.5kv optical isolation protection
- 1 x Mini-PCIe socket for fieldbus, 3.5G, LTE or Wi-Fi module
- Extended operating temperature range of -20°C~70°C, support +24V DC input \pm 20%
- Support Xcare™ 3.0 utility

2

NIFE 2410

Fieldbus-Expandable Fanless System with 4th Gen. Intel® Atom™ Processor

Powered by dual core Intel® Atom™ processor E3827, 1.75GHz, NIFE 2410 can provide excellent computing, power efficiency and graphic performance than previous generation Intel® Atom™ product family. NIFE 2410 supports up to 8G DDR3L memory and has several options for storage devices like CFast, HDD, SSD or mSATA and comes with 2 x COM ports (RS232/422/485) and 5 x USB ports (1 x USB3.0) and one available PCI expansion.

This fanless system supports 2 x mini-PCIe modules for network and automation applications (with optional GbE LAN, Wi-Fi, 3.5G/4G LTE, USB and COM module). The NIFE 2410 is designed with universal support for major fieldbus protocols without extra effort. NIFE 2410 fieldbus expansion allows easy replacement and installation of PROFIBUS, PROFINET, DeviceNet, EtherCAT or EtherNet/IP protocol modules for communication in factory automation.

- Onboard dual core Intel® Atom™ processor E3827, 1.75GHz
- Dual independent display with DVI-I and HDMI outputs
- 2 x Gigabit LAN ports with built-in Intel® I210IT with WoL, Teaming and PXE
- Support optional fieldbus module kit (PROFIBUS, PROFINET, DeviceNet, EtherCAT, EtherNet/IP master module)
- Extended operating temperature range of -20°C~70°C, support +9~30V DC input



NIFE 2410 Rear View

NIFE 2410 Front View

3

NISE 2410

PCI-Expandable Fanless System
with 4th Gen. Intel® Atom™ Processor

Powered by dual core Intel® Atom™ processor E3827, 1.75GHz, NISE 2410 can provide excellent computing, power efficiency and graphic performance than previous generation Intel® Atom™ product family. NISE 2410 supports up to 8G DDR3L memory and has several options for storage devices like CFast, HDD, SSD or mSATA and comes with 2 x COM ports (RS232/422/485) and 5 x USB ports (1 x USB3.0) and one available PCI expansion.

This fanless system supports 2 x mini-PCIe modules for network and automation applications (with optional GbE LAN, Wi-Fi, 3.5G/4G LTE, USB and COM module). Such expansion versatility makes NISE 2410 a highly popular choice for kiosk, ATM, HMI, factory automation and IoT markets.

- Onboard dual core Intel® Atom™ processor E3827, 1.75GHz
- Dual independent display with DVI-I and HDMI outputs
- 2 x Mini-PCIe sockets for mSATA, 3.5G, LTE or Wi-Fi module, 1 x PCI expansion
- 2 x Gigabit LAN ports with built-in Intel® I210IT with WoL, Teaming and PXE
- Extended operating temperature range of -20°C~70°C, support +9~30V DC input

4

NISE 3640M/3640M2

EN60601-1:2006 Compliant
Fanless Medical Computer

Compliant with TUV/RH Certificate: EN60601-1:2006, the NISE 3640M series is designed specifically for medical applications in hospitals, clinics or any medical environments. This fanless system integrates 3rd generation Intel® Core™ i7 processor and QM77 PCH platform, bringing great processing power to all medical equipment.

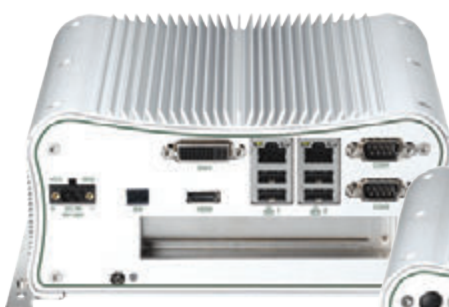
Together with enhanced graphics performance that can support 3 independent displays, the NISE 3640M series can offer the performance required for image and vision processing required of clinical diagnosis, medical imaging, patient monitoring, and testing and analysis applications. Furthermore, the NISE 3640M series features rich I/O expansions of 2x RS232/422/485, 4x RS232, 2x USB3.0, 2x USB2.0, 1x CFast socket, 1x SIM card socket, 4x Intel® GbE LANs and 1x internal mini-PCIe socket with optional Wi-Fi or 3.5G module support.

- Onboard 3rd generation Intel® Core™ i7 BGA processor with QM77
- 2 x DisplayPort; 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
- Support +24V DC input; support ATX power mode
- TUV/RH certificate: EN60601-1:2006

NISE 3640M2



NISE 3640M



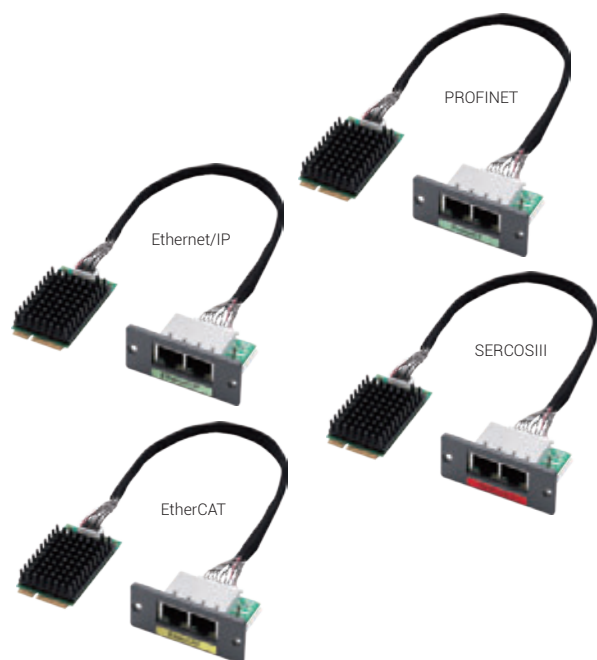
NISE 2410 Rear View



NISE 2410 Front View

5 FBI 90E-REM Fieldbus Module Supporting PROFINET, EtherNet/IP, EtherCAT, and SERCOS III

FBI 90E-REM is a fieldbus module that supports real-time industrial Ethernet fieldbus protocols like PROFINET, EtherNet/IP, EtherCAT, and SERCOS III. Users can download the required firmware to make this card as the master interface for these protocols. By equipping this interface card, users can turn their platforms to control stations for PROFINET, EtherNet/IP, EtherCAT and SERCOS III slave devices.



- Support PROFINET, EtherNet/IP, EtherCAT, and SERCOS III 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, SERCOS III controllers and I/O modules
- 2 x RJ45 connectors
- User-friendly configuration utility

6 FBI 90E-COM Fieldbus Module Supporting CANopen

The FBI 90E-COM is a fieldbus module that supports the real-time industrial fieldbus protocol CANopen. Users can download

the required firmware to make this card as the master interface for this protocol. By equipping this interface card, users can turn their platforms to control stations for CANopen slave devices.

- Support CANopen master or slave interface (depends on the downloaded firmware)
- Real-time fieldbus communication
- Mini-PCIe form factor
- Master supports a maximum of 126 nodes
- Cyclic maximum data of up to 7168 bytes for master, 1024 bytes for slave
- Driver support for Windows, WinCE, RTX, QNX, VxWorks, Linux
- 1 x DB9 male connector
- User-friendly configuration utility

7 AXE-5904 EtherCAT Slave Module with Built-in EtherCAT Controller



AXE-5904 is an EtherCAT slave module designed to bridge stepping or servo drive with pulse input command to an EtherCAT network. AXE-5904 features a block type design with built-in EtherCAT slave controller and thus is not restricted by location of the communication coupler. Supporting 4 axes, each axis on the AXE-5904 equips a pulse output and an encoder feedback channel. Moreover, dedicated I/O such as limit sensor input and servo alarm clear are also ready for every single axis. The AXE-5904 is the best way to connect legacy drives to an EtherCAT network.

- Built-in EtherCAT slave controller. No additional bridge needed.
- EtherCAT control interface with CoE Profile and CSP mode
- Pulse output of up to 8MHz with CW/CCW and OUT/DIR mode
- Encoder feedback of up to 8MHz at 4x AB phase mode
- Removable terminal for easy maintenance

8 APPC 0840

8" Industry 4.0-Compliant Smart Panel PC



APPC 0840

APPC new 8" panel PC incorporates a reliable embedded CPU board powered by Intel® Atom™ processor E3800 product family with integrated Intel® HD Graphics. The panel PC supports a wide range power input of 12~30VDC, equips an IP65-compliant front panel with a flush design, and features 2.5KV isolation protection COM ports, making it ideal for industrial applications.

The new generation APPC integrates widely-used industrial fieldbus master interfaces including PROFINET, PROFIBUS, DeviceNet, EtherNet/IP, and EtherCAT to communicate with programmable logic controllers (PLCs) and remote I/Os made by major brand-name suppliers. In addition, the APPC series can be bundled with the SCADA/HMI software for use in the SCADA/HMI station.

- 4:3, 8" fanless LED panel computer with IP65-compliant front panel
- Intel® Atom™ processor E3800 product family (up to quad cores)
- 2GB of DDR3L by default with support for up to 8GB
- Bezel free touch panel for stylish aesthetics with flexible customized membrane
- 1 x mini-PCIe socket, 1 x CFast slot, 2.5" HDD Bracket, 4 x COM, 2 x GbE, 4 x USB, 2nd display-VGA, Line-out, 1 x fieldbus port

9 IPPD 1600P/1800P/2100P

Wide Screen, Multi-Touch Industrial Touch Monitor

NEXCOM new industrial touch monitors, the IPPD series, come in 16:9 wide screen sizes of 15.6" 1366x768, 18.5" 1366x768 and 21.5" 1920x1080. The industrial touch monitors feature an IP66 rated front with a zero bezel flush design to withstand water and dust ingress, and a 10-point P-Cap touch panel with a 7H hardness to withstand

rigorous use. Additional wide range power input of 12~24VDC and ground protection are provided to ensure high reliability.

The IPPD series also has the same cutout size as SIEMENS's touch monitor, representing an easy and cost-effective alternative for users. Feature wise, the IPPD series supports VGA, DVI-D and DisplayPort inputs, USB touch screen interfaces, OSD keypad on rear panel, VESA mounting for panel, wall and stand installations.

- 15.6 WXGA/ 18.5 WXGA/ 21.5" full HD wide screen TFT LCD display
- 10-point projected capacitive touch with full Windows 8 compatibility
- Front IP66 protection and anti-scratch touch surface: 7H hardness
- Display input interfaces: analog VGA, DVI-D and DisplayPort
- Touch interface: USB with lockable I/O connectors
- Mounting support: Panel/Wall/Stand/VESA 100 x 100mm
- Front LED indicator to show operating status
- Wide range power input: +12V~24VDC



10 PBOX 241P

2U Rackmount System with Configurable PICMG 1.3 Backplanes

PBOX 241P is NEXCOM's latest PICMG-based 2U 19" rackmount system which is designed to fit a variety of PICMG 1.3 boards including NEXCOM's new PEAK 887VL2/PEAK 886VL2. This rackmount system also offers complete support for NEXCOM's backplanes such as NBP 2U220 and NBP 2U040, and can be customized under NEXCOM's PBOX customization and integration services.

- 19" rackmount industrial chassis
- Supports PEAK 887VL2 and PEAK 886VL2
- Supports various 2U NBP series
- Front access USB and PS/2 ports
- Flexible configuration service for PCI and PCIe device

11 PBOX 441P

4U Rackmount System with Configurable PICMG 1.3 Backplanes



PBOX 441P

PBOX 441P is NEXCOM's latest PICMG-based 4U 19" rackmount system which is designed to fit a variety of PICMG 1.3 boards including NEXCOM's new PEAK 887VL2/PEAK 886VL2 and PICMG 1.0-based PEAK 779. This rackmount system also offers complete support for NEXCOM's backplanes such as NBP 14570 and NBP 14210, and can be customized under NEXCOM's PBOX customization and integration services.

- 19" rackmount industrial chassis
- Supports PEAK 887VL2, PEAK 886VL2, and PEAK 779VL2
- Supports various 4U NBP series
- Front access USB and PS/2 ports
- Flexible configuration service for PCI and PCIe device

12 PBOX 521A

Customizable Rackmount System for Industrial Automation Control Applications



PBOX 441P

NEXCOM PBOX 521A is a 4U 19" rackmount chassis dedicated for a variety of industrial automation control applications. Designed to house industrial motherboards, PBOX 521A integrates NEXCOM's advanced industrial motherboard, NEX 981. PBOX 521A has been validated to run high-power graphics card on full load and MA (machine automation) motion cards continuously for 72 hours in high-low thermal cycling test scenarios. It is also certified for EMC/safety requirements. Furthermore, NEXCOM provides PBOX customization services based on any level of customer requirements, from new motherboard to third party add-on card integration.

- 19" rackmount industrial chassis
- Supports Intel® Core™ 2 Duo up to 2.13GHz with greater performance and energy efficiency
- Supports 3 x 5.25" and 1 x 3.5" disk drives
- Front access USB and PS/2 ports
- Supports 4 x PCI, 1 x mSATA, 3 x PCIe (x16/x4/x1), 1 x CFAST card socket (optional)

13 IWF 300

Dual RF Industrial Wi-Fi Supporting 802.11a/b/g/n and 802.11ac/an/a



IWF 300

IWF 300 is a QCA9344-based industrial-grade AP/CPE/Router/Mesh designed with IEEE802.11a/b/g/n 2x2 MIMO and IEEE802.11ac/an/a 3x3 MIMO technology. IWF 300 can deliver a data rate of up to 1.6Gbps and an RF output power of up to 27dBm. The radio power is twice the amount of last generation technology, providing wider coverage range and service. IWF 300 can also function as a MESH network Wi-Fi access point to provide a cost-effective option in building a roaming network that supports a speed of 60km/hr.

- Qualcomm Atheros QCA9344 processor 533MHz
- AP/CEP/Router/Mesh multi-operation mode
- Dual RF for IEEE 802.11 a/b/g/n 2x2 MIMO + IEEE802.11ac/an/a 3x3 MIMO high throughput
- High power RF solution up to 27dBm
- 1+4 10/100/1000 Base-T Gigabit Ethernet ports
- Support -40°C ~ 80°C extended operating temperature

14 NIO 100

Industrial IoT Gateway Realizes the Factory of Things

NIO 100 is an IoT (Internet of Things) gateway designed to connect industrial systems to the cloud. Supporting RS232, RS485, digital input, digital output interfaces or a fieldbus card, the NIO 100 can interface with various industrial devices of different protocols and transmit the data over Ethernet, Wi-Fi or 3G connections. In addition, the NIO 100 supports PoE (Power over Ethernet) IEEE 802.3at, dual redundant 9 to 36VDC wide range power input and wide operating temperature range. With an array of connectivity options and industrial-grade design, the NIO 100 is a cost-efficient solution for industrial IoT applications.

- Onboard Intel® Quark processor X1000, 400MHz single core
- 2 x 10/100 fast Ethernet ports
- 2 x Mini-PCIe slots for radio module and FBI module
- 1 x USB 2.0, 1 x RS232/485 selectable, DIO 4x4
- Support 9~36V wide range DC input, IEEE802.3at PoE
- Support -40°C~80°C extended operating temperature



NIO 100, IDF14 TIA Award Winner

15 PEAK 779VL2

PICMG 1.0 Extends the Value of Existing Critical Applications

PEAK 779VL2 is the flagship of NEXCOM's PICMG 1.0 full-size single computing boards. Based on the 3rd generation Intel® Core™ processor, PEAK 770VL2 features dual channel DDR3 memory of up to 16GB DDR3 1333/1600MHz SDRAM, integrated HD graphic controller and SATA 2.0/3.0 support. Furthermore, it supports other

versatile I/O ports such as legacy PCI and ISA interfaces, 2 x COM, 1 x keyboard/mouse interface, optional TPM function, 8 x USB ports, and 2 x Intel® PCI Express Gigabit LAN port. PEAK 779VL2 is a great solution for advance industrial application that requires superb display and processing performance.

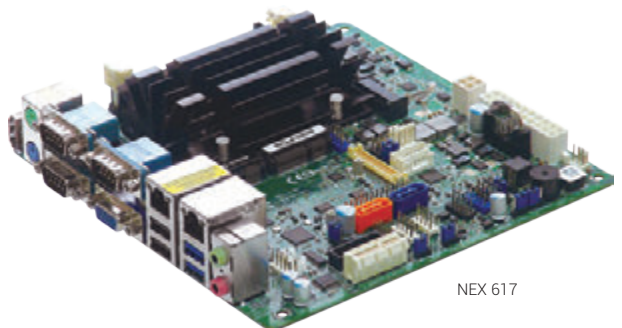


PEAK 779VL2

- Scalable platform 3rd generation Intel® Core™ i7/i5/i3 processors + non-ECC
- Intel® B75 PCH chipset with PICMG 1.0 specification compliant
- Support dual channel DDR3 with non-ECC DIMMs 1333/1600MHz, up to 16GB
- Support PCI/ISA, 4 x USB3.0/4 x USB2.0, 1 x SATA 3.0/3 x SATA 2.0 and 2 x GbE
- Display support for VGA, DVI, HDMI
- Dimension 338.58mm (L) x 122mm (W) (8 layers single side)

16 NEX 617

Mini-ITX Powered by Intel® Celeron® J1900 Quad Core Processor



NEX 617

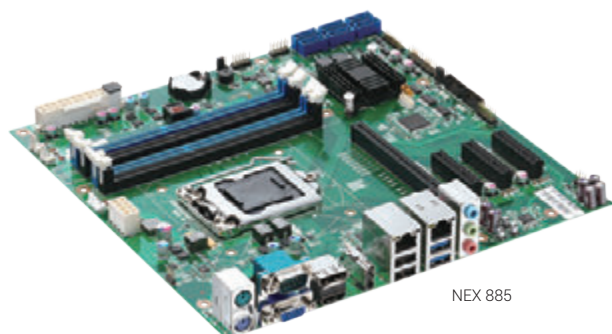
NEX 617 is NEXCOM's most advanced flagship mini-ITX industrial motherboard for embedded computers. Powered by Intel® Celeron® processor J1900, NEX 617 features 24/48-bit LVDS, up to 8GB DDR3/L memory and rich I/O expansions. NEX 617 represents a powerful model for intensive multimedia & high computing applications. It can be embedded into a fanless enclosure or 1U/2U

rack mounted chassis as customized system such as NEXCOM's PBOX solution. NEX 617 also accepts a wide range power input of 9~19V DC or ATX power for input flexibility.

- Intel® Celeron® processor J1900
- Integrated Intel® Gen7 Graphics with DX 11* and OGL3.2 support
- Supports dual channel DDR3 1333MHz, 2 x SO-DIMM, up to 8GB system memory
- 3 x COM (RS-232/422/485), 2 x COM (RS-232); 1 x HDMI, 1 x D-Sub, 1 x dual channel 24-bit LVDS; 4 x USB 3.0, 6 x USB 2.0, 2 x SATA2; Gigabit LAN : 2 x Realtek LAN
- 9~19V DC or ATX power support

17 NEX 885

Industrial micro-ATX Board based on 4th Gen. Intel® Core™ Processor



NEX 885

The NEX 885 is an industrial micro-ATX board based on LGA1150 socket-type 4th generation Intel® Core™ i7/i5/i3 processors as well as Intel® Celeron® processors. The board has four memory sockets to support up to 32GB of 1066/1333/1600MHz DDR3 RAM in dual channel configuration.

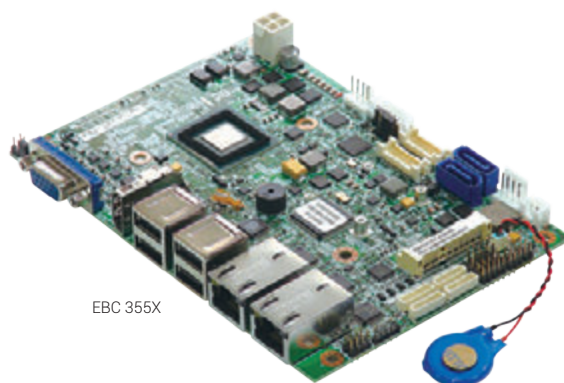
The Q87 chipset allows simultaneous control of three displays over 2 x HDMI, VGA and DisplayPort. Furthermore the chipset supports 10 x USB (3 x USB3.0, 7 x USB2.0), 3 x RS232, 1 x RS232/422/485, 2 x Intel® GbE LAN, and Intel® AMT 9.0 remote management technology. Moreover, remote boot via LAN is also supported with PXE function.

For data storage, the NEX 885 has 6 x SATA 3.0 and support RAID 0/1/5/10 functions to protect data in case of hard drive failure. The NEX 885 also supports system extensions with 1 x PCIe x16 (Gen.3.0), 1 x PCIe x4 as well as 2 x PCIe x1 slots.

- LGA1150 socket-type 4th Gen Intel® Core™ i3/i5/i7 processors
- 4x DDR3 LONG-DIMM memory, Max. 32GB
- Support DisplayPort/ 2 x HDMI/ VGA, up to three independent displays
- Support 2 x GbE LAN, 6 x SATA 3.0, 10 x USB 3.0/2.0, 4 x COM, 8 x GPIO
- Support 1 x PCIe x16(Gen. 3.0), 1 x PCIe x4, 2 x PCIe x1

18 EBC 355X

3.5" Boards Bring GPU Image Processing & Wide Temperature Support



EBC 355X

EBC 355X is a wide temperature 3.5" ECX embedded board based on Intel® Atom™ processor E3800 product family (formerly codenamed "Bay Trail-I"). EBC 355X features USB 3.0 ports and Intel® Gen7 Graphics with multi-display support. Aimed at embedded applications, EBC 355X offers low power consumption and supports wide operating temperature range of -20°C ~ 60°C. It also features a maximum memory of 8GB DDR3L SDRAM, 2 x SATA, 4 x COM, 4 x USB, 2x GbE LANs and 2 x mini-PCIe expansions.

EBC 355X is ideal for battery-powered portable devices, multimedia HMI panels, outdoor systems installed in harsh environments, home automation and thin clients.

- Wide operating and storage temperature range of -40°C to 85°C
- Industrial grade conformal coating (optional)
- Onboard Intel® Atom™ processor E3800 product family
- 1 x 204-pin SO-DIMM socket supporting up to 8GB DDR3L 1066/1333 MHz SDRAM
- Display: HDMI/VGA/1 x LVDS (2 x DF13 20-pin 24/48-bit dual channel)
- 2 x Mini-PCIe, 2 x Intel® i210 PCI Express Gigabit Ethernet, 2 x SATA2.0, 4 x USB2.0, 4-in/4-out GPIO, Mic-in, Speaker-out, Serial port: 3 x RS232, 1 x RS232/422/485 port

19 NPT 1560/1561/1562

Time Is Money, NPT 1560 Series Cuts Waiting Queues

Powered by Intel® Celeron® processor J1900, the fanless POS NPT 1560 series embodies high responsiveness, dual-display capability and ease of maintenance features, aimed to help kill off long checkout lines and generate more revenue for retailers and restaurants. Equipped with a 15" touch display and dual display capability, the NPT 1562 features a true flat P-cap multi-touch panel, while the NPT 1560 with bezel and the bezel-free NPT 1561 feature a 5-wire resistive touch display for users with tight budget.

For ease of use, the POS NPT 1560 series is designed with a removable HDD and supports optional expansion peripherals including MSR, fingerprint scanner, VFD, and various mounting options. The POS NPT 1560 series can deliver advertising to spur sales at point of sale, and offer more screen real estate than kitchen display systems (KDS) can use to streamline order process for quick service restaurants (QSR).

- 15" XGA 1024x768 250nits with LED backlight
- Projected capacitive true flat touch screen
- Intel® Celeron® processor J1900, 2.0GHz quad core
- Fanless POS terminal, front bezel complies with IP65
- Built with removable 2.5" SATA HDD
- Optional MSR/ fingerprint/ VFD/ 2nd display/ cash drawer/ scanner



20 KPPC 1812

Facilitates the Rise of Smart Kiosks, Targeting IoT Applications

KPPC 1812 is designed to help build a smart future-proof kiosk that can evolve with changing needs of retail and hospitality industries. Based on Intel® Celeron® processor J1900, the KPPC 1812 can power multimedia contents for advertising and enable multiple ways of user interaction for self-servicing. The KPPC 1812 is designed with expansion flexibility and ease of use and maintenance and can maximize kiosk uptime and lower total cost of ownership (TCO) for users.

To enable a greater extent of self-service, the KPPC 1812 is equipped with a wide set of I/O interfaces and peripheral options. The KPPC 1812 can not only be customized with commercial off-the-shelf (COTS) peripherals but also supply power to the external devices. NEXCOM has also developed QR code scanner, NFC reader, and thermal printer modules to build up, for instance, mobile payment function whilst reducing the wiring and simplifying peripheral integration.

- 18.5" widescreen (16:9) true flat projected capacitive touch screen with Intel® Celeron® processor J1900, 2.42GHz
- Robust aluminum alloy rear cover and IP65-compliant plastic front bezel for harsh environment
- Swappable 2.5" HDD/SSD and mainboard tray design.
- Built-in 2MP web camera
- Two expansion slots for add-on mini-PCIe cards
- Optional 3.5G/ Wi-Fi module and antenna, MSR, fingerprint, NFC reader, 2D scanner, thermal printer



21 NSA 7130

Makes Performance and Green Pushes on Network Security

NEXCOM has released the 2U network security appliance NSA 7130 to take on more security workloads and lower energy consumption to contribute to a greener world. Based on Intel® Xeon® E5-2600 v3 product family paired with Intel® C610 series chipset (codenamed Grantley), NEXCOM NSA 7130 features enhancements in computing performance, system responsiveness, I/O throughput and hardware design to safeguard network traffic for both enterprise and telecommunication applications.

The NSA 7130 is a dual-socket network security appliance with support for the full range of Intel® Xeon® E5-2600 v3 product family and up to 512GB of DDR4 memory. The NSA 7130 is equipped with high speed network interfaces including four 10GbE ports, eight 1GbE copper port, and eight 1GbE fiber ports. With two third generation PCIe x8 slots and room for flexible configuration, the NSA 7130 can build on extra performance, storage, and LAN density with NEXCOM SmartNIC, LAN, and HDD modules and facilitate scaling in, scaling up, and scaling out of applications.

- Support full range of Intel® Xeon® E5-2600 v3 product family with up to 12 cores
- Support up to 512GB of DDR4 2133 memory with 16 DIMM slots
- Onboard 4 x 10GbE LAN ports, 8 x 1 GbE copper ports, 8 x 1GbE fiber ports
- 2 x PCIe 3.0 x8 expansion slots
- 2U 450mm deep rackmount form factor
- Redundant power supply with two 550W 80 PLUS Gold certified Intel® CRPS modules



NSA 7130

22 IFA 1610/3610

The Henge™ Industrial Firewall Series

The Henge™ IFA 3610 and IFA 1610 are 5-port and 2-port industrial firewalls with VPN functionality. Fully integrated, the broadband-capable firewall routers offer stateful packet inspection (SPI) firewall, denial-of-service (DoS), distributed denial-of-service (DDoS) protection and intrusion prevention, ports can detection, and real-time alerts for additional protection of machinery and equipment. Equipped with IPsec and SSL VPN function, the firewall routers provide a secure, remote access connection to help machine builders/system integrators easily execute remote monitoring and maintenance tasks.

Furthermore, with rugged design and wide operating temperature range of -20°C to 70°C, IFA3610 is perfectly suited for installation in harsh environments. By combining firewall, VPN functionality and rugged design, IFA 3610 is ideal endpoint connectivity and security solutions for industrial automation, process control, energy and medical instrument management applications.

- 5-port/2-port VPN router
- Stateful packet firewall
- Intrusion detection/prevention
- Secure remote access through SSL VPN
- Unified VPN user management
- RS232/485 serial communication



IFA 3610

IFA 1610

23 NDiS B114

Cost Effective Full-HD Digital Signage Player



NDiS B114

Powered by ARM® Cortex™-A9 RISC MPU, NDiS B114 can play rich multi-media contents with low power consumption. NDiS B114 is enclosed in a compact chassis and can be easily integrated into display devices, such as LCD TV or PDP with HDMI display output. NDiS B114 is suitable as an entry level digital signage player for advertising, messaging, and brand promotion.

- Onboard Cortex™-A9 SoC
- Full HD video support
- HDMI 1.4 output with resolution up to 1920x1080 @60Hz
- Half-size mini-PCIe slot supporting Wi-Fi module
- Android 4.3 and Ubuntu 12.04 ready

24 VES30-8S/VES 30-4S

Mobile PoE Switches Simplify Wiring and Power Management



VES30-4S

VES30-8S

VES30-8S and VES30-4S are mobile PoE switches with fanless enclosure designed for telematics applications in harsh environments. The VES30-8S and VES30-4S feature 9 and 5 Gigabit Ethernet ports respectively, including up to 8 and 4 IEEE 802.3af compliant PoE ports to transfer large amounts of video streams, voice and critical data across Ethernet networks smoothly and quickly.

With PoE support, the PoE switches can power PoE-enabled IP

camera without the need for additional power lines, simplifying device integration for surveillance applications in transportation. The mobile PoE switches also support wide operating temperatures of -30°C to 70°C, wide voltage input range of 9VDC to 36VDC and provide smart power management with low battery voltage protection, power-on and power-off delay timer, and auto ignition power on/off functions. These unique features can secure reliable operation and prevent premature failure of both the PoE switches and vehicle.

- 1 + 4/8 x 10/100/1000 Mbps PoE port (60W/120W, IEEE 802.3af compliance)
- Wide power input range 9~36VDC
- -30°C ~ 70°C operating temperature
- Low battery voltage protection / Delay time setting / Ignition support
- CE/FCC, E13 mark certification

25 VMC 100

7" Cost Effective Vehicle Mount Computer



VMC 100

VMC 100, a 7-inch all-in-one vehicle computer, is designed to provide transportation applications a cost-effective vehicle mount computer solution. Similar to all VMC series, the fanless and wide temperature design are reserved in VMC 100. VMC 100 features Cortex™-A8 processor, Linux and Android operating system, high resolution LCD with brightness of 400 nits and a 4-wire resistive touch sensor. VMC 100 offers real-time communication for traffic control through optional Bluetooth, Wi-Fi and WWAN module expansions, and provides RS-232/422/485, USB 2.0, GPIO and LAN interfaces to link with peripherals. Additional VESA75 is supported to aid installation in limited vehicle space using RAM mount kits.

- 7" WVGA TFT LCD monitor with resistive touchscreen
- Built-in TI® AM3352 720MHz processor
- Support Linux and Android system
- Dual CANbus support with optional SAE J1939 SAE J1113, ISO7637-2 and SAE J1455 compliance for power design

26 VMC 1100

7" Real-time Tracking Vehicle Mount Computer



VMC 1100

VMC 1100, a new generation 7-inch vehicle mount computer with dual core Intel® Atom™ processor, is designed for transportation applications requiring real-time vehicle tracking. Adopting the latest low power consumption processor and integrating a WVGA LCD with a brightness of 400nits and a 4-wire resistive touch sensor, VMC 1100 does not compromise with its space to sacrifice its functional features. It provides dual CANbus, RS-232, RS-485, USB 3.0, GPIO, analog input, PWM and LAN signal. For security, VMC 1100 supports real-time vehicle tracking through GPS and SMS/GSM/GPRS. VMC 1100 can also be upgraded to a different LCD resolution and include other features such as LTE, projected capacitive touch, CANbus protocol support and backup battery.

- 7" WVGA TFT LCD monitor with resistive touchscreen
- Built-in Intel Atom Dual Core E3825 1.33GHz
- Supports a variety of wireless communication and GPS tracker
- Dual CANbus support with optional OBD-II (SAE J1939)
- SAE J1113, ISO7637-2 and SAE J1455 compliance for power design

27 VMC 4011

12" Rugged Vehicle Mount Computer for Off-road Applications



VMC 4011

VMC 4011, a 12.1-inch all-in-one vehicle mount computer, is designed for transportation, warehouses and material handling applications. Adopting the latest Intel® Atom™ processor, VMC 4011 integrates a high-res LCD with a brightness of 1000 nits, a 5-wire resistive touch sensor and an IP65-compliant aluminum enclosure for extreme ruggedness. Without compromising its space for functional features, VMC 4011 provides RS-232, USB 2.0, CFast, LAN and three mini-PCIe extensions for a variety of communication options. VMC 4011 also features a multitude of mounting methods to offer easy installation in vehicles such as forklifts, straddle carriers, truck, mining vehicles, construction machines and marine.

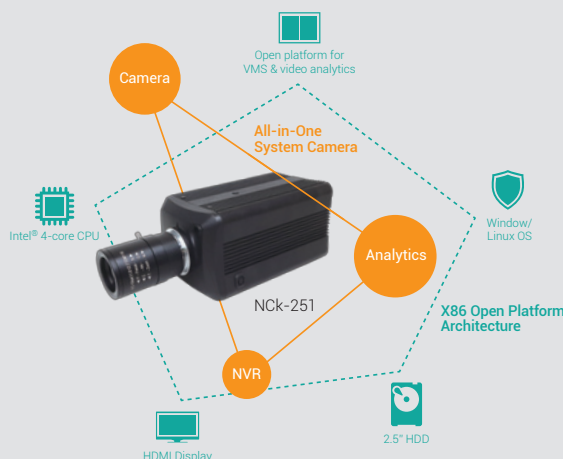
- 12.1" XGA TFT LCD monitor with high brightness solution
- Built-in Intel® Atom™ D2550 processor
- On screen F1 - F10 functional keys
- Rugged construction, fanless design and IP65 sealing
- Variety of wireless communication options including Wi-Fi/BT/WWAN/GPS

28 Nck-251

IP Cam+ NVR+ VMS All-in-one Advanced System Camera

Nck-251 is an innovative product which combines IP camera & NVR in one system. Open platform design allows users to integrate preferred VMS and VAs to make the IP camera a smarter appliance. Optional 2.5" HDD inside helps to save cost for storage.

- x86 open platform
- Full HD1080P @30fps
- 2.5" SSD/HDD supported
- Support -20°C ~ 60°C / -4°F ~ 140°F
- Lens optional



NEXCOM's PC-based Machine Automation Envisioned the Future Possibility of Robots and Humans Working Together



NEXCOM presented its latest EtherCAT machine automation and PC-based factory automation solutions at Taiwan Automation Intelligence and Robot Show (TAIROS in short) to demonstrate its blueprint of smart factory under the concept of Industry 4.0. Aiming to help electronic manufacturers realize smart manufacturing, NEXCOM showcased live 4R Delta robot working in DIP line and two 6R robot arms working with humans to present how robots can improve the productivity on the work floor.

The movement of robots required sophisticated and high accurate control. To make the demo easily understood, NEXCOM arranged two 6R robot arms and its staffs working together to make ice cream cones and hand them over to onsite visitors. The robots continuously worked 8 hours per day to deliver around

1500 cones to a long line of visitors who were intrigued by the beauty of technologies, showing how robots could assist factory employees in improving productivity. It also showed the possibility of human-robot collaboration in the near future.

4R Delta robots are one of the best solutions for optimizing productivity. As demonstrated at the event, the 4R Delta robot in the DIP line could continuously perform pick-and-place movements in an accurate manner for long working hours. This showed how the addition of robots or any machine automation solutions could free humans from monotonous work for more intelligent work, resulting in better productivity and cost efficiency in the long run.

At TAIROS, NEXCOM received many inquiries

from different industry manufacturers such as semiconductor, electronics, CNC, instruments, food maker, and ceramics etc. The transformation to smart manufacturing will be inevitable, but will be embraced and delighted by the majority.



NEXCOM's Digital Security Surveillance Answered the Market Demand

At 2014 IFSEC, NEXCOM presented a full range of solutions of digital security surveillance and latest technological advances such as RF detection and 360-degree fisheye lens IP cameras. The 10 megapixel fisheye camera with IR function attracted many eyeballs from key players in security, while NEXCOM's traffic solution—NViS mobile NVR and megapixel IP cameras for in-vehicle and LPR/ANPR applications—won the most inquiries.

NEXCOM's PoE-integrated NViS 3542P4 mobile NVR impressed attendees at the event with its combination of surveillance capability, vehicular functionality and system reliability. The NViS 3542P4 supports 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. Based on the Intel® Core™ i7/i5 processor, the PoE-integrated NViS 3542P4 supports high bandwidth GbE LAN, PoE interface, GPS communication, WAN/WLAN connectivity, and hot swappable HDD. This ruggedized mobile NVR series guarantees highly reliable performance in challenging mobile environments and is suitable for use in police patrol cars, fire engines, ambulances, public transportation and more.

The 3 megapixel IP camera, NCm-301-V, was praised for its reliability and performance for in-vehicle applications. Dedicated for transportation surveillance, NCm-301-V features image stabilization, compact and rugged housing, and true WDR to provide clear image output under various lighting

conditions. In addition, with IP67 design and wide operating temperature of -40°C to 60°C, NCm-301 is also ideal for all kinds of extreme working environments.

Furthermore at the event, NEXCOM's NCb-231 box type IP camera received numerous inquiries for its LPR/ANPR-oriented design. Equipped with 2/3" full HD progressive scan CMOS image sensor and global shutter function, NCb-231 can capture clear images of objects moving at speeds over 200km (124 miles) in low light environment. In addition, NCb-231 supports H.264/MJPEG compression technology and offers smooth video playback at up to 30 fps in 1080p. The video ROI (Region of Interest) function further reduces bandwidth and storage requirement, offering users the bandwidth flexibility and storage efficiency.



Headquarters

NEXCOM International Co., Ltd.

9F, 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

NEXCOM Intelligent Systems

Taipei Office

13F, No.920, Chung-Cheng Rd.,
ZhongHe District,
New Taipei City, 23586, Taiwan, R.O.C.

Tel: +886-2-8226-7796

Fax: +886-2-8226-7792

Email: sales@nexcom.com.tw

www.nexcom.com.tw

NEXCOM Intelligent Systems

Taichung 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

1F & 2F, Block A, No.16 Yonyou Software Park,
No.68 Beiqing Road, Haidian District,
Beijing, 100094, China

Tel: +86-10-5704-2680

Fax: +86-10-5704-2681

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

Shanghai Office

Room 603/604, Huiyinmingzun Plaza, Bldg., 1,
No.609, Yunlin East Rd.,
Shanghai, 200062, China

Tel: +86-21-5278-5868

Fax: +86-21-3251-6358

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

Europe

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

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



The Intelligent Systems

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