NEXCOM

The Intelligent Systems

A **Passion** for Quality,
Security and Connectivity

2017
Network and Communication Solutions

- ■ Network Application Appliances
- ■ Network Security Appliance
- ■ Telecom Companies' Preference for NFV Drives Enterprise vCPE Market Forward

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NCS

Network and Communication Solutions

Network Application Appliance
Network Security Appliance
Telecom Companies' Preference for NFV Drives Enterprise
vCPE Market Forward

Corporate Information

Vertical Industry Applications

Network Security Appliance

Performance Platform

LAN Module

Mainstream Platform

Entry Platform

Entry Platform

About NEXCOM

Reliable Partner for the Intelligent Systems

Founded in 1992 and headquartered in Taipei, Taiwan, NEXCOM is committed to being your trustworthy partner in building the intelligent systems. To surpass customers' expectations, NEXCOM makes the difference by utilizing its decades of industrial computing experience, a highly talented R&D team, and by providing exceptional levels of customer service. With these core strengths, NEXCOM has enabled its customers to win key projects in a diverse range of industries.

With its focus on delivering these core values to better serve customers, NEXCOM integrates its capabilities and operates six global businesses, which are Multi-Media Solutions (MMS), Mobile Computing Solutions (MCS), IoT Automation Solutions (IAS), Network and Communication Solutions (NCS), Intelligent Digital Security (IDS), and Medical and Healthcare Informatics

(MHI). This strategic deployment enables NEXCOM to offer time-to-market, time-to-solution products and service without compromising cost.

In addition, the service-to-market business model gives NEXCOM core competence to build a strong world-class service network by providing customized service, global logistics, local access, and real-time support. Operating six subsidiaries, from China, Italy, Japan, Taiwan, the United States, to the United Kingdom, NEXCOM is able to better facilitate customers' requirements as well as closely work with global partners in different regions.

Partners should also be assured that NEXCOM's Taiwan based Headquarters and subsidiary offices in China, UK and USA have obtained ISO 9001:2008 Certification.

IAS	IoT Automation Solutions: Industry 4.0 Solution, industrial robot & motion, industrial network, DMS 4.0
IDS	Intelligent Digital Security: IP Cam, NVR, mobile server platform
IoT	Internet of Things: total solutions for vertical IoT applications Healthcare and Medical Informatics: total solutions with a variety of medical IT systems
IPS	Intelligent Platform & Services: smart retails, digital signage, interactive kiosk, customization services
MCS	Mobile Computing Solutions: rugged computer devices, rugged mobile computer Vehicle Telematics Computer: Car PC, heavy duty vehicle, train PC
NCS	Network and Communication Solutions: network security, HPC, telecommunication, storage, SDN/NFV, industrial security

Corporate Vision

To become the industrial leader in providing intelligent systems, NEXCOM utilizes its industry leading technology, localized customer support and worldwide logistics services. This will be achieved by:
- Great team work
- Cooperation with trusted partners
- Growth through innovation

Corporate Mission
- An innovative supplier in vertical application markets
- A quality partner in engineering, manufacturing and services

Business Strategy

Aim to better support the activities of all its partners, NEXCOM divides its sales force into six dedicated business units to target rapidly expanding vertical markets. This enhances each business unit concentrating on strategic channel accounts and on repeat order business. Moreover, NEXCOM's business units have been set up to serve the requirements of key project accounts, where product ODM and project support are frequently required.

NEXCOM is working with embedded computing solution providers to envision new opportunities for growth. We'll help you deliver reliable vertical solutions, optimized for the next wave of IoT and Industrial 4.0 applications.

Research and Development

Innovation, Quality, Speed and One-stop Service

Over a decade ago, NEXCOM successfully launched the PEAK series of Single Board Computers onto the IPC market, and in doing so, gained a solid reputation for product quality and innovation. In subsequent years, NEXCOM has enhanced its reputation for R&D excellence with a multitude of high-end technology products, which has cemented NEXCOM as one of the industry leaders for R&D and innovation.

The mission of NEXCOM R&D team is to design exceptional products that meet the stringent requirements of today's global markets. In order to achieve this goal, we have recruited hundreds of talented engineers who have the knowledge and expertise to make NEXCOM's products stand out in this highly competitive market.
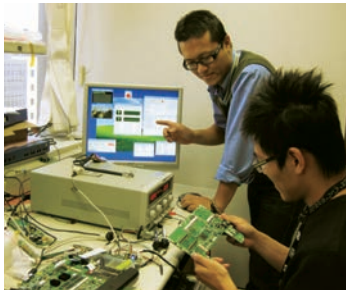
NEXCOM offers solutions for IoT gateway, robot controller, connected cars, Industry 4.0, and industrial security applications. The team is encouraged to "Think with New Ideas" and "Know how to make it and do it right first time". In addition, NEXCOM 's R&D team has been expanded to over 300 engineers with the ration of software engineers to hardware engineers coming to about 1:1, and remains as one of core competences of the company.

Versatile Design Capabilities

- Fanless technology for industrial computer
- High availability network security platform, blade, and cPCI
- Rugged tablet computer and car PC

- Ultra small footprint computer-on-module
- High speed networking
- Isolated and non-isolated power system
- Isolated and non-isolated industrial I/O
- Wide range of operating temperature

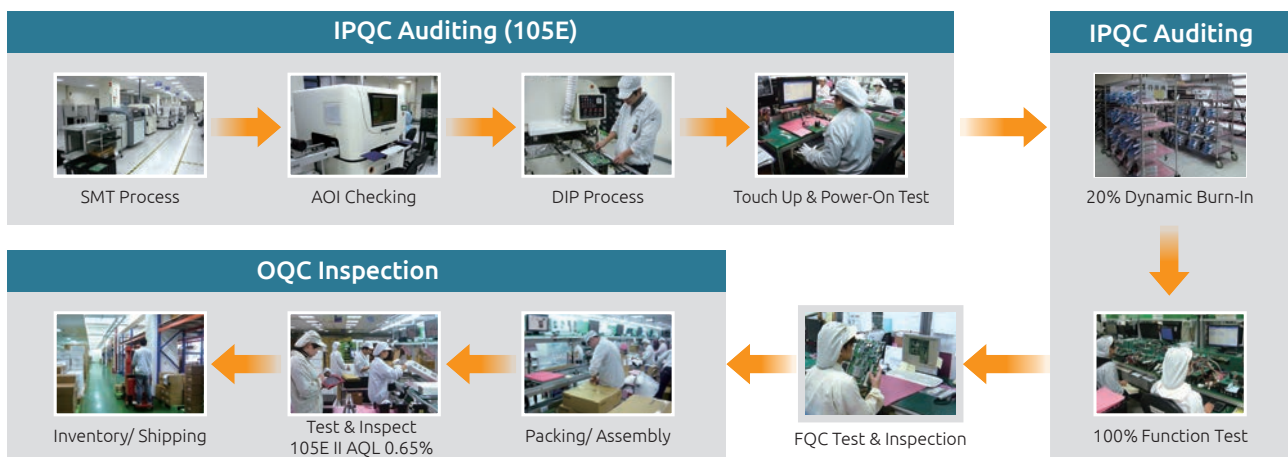# 24/7 Production Line

Optimal Manufacturing Efficiency

The manufacturing of delicate products requires a high-level technology, craftsmanship, standards and time-to-market efficiency. Over years continual investment in advanced manufacturing equipment and systemic training programs has enabled NEXCOM to obtain optimal manufacturing efficiency.

To fulfill the increasing market demand for NEXCOM's products, the company has opened a 24/7 production line. This investment not only furthers the quality of products, but also reduces production lead-time for all global customers.

Quality Assurance

Under a strict Quality Assurance System, product design and reliability are controlled to support all critical solutions, and ensure Total Quality Assurance (TQA) implementation for all NEXCOM products and service. Furthermore, NEXCOM technical support team aims to provide feedback within 24 hours to ensure technical issues are resolved in the shortest possible time.

IPQC Auditing (105E)

SMT Process → AOI Checking → DIP Process → Touch Up & Power-On Test

IPQC Auditing

20% Dynamic Burn-In → 100% Function Test

FQC Test & Inspection

OQC Inspection

Inventory/ Shipping ← Test & Inspect 105E II AQL 0.65% ← Packing/ Assembly

Closed-Loop Quality Assurance System

Green Policy

As a global citizen, NEXCOM is committed to providing green products and services, which are compliant with WEEE and RoHS legislation. NEXCOM continues to proactively work with industry peers and suppliers, to clarify standards, and identify compatible technologies and practices that help reduce hazardous substances from our products and manufacturing processes.

Global Fulfillment Service

Product delivery and customer support are always more effective when delivered locally. NEXCOM localizes support and provides a global customer service network to handle all aspects of global business, from presales, order taking, and system assembly to logistics. For expeditious product delivery, NEXCOM has established four regional service centers: Taiwan (for Asia), USA (for North America and South America), the United Kingdom (for Europe) and China. Therefore, NEXCOM customers benefit from quality assured product assembly and four service centers.

NEXCOM has invested heavily to establish operational infrastructures, including advanced equipment and facilities, not only at its global headquarters but also at subsidiary offices. Today, each of our service centers, with ISO 9001:2008 certification, has a purpose built assembly line, RMA/ DOA center and warehouse storage capability.

UK
ISO 9001
Assembly Line
RMA/DOA
Logistic

China
ISO 9001
UL Certified
Assembly Line
RMA/DOA
Logistic

USA
ISO 9001
Assembly Line
RMA/DOA
Logistic

Taiwan
ISO 9001/ISO 14000
UL Certified
Assembly Line
RMA/DOA
Logistic

1. NEXCOM H.Q. Taipei, Taiwan
2. NEXCOM Central Taiwan Office Taichung
3. NEXCOM UK Milton Keynes
4. NEXCOM Italy Milan
5. NEXCOM USA Fremont, CA
6. NEXCOM China Beijing
7. NEXCOM China Shanghai
8. NEXCOM United System Service Shanghai
9. NEXCOM Surveillance Technology Shenzhen
10. NEXCOM Japan Tokyo

NEXCOM Global Service Network

Assembly Line Operation

NEXCOM offers custom-built products based on customers' specific requirements through the build-to-order services. A dedicated 24/7 assembly line and Quality Assurance System are installed in the services center to ensure exceptional production efficiency and superb product performance and reliability.

Service Pledge and Connection

As a reliable intelligent systems provider for vertical markets, NEXCOM provides the very best products and the most expeditious service to help customers build the digital infrastructure. Comprehensive types of service are provided to promptly satisfy varying requirements. In addition to the headquarters in Taiwan, seven subsidiaries and distributors in strategic worldwide locations are at your service.

Service Types

| Quotation | Project Consultant | Technical Support | Solution Alliance | RMA/DOA | Assembly/ Test | Global Logistics | Customization | ODM Original Design Manufacturing |

Your Truly Global Information Resource

www.nexcom.com

www.nexcom.com is your one-stop platform for the latest information on all NEXCOM products and services. The rejuvenated website not only contains product relevant information and data, solutions/ products demo, up-to-date news, but incorporates online downloads, publications, and technical service supports, such as RMA/ DOA centre. Furthermore to localize service and support, seven NEXCOM sister websites remain to serve visitors in diverse geographical regions.
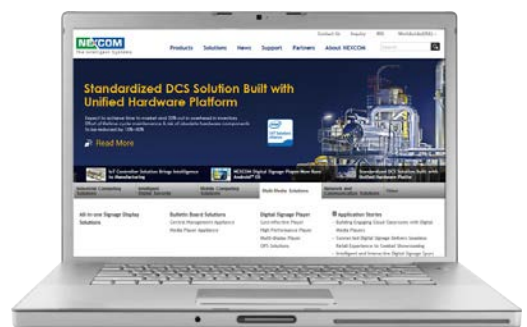
Get the Latest Updates Anytime, Anywhere

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At the end of the year 2011, NEXCOM launches its mobile site, m.nexcom.com. The site aims to cross time and space boundaries by allowing users to access the latest innovation and information of NEXCOM via smartphones. On this website, users will easily find our latest products, news, application stories, white papers, and videos. The mobile site now supports iOS and Android system. Please visit us at m.nexcom.com.

Design and Manufacturing Services (DMS)

Customized Service for Tailor-Made Solutions

NEXCOM provides cost-effective and time-to-market Design and Manufacturing Services (DMS). The DMS offers product customization from core modular designs to finished products based on customers' specifications in all kinds of industrial field. The levels of the service include manufacturing new CPU boards and system based products to fulfill customers' unique applications.

Unique DMS Features

With vast experience, the know-how, leading technology and innovative design capabilities, NEXCOM DMS incorporates the following features:

Prompt Time-to-Market

NEXCOM possesses a dedicated project management team to monitor and ensure each DMS project is delivered on schedule. Thus, a quick time-to-market solution can be offered with time-scales varying from one-three months for the design phase, with an average six month period from design to market.

Flexible Design and Manufacturing

NEXCOM possesses a complete R&D team to design and engineer the latest industrial grade products. As R&D engineers grouped into small cross-functional teams, they can develop more reliable products with flexible designs and quicker response to customers' requirements. In addition to our R&D capabilities, the state of art manufacturing facility and production lines enables NEXCOM to offer a flexible manufacturing with highly skilled factory staff.

Rigid Quality Control

NEXCOM is pledged to deliver high quality products, from design to manufacture, and safeguard against defective products by implementing a rigid Quality Assurance System. In this system, at the end of each process, NEXCOM performs various tests to ensure that the product passes the industrial standard before it enters into next stage. Finally, additional tests are performed to ensure all board and system level products function correctly. Tests include "Failure Mode and Effects Analysis", "Vibration Test", "Burn-in Chambers", "Drop Test", and "AC Power Source Test".

Extensive DMS Experience

We set higher standards! NEXCOM surpasses your tailor-made product requirements with extensive DMS experiences. We are specialized in X86 architecture and have accumulated invaluable experience and know-how in real working environments. Moreover, with a superb reputation, NEXCOM has under its belt many ODM projects in diverse fields, such as gaming, medical, POS, network security, transportation, marine, blade servers, and Linux BIOS etc.

Scope of DMS Work

■ Original Design Manufacturing Service (ODMS)

NEXCOM offers a complete ODM Service starting from the brand new product design right through to the finished product. We can design products based on the customer's unique specifications and application requirements.

■ Customization to Order Service (CTOS)

NEXCOM also provides CTOS, which is a quick-to-market solution by modifying the existing products to fit your business requirements, such as BIOS setting, component change by using current PCM layout, chassis color change, and packing accessories etc.
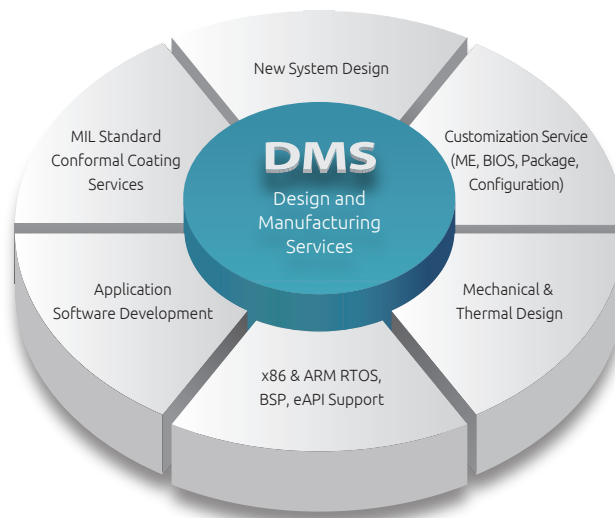
Service of DMS

With decades of industrial computing experience, NEXCOM has the capability to provide different levels of customized service to manufacture innovative products with exceptional high quality. We can assist you to differentiate from competitors, and save significant time and efforts.

Level 1	Logo Re-brand	We provide the service to change the membrane to re-brand the company logo on the front panel. Customers need to provide Membrane drawing with all color pantone number. There is a service charge involved.
Level 2	Customerized Build	Customers can change the membrane and chassis color to re-brand the packing. NEXCOM can offer dedicated part numbers and BOM. MOQ and service charge are required.
Level 3	Manufacturing Service	Contract manufacturing. The service scope includes system assembly & burn-in, software loading & testing. MOQ and manufacturing service charge are required.
Level 4	New Project	The design of new board & system is available. NRE and quantity commitment are required.

Professional Conformal Coating Solution

Get Ruggedized with NEXCOM Cost-Effective Conformal Coating Service for Hash Environment Protection

Prompt Time-to-Market

NEXCOM recognizes the harsh reality that many embedded systems find themselves operating in unusual hostile environments. When conformal coating is required to protect your application against substantial humidity, dust, chemicals or temperature extremes, we can help!

Cost Effective Service to Apply Coating Solution in Vertical Market Segments

In addition to the usual military and harsh industrial environments that demand conformal coating, NEXCOM expand our conformal coating to Vehicle Telematics Computing, outdoor traffic control/surveillance, and off-shore Marine applications. These applications demand embedded computing performance with increased reliability through conformal coating process.

To support a wide range of applications in vertical markets, NEXCOM has engineered a diverse range of platforms, which incorporate the latest.

"State of the Art" Conformal Coating Line

NEXCOM uses automated Conformal Coater equipment for applications that require a high level of accuracy and repeatability in moderate to high volume manufacturing environments. "State of the Art" coating line is a closed-loop robotic platform featuring optical encoder feedback on all axes.

Smart Masking Technology

Our smart masking technology can pin point specific area on the PCBA for coating. The green, programmable conformal coater equipment allow user to only coat the area selected, which save labor/ material costs.

De-Flux Cleaning

To prepare a PCB for conformal coating, the circuits need to be cleaned. NEXCOM uses automatic defluxing and cleanliness testing systems. The deflux system is equipped with an automatic chemical management system that automatically doses and mixes defluxing chemicals at the turn of a keyed switch.
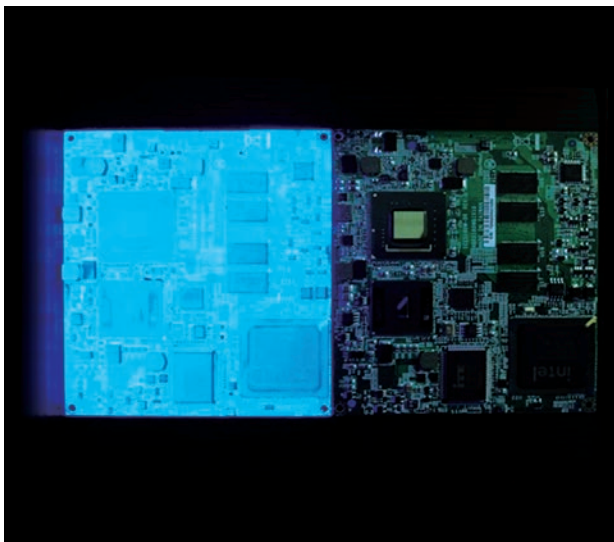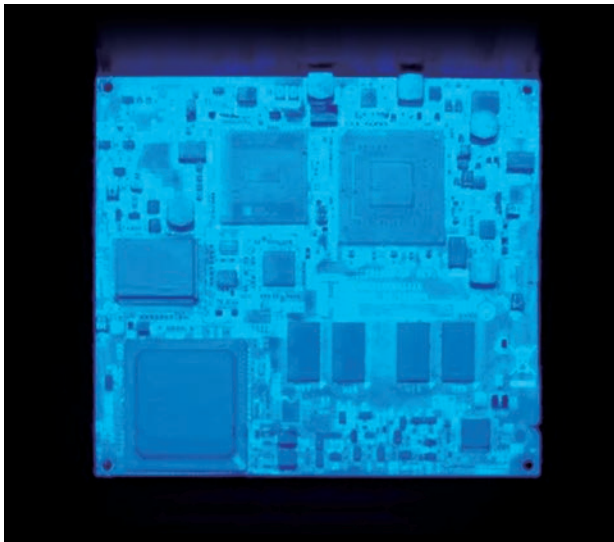


Real Time Cleanliness Testing

NEXCOM's deflux cleaning system is also equipped with an onboard cleanliness testing system which allows a user to program a desired cleanliness level. This assures that cleanliness levels will be consistent batch after batch.

De-Coating RMA Service

NEXCOM offer De-Coating RMA service upon request. This new service allows you to further cost down and generate higher ROI.

Quality Assurance Policy and Consistency Guarantee

Conformal coating inspection is a critical factor in determining successful coating application and long term reliability of PCBs. Using the IPC standards allows the coating operator to monitor the coating application performance. NEXCOM offers 100% manual screening by examining the PCB under white and UVA light and Thickness Gauge.
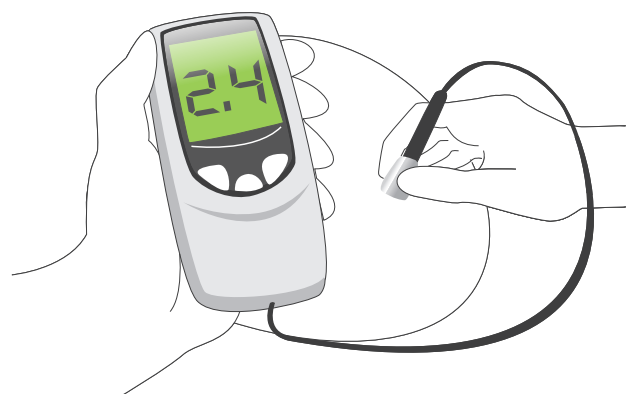
NEXCOM follows IPC-A 610, IPC-CC-830, IPC J-STD-001E regulations to generate consistent, adjustable coating thickness and cleanliness.

Network Application Appliances

## The Diversify Network Application Solutions

As consumers demand more sophisticated services over increasingly advanced networks, managing complexity is becoming more challenging. While enterprises and service providers alike may dream of simply replacing existing networks, the reality is that most legacy installations still work beautifully, forcing networks from various generations to co-exist and interconnect seamlessly for the foreseeable future.

NEXCOM offers a media appliance that interconnects different types of media streams to create a transparent end-to-end path for voice, video, and data in corporations and service provider environments. Available in a range of functionality and sizes, these gateways may also include premier bandwidth and codec optimization that can reduce costs significantly in the access and core portions of the network.

Rising to this interwork challenge, NEXCOM supplies a full suite of products ready to deliver video calls, text messaging, and location-based services and many other high-demand services over mobile, VoIP, and traditional networks. Whatever the need- from switching to transport- NEXCOM supplies the technology to create, manage and security control, voice, video, and data sessions simultaneously to meet your business.

VoIP Application Diagram
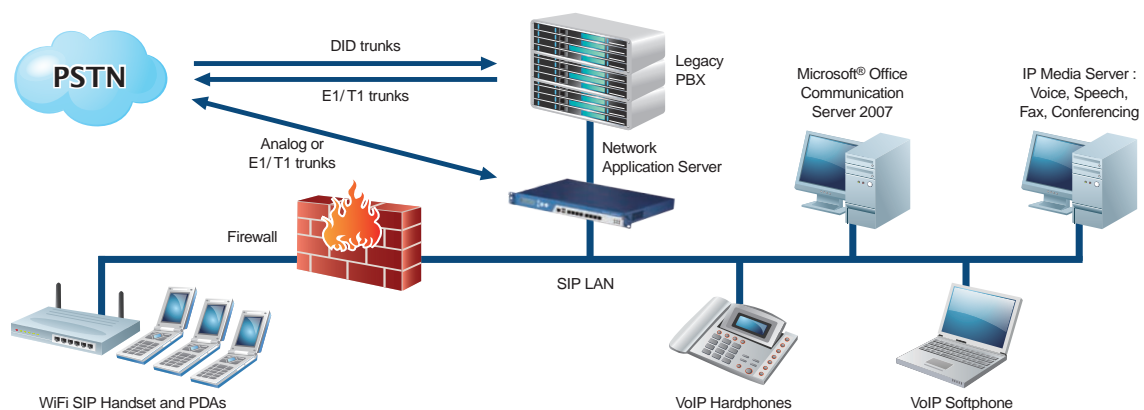
Network Security Appliance

Is Your Info Protected?

The invention of the Internet has broken down geographic barriers and created numerous business opportunities, however the Internet has also exposed businesses to the catastrophic danger of web attack. In the e-business generation, a company's daily operation relies on the Internet. Without proper Internet and network protection, an organization operation could be severely damaged by Internet attack, such as malicious hacking and security breach. Where a security breach occurs, the true cost of the incident is often difficult to measure, but could include the cost of server down time, stolen or lost data and subsequent loss of an organizations reputation.

The Most Trustworthy Network Security Solutions

To protect all of your valuable investments, NEXCOM offers a full range of network security platforms. Designed to fit various Network environments, NEXCOM's Network Security Appliances are designed to act as the solid foundation on which to host Virtual Private Network (VPN) as well as load balancing and Intrusion Detection System/ Intrusion Prevention System (IDS/IPS). NEXCOM's network security solutions provide highly secure platforms to ensure the normal operation of your critical business systems.
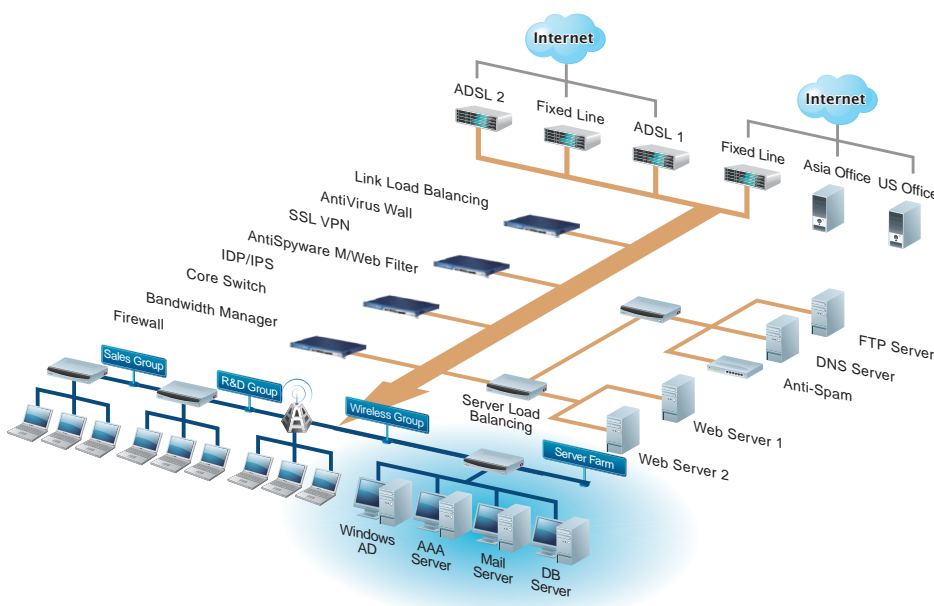
Applications

- SSL VPN
- Link Load Balancing
- IDP/IPS
- Bandwidth Management
- Firewall
- Anti-Spyware
- UTM
- Network Access Control
- Web Filter
- AntiVirus Wall
- Core Switch
- Server Load Balancing
- IM Filter (Instant Message)
- Anti-Spam
- AAA Server

Telecom Companies' Preference for NFV Drives Enterprise vCPE Market Forward

As telecom services become more diversified, operators who rely on traditional proprietary network appliances require strenuous effort in developing new services. The use of software-defined networking (SDN), network function virtualization (NFV) along with virtual customer premises equipment (vCPE) will grow in significance and set to open new territory for the industry.

Telecom operators are bound to vendor lock-in imposed by telecommunications equipment manufacturers (TEM).Despite the fact that the core telecom network and devices built on a closed architecture defined by TEM ensure service performance and quality, the push towards service diversity is still in motion. For example, network communication and services are gradually becoming integral parts within the telecom industry, with many operators shifting their focus to network services. However, using existing traditional equipment either incurs high costs or lacks the capability to deliver the right functions that meet the expectations of operators.

Within this dilemma of stalled progress, NFV is seen as the ray of hope for paving a new way for telecom operators. Hadwin Liu, Chief Architect of NEXCOM Network and Communication Solutions Business Group, explains that NFV is generally favored as it is built upon industry open standards, and uses universal hardware platform, virtualization technology and software to enable network functions that are only available on expensive, proprietary equipment. This helps operators to be less reliant on TEMs or system integrators, greatly reducing the deployment cost of equipment.

The NFV value chain consists of hardware (one of which serves as the main platform for vCPE), cloud operating system, application software and other components. Operators can list these components as open bids without having to worry about interoperability issues between heterogeneous components. For businesses who have invested in the development of x86-based enterprise vCPE, this will present a vast pool of opportunities.

Rising Significance of vCPE for Offloading Cloud Workloads

Liu points out that the concept of NFV operation focuses on translating network functions such as network security, WAN optimization and load balancing, into service processes that can be executed on a virtual machine. These processes are not closely bounded to the underlying hardware. In other words, businesses can simply use control commands of back-end cloud data centers to flexibly insert NFV virtual machines or remove devices.

As the number of end devices increases, more processing burdens are placed on the cloud center. As a result, the concept of "fog computing" has emerged to relieve the heavy processing load. The idea of fog computing is to share the workload of the cloud by using end devices with stronger computing power to enable vCPE functions to take place. Compared to traditional CPE, vCPE differs greatly as traditional CPE typically only handles simple network processing tasks that require only a dual-core processor and small amount of system

memory. vCPE, on the other hand, requires high processor core count, large system memory and network bandwidth capacity.

In terms of processor core count, vCPE basically requires four processor cores. The first core is used to run cloud operating systems such as Wind River, while the second core is dedicated for network switching (OVS). The remaining two cores are then used to run VNF virtual machines. For applications that require additional VNFs or network switching performance (OVS-DPDK), a higher processor core count is required.

Besides telecom businesses, another possible driving force for enterprise vCPE could come from traditional dedicated devices used for delivering network functions and performance. The main focus of these devices centers on allowing users to enjoy services offered by providers, while at the same time allowing room to access NFV services provided by other vendors. However, industry experts have evaluated that the development of dedicated devices may not be as significant as telecom services.

x86 to Non-x86 Cross-Platform Migration with NFV Virtual Machines

NEXCOM looks forward to the potential development of enterprise vCPE, and has vigorously revitalized its product lines; vCPE-related products from now on utilize Intel-based solutions as the core architecture. Not only Intel® Virtualization Technology is full-featured and complete, it is also widely used throughout the

industry as the main platform for various applications, thus ensuring high degree of integration. Furthermore, to strengthen the competitiveness of enterprise vCPE products, NEXCOM has been actively investing resources in building two specialized teams with distinct roles. The first specializes in non-x86 technology while the second specializes in software technology. These investment and research efforts have come together as the foundation for NEXCOM's unique niche.

For non-x86 technology, NEXCOM plans to reserve a wider resource space for platform migration. For example, a virtual service running on an x86 platform can be migrated to non-x86 platforms based on vendors like NXP's SoC. As a result, octa-core processor coupled with OVS hardware acceleration can be made available with competitive pricing to target the budget-constrained customer base. As for software technology, interoperability between devices and virtual machines will be assured, and if any issues are encounter by users, consultations are provided.

NEXCOM's enterprise vCPE is currently divided into three product series, which are NSA 7135, NSA 5160 and NSA 1150, from high-end to low-end respectively in that order. NSA 7135 features Intel® Xeon® processor E5 family with support for up to 44-core processors. NSA 5160 features Intel® Xeon® processor D-1500 family with support for up to 16-core processors. Lastly, NSA 1150 features Intel® Atom™ processor family with support for 2- to 8-core processors.

vCPE Product Selection Table

Module (P/N)	NSA 7135	NSA 5160	NSA 1150	NSA 1150A	DNA 1150	DNA 125B
Processor Family	Dual Intel® Xeon® E5-2600 v4/v3	Intel® Xeon® D-1500	Intel® Atom™ C2358	Intel® Atom™ C2558	Intel® Atom™ C2358	Intel® Atom™ E3815
Cores	Max. 44	Max. 16	2	4	2	1
Memory (Max.)	512GB	128GB	16GB	16GB	16GB	8GB
LAN Module	8	2	x	x	x	x
Intel® VT-x	Yes	Yes	Yes	Yes	Yes	Yes
Intel® VT-d	Yes	Yes	x	x	x	x
Intel® AES-NI	Yes	Yes	Yes	Yes	Yes	Yes
Intel® QA	x	x	Yes	Yes	Yes	x

2017 New Products

NSA 5160/5160NS

Intel® Xeon® Processor D-1500 Product Family, 1U Rackmount with 8 PCIe GbE LAN & LAN Module

- 1U rackmount network platform
- Intel® Xeon® processor D-1500 product family
- Support DDR4 2133 ECC & REG, up to 128GB
- On-board 8G LAN Copper + 2 x 10G SFP+ ; 4x10G SFP+ for NSA 5160NS
- Up to Two LAN modules support

NSA 5170

Intel® 6th Gen. XEON®/Core™/Pentium® Processors (Skylake-S), 1U Rackmount with 1GbE LAN & 4 LAN Module

- 1U up workstation rack mount system
- Intel 6th generation XEON®/Core™/Pentium® processor
- On board 1GbE LAN port
- Four LAN modules
- Optional CRPS redundant power
- Supporting NEXCOM IPMI

NSA 3640

Freescale QorIQ LS-series CPU LS2085/LS2088 up to 8 CPU Cores, up to 2.0GHz

- Freescale QorIQ LS2085/LS2088 communication processor, up to 2.0GHz
- DDR4 2133/2400 UDIMM memory (1 x ECC slot, 4 x Non-ECC slot)
- 4 x port 1/10 GbE Copper, 4 x port SFP+
- Onboard 1GB NAND flash, 128MB NOR flash
- Removable SD card
- USB 3.0 port, 1 x Type-A, 1 x Micro-B connector

DNA 1160

Fanless Embedded Computer Powered by Intel® Core™ i3-6100U SoC Processor

- Next generation Intel® Atom™ processor C3000 series supporting 2 & 4 cores, BGA type
- 2 x DDR4-2133 Long-DIMM ECC memory, Max. 32GB
- Support 8 GbE LAN ports
- Internal one 2.5" HDD Bay, one CFast socket
- USB 3.0 connector
- Backup power supporting (by project)

Products Selection Tables

Gateway to Communication

NEXCOM delivers the trusted and reliable platforms for network security appliances. Building upon the standard x86 architecture, our products allow network security software vendors to create their own professional appliances easier without additional efforts in BIOS and drivers. With the integration of leading technology from x86 CPU, PCI-Express and I/O accelerations, the security and performance of customers' applications are greatly improved.

Features and Benefits

- RoHS compliance: commit to produce green products and services compliant with EU RoHS directive 2002/95/EU.
- PCIe based GbE LAN: our PCIe based network security appliances can be enhanced to utilize 10 Gigabit networks to boost network performance.
- Dual/quad core processors with I/O acceleration: greatly improve CPU computing bandwidth in complex and intensive security computing. With sufficient processing power, they are appropriate for connection/ control- oriented and threat management-oriented network security appliances.
- Modular design platforms: can cope with diverse connection types from copper to fiber or from 2 ports to multi port. Security software vendors can focus on per port performance or increased connectivity with high port density.
- LAN bypass: enable connection fault tolerance for appliances, which act as the transparent bridges among networks. Users will hardly sense the network inaccessible when the appliances stops working due to hardware or software detects.

Applications and Market Focus

- Firewall/VPN
- Anti-Virus/Anti-Spyware
- Voice & Date Convergence
- E-mail Filtering & Anti-Spam
- Traffic Load Balance
- Unified Threat Management
- Intrusion Detection & Prevention
- Bandwidth Management

Network Security Appliance

Model	NSA 7130	NSA 7135
CPU	Dual Intel® Xeon® E5-2600 V3 / V4 Processor Family	Dual Intel® Xeon® E5-2600 V3 / V4 Processor Family
RAM	16 x DDR4 1866/ 2133 DIMM, up to 512GB	16 x DDR4 1866/ 2133 DIMM, up to 512GB
Chipset	Intel® 612	Intel® 612
LAN Chip	Intel® i350 Intel® XL710	Intel® i211
GbE	On board 16GbE Copper/ Fiber 4 x 10G SFP+ + 2 LAN Module	On board 2 GbE + 8 LAN Module
HDD	3.5" HDD x 2	3.5" HDD x 1
SSD	CF x 1 SATA DOM x 1	C-Fast x 1 SATA DOM x 1
Serial	1 at Front (RJ-45 Connector)	1 at Front (RJ-45 Connector)/ On board 2x5 2.0mm Box Header x 1
SATA	4	5
USB	2 at Front	2 at Front/ 2 at Rear
Expansion	PCIe Slot x 1, LAN Module Bay x 2	PCIe Slot x 1, LAN Module Bay x 8
LCM Module	Graphic, SIO	Graphic, SIO
Indicators	Power, HDD, Bypass LED, GPIO LED	Power status, HDD status, GPIO status, ERROR status LEDs
Power	700 Walt 1+1 CRPS Redundant Power Supply	700 Walt 1+1 CRPS Redundant Power Supply
Form Factor	2U	2U
Dimenions (mm)	430 x 450 x 88	432 x 550 x 88

Model	NSA 5150	NSA 5160/ 5160NS	NSA 5170	NSA 3150	NSA 3170	NSA 3170A	NSA 3170HA
CPU	4nd Gen. Intel® Core™ Processor Family/ Intel® Xeon® E3 Family	Intel® Xeon® Processor D-1500 Product Family	Intel® 6th Gen. XEON®/Core™/ Pentium® Processors (Skylake-S)	4nd Gen Intel® Core™/Intel® Xeon® E3 Processor Family	Intel® 6th Gen XEON®/CoreTM/ Pentium® Processors (Skylake-S)	Intel® 6th Gen XEON®/CoreTM/ Pentium® Processors (Skylake-S)	Intel® 6th Gen XEON®/CoreTM/ Pentium® Processors (Skylake-S)
RAM	4x DDR3 1333/ 1600 DIMM, up to 32GB	4 x DDR4 2133 memory DIMM support ECC/ Non-ECC memory, MAX. 128GB	4 x DDR4 2400 memory DIMM support ECC/ non-ECC memory MAX. 64GB	2x DDR3 1333/ 1600 DIMM, up to 32GB	2 x DDR4 2400 memory DIMM support ECC/ non-ECC memory, MAX. 32GB	2 x DDR4 2400 memory DIMM support ECC/ non-ECC memory, MAX. 32GB	2 x DDR4 2400 memory DIMM support ECC/ non-ECC memory, MAX. 32GB
Chipset	Intel® C226 PCH	SOC	Intel® C236	Intel® H81	Intel® H110	Intel® C236	Intel® C236
LAN Chip	Intel® i350AM4	Intel® Intel i211	Intel® i211/ i350-AM4	Intel® I211	Intel® I211	Intel® I211	Intel® I211
GbE	Max 8+8 Ports	8G LAN Copper + 2 x 10G SFP+ +LAN Module Bay x 2	1GbE LAN port +LAN Module Bay x 4	Max 8+8 Ports	Max. 6 LAN copper Ports	Max. 8 LAN copper Ports +LAN Module Bay x 1	Max. 8 LAN copper Ports +LAN Module Bay x 1
HDD	3.5" HDD Bay x 1 or 2.5" HDD x 2 (Option)	3.5" HDD Bay x 1 or 2.5" HDD x 2 (Option)	3.5" HDD Bay x 1 or 2.5" HDD x 2 (Option)	3.5" HDD Bay x 1 or 2.5" HDD x 2 (Option)	2.5" HDD x 2	2.5" HDD x 2	2.5" HDD x 2
SSD	SATA DOM x 1	SATA DOM x 1	C-Fast x 1 SATA DOM x 1	SATA DOM x 1	SATA DOM x 1	SATA DOM x 1	SATA DOM x 1
Serial	1 at Front (RJ-45 Connector)	1 at Front (RJ-45 Connector)	1 at Front (RJ-45 or microUSB Connector)	1 at Front (RJ-45 Connector)	1 at Front (RJ-45 or microUSB Connector)	1 at Front (RJ-45 or microUSB Connector)	1 at Front (RJ-45 or microUSB Connector)
SATA	3	3	4	3	2	2	2
USB	2 at Front	2 at Front	2 at Front / 2 at rear	2 at Front	2 at Front	2 at Front	2 at Front
Expansion	PCIe Slot x 1 PCIe Slot	PCIe Slot x 1 PCIe Slot	PCIe Slot x 1 (Option)	PCIe Slot x 1 (Option)	-	PCIe Slot x 1 (Option)	PCIe Slot x 1 (Option)
LCM Module	2 x 16, PIO	Graphic, SIO	Graphic, SIO	2 x 16, PIO	Graphic, SIO	Graphic, SIO	Graphic, SIO
Indicators	Power, HDD, Bypass LED, GPIO LED	Power, HDD, LAN, Bypass LED	Power, HDD, LAN, Bypass LED	Power, HDD, Bypass LED, GPIO LED	Power, HDD, LAN, Bypass LED	Power, HDD, LAN, Bypass LED	Power, HDD, LAN, Bypass LED
Power	250W ATX Power Supply	300W ATX power supply	250W ATX Power Supply, 250W Redundant Power Supply (Option)	250W ATX Power Supply	250W ATX Power Supply	250W ATX Power Supply	400W ATX Redundant Power Supply
Form Factor	1U	1U	1U	1U	1U	1U	1U
Dimenions (mm)	430 x 450 x 44	430 x 450 x 44	438 x 450 x 44	430 x 450 x 44	438 x 300 x 44	438 x 300 x 44	438 x 470 x 44

Network Security Appliance

	NSA 3640	NSA 1150	ISA 1120A	DNA 120	DNA 125B	DNA 1150	DNA1160	DNA1510	DNA1520
	Freescale QorIQ LS-series CPU LS2085/LS2088 up to 8 CPU Cores	Intel® Atom™ Processor C2358, BGA Type	Intel® ATOM® Bay Trail E3800 series Processor Family	Intel® Atom™ E3815 Processor	Intel® Atom™ E3815 Processor	Intel® Atom™ Processor C2358, BGA Type	Next Gen. Intel® Atom™ Processor C3000 Series up to 4 Cores 1.6G, BGA type	Cavium CN7010 1.2GHz single core CPU bases on cnMIPS64	Cavium Octeon-TX CN80xx/81xx Multicore ARM64 Processor
	5 x DDR4 2133/2400 UDIMM memory, MAX. 64GB (1 x ECC Slot, 4 x Non-ECC slot)	2 x DDR3 1333/ 1600 Memory, up to 16GB	1 x DDR3L 1066 SO-DIMM, up to 8GB	1 x DDR3 1600 Memory, up to 8GB	1 x DDR3 1066 Memory, up to 8GB	2 x DDR3 1333/ 1600 Memory, up to 16GB	2 x DDR4 2133 Long-DIMM ECC memory, Max. 32GB	On-board 1GByte DDR3, 4GBytes eMMC, up to 8GBytes	On-board 1GBytes 64bit DDR4 (4x128Mx16bit) and 8bit ECC.
	SOC	Intel® C2358 (SoC)	-	Intel® E3815(SoC)	Intel® E3815(SoC)	Intel® C2358 (SoC)	SOC	SOC	SOC
	AQUANTIA: AQR405-B1-EG-Y INPHI: WPCS4340C.A0-900031	Intel® i211	Intel® i210	Intel® i211	Intel® i211 Broadcom BCM5312	Intel® i210	Intel® i211-AT	-	SOC
	4 x Copper Ports 4 x Fiber Ports	6 Ports	4GbE LAN Ports	4 Ports	2 + 8 Ports	6 Ports	8 Ports	4 Ports	10GbE Combo x 1 1GbE Combo x 1 1GbE copper x 5
	-	2.5" HDD x 2	-	-	2.5" HDD x 1	2.5" HDD x 1	2.5" HDD x 1	-	-
	Micro SD Card x 1	CF Card x 1	SATA DOM x 1	SATA DOM x 1	SATA DOM x 1	MO-297	CFast Card x 1	Micro SD Card x 1	Micro SD Card x 1
	2 at Front (RJ-45 Connector)	1 at Front (RJ-45 Connector)	2 at Rear (DB-9 Connector)	1 at Front (RJ-45 Connector)	1 at Front (RJ-45 Connector)	1 at Front (RJ-45 Connector)	1 at Front (RJ-45 Connector)	1 at Front (RJ-45 Connector)	1 at Front (RJ-45 Connector)
	-	1	-	2	2	1	1	-	2
	2 at Front	2 at Front	2 at Front	2 at Rear	2 at Front	2 at Front	2 at Rear	2 at Front	1 x 3.0 at Front
	PCIex8 Slot x 1 PCIex4 Slot x 1 (Option)	PCIe Slot x 1 (Option)	-	-	Mini-PCIe Slot x 1 (Option)	PCIe Slot x 1 (Option)	Mini-PCIe Slot x 2 Antenna Holes x 3 (Option)	PCIe Slot x 1 (Option)	Daughter Boards for PCIe x 3 (Option)
	-	2 x 16, PIO	-	-	-	-	-	-	-
	Power, LAN	Power, HDD, Bypass LED, GPIO LED	Power, Cfas, BYPASS status LEDs	Power, GPIO LED	Power, GPIO LED	Power, GPIO LED	Power, HDD, LAN	Power, Alert, WAN, DMZ, LAN and USB LED	Power, LAN, USB, SD
	300W ATX Power Supply	65W ATX Power Supply	65 Walt 1+1 Redundant Power Supply	40W Power Adapter	40W Power Adapter	40W Power Adapter	40W Power Adapter	30W Power Adapter	65W (non-PoE) 150W (PoE)
	1U	1U	DIN Rail	Desktop	Desktop	Desktop	Desktop	Desktop	Desktop
	426 x 300 x 44	426 x 260 x 44	190 x 140 x 72	204 x 110 x 44	232 x 184 x 44	272 x 195 x 44	288 x 186.8 x 44	160 x 120 x 66	190 x 181 x 64

NSA 7130

Main Features

- Dual Intel® Xeon® processor E5-2600 v4/v3 product family
- Support DDR4 1866/2133 ECC & REG, up to 512GB
- On-board 16G LAN Copper/Fiber + 4 x 10G SFP+
- Two LAN modules slots
- Support two swappable 3.5" SATA/SAS HDD
- Support CRPS (1 + 1) redundant power supply
- 2U, 450mm depth chassis design

Specifications

Main Board
- NSB 7130
- Dual Intel® Xeon® processor E5-2600 v4/v3 product family
- Support 9.6 GT/s QPI Speed
- Intel® C612
- Support IPMI 2.0

Main Memory
- 16 x 284-pin DDR4 1866/2133 DIMM Sockets, up to 512GB ECC & REG SDRAM

LAN Features
- On board 16 x 1G LAN, Intel® i350, support Copper/Fibre ports
- On board 4 x 10G SFP + Intel® XL710
- Support 10/100/1000/10G link speed
- LAN Bypass: 4 pairs by pass support
- Two LAN Module slots

I/O Interface-Front
- 8 x RJ45, 8 x SFP port, 4 x SFP + ports
- Support 2 x 20 Characters LCD module, SIO interface
- Power status/HDD status/LAN status/Bypass status LEDs
- 2 x 3.5" HDD Swappable bays
- 2 x LAN Module bays
- 2 x USB 2.0 ports
- 1 x RJ45 type Console port
- 1 x Software button
- 2 x Management LAN ports

I/O Interface-Rear
- 3 x Swappable System FANs
- 1 x VGA Port
- 2 x USB 2.0 ports

Devices
- 1 x on-board CFast socket

Power Input
- 700W 1+1 CRPS Redundant Power Supply

Chassis Dimensions
- Chassis Dimension: 430mm x 450mm x 88mm
- Carton Dimension: 640mm x 640mm x 310mm

Weight
- Without packing: 19kg
- With packing: 25kg

Environment
- Operating temperatures : 0℃~40℃
- Storage temperature : -20℃~75℃
- Relative humidity : 10%~90% non-condensing

Certifications
- CE approval
- FCC Class A

Ordering Information

Barebone

♦ **NSA 7130 (P/N: 10S00713002X0)**
2U Intel® Xeon® E5-2600 v4/v3, 16 DDR4 memory slots, On board 16G LAN + 4 x 10G LAN ports, Two LAN Modules slots, CFast Socket, VGA, USB port, With LCM

♦ **NSK 5150R-F8**
PCIe 1GbE module with 8 SFP ports base on Intel® i350 chipset

♦ **NSK 5199R-F2**
PCIe 10GbE module with 2 SFP+ ports base on Intel® 82599EB chipset

♦ **NSK-CVCK**
PCIe 1GbE module with 4 Copper ports base on Intel® CAVE CREEK SKU4 DH8920CC

♦ **NSK-CTCK**
PCIe 1GbE module base on Intel® chipset Coleto Creek: DH8925CL

	P/N Controller	Interface	Type	Port Number	Bypass/Segment	Expansion Slot	Location Slot
NSK 5150R-F8	10SK0515002X0	Intel® i350	PCIe x8	8 SFP	None	None	All Slot
NSK 5199R-F2	10SK0519909X0	Intel® 82599	PCIe x8	2 SFP+	None	None	All Slot
NSK-CVCK	10SK0CVCK00X0	DH8920CC	PCIe x8	4 Copper	Dual Latch/2	None	All Slot
NSK-CTCK	10SK0CTCK03X0	DH8925CL	PCIe x8	None	None	None	All Slot

NSA 7135

Main Features

- Dual Intel® Xeon® processor E5-2600 v4/v3 product family
- Support DDR4 1866/2133 ECC & REG, up to 512GB
- Modular design supports 8 PCI-e LAN modules
- Support swappable 3.5" SATA/SAS HDD
- Support CRPS (1 + 1) redundant power supply
- Support LCD module

Specifications

Main Board
- NSB 7135
- Dual Intel® Xeon® processor E5-2600 v4/v3 product family
- Support 9.6 GT/s QPI speed
- Intel® C612
- Support IPMI 2.0 (option)
- One PCIe x8 expansion slot

Main Memory
- 16 x 284-pin DDR4 1866/2133 DIMM sockets, up to 512GB ECC & REG SDRAM

LAN Features
- Swappable LAN modules
- Support Intel® i350/Intel® XL710 Copper/Fiber ports
- Support 10/100/1000/10G link speed
- LAN Bypass: ** please see Lan module list information

I/O Interface-Front
- Support 2 x 20 characters LCD module, SIO interface
- Power status/HDD status/GPIO status/system failure status LEDs
- 1 x 3.5" HDD swappable bays
- 8 x LAN module bays
- 2 x USB 2.0 ports
- 1 x RJ45 type console port
- 1 x Reset button
- 2 x Management LAN ports

I/O Interface-Rear
- 3 x Swappable system FANs
- 1 x Power button switch
- 1 x VGA Port
- 2 x USB 2.0 ports

Devices
- 1 x on-board CFast socket

Power Input
- 700W 1+1 CRPS redundant power supply

Chassis Dimensions
- Chassis dimension: 432mm x 550mm x 88mm
- Carton dimension: 774mm x 636mm x 293mm

Weight
- Without packing: 19kg
- With packing: 25kg

Environment
- Operating temperatures : 0℃~40℃
- Storage temperature : -20℃~75℃
- Relative humidity : 10%~90% non-condensing

Certifications
- CE approval
- FCC Class A
- UL

Ordering Information

Barebone

- **NSA 7135 (P/N: 10S00713500X0)**
  2U Intel® Xeon® E5-2600 v4/v3 PCH C612, with LCM, 1 swappable 3.5" HDD tray, 3 swappable system fans, 8 LAN module (NI/NX series) bays, 700W PSU

- **NX 140F**
  Intel® XL710-BM1 10GbE module 4 fiber ports by PCIex8 interface with PKG

- **NX 142F**
  Intel® XL710-BM1 10GbE module 4 fiber ports with 2 bypass segment (multi mode) by PCIex8 interface with PKG

- **NI 140F**
  Intel® I350 module 4 fiber ports with PCIex8 interface with PKG

- **NI 180F**
  Intel® I350 module 8 fiber ports with PCIex8 interface with PKG

- **NI 142C**
  Intel® I350 module 4 copper ports with 2 bypass segment by PCIex8 interface with PKG

- **NI 180C**
  Intel® I350 module 8 copper ports by PCIex8 interface with PKG

- **NI 184C**
  Intel® I350 module 8 copper ports with 4 bypass segment by PCIex8 interface with PKG

- **NI 142F**
  Intel® I350 module 4 fiber ports with 2 bypass segment by PCIex8 interface with PKG

- **NI 121F**
  Intel® I350 module 2 fiber ports with 1 bypass segment by PCIex8 interface with PKG

Model	P/N Controller	Interface	Type	Port Number	Bypass/Segment	Expansion Slot	Location Slot
NX 140F	10S20140F01X0	XL710-BM1	PCIex8	4 SFP+	None	None	All Slot
NX 142F	10S20142F01X0	XL710-BM1	PCIex8	4 SFP+	2 bypass	None	All Slot
NX 142F-LR	10S20142F03X0	XL710-BM1	PCIex8	4 SFP+	2 bypass	None	All Slot
NX 120F	10S20120F00X0	X710-BM2	PCIex8	2 SFP+	None	None	All Slot
NI 140F	10SK000NI02X0	i350AM4x1	PCIex8	4 SFP	None	None	All Slot
NI 180F	10S10180F01X0	i350AM4x2	PCIex8	8 SFP	None	None	All Slot
NI 142C	10SK000NI03X0	i350AM4x1	PCIex8	4 Copper	2 bypass	None	All Slot
NI 180C	10S10180C01X0	i350AM4x2	PCIex8	8 Copper	None	None	All Slot
NI 184C	10S10184C01X0	i350AM4x2	PCIex8	8 Copper	4 bypass	None	All Slot
NI 142F	10S10142F01X0	i350AM4x1	PCIex8	4 SFP	2 bypass	None	All Slot
NI 121F	10S10121F01X0	i350AM2x1	PCIex8	2 SFP	1 bypass	None	All Slot
NI 140C	10S10140C01X0	i350AM4x1	PCIex8	4 Copper	None	None	All Slot

NI Series LAN Module

1GbE Copper/Fiber Port LAN Module

NI 184C　　　　NI 180C　　　　NI 142C

NI180F　　　　NI140F　　　　NI142F　　　　NI 121F

Main Features

- Intel® i350-AM4 LAN controller
- Supporting 4~8GbE RJ45 copper/SFP fiber ports
- Supporting bypass function up to 4 pairs

Specifications

LAN Features

Module Type	Controller	Bypass	Link Speed	Media Type	I/O ports
NI 184C	i350AM4x2	4	1G	Copper	8 RJ45
NI 180C	i350AM4x2	0	1G	Copper	8 RJ45
NI 142C	i350AM4x1	2	1G	Copper	4 RJ45
NI 140C	i350AM4x1	0	1G	Copper	4 RJ45
NI 180F	i350AM4x2	0	1G	Fiber	8 SFP
NI 140F	i350AM4x1	0	1G	Fiber	4 SFP
NI 142F	i350AM4x1	2	1G	Fiber	4 SFP
NI 121F	i350AM2x1	1	1G	Fiber	2 SFP

Dimensions
- PCBA dimension: 167mm x 71.3mm x 1.6mm

Environment
- Operating temperatures : 0℃~40℃
- Storage temperature : -20℃~75℃
- Relative humidity : 10%~90% non-condensing

Ordering Information

- **NI 184C (P/N: 10S10184C01X0)**
  Intel® I350 module 8 copper ports with 4 bypass segment by PCIe x8 interface with PKG

- **NI 180C (P/N: 10S10180C01X0)**
  Intel® I350 module 8 copper ports by PCIe x8 interface with PKG

- **NI 142C (P/N: 10SK000NI03X0)**
  Intel® I350 module 4 copper ports with 2 bypass segment by PCIe x8 interface with PKG

- **NI 140C (P/N: 10S10140C01X0)**
  Intel® I350 module 4 copper ports by PCIe x8 interface with PKG

- **NI 180F (P/N: 10S10180F01X0)**
  Intel®I350 module 8 fiber ports with PCIe x8 interface with PKG

- **NI 140F (P/N: 10S20140F01X0)**
  Intel® I350 module 4 fiber ports with PCIe x8 interface with PKG

- **NI 142F (P/N: 10S10142F01X0)**
  Intel® I350 module 4 fiber ports with 2 bypass segment by PCIe x8 interface with PKG

- **NI 121F (P/N: 10S10121F01X0)**
  Intel® I350 module 2 fiber ports with 1 bypass segment by PCIe x8 interface with PKG

NEXCOM

NX Series LAN Module

NX 142F   NX 142F-LR   NX140F

Main Features

- Intel® XL710 LAN controller
- Supporting up to 40GbE SFP+ fiber ports
- Supporting bypass function up to 1 pair

Specifications

LAN Features

Module Type	Controller	Bypass	Link Speed	Media Type	I/O ports
NX 142F	XL710-AM1	2	10G	multi mode Fiber	4 SFP+
NX 142F-LR	XL710-AM1	2	10G	single mode Fiber	4 SFP+
NX 140F	XL710-AM1	0	10G	Fiber	4 SFP+
NX 120F	X710-AM2	0	10G	Fiber	2 SFP+

Dimensions
- PCBA dimension: 167mm x 71.3mm x 1.6mm

Environment
- Operating temperatures : 0°C~40°C
- Storage temperature : -20°C~75°C
- Relative humidity : 10%~90% non-condensing

Ordering Information

- **NX 142F (P/N: 10S20142F01X0)**
  Intel® XL710-AM1 10GbE module 4 fiber ports with 2 bypass segment (multi mode) by PCIex8 interface with PKG

- **NX 142F-LR (P/N: 10S20142F03X0)**
  Intel® XL710-AM1 10GbE module 4 fiber ports with 2 bypass segment (single mode) by PCIex8 interface with PKG

- **NX 140F (P/N: 10S20140F01X0)**
  Intel® XL710-AM1 10GbE module 4 fiber ports by PCIex8 interface with PKG

- **NX 120F (P/N: 10S20120F00X0)**
  Intel® X710-AM2 10GbE module 2 fiber ports by PCIex8 interface with PKG

NS Series LAN Module

100GbE Switch Based LAN Module

Coming Soon

Main Features

- Intel® Ethernet multi-host controller FM10420
- Supporting up to 200GbE QSFP28 fiber ports

Specifications

LAN Features

Module Type	Controller	Bypass	Link Speed	Media Type	I/O ports
NS 120F	FM10420	0	100G	Fiber	2 QSFP

Dimensions
- PCBA dimension: 167mm x 71.3mm x 1.6mm

Environment
- Operating temperatures : 0℃~40℃
- Storage temperature : -20℃~75℃
- Relative humidity : 10%~90% non-condensing

Ordering Information

- **NS 120F (P/N: TBC)**
  Intel® FM10420 100GbE module 2 fiber ports by PCIe x8 interface with PKG

NEXCOM

NQ Series LAN Module

Coming Soon

Main Features

- Intel® XL710 LAN Controller
- Supporting up to 80GbE QSFP fiber ports

Specifications

LAN Features

Module Type	Controller	Bypass	Link Speed	Media Type	I/O ports
NQ 120F	XL710-AM2	0	40G	Fiber	2 QSFP

Dimensions
- PCBA dimension: 167mm x 71.3mm x 1.6mm

Environment
- Operating temperatures : 0℃~40℃
- Storage temperature : -20℃~75℃
- Relative humidity : 10%~90% non-condensing

Ordering Information

- **NQ 120F (P/N: TBC)**
  Intel® XL710-AM2 40GbE module 2 fiber ports by PCIe x8 interface
  with PKG

NSA 5150

Main Features

- 1U rackmount network platform
- Supports 4th generation Intel® Xeon® E3-1200 v3/Core™ processors
- Support four DDR3 1333/1600 memory, up to 32GB
- Support one PCIex8 expansion
- Internal one 3.5" HDD bay/two 2.5" HDD bay (optional)

Specifications

Main Board
- NSB 5150
- Supports 4th Generation Intel Xeon® E3-1200 v3/ Core™ Processors
- Intel® C226

Main Memory
- 4 x 240-pin DDR3 1333/1600MHz DIMM sockets, up to 32GB ECC SDRAM

LAN Features
- LAN Chip: Intel® I350
- Support 10/100/1000 link speed
- LAN Bypass: 4pairs

Expansion
- 1 x PCIex4 Slot
- 1 x Lan Module

I/O Interface-Front
- Power status/HDD status/LAN status/Bypass status LEDs
- 2 x USB 2.0 ports
- 1 x RJ45 type console port
- 8 x copper LAN ports
- 1 x LAN Module (Optional)

I/O Interface-Rear
- 1 x expansion slot
- 2 x USB 2.0 ports
- 1 x VGA port

Devices
- 1 x MO-297 socket
- 1 x internal 3.5" HDD bay/two 2.5" HDD Bay (Optional)
- 1 x SATA-DOM device space

Power Input
- 250W ATX power supply

Dimensions
- Chassis Dimension: 430mm x 450mm x 44mm
- Carton Dimension: 560mm x 620mm x 190mm

Weight
- Without Packing: 8Kg
- With Packing: 12Kg

Environment
- Operating temperatures : 0℃~40℃
- Storage temperature : -20℃~75℃
- Relative humidity : 10%~90% non-condensing

Certifications
- CE approval
- FCC Class A
- UL

Ordering Information

Barebone

- **NSA 5150(P/N: 10S00515000X0)**
  Support 4th generation Intel® Core™ processors, 4 DDR3 memory slots, 8PCIe GbE LAN ports, MO-297 socket, USB ports, VGA port, one PCIex4 expansion slot, w/o LCM

- **NSK 5350-C8**
  PCIe 1GbE module with 8 copper ports base on Intel® I350 chipset and 2 pairs dual latch bypass

- **NSK 5350-F8**
  PCIe 1GbE module with 8 SFP ports base on Intel® I350 chipset

- **NSK 5350-C4F4**
  PCIe 1GbE module with 4 copper and 4 SFP ports base on Intel® I350 chipset and 2 pairs dual latch bypass

- **NSK 5399-F2**
  PCIe 10GbE module with 2 SFP ports base on Intel® 82599EB chipset

- **NSK-CVCK**
  PCIe 1GbE module with 4 Copper ports base on Intel® CAVE CREEK SKU4 DH8920CC

- **NSK-CTCK**
  PCIe 1GbE module base on Intel® chipset Coleto Creek: DH8925CL

	P/N	Interface	Port Number	Bypass/Segment
NSK 5350-C8	10SK0535007X0	Intel® I350	8 Copper	Dual Latch/2
NSK 5350-F8	10SK0535003X0	Intel® I350	8 SFP	None
NSK 5350-C4F4	10SK0535005X0	Intel® I350	4 Copper/4 SFP	Dual Latch/2
NSK 5399-F2	10SK0539901X0	Intel® 82599	2 SFP+	None
NSK-CVCK	10SK0CVCK00X0	DH8920CC	4 Copper	Dual Latch/2
NSK-CTCK	10SK0CTCK03X0	DH8925CL	None	None

NSA 5160/5160NS

Intel® Xeon® Processor D-1500 Product Family, 1U Rackmount
with 8 PCIe GbE LAN & LAN Module

Main Features

- 1U rackmount network platform
- Intel® Xeon® processor D-1500 product family
- Support DDR4 2133 ECC & REG, up to 128GB
- On-board 8G LAN Copper + 2 x 10G SFP+
- Up to Two LAN modules support

Specifications

Main Board
- NSB 5160
- Intel® Xeon® processor D-1500 product family
- CS4227 10G PHY
- Support IPMI 2.0 (option)
- One PCIe x8 expansion slot

Main Memory
- 4 x DDR4 2133 memory DIMM support ECC/Non-ECC memory, Max 128GB

LAN Features
- Swappable LAN modules
  ** please see Lan module list information
- Support Intel® i350/Intel® XL710 Copper/Fiber ports
- Support 10/100/1000/10G link speed

I/O Interface-Front
- Power status/HDD status/LAN status/Bypass status LEDs
- 2 x USB 2.0 ports
- 1 x RJ45 type console port
- 2 x SFP + ports; 4 x SFP+ ports for NSA 5160NS
- 8 x Copper LAN ports
- 2 x LAN module

Power Input
- 300W SWITCHING power supply

I/O Interface-Rear
- 1 x Power button switch
- 1 x VGA port

Devices
- 1 x SATA-DOM device space
- 1 x 3.5" HDD(Default) or 2 x 2.5" HDD/SSD with front access (Optional)

Dimensions
- Chassis dimension: 430mm x 450mmx 44mm
- Carton dimension: 560mm x 620mm x 190mm

Weight
- Without packing: 8kg
- With packing: 12kg

Environment
- Operating temperatures: 0°C~40°C
- Storage temperature: -20°C~75°C
- Relative humidity: 10%~90% non-condensing

Certifications
- CE approval
- FCC Class A
- UL

Ordering Information

Barebone

- **NSA 5160 (P/N: 10S00516000X0)**
  1U Intel® Broadwell-DE D-1528 6C/1.9GHz with 2 x 10GbE + 8 1GbE LAN ports, 2 LAN Module (NI/NX series) bays, w/o LCM kit

- **NSA 5160NS (P/N TBD)**
  1U Intel® Broadwell-DE-NS D-1528 6C/1.9GHz with 4x10GbE + 8x1GbE LAN ports, 2 LAN Module (NI/NX series) bays, w/o LCM kit, support QAT

- **NX 140F**
  Intel® XL710-BM1 10GbE module 4 fiber ports by PCIex8 interface with PKG

- **NX 142F**
  Intel® XL710-BM1 10GbE module 4 fiber ports with 2 bypass segment (multi mode) by PCIex8 interface with PKG

- **NI 140F**
  Intel® I350 module 4 fiber ports with PCIex8 interface with PKG

- **NI 180F**
  Intel® I350 module 8 fiber ports with PCIex8 interface with PKG

- **NI 142C**
  Intel® I350 module 4 copper ports with 2 bypass segment by PCIex8 interface with PKG

- **NI 180C**
  Intel® I350 module 8 copper ports by PCIex8 interface with PKG

- **NI 184C**
  Intel® I350 module 8 copper ports with 4 bypass segment by PCIex8 interface with PKG

- **NI 142F**
  Intel® I350 module 4 fiber ports with 2 bypass segment by PCIex8 interface with PKG

- **NI 121F**
  Intel® I350 module 2 fiber ports with 1 bypass segment by PCIe x8 interface with PKG

Model	P/N Controller	Interface	Type	Port Number	Bypass/Segment	Expansion Slot	Location Slot
NX 140F	10S20140F01X0	XL710-BM1	PCIex8	4 SFP+	None	None	All Slot
NX 142F	10S20142F01X0	XL710-BM1	PCIex8	4 SFP+	2 bypass	None	All Slot
NX 142F-LR	10S20142F03X0	XL710-BM1	PCIex8	4 SFP+	2 bypass	None	All Slot
NX 120F	10S20120F00X0	X710-BM2	PCIex8	2 SFP+	None	None	All Slot
NI 140F	10SK000NI02X0	i350AM4x1	PCIex8	4 SFP	None	None	All Slot
NI 180F	10S10180F01X0	i350AM4x2	PCIex8	8 SFP	None	None	All Slot
NI 142C	10SK000NI03X0	i350AM4x1	PCIex8	4 Copper	2 bypass	None	All Slot
NI 180C	10S10180C01X0	i350AM4x2	PCIex8	8 Copper	None	None	All Slot
NI 184C	10S10184C01X0	i350AM4x2	PCIex8	8 Copper	4 bypass	None	All Slot
NI 142F	10S10142F01X0	i350AM4x1	PCIex8	4 SFP	2 bypass	None	All Slot
NI 121F	10S10121F01X0	i350AM2x1	PCIex8	2 SFP	1 bypass	None	All Slot
NI 140C	10S10140C01X0	i350AM4x1	PCIex8	4 Copper	None	None	All Slot

NSA 5170

Main Features

- 1U up workstation rack mount system
- Intel 6th XEON®/Core™/Pentium® processor
- On board 6GbE LAN ports

- Three LAN modules
- Optional CRPS redundant power
- Supporting NEXCOM IPMI

Specifications

Main Board
- NSB 5170
- Supports Intel® 5th gen XEON®/Core™ /Pentium® processors
- Intel® C236

Main Memory
- 4 x DDR4 2400 memory DIMM support ECC/non-ECC memory, max 64GB

LAN Features
- 2 x management ports (LAN chip: Intel® i211-AT)
- 4 x ethernet ports (LAN chip: Intel® i350-AM4)
- Support 10/100/1000/10G link speed

I/O Interface-Front
- Power status/HDD status/LAN status/bypass status LEDs
- 2 x USB 3.0 ports
- 1 x microUSB console port
- 1 x RJ45 type console port
- 1 x reset button
- 3 x PCIe x8 LAN module slots

I/O Interface-Rear
- 1 x rear PCIe x 8 expansion slot (optional for single power)
- 1 x VGA port
- 1 x power button switch (optional)
- 2 x USB 3.0 ports(optional)

Devices
- CFast x 1
- 3.5" HDD bay x 1or 2.5" HDD bay x 2

Power Input
- Power supply 250W (optional redundant PSU)

Dimensions
- Chassis dimension: 438 mm x 450mm x 44mm
- Carton dimension : TBC

Weight
- Without packing: TBC
- With packing: TBC

Environment
- Operating temperatures : 0℃~40℃
- Storage temperature : -20℃~75℃
- Relative humidity : 10%~90% non-condensing

Certifications
- CE approval
- FCC class A
- UL

Ordering Information

Barebone

- **NSA 5170 (P/N: TBC)**
  Supports Intel® 6th gen. XEON®/CoreTM /Pentium® processors, 4 DDR4 memory slots, 6PCIe GbE LAN ports, CFast socket, USB ports, VGA port, three PCIex8 LAN expansion slot (Front), w/o LCM

- **NX 140F**
  Intel® XL710-AM1 10GbE module 4 fiber ports by PCIex8 interface with PKG

- **NX 142F**
  Intel® XL710-AM1 10GbE module 4 fiber ports with 2 bypass segment (multi mode) by PCIex8 interface with PKG

- **NI 140F**
  Intel® I350 module 4 fiber ports with PCIex8 interface with PKG

- **NI 180F**
  Intel® I350 module 8 fiber ports with PCIex8 interface with PKG

- **NI 142C**
  Intel® I350 module 4 copper ports with 2 bypass segment by PCIex8 interface with PKG

- **NI 180C**
  Intel® I350 module 8 copper ports by PCIex8 interface with PKG

- **NI 184C**
  Intel® I350 module 8 copper ports with 4 bypass segment by PCIex8 interface with PKG

- **NI 142F**
  Intel® I350 module 4 fiber ports with 2 bypass segment by PCIex8 interface with PKG

- **NI 121F**
  Intel® I350 module 2 fiber ports with 1 bypass segment by PCIe x8 interface with PKG

Model	P/N Controller	Interface	Type	Port Number	Bypass/Segment	Expansion Slot	Location Slot
NX 140F	10S20140F01X0	XL710-BM1	PCIex8	4 SFP+	None	None	All Slot
NX 142F	10S20142F01X0	XL710-BM1	PCIex8	4 SFP+	2 bypass	None	All Slot
NX 142F-LR	10S20142F03X0	XL710-BM1	PCIex8	4 SFP+	2 bypass	None	All Slot
NX 120F	10S20120F00X0	X710-BM2	PCIex8	2 SFP+	None	None	All Slot
NI 140F	10SK000NI02X0	i350AM4x1	PCIex8	4 SFP	None	None	All Slot
NI 180F	10S10180F01X0	i350AM4x2	PCIex8	8 SFP	None	None	All Slot
NI 142C	10SK000NI03X0	i350AM4x1	PCIex8	4 Copper	2 bypass	None	All Slot
NI 180C	10S10180C01X0	i350AM4x2	PCIex8	8 Copper	None	None	All Slot
NI 184C	10S10184C01X0	i350AM4x2	PCIex8	8 Copper	4 bypass	None	All Slot
NI 142F	10S10142F01X0	i350AM4x1	PCIex8	4 SFP	2 bypass	None	All Slot
NI 121F	10S10121F01X0	i350AM2x1	PCIex8	2 SFP	1 bypass	None	All Slot
NI 140C	10S10140C01X0	i350AM4x1	PCIex8	4 Copper	None	None	All Slot

NSA 1150

Main Features

- Intel® Atom™ processor C2358, 2 Core 1.7 GHz with Quick Assist , BGA type
- DDR3 1333MHz Long-DIMM sockets, up to 16GB ECC or non-ECC SDRAM
- Support 6 PCIe GbE LAN ports
- Support 2 ports LAN module(optional)
- Internal one 2.5" HDD bay
- Two pairs dual latch bypass

Specifications

Main Board
- NSB1150
- Intel® Atom™ processor C2358, 2 Core 1.7 GHz with Quick Assist, BGA type

Main Memory
- 2 x 240-pin DDR3 1333MHz DIMM sockets, up to 16GB ECC or non-ECC SDRAM

LAN Features
- 2 x LAN chip: Intel® i211
- 1 x MARVELL PHY: 88E1543
- Support 10/100/1000 link speed
- LAN bypass: 2 pairs
- 6 x copper ports
- Support 2 ports LAN module (optional)

Expansion
- 1 x PCIex4 slot (optional)

I/O Interface-Front
- 2 x USB 2.0 ports
- 1 x RJ45 type console port
- 6 x copper ports
- 1 x reset button

I/O Interface-Rear
- 2 x USB 2.0 ports
- 1 x VGA port

Storage
- 1 x 2.5" HDD bay
- 1 x CF socket

Power Input
- 65W Power supply

Dimensions
- Chassis dimension: 430mmx 260mm x 44mm

Weight
- Without packing: 5Kg
- With packing: 7Kg

Environment
- Operating temperatures : 0℃~40℃
- Storage temperature : -20℃~75℃
- Relative humidity : 10%~90% non-condensing

Certifications
- CE/FCC/UL

Ordering Information

Barebone

- **NSA 1150 (P/N: 10S00115000X0)**
  Intel® Atom™ processor C2358/2 cores 1.7GHz ,BGA type, 2 DDR3 memory slots, 6 copper LAN ports ,CF socket , USB ports, VGA port

- **NSA 1150A (P/N: 10S00115001X0)**
  Intel® Atom™ processor C2558/4 cores 2.4GHz ,BGA type, 2 DDR3 memory slots, 6 copper LAN ports ,CF socket , USB ports, VGA port

NSA 3150

Main Features

- 1U rackmount network platform
- 4th generation Intel® Core™ processors
- Support two DDR3 1333/1600 memory, up to 16GB
- Support one PCIex8 expansion
- Internal one 3.5" HDD bay/two 2.5" HDD bay (optional)

Specifications

Main Board
- NSB3150
- Support 4th generation Intel® Core™ processors
- Intel® H81

Main Memory
- 2 x 240-pin DDR3 1333/1600MHz DIMM sockets, up to 16GB non-ECC SDRAM

LAN Features
- LAN chip: Intel® I211
- Support 10/100/1000 link speed
- LAN bypass: 4pairs

Expansion
- 1 x PCIe x8 slot
- 1 x LAN module (Optional Support)

I/O Interface-Front
- Power status/HDD status/LAN status/Bypass status LEDs
- 2 x USB 2.0 ports
- 1 x RJ45 type console port
- 8 x copper LAN ports
- 1 x LAN module

I/O Interface-Rear
- 1 x expansion slot (optional)
- 2 x USB 2.0 ports
- 1 x VGA port

Devices
- 1 x internal 3.5" HDD bay/two 2.5" HDD bay (optional)
- 1 x SATA-DOM device space

Power Input
- 250W ATX power supply

Dimensions
- Chassis dimension: 430mm x 400mm x 44mm
- Carton dimension: 698mm x 543mm x 220mm

Weight
- Without packing: 8Kg
- With packing: 12Kg

Environment
- Operating temperatures : 0℃~40℃
- Storage temperature : -20℃~75℃
- Relative humidity : 10%~90% non-condensing

Certifications
- CE approval
- FCC Class A
- UL

Ordering Information

Barebone

- **NSA 3150 (P/N : 10S00315000X0)**
  Support 4th generation Intel® Core™ processors, 2 DDR3 memory slots, 8PCIe GbE LAN ports, USB ports, VGA port, w/o LCM

NSA 3170/3170A

Main Features

- 1U rackmount network platform
- Supports Intel® 6th gen. Xeon®/Core™/Pentium® processors
- Support DDR4 2400 ECC & REG, up to 32GB
- Support one PCIe x8 expansion
- Internal two 2.5" HDD bay
- Single 250 watt PSU

Specifications

Main Board
- NSB 3170
- Supports Intel® 6th gen. Xeon®/Core™/Pentium® processors (codenamed Skylake-S)
- Intel® H110/Intel® C236 chipset

Main Memory
- 2 x DDR4 2400 memory DIMM, support ECC/non-ECC memory, Max 32GB

LAN Features
- LAN Chip: Intel® i211-AT
- Support 10/100/1000/10G link speed
- LAN Bypass: 2 pairs

I/O Interface-Front
- Power status/HDD status/LAN status/bypass status LEDs
- 2 x USB 3.0 ports
- 1 x micro USB console port
- 1 x RJ45 type console port
- Up to 8 x copper LAN ports
- 1 x Reset button
- 1 x 8GbE Copper/Fiber Expansion LAN Module (by project)

I/O Interface-Rear
- 1 x Rear PCIe x 8 expansion slot (by project)
- 1 x VGA Port
- 1 x Power button switch
- 2 x USB 2.0 ports (optional)

Devices
- 1 x SATA DOM (power pin reserved)
- 2 x 2.5" HDD bay

Power Input
- ATX power supply 250W

Chassis Dimensions
- Chassis dimension: 438mm x 300mm x 44mm
- Carton dimension : 544mm x 506mm x 205mm

Weight
- Without packing: 5.2Kg
- With packing: 8Kg

Environment
- Operating temperatures: 0°C~40°C
- Storage temperature: -20°C~75°C
- Relative humidity: 10%~90% non-condensing

Certifications
- CE approval
- FCC Class A
- UL

Ordering Information

Barebone

- **NSA 3170 (P/N: 10S00317000X0)**

  Intel® H110 PCH, supporting Intel® 6th gen. Core™/Pentium® processors, 2 DDR4 memory slots, 6GbE copper LAN ports, SATA DOM, USB ports, VGA port, w/ LCM

- **NSA 3170A (P/N: 10S00317001X0)**

  Intel® C236 PCH, supporting Intel® 6th gen. Xeon®/Core™/Pentium® processors, 2 DDR4 memory slots, 8GbE copper LAN ports, SATA DOM, USB ports, VGA port, one PCIex8 LAN expansion slot (front), w/ LCM

- **NX 140F**

  Intel® XL710-BM1 10GbE module 4 fiber ports by PCIex8 interface with PKG

- **NX 142F**

  Intel® XL710-BM1 10GbE module 4 fiber ports with 2 bypass segment (multi mode) by PCIex8 interface with PKG

- **NI 140F**

  Intel® I350 module 4 fiber ports with PCIex8 interface with PKG

- **NI 180F**

  Intel® I350 module 8 fiber ports with PCIex8 interface with PKG

- **NI 142C**

  Intel® I350 module 4 copper ports with 2 bypass segment by PCIex8 interface with PKG

- **NI 180C**

  Intel® I350 module 8 copper ports by PCIex8 interface with PKG

- **NI 184C**

  Intel® I350 module 8 copper ports with 4 bypass segment by PCIex8 interface with PKG

- **NI 142F**

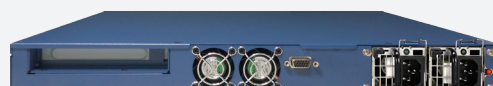 Intel® I350 module 4 fiber ports with 2 bypass segment by PCIex8 interface with PKG

- **NI 121F**

  Intel® I350 module 2 fiber ports with 1 bypass segment by PCIex8 interface with PKG

Model	P/N Controller	Interface	Type	Port Number	Bypass/Segment	Expansion Slot	Location Slot
NX 140F	10S20140F01X0	XL710-BM1	PCIex8	4 SFP+	None	None	All Slot
NX 142F	10S20142F01X0	XL710-BM1	PCIex8	4 SFP+	2 bypass	None	All Slot
NX 142F-LR	10S20142F03X0	XL710-BM1	PCIex8	4 SFP+	2 bypass	None	All Slot
NX 120F	10S20120F00X0	X710-BM2	PCIex8	2 SFP+	None	None	All Slot
NI 140F	10SK000NI02X0	i350AM4x1	PCIex8	4 SFP	None	None	All Slot
NI 180F	10S10180F01X0	i350AM4x2	PCIex8	8 SFP	None	None	All Slot
NI 142C	10SK000NI03X0	i350AM4x1	PCIex8	4 Copper	2 bypass	None	All Slot
NI 180C	10S10180C01X0	i350AM4x2	PCIex8	8 Copper	None	None	All Slot
NI 184C	10S10184C01X0	i350AM4x2	PCIex8	8 Copper	4 bypass	None	All Slot
NI 142F	10S10142F01X0	i350AM4x1	PCIex8	4 SFP	2 bypass	None	All Slot
NI 121F	10S10121F01X0	i350AM2x1	PCIex8	2 SFP	1 bypass	None	All Slot
NI 140C	10S10140C01X0	i350AM4x1	PCIex8	4 Copper	None	None	All Slot

NSA 3170HA

Main Features

- 1U rackmount network platform
- Supports Intel® 6th gen. Xeon®/Core™/Pentium® processors
- Support DDR4 2400 ECC & REG, up to 32GB

- Support one PCIe x8 expansion
- Internal two 2.5" HDD bay
- Redundant 400 watt PSU

Specifications

Main Board
- NSB 3170HA
- Supports Intel® 6th gen. Xeon®/Core™/Pentium® processors (codenamed Skylake-S)
- Intel® C236 chipset

Main Memory
- 2 x DDR4 2400 memory DIMM, support ECC/non-ECC memory, Max 32GB

LAN Features
- LAN Chip: Intel® i211-AT
- Support 10/100/1000/10G link speed
- LAN Bypass: 2 pairs

I/O Interface-Front
- Power status/HDD status/LAN status/bypass status LEDs
- 2 x USB 3.0 ports
- 1 x micro USB console port
- 1 x RJ45 type console port
- 8 x copper LAN ports
- 1 x Reset button

I/O Interface-Rear
- 1 x Rear PCIe x 16 expansion slot (optional)

- 1 x VGA Port
- 1 x Power button switch

Devices
- 1 x SATA DOM (power pin reserved)
- 2 x 2.5" HDD bay

Power Input
- ATX power supply 400W

Chassis Dimensions
- Chassis dimension: 438mm x 470mm x 44mm
- Carton dimension : TBC

Weight
- Without packing: TBC
- With packing: TBC

Environment
- Operating temperatures: 0°C~40°C
- Storage temperature: -20°C~75°C
- Relative humidity: 10%~90% non-condensing

Certifications
- CE approval
- FCC Class A
- UL

NEXCOM

Ordering Information

Barebone

- **NSA 3170HA (P/N: TBD)**
  Intel® C236 PCH, supporting Intel® 6th gen. Core™/Pentium processors, 2 DDR4 memory slots, 8GbE copper LAN ports, SATA DOM, USB ports, VGA ports, one PCIex16 LAN expansion slot (rear), Redundant power supply, w/LCM.

- **NX 140F**
  Intel® XL710-BM1 10GbE module 4 fiber ports by PCIex8 interface with PKG

- **NX 142F**
  Intel® XL710-BM1 10GbE module 4 fiber ports with 2 bypass segment (multi mode) by PCIex8 interface with PKG

- **NI 140F**
  Intel® I350 module 4 fiber ports with PCIex8 interface with PKG

- **NI 180F**
  Intel® I350 module 8 fiber ports with PCIex8 interface with PKG

- **NI 142C**
  Intel® I350 module 4 copper ports with 2 bypass segment by PCIex8 interface with PKG

- **NI 180C**
  Intel® I350 module 8 copper ports by PCIex8 interface with PKG

- **NI 184C**
  Intel® I350 module 8 copper ports with 4 bypass segment by PCIex8 interface with PKG

- **NI 142F**
  Intel® I350 module 4 fiber ports with 2 bypass segment by PCIex8 interface with PKG

- **NI 121F**
  Intel® I350 module 2 fiber ports with 1 bypass segment by PCIex8 interface with PKG

Model	P/N Controller	Interface	Type	Port Number	Bypass/Segment	Expansion Slot	Location Slot
NX 140F	10S20140F01X0	XL710-BM1	PCIex8	4 SFP+	None	None	All Slot
NX 142F	10S20142F01X0	XL710-BM1	PCIex8	4 SFP+	2 bypass	None	All Slot
NX 142F-LR	10S20142F03X0	XL710-BM1	PCIex8	4 SFP+	2 bypass	None	All Slot
NX 120F	10S20120F00X0	X710-BM2	PCIex8	2 SFP+	None	None	All Slot
NI 140F	10SK000NI02X0	i350AM4x1	PCIex8	4 SFP	None	None	All Slot
NI 180F	10S10180F01X0	i350AM4x2	PCIex8	8 SFP	None	None	All Slot
NI 142C	10SK000NI03X0	i350AM4x1	PCIex8	4 Copper	2 bypass	None	All Slot
NI 180C	10S10180C01X0	i350AM4x2	PCIex8	8 Copper	None	None	All Slot
NI 184C	10S10184C01X0	i350AM4x2	PCIex8	8 Copper	4 bypass	None	All Slot
NI 142F	10S10142F01X0	i350AM4x1	PCIex8	4 SFP	2 bypass	None	All Slot
NI 121F	10S10121F01X0	i350AM2x1	PCIex8	2 SFP	1 bypass	None	All Slot
NI 140C	10S10140C01X0	i350AM4x1	PCIex8	4 Copper	None	None	All Slot

NSA 3640

Main Features

- Freescale QorIQ LS2085/LS2088 communication processor, up to 2.0GHz
- DDR4 2133/2400 UDIMM memory (1 x ECC slot, 4 x Non-ECC slot)
- 4 x port 1/10 GbE Copper, 4 x port SFP+
- Onboard 1GB NAND flash, 128MB NOR flash
- Removable SD card
- USB 3.0 port, 1 x Type-A, 1 x Micro-B connector

Specifications

Main Board
- NSB 3640
- Freescale QorIQ SOC Process LS2085/LS2088 ,BGA type

Main Memory
- DDR4 2133/2400 Long-DIMM memory x 5 (one for ECC), Max. 64GB

LAN Features
- 1 x 10GE RJ45: AQUANTIA: AQR405-B1-EG-Y
- 1 x 10GE SFP+ : INPHI: WPCS4340C.A0-900031
- Support 100/1000/10G link speed
- 4 x Copper ports
- 4 x Fiber ports

Expansion
- 1 x PCIex8 slot
- 1 x PCIex4 slot (no riser card)

I/O Interface-Front
- Power status/LAN status
- 1 x SD Card
- 1 x USB 3.0 type A, 1 x USB 3.0 Micro-B
- 2 x RJ45 type console port

I/O Interface-Rear
- 1 x Expansion slot for PCIex8

Devices
- 1 x Internal 2.5" HDD bay
- 1 x SD socket

Power Input
- 300W ATX power supply

Dimensions
- Chassis dimension: 426 mm x 300mm x 44mm
- Carton dimension : 582mm x 512mm x 169mm

Weight
- Without packing: 8kg
- With packing: 12kg

Certifications
- CE approval
- FCC Class A

Ordering Information

Barebone

- **NSA 3640A (P/N: 10S00364001X0)**
  Freescale QorIQ architecture CPU LS2085/LS2088, up to 2.0GHz, On Board 128MB NOR Flash, 1G NAND Flash, 5 x DDR4 DIMM Sockets, 4 x 10G RJ45, and 4 x10G SFP+ LAN ports

DNA 120

Main Features

- Intel® Atom™ processor E3815, BGA type
- DDR3L 1600 SO-DIMM memory, Max. 8GB
- Support 4 PCIe GbE LAN ports
- Support one mini-PCIex1 slot (optional)

Specifications

Main Board
- DNB120
- Intel® Atom™ processor E3815, BGA type

Memory
- DDR3L 1600 SO-DIMM memory, Max. 8GB

LAN Features
- 4 x LAN Chip: Intel® i211-AT
- Support 10/100/1000 link speed
- 4 x copper ports

Expansion
- 1 x mini-PCIe slot (Optional)

I/O Interface-Front
- Power status/HDD status/Power Button

I/O Interface-Rear
- 2 x USB 2.0 ports
- 1 x RJ45 type console port
- 4 x Copper ports
- 1 x VGA port
- 1 x DC power input
- 1 x Reset Button

Devices
- 1 x Internal SATA DOM

Power Input
- 40W power Adapter

Dimensions
- Chassis Dimension: 202.4mm x 110.1mm x 44mm
- Carton Dimension: 229mm x 197mm x 125mm

Weight
- Without Packing: 2Kg
- With Packing: 4Kg

Environment
- Operating temperatures : 0℃~40℃
- Storage temperature : -20℃~75℃
- Relative humidity : 10%~90% non-condensing

Standards/Certifications
- CE approval
- FCC Class B
- UL

Ordering Information

Barebone

- **DNA 120 (P/N: 10L00012000X0)**
  4th generation Intel® Atom™ processor E3815 single core, BGA type, 1 DDR3 SO-DIMM slots, 4 Copper LAN ports, SATA DOM socket, USB ports, VGA port

DNA 125B

Intel® Atom™ Processor E3800 Product Family BGA Type, with 2 Giga LAN and 8 Port Switch

Main Features

- Intel® Atom™ processor E3815, BGA type
- DDR3L- SO-DIMM memory, Max. 8GB
- Support 2 Giga LAN ports
- Support 8 GbE switch ports
- Support one Mini-PCIe slot

Specifications

Main Board
- DNB125B
- Intel® Atom™ processor E3815, BGA type

Memory
- DDR3L 1066 SO-DIMM memory, Max. 8GB

LAN Features
- 2 x LAN Chip: Intel® i211-AT
- 8 x Broadcom 53128 Switch ports
- Support 10/100/1000 link speed

Expansion
- 1 x mini-PCIe slot

I/O Interface-Front
- Power status/HDD status/Power Button

I/O Interface-Rear
- 2 x USB 2.0 ports
- 1 x RJ45 type console port
- 2 x Giga LAN ports
- 8 x switch ports
- 1 x VGA port
- 1 x DC power input
- 1 x Reset Button

Devices
- 1 x Internal SATA DOM
- 1 x 2.5" HDD

Power Input
- 40W power Adapter

Dimensions
- Chassis Dimension: 232mm x 184mm x 44mm
- Carton Dimension: 303mm x 435mm x 176mm

Weight
- Without Packing: 2Kg
- With Packing: 4Kg

Environment
- Operating temperatures : 0℃~40℃
- Storage temperature : -20℃~75℃
- Relative humidity : 10%~90% non-condensing

Standards/Certifications
- CE approval
- FCC Class B
- UL

Ordering Information

Barebone

- **DNA 125B (P/N: 10L00012501X0)**
  Intel® Bay Trail SoC E3815 single core ,BGA type, 1 DDR3 SO-DIMM slots, 2 Giga LAN ports ,SATA DOM socket , USB ports, VGA port, Mini PCIe slot

NEXCOM

DNA 1150

Main Features

- Intel® Atom™ processor C2358, 2 Cores/1.7GHz with Quick Assist , BGA type
- DDR3 1333MHz Long-DIMM sockets, up to 16GB ECC or non-ECC SDRAM
- Support 6 PCIe GbE LAN ports
- Support one mini-PCIex1 slot
- Internal one 2.5" HDD bay
- Two pairs dual latch bypass

Specifications

Main Board
- DNB 1150
- Intel® Atom™ processor C2358, BGA type
- 2 Cores/1.7GHz

Main Memory
- 2 x 240-pin DDR3 1333MHz DIMM sockets, up to 16GB ECC or non-ECC SDRAM

LAN Features
- 2 x LAN Chip: Intel® i210
- MARVELLL PHY 88E1543
- Support 10/100/1000 link speed
- LAN Bypass: 2 pairs
- 6 x copper ports

Expansion
- 1 x Mini-PCIe slot

I/O Interface-Front
- Power status/HDD status/LAN status

I/O Interface-Rear
- 2 x USB 2.0 ports
- 1 x RJ45 type console port
- 6 x copper ports
- 1 x VGA port
- 1 x Power Button

Devices
- 1 x On-board MO-297 socket
- 1 x Internal 2.5" HDD Bay

Power Input
- 40W power Adapter

Dimensions
- Chassis Dimension: 272mm x 194.7mm x 44mm
- Carton Dimension: 420mm x 290mm x 147mm

Weight
- Without Packing: 2.5Kg
- With Packing: 5Kg

Environment
- Operating temperatures : 0℃~40℃
- Storage temperature : -20℃~75℃
- Relative humidity : 10%~90% non-condensing

Certifications
- CE
- FCC
- UL

Ordering Information

Barebone

- **DNA 1150 (P/N: 10L00115000X0)**
  Intel® Atom™ Processor C2358, 2 Cores 1.7GHz, BGA type, 2 DDR3 memory slots, 6 copper LAN ports ,MO-297 socket , USB ports, VGA port, mini-PCIe slot

DNA 1160

Next Gen. Intel® Atom™ Processor C3000 Series up to 4 Cores 1.6G, BGA type, with 8 GbE Copper LAN Ports

Main Features

- Next gen. Intel® Atom™ processor C3000 series supporting 2 & 4 cores, BGA type
- 2 x DDR4-2133 Long-DIMM ECC memory, Max. 32GB
- Support 8 GbE LAN ports
- Internal one 2.5" HDD Bay, one CFast socket
- USB 3.0 connector
- Backup power supporting (by project)

Specifications

Main Board
- DNB 1160
- Next gen. Intel® Atom™ processor C3000 Series, BGA type

Main Memory
- 2 x DDR4-2133 Long-DIMM ECC memory, Max. 32GB

LAN Features
- 4 x LAN controller: Intel® i211-AT
- 4 x MARVELL PHY: 88E1543
- Support 10/100/1000 link speed
- 8 x copper ports

Expansion
- 2 x mini-PCIe slot (One with SIM Sokcet for 3G/4G Module)
- 3 x antenna holes

I/O Interface-Front
- Power status/HDD status/LAN status

I/O Interface-Rear
- 1 x USB 2.0 + 1 x USB 3.0
- 1 x RJ45 type console port
- 8 x Copper ports
- 1 x Power button
- 1 x VGA port

Devices
- 1 x on-board CFast socket
- 1 x Internal 2.5" HDD bay

Power Input
- 40W Power Adaptor

Dimensions
- Chassis Dimension: 288mm x 186.8mm x 44mm
- Carton Dimension: 347mm x 254mm x 142mm
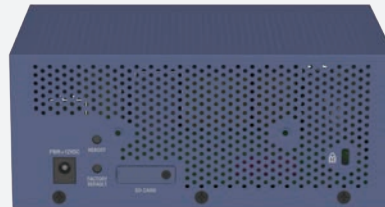
Weight
- Without Packing: 2.5kg
- With Packing: 5kg

Certifications
- CE approval
- FCC Class B
- UL

Ordering Information

Barebone

- **DNA 1160 (P/N: 10L00116000X0)**
  Intel® Devnerton SoC Atom™ C3000 series, BGA type,
  2 x DDR4 memory slots, 8 Copper LAN ports, CFast socket,
  1 x USB 2.0, 1 x USB 3.0, mini-PCIe slot

NEXCOM

DNA 1510

Main Features

- Cavium CN7010 1.2GHz single core CPU bases on cnMIPS64
- On-board 1GByte DDR3 (4x128Mx16bit). Upgradable to be up to 2GBytes
- On-board 4GBytes eMMC. Upgradable to be up to 8GBytes
- Flexible design on WAN and DMZ ports by combo Copper/Fiber connector

- Dual power DC input selections by Industrial Phoenix 3-pin type (12V-72V DC) or standard coaxial power type (12V DC)
- Compact and Fanless mechanical design
- Supports multiple mounting type: din rail, rack mount shelf, desktop and wall mount

Product Overview

DNA 1510 is a highly-integrated design for industrial firewall application. The CPU is MIPS64® processor with single-core cnMIPS™ III at 1.2GHz which provides highest performance capability for packet processing and network security. WAN and DMZ provides flexible design which support Copper/Fiber combo connector. Compact and flexible design is easier to fulfill different requirements and applications.

Specifications

CPU
- Cavium CN7010 cnMIPS™ III 1.2GHz single core CPU bases with 78KB I-Cache and 32KB D-Cache
- Integrate 512KB four-way set-associative L2 cache
- Integrate hardware cryptographic and CRC acceleration
- Integrate hardware packet-processing acceleration

Memory
- On-board 1GByte DDR3 (4x128Mx16bit). Upgradable to be up to 2GBytes
- On-board 4GBytes eMMC. Upgradable to be up to 8GBytes

Ethernet
- One GbE combo WAN (RJ45+SFP) and one GbE combo DMZ (RJ45+SFP) via Marvell 88E1322
- Four GbE copper LAN (RJ45) via Marvell 88E6350R

Other I/Os
- One USB 3.0 host
- One USB 2.0 host
- One Micro SD card reader with protective cover
- One RJ45 console supports to connect with serial modem for remote management

Indicators and Buttons
- LEDs for power, Alert, WAN, DMZ, LAN and USB
- One factory default button
- One system reboot button

HW Monitor
- Support HW monitor features via two thermocouples and six voltages Sensors

Power Input (either one)
- External wall-mounted AC to DC power adapter
  - Power input: 100V~240VAC
  - Power output: 12V/24W
- DC to DC power input: DC12V ~72V

Physical Characteristics
- Housing: metal
- Dimensions: 160mm x 120mm x 66mm
- Weight: 1.8kg
- Installation: tabletop, rack mount, din rail, wall mount

Environment
- Operation temperature: -40°C~75°C
- Storage temperature: -40°C~85°C
- Humidity: 5 to 90% (non-condensing)

Certifications
- FCC
- CE/CB

Ordering Information

- **DNA 1510 (P/N: 10L00151000X0)**
  Fanless industrial grade desktop Cavium processor CN7010 1C/1.2GHz, 1GB DDR3, 4GB eMMC, with 2 GbE combo WAN (RJ45+SFP) and 4 GbE switch LAN ports, operation temperature: -40°C~75°C

DNA 1520

Main Features

- Cavium Octeon-TX CN80/81xx CPU based on ARMv8.1 64bit architecture
- On-board 1GBytes SLC NAND flash. Upgradable to be up to 2GBytes
- On-board 1GBytes 64bit DDR4 (4x128Mx16bit) and 8bit ECC Supports 36/72bit memory configurations with ECC. Upgradable to be up to 2GBytes
- Another PCB version to support SO-DIMM for 4GBytes DDR4 and above
- Support 802.3bz 10G standard which can be backward compatible with 1/2.5/5Gbps
- Support 1-pair bypass feature

- Flexible daughter boards design to support different features like Wi-Fi, 3G/LTE, PoE (2-port 802.3at or 4-port 802.3af), Industrial management and Storage
- Dual power DC input selections by Industrial Phoenix 2-pin type (9V-36V DC) or standard coaxial power type with screw (12V DC)
- Fanless mechanical design
- Supports multiple mounting types: Din-Rail, rack mount shelf, desktop and wall mount

Product Overview

DNA 1520 adopts Cavium latest ARMv8.1 64-bit SOC to provide a high performance platform. It can support Cavium Octeon-TX either CN80xx or CN81xx series CPU. Daughter board design is flexible to support different features, like Wi-Fi, 3G/LTE, PoE, Industrial Management and Storage. It is a universal platform which can be for below applications.

- SDN Control Plane
- Virtualized GW
- Virtualized CPE
- NAS
- Firewall/IPS/AntiVirus
- VPN
- SMB Routers
- IoT GW
- Industrial Management
- Vehicle applications

Specifications

CPU
- Cavium Octeon-TX CN80xx/81xx Multicore ARM64 Processor
- ARMv8.1 64bit architecture
- Hardware floating point, SIMD and MMU support
- Hardware support for Virtualization

Memory
- On-board 128MB SPI Flash for system boot-up
- On-board 1GBytes SLC NAND Flash. Upgradable to be up to 2GBytes
- On-board 1GBytes 64bit DDR4 (4x128Mx16bit) and 8bit ECC. Supports 36/72bit memory configurations with ECC. Upgradable to be up to 2GBytes
- Another PCB version to support SO-DIMM for 4GBytes DDR4 and above

Ethernet
- One 1Gb copper WAN (RJ45)
- One 1Gb combo DMZ (RJ45+SFP plus)
- One 10Gb combo WAN/DMZ/LAN (RJ45+SFP plus)
- Four 1Gb copper LAN (RJ45)
- Support bypass feature between WAN and LAN1

Other I/Os
- One USB 3.0 Host
- One Micro SD Card reader with protective cover
- One RJ45 console supports serial modem

Indicators and Buttons
- LEDs for Power, Alarm, WAN, DMZ, LAN(1~4), 10G, USB, SD, Internet, PoE (1~4), MAX (PoE), 2.4GHz (Wi-Fi), 5GHz (Wi-Fi) and LTE
- One reset to default button, one system reboot button

Optional Daughter Boards
- Two Wi-Fi and one 3G/LTE:
  - Two PCIe slots for two half/full-size WiFi PCIe cards via PCIe signal
  - One PCIe slot for 3G/LTE module via USB signal
- PoE
  - Supports 4-port PoE for up to 2-port 802.3at or 4-port 802.3af

- Industrial management
  - RS232/485/422
  - Digital input/output
- Storage
  - Share the same board-to-board interface as WiFi/LTE board. Only support either one at the same time
  - Supports two SATA interfaces for two SATA SSD/HDDs

HW Monitor
- Support HW monitor features via two thermocouples and ten voltages Sensors

Power Input
- External AC to DC desktop power adapter
  - Power input: 100V ~240VAC
  - Power output: DC12V/65W (non-PoE). DC12V/150W (PoE)
- 2-pin DC to DC power input
  - DC9V~36V

Dimension
- 190 x 181.6 x 64mm

Weight
- 2.5kg

Environment
- Operation temperature: -20°C~70°C
- Storage temperature: -40°C~85°C
- Humidity: 5% to 95% maximum (Non-condensing)

Certifications
- FCC class B
- UL
- CE/CB

Ordering Information

- **DNA 1520 (P/N:10L00152000X0)**

  Cavium Octeon-TX CN8120 2-core 1.5GHz main system

ISA 1120A

Main Features

- Intel® Atom™ processor E3815, BGA type
- DDR3-1066 SO-DIMM memory, Max. 8GB
- Support 4 PCIe GbE LAN ports

- Support -40℃~70℃ extended operating temperature
- Redundant DC Input, support 9~30V DC input

Specifications

Main Board
- ISA 1120A
- Intel® Atom™ processor E3815, BGA type

Main Memory
- DDR3 1066 SO-DIMM memory, Max. 8GB

LAN Features
- 4 x LAN Chip: Intel® i210-IT
- Support 10/100/1000 link speed
- 4 x copper ports

I/O Interface-Front
- 2 x USB2.0 port
- 4 x RJ45 port (bypass function 1 pair)
- 1 x VGA (internal debug)
- 2 x DC input 1 x 2-pin
- 1 x Reset button
- 1 x GPIO button
- Power status/bypass status/CFast status

I/O Interface-Rear
- 2 x Console Port (support RS232/RS422/RS485)
- 1 x CFast

Devices
- None

Power Input
- Redundant DC input power adapter (65W), support +9V to +30VDC input

Chassis Dimensions
- Chassis dimension: 190 mm x 140 mm x 70 mm
- Carton dimension: 301 mm x 268 mm x 250 mm

Weight
- Without packing: 2.2 Kg
- With packing: 3.8 Kg

Environment
- Operating temperature : -40℃~70℃
- Storage temperature : -40℃~85℃
- Relative humidity : 5%~95% non-condensing

Certifications
- CE approval
- FCC Class A
- UL

Ordering Information

- **ISA 1120A (P/N: 10Q00112001X0)**
  Fanless industrial grade desktop Intel® Atom™ processor E3815 1C/1.46GHz with 4 Giga LAN ports with 1pairs bypass, operation temperature: -40℃~70℃

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