

A Passion  
for Innovation



# 2018 Network and Communication Solutions

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

# NCS

## Network and Communication Solutions

Network Application Appliance

Network Security Appliance

Telecom Companies' Preference for NFV Drives Enterprise

vCPE Market Forward



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#### Industrial Grade Platform

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# About NEXCOM

## Reliable Partner for the Intelligent Solutions

Founded in 1992 and headquartered in Taipei, Taiwan, NEXCOM is committed to being your trustworthy partner in building the intelligent solutions. 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 IoT Automation Solutions (IAS), Intelligent Digital Security (IDS), Medical & Healthcare Informatics (MHI), Intelligent Platform & Services (IPS), Mobile Computing Solutions (MCS), and Network and Communication

Solutions (NCS). 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
MHI	Medical & Healthcare 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 solutions, 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

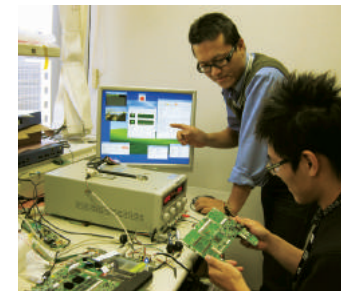
Aim to better support the activities of all its partners, NEXCOM divides its sales force into six dedicated business units to target rapidly expanding vertical markets. This enhances each business unit concentrating on strategic channel accounts and on repeat order business. Moreover, NEXCOM's business 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 Industry 4.0 solutions.

## 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

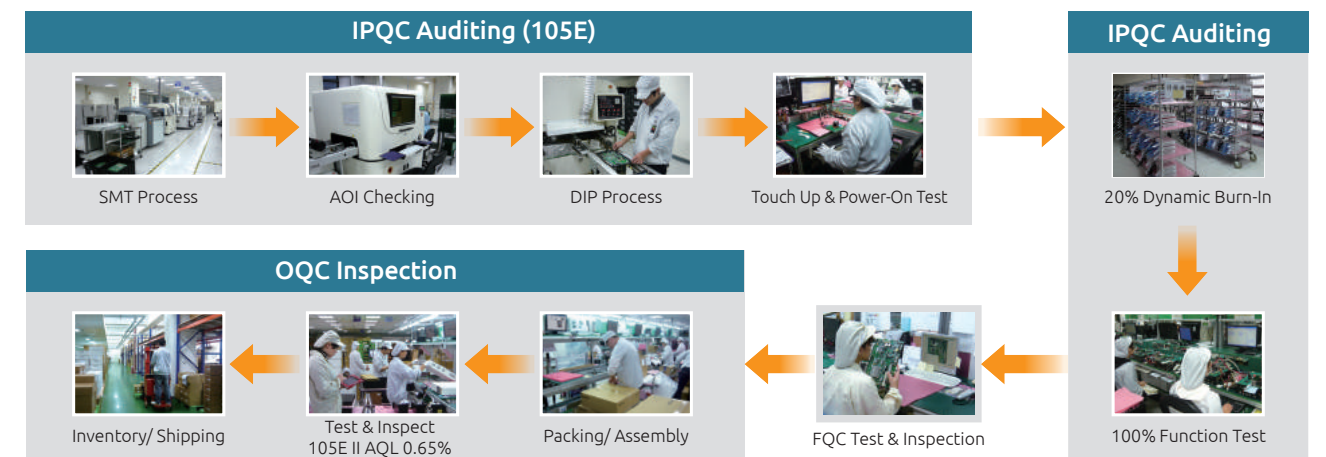
The manufacturing of delicate products requires a high-level technology, craftsmanship, standards and time-to-market efficiency. Over years continual investment in advanced manufacturing equipment and systemic training programs has enabled NEXCOM to obtain optimal manufacturing efficiency.

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.



### 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.



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.



## 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 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.

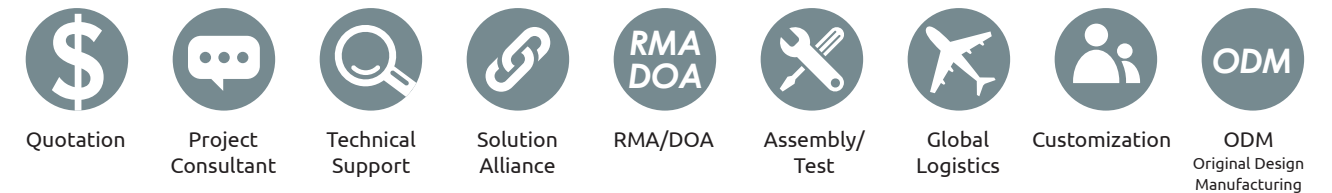


## Service Pledge and Connection

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



## Your Truly Global Information Resource

[www.nexcom.com](http://www.nexcom.com)

[www.nexcom.com](http://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

[m.nexcom.com](http://m.nexcom.com)

At the end of the year 2011, NEXCOM launches its mobile site, [m.nexcom.com](http://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](http://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.

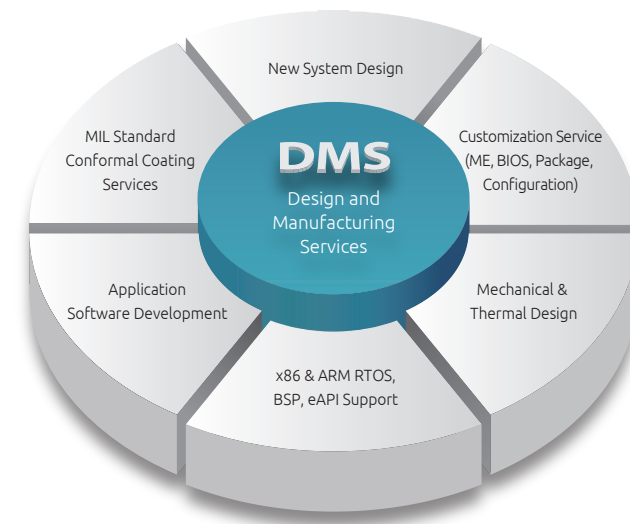
## Scope of DMS Work

### 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	Customized 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 Harsh 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.

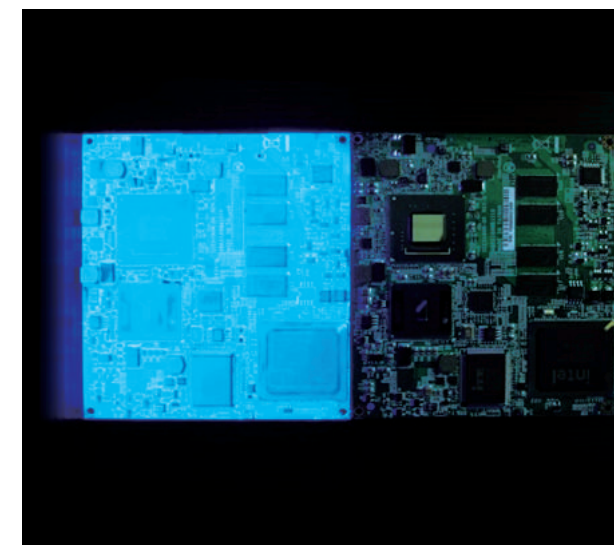
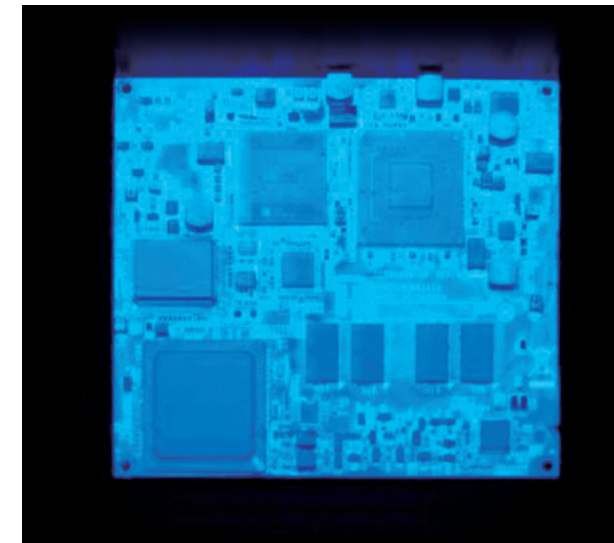
### Smart Masking Technology

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

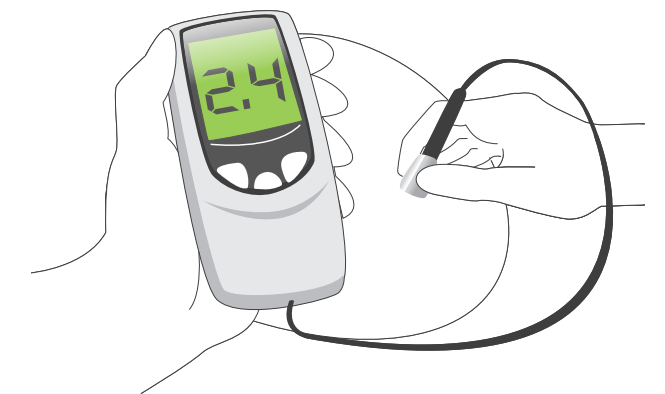
NEXCOM's deflux cleaning system is also equipped with an onboard cleanliness testing system which allows a user to program a desired cleanliness level. This assures that cleanliness levels will be consistent batch after batch.

### 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.

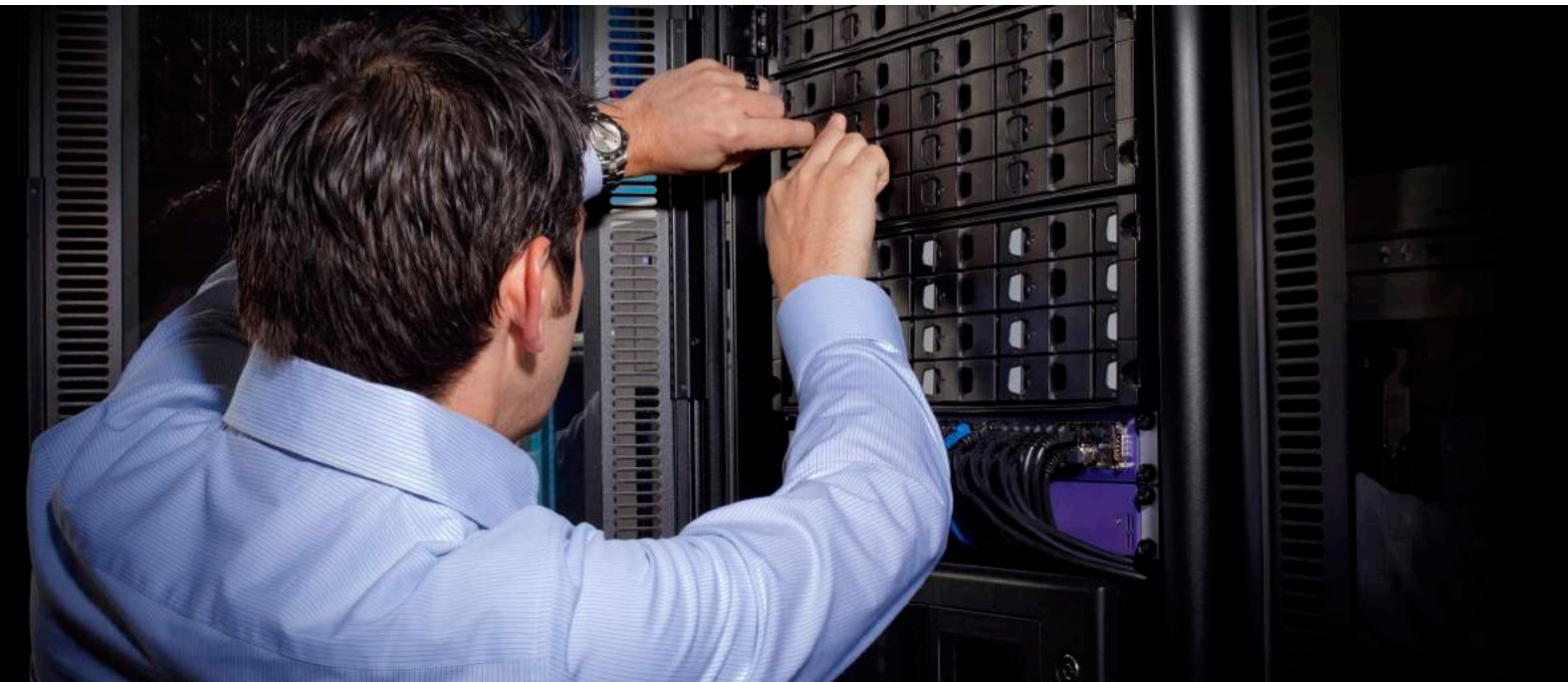


NEXCOM follows IPC-A 610, IPC-CC-830, IPC J-STD-001E regulations to generate consistent, adjustable coating thickness and cleanliness.



# Network Application Appliances

# Network Security Appliance



## The Diversify Network Application Solutions

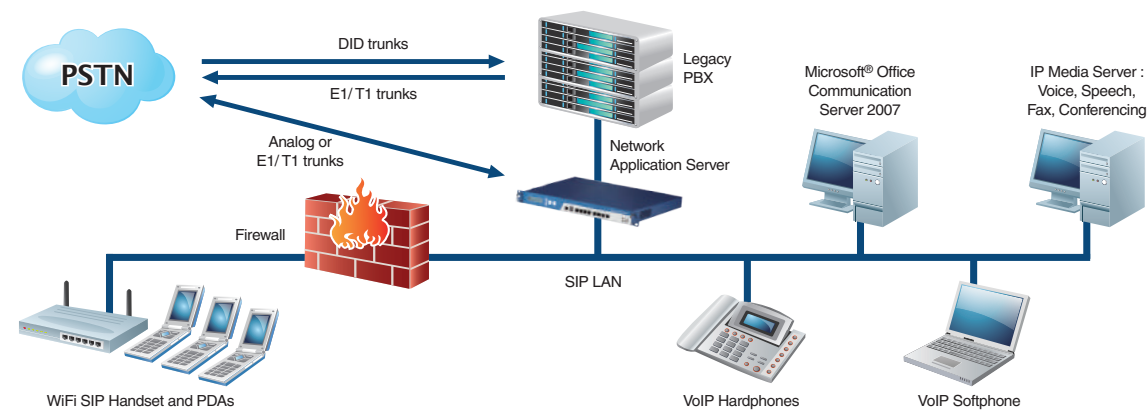
As consumers demand more sophisticated services over increasingly advanced networks, managing complexity is becoming more challenging. While enterprises and service providers alike may dream of simply replacing existing networks, the reality is that most legacy installations still work beautifully, forcing 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

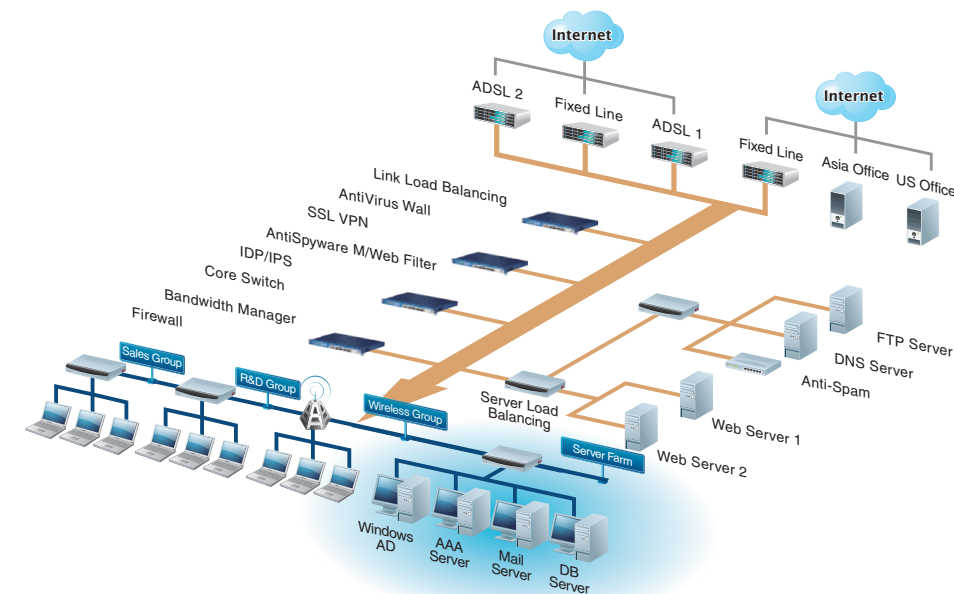


## Is Your Info Protected?

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 encountered 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



# 2018 New Products

## NSA 7145

Dual Intel® Xeon® Scalable Processors for Multi-Thread Network Processing

- Dual Intel® Xeon® Scalable processors
- Support processor-FPGA solution
- Support up to 512GB of DDR4 2133/2400/2666 ECC & REG memory
- Up to 8 x PCIe slots for LAN modules
- 2 x 2.5" SATA/SAS HDD (swappable)
- CRPS (1 + 1) redundant power supply
- Support BMC with IPMI 2.0 and out-of-band management
- Optional TPM 1.2/2.0 module



## vDNA 1160

Network Virtualization and Software-Defined Appliance with Intel Atom® C3000 Processor

- Intel Atom® C3000 processor (SoC, 8~16 cores, BGA type)
- Intel® QuickAssist: up to 20 Gbps crypto + 20Gbps compression
- Virtualization: Intel® VT-x, Intel® VT-d, SR-IOV, VMDq
- Support 2 x 10 GbE SFP+ ports and 6 x 1 GbE LAN ports
- Internal 1 x 2.5" HDD bay, onboard eMMC 5.0
- 2 x USB 3.0
- Support TPM 1.2/2.0



## DNA 130-E

Intel® Celeron® Processor N3350, up to 2 Cores 2.4 GHz, BGA type, with 4 GbE Copper LAN ports

- Intel® Celeron® processor N3350, BGA type
- Onboard 4GB of DDR3L-1866MHz Non-ECC memory
- Support 4 GbE LAN ports
- M.2 2242 socket
- Fanless system
- 40 watt power adaptor



## DNA 1160

Intel Atom® C3000 Processor, up to 4 Cores 1.6 GHz, BGA type, with 8 GbE Copper LAN Ports

- Intel Atom® C3000 processor, 2/4 cores, BGA type
- Up to 32GB, 2 x DDR4-2133 long DIMMs ECC memory
- Support 8 x 1 GbE LAN ports
- Internal 1 x 2.5" HDD bay, 1 x CFAST socket
- USB 3.0
- Backup power support (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 & Data Convergence		E-mail Filtering & Anti-Spam
	Traffic Load Balance		Unified Threat Management
	Intrusion Detection & Prevention		Bandwidth Management



## Network Security Appliance

Model	NSA 7136	NSA 7145
CPU	Dual Intel® Xeon® E5-2600 V4/V3 processor family	Dual Intel® Xeon® E5-2600 V6/V5 processor family
RAM	16 x DDR4 1866/2133/2400/2666 DIMM, up to 512GB	16 x DDR4 1866/2133 DIMM, up to 512GB
Chipset	Intel® C612	Intel® C621
LAN Chip	Intel® I211	Intel® I210
GbE	2 x GbE copper + 8 x LAN module	2 x GbE copper + 8 x LAN module
HDD	1 x 3.5" HDD	1 x 3.5" HDD 1 x 2.5" HDD
SSD	1 x CFAST 1 x SATA DOM	1 x CFAST 1 x SATA DOM
Serial	1 x at Front (RJ45 connector)/ 1 x On-board 2x5 2.0mm box header	1 x at Front (RJ45 connector)/ 1 x On-board 2x5 2.0mm box header
SATA	5	5
USB	2 x at Front/ 2 x at Rear	2 x at Front/ 2 x at Rear
Expansion	1 x PCIe slot, 8 x LAN module	1 x PCIe slot, 8 x LAN module
LCM Module	Graphic, SIO	Graphic, SIO
Indicators	Power status, HDD status, GPIO status, Error status LEDs	Power status, HDD status, GPIO status, Error status LEDs
Power	700W 1+1 CRPS redundant power supply	700W 1+1 CRPS redundant Status
Form Factor	2U	2U
Dimensions (mm)	432 x 550 x 88	438 x 570 x 88








# Network Security Appliance



Model					
	NSA 5640	NSA 5150	NSA 5160	NSA 5170	NSA 1150
CPU	Freescale T4240 QorIQ processor	4th Gen Intel® Core™/Xeon® E3 processor family	Intel® Xeon® Processor D-1500 product family	Intel® Xeon®/ 6th Gen Intel® Core™/ Pentium® processors	Intel Atom® processor C2358, BGA type
RAM	3 x DDR3 1600/2400 DIMM, up to 12GB	4 x DDR3 1333/1600 DIMM, up to 32GB	4 x DDR4 2133 DIMM, support ECC/non-ECC memory, up to 128GB	4 x DDR4 2400 DIMM, support ECC/non-ECC memory, up to 64GB	2 x DDR3 1333/1600 DIMM, up to 16GB
Chipset	SoC	Intel® C226	SoC	Intel® C236	SoC
LAN Chip	Cortina CS4340	Intel® I350-AM4	Intel® I211	Intel® i211/i350- AM4	Intel® I211
GbE	8 x GbE copper, 4 x 10G SFP+	8 x GbE copper + 1 x LAN module	8 x GbE copper, 2 x 10G SFP+ + 2 x LAN module	1 x GbE copper + 4 x LAN module	6 x GbE copper
HDD	-	1 x 3.5" HDD bay or 2 x 2.5" HDD (option)	1 x 3.5" HDD bay or 2 x 2.5" HDD (option)	1 x 3.5" HDD bay or 2 x 2.5" HDD (option)	2 x 2.5" HDD
SSD	1 x MicroSD card	1 x SATA DOM	1 x SATA DOM	1 x Cfast 1 x SATA DOM	1 x CF card
Serial	2 x at Front (RJ45 connector)	1 x at Front (RJ45 connector)	1 x at Front (RJ45 connector)	1 at Front (RJ-45 or Micro USB connector)	1 x at Front (RJ45 connector)
SATA	-	3	3	4	1
USB	2 x at Front	2 x at Front	2 x at Front	2 at Front/ 2 at Rear	2 x at Front
Expansion	1 x PCIe x8 slot, 1 x PCIe x4 slot (option)	1 x PCIe slot	1 x PCIe slot	1 x PCIe slot (option)	1 x PCIe slot (option)
LCM Module	Graphic, SIO	2 x 16, PIO	Graphic, SIO	Graphic, SIO	2 x 16, PIO
Indicators	Power, LAN	Power, HDD, Bypass LED, GPIO LED	Power, HDD, LAN, Bypass LED	Power, HDD, LAN, Bypass LED	Power, HDD, Bypass LED, GPIO LED
Power	300W ATX power supply	250W ATX power supply	300W ATX power supply	250W ATX power supply, 250W redundant power supply (option)	65W ATX power supply
Form Factor	1U	1U	1U	1U	1U
Dimensions (mm)	426 x 300 x 44	430 x 450 x 44	430 x 450 x 44	438 x 450 x 44	426 x 260 x 44

Model					
	NSA 3150	NSA 3170	NSA 3170A	NSA 3170HA	NSA 3640
CPU	4th Gen Intel® Core™/Xeon® E3 processor family	Intel® Xeon®/ 6th Gen Intel® Core™/ Pentium® processors	Intel® Xeon®/ 6th Gen Intel® Core™/ Pentium® processors	Intel® Xeon®/ 6th Gen Intel® Core™/ Pentium® processors	Freescale QorIQ LS-Series CPU LS2085/LS2088, up to 8 CPU cores
RAM	2x DDR3 1333/1600 DIMM, up to 32GB	2 x DDR4 2400 DIMM, support ECC/non-ECC memory, up to 32GB	2 x DDR4 2400 DIMM, support ECC/non-ECC memory, up to 32GB	2 x DDR4 2400 DIMM, support ECC/non-ECC memory, up to 32GB	5 x DDR4 2133/2400 UDIMM, up to 64GB (1 x ECC Slot, 4 x non-ECC slot)
Chipset	Intel® H81	Intel® H110	Intel® C236	Intel® C236	SoC
LAN Chip	Intel® I211	Intel® I211	Intel® I211	Intel® I211	Aquantia: AQR405-B1-EG-Y INPHI: WPCS4340C.A0- 900031
GbE	8 x GbE copper + 1 x LAN module	6 x GbE copper	8 x GbE copper + 1 x LAN module	8 x GbE copper + 1 x LAN module	4 x GbE copper, 4 x Fiber
HDD	1 x 3.5" HDD bay or 2 x 2.5" HDD (option)	2 x 2.5" HDD	2 x 2.5" HDD	2 x 2.5" HDD	-
SSD	1 x SATA DOM	1 x SATA DOM	1 x SATA DOM	1 x SATA DOM	1 x MicroSD card
Serial	1 x at Front (RJ45 connector)	1 x at Front (RJ45 or Micro USB connector)	1 x at Front (RJ45 or Micro USB connector)	1 x at Front (RJ45 or Micro USB connector)	2 x at Front (RJ45 connector)
SATA	3	2	2	2	-
USB	2 x at Front	2 x at Front	2 x at Front	2 x at Front	2 x at Front
Expansion	1 x PCIe slot (option)	-	1 x PCIe slot (option)	1 x PCIe slot	1 x PCIe x8 slot, 1 x PCIe x4 slot (option)
LCM Module	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, LAN, Bypass LED	Power, LAN
Power	250W ATX power supply	250W ATX power supply	250W ATX power supply	400W ATX redundant power supply	300W ATX power supply
Form Factor	1U	1U	1U	1U	1U
Dimensions (mm)	430 x 450 x 44	438 x 300 x 44	438 x 300 x 44	438 x 470 x 44	426 x 300 x 44



# Network Security Appliance

Model					
	DNA 120	DNA 125B	DNA 130-E	DNA 1150	DNA 1160
CPU	Intel® Celeron® processor N3350	Intel Atom® processor E3815	Intel® Celeron® processor N3350	Intel Atom® processor C2358, BGA type	Intel Atom® C3000 processor, up to 4 cores 1.6GHz, BGA type
RAM	1 x DDR3 1600 SO-DIMM, Up to 8GB	1 x DDR3 1066 DIMM, up to 8GB	On-board 4GB DDR3L-1866MHz non-ECC memory	2 x DDR3 1333/1600 DIMM, up to 16GB	2 x DDR4 2133 Long-DIMM, ECC memory, up to 32GB
Chipset	SoC	SoC	SoC	SoC	SoC
LAN Chip	Intel® I211	Intel® I211 Broadcom BCM5312	Realtek 8111G	Intel® I210	Intel® I211-AT
GbE	4 x GbE copper	2 x GbE copper, 8 GbE switch	4 x GbE copper	6 x GbE copper	8 x GbE copper
HDD	-	1 x 2.5" HDD	-	1 x 2.5" HDD	1 x 2.5" HDD
SSD	1 x SATA DOM	1 x SATA DOM	1 x M.2 2242	MO-297	1 x CFast card
Serial	1 x at Front (RJ45 connector)	1 x at Front (RJ45 connector)	1 x at Rear (RJ45 connector)	1 x at Front (RJ45 connector)	1 x at Front (RJ45 connector)
SATA	2	2	2	1	1
USB	2 x at Rear	2 x at Front	2 x at Rear	2 x at Front	2 x at Rear
Expansion	-	1 x mini-PCIe slot (option)	-	1 x PCIe slot (option)	2 x mini-PCIe slot, 3 x Antenna hole (option)
LCM Module	-	-	-	-	-
Indicators	Power, GPIO LED	Power, GPIO LED	Power, storage, LAN LED	Power, GPIO LED	Power, HDD, LAN
Power	40W power adapter	40W power adapter	40W power adapter	40W power adapter	40W power adapter
Form Factor	Desktop	Desktop	Desktop	Desktop	Desktop
Dimensions (mm)	204 x 110 x 44	232 x 184 x 44	225 x 150 x 44	272 x 195 x 44	288 x 186.8 x 44

				
vDNA1160	DNA 1510	DNA 1520	iNAS 330	ISA 1120A
Intel Atom® C3000 processor, Up to 16 cores, BGA type	Cavium OCTEON® III CN7010 1.2GHz, single cnMIPS64 core	Cavium OCTEON TX™ CN80xx/81xx multicore ARM64 processor	Marvell ARMADA 388 (dual Cortex-A9)	Intel Atom® processor E3800 family
4 x DDR4 2400 Long-DIMM, ECC memory, up to 64GB	On-board 1GB DDR3, 4GB eMMC, up to 8GB	On-board 1GB 64-bit DDR4 (4 x 128Mx16-bit) and 8-bit ECC	On-board DDR3 512MB	1 x DDR3L 1066 SO-DIMM, up to 8GB
SoC	SoC	SoC	-	-
Intel® i350 Intel Atom® C3000 processor build-in NICs	-	SoC	Marvell 88E1512	Intel® I210
2 x SFP+ (fiber only), 6 x GbE copper	4 x GbE copper	1 x 10GbE combo, 1 x GbE combo, 5 x GbE copper	3 x GbE copper (M12)	4 x GbE copper
-	-	-	-	-
1 x 2.5" SSD, 1 x SATA DOM, 1 x M.2 2240 (SATA and PCIe x4), 1 x on-board eMMC 5.0	1 x MicroSD card	1 x MicroSD card	-	1 x SATA DOM
1 x at Front (RJ45 connector)	1 x at Front (RJ45 connector)	1 x at Front (RJ45 connector)	3 x at Front (M12 connector)	2 x at Rear (DB9 connector)
2	-	2	-	-
2 x USB 3.0 with 5W power output	2 x at Front	1 x 3.0 at Front	-	2 x at Front
1 x M.2 2230 for Wi-Fi, 4 x antenna hole (option), expansion PCIe x8 connector w/ 1 x PCIe 3.0 x4, 1 x SATA, 2 x KR/SGMII management face	1 x PCIe slot (option)	Daughter boards for 3 x PCIe slot (option)	-	-
Optional	-	-	-	-
Programmable UI (default: HW, SW, storage, user definition)	Power, alert, WAN, DMZ, LAN and USB LED	Power, LAN, USB, SD	Power, Sys, Temp/ PoE, LAN/HDD	Power, CFast, Bypass status LEDs
60W power adapter	30W power adapter	65W (non-PoE) 150W (PoE)	2 x PoE (IEEE 802.3af) or 2 x PoE+ (IEEE 802.3at)	65W 1+1 edundant power adapter
Desktop	Desktop	Desktop	Desktop	DIN Rail
260 x 241 x 44	160 x 120 x 66	190 x 181 x 64	262x 194 x 60	190 x 140 x 72





## Main Features

- Dual Intel® Xeon® processor E5-2600 v4/v3 product family
- Support DDR4 1866/2133/2400 ECC & REG, up to 512GB
- Modular design supports 8 LAN modules slots
- Support swappable 3.5" SATA/SAS HDD
- Support CRPS (1 + 1) redundant power supply
- Support LCD module

## Product Overview

NEXCOM has released the 2U network security appliance NSA 7136 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 (codenamed Grantley), NEXCOM NSA 7136 features enhancements in computing performance, system responsiveness, I/O throughput and hardware design to safeguard network traffic for both enterprise and telecommunication applications.

## Specifications

### Main Board

- NSB 7136
- Dual Intel® Xeon® processor E5-2600 v4/v3 product family
- Support 9.6 GT/s QPI speed
- Intel® C612
- One PCIe x8 expansion slot (internal)

### 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

### Main Memory

- 16 x 284-pin DDR4 1866/2133/2400 DIMM sockets, up to 512GB ECC & REG SDRAM

### Devices

- 1 x On-board CFAST socket

### Power Input

- 700W 1+1 CRPS redundant power supply

### Chassis Dimensions

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

### Weight

- Without packing: 19 KG
- With packing: 25 KG

### Environment

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

### Certifications

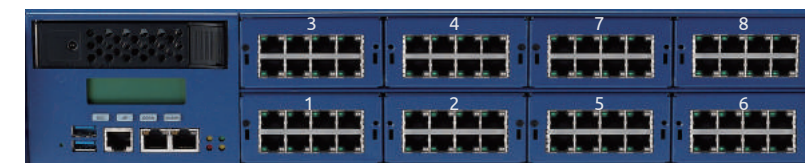
- CE approval
- FCC Class A
- UL

## Ordering Information

### Barebone

- **NSA 7136 (P/N: 10S00713600X0)**  
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

Model	P/N Controller	Interface	Type	Port Number	Bypass/Segment	Expansion Slot	Location Slot
NX 140F	10S20140F01X0	XL710-BM1	PCIe x8	4 SFP+	None	None	All Slot
NX 142F	10S20142F01X0	XL710-BM1	PCIe x8	4 SFP+	2 bypass	None	All Slot
NX 142F-LR	10S20142F03X0	XL710-BM1	PCIe x8	4 SFP+	2 bypass	None	All Slot
NX 120F	10S20120F00X0	X710-BM2	PCIe x8	2 SFP+	None	None	All Slot
NI 140F	10SK000NI02X0	i350AM4x1	PCIe x8	4 SFP	None	None	All Slot
NI 180F	10S10180F01X0	i350AM4x2	PCIe x8	8 SFP	None	None	All Slot
NI 142C	10SK000NI03X0	i350AM4x1	PCIe x8	4 Copper	2 bypass	None	All Slot
NI 180C	10S10180C01X0	i350AM4x2	PCIe x8	8 Copper	None	None	All Slot
NI 184C	10S10184C01X0	i350AM4x2	PCIe x8	8 Copper	4 bypass	None	All Slot
NI 142F	10S10142F01X0	i350AM4x1	PCIe x8	4 SFP	2 bypass	None	All Slot
NI 121F	10S10121F01X0	i350AM2x1	PCIe x8	2 SFP	1 bypass	None	All Slot
NI 140C	10S10140C01X0	i350AM4x1	PCIe x8	4 Copper	None	None	All Slot
NV 120F	10S50120F01X0	XXV710-AM2	PCIe x8	2 QSFP	None	None	All Slot
NC220Q28M	10S30022002X0	MT27708A0-FDCF-CE	PCIe x16	2 QSFP28	None	None	1,2/3,4/5,6/7,8







## Main Features

- Dual Intel® Xeon® scalable processor family
- Support processor-FPGA solution
- Support up to 512GB of DDR4 2133/ 2400/ 2666 ECC & REG memory
- Up to 8 slots for PCIe LAN modules
- 2x 2.5" SATA/ SAS HDD (swappable)
- CRPS (1 + 1) redundant power supply
- Support BMC with IPMI 2.0 and out-of-band management
- Optional TPM 1.2/ 2.0 module

## Product Overview

NEXCOM has released the 2U network security appliance NSA 7145 to take on more security workloads and lower energy consumption to contribute to a greener world. Based on Intel® Xeon® product family (codenamed Grantley), NEXCOM NSA 7145 features enhancements in computing performance, system responsiveness, I/O throughput and hardware design to safeguard network traffic for both enterprise and telecommunication applications.

## Specifications

### Main Board

- NSB 7145
- Dual Intel® Xeon® processor scalable family
- Support 10.4 GT/s UPI
- Intel® C621
- One PCIe x8 expansion slot (internal)

### 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
- 2 x 2.5" HDD swappable bays
- 8 x LAN module bays
- 2 x USB 3.0 ports
- 1 x Micro USB type console port
- 1 x RJ45 type console port
- 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

### Main Memory

- 16 x 284-pin DDR4 2133/ 2400/ 2666 DIMM sockets, up to 512GB ECC & REG SDRAM

### Devices

- 1 x On-board CFast socket

### Power Input

- 700W 1+1 CRPS redundant power supply

### Chassis Dimensions

- Chassis dimension: 438 mm x 570 mm x 88 mm
- Carton dimension: 774 mm x 636 mm x 293 mm

### Weight

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

### 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

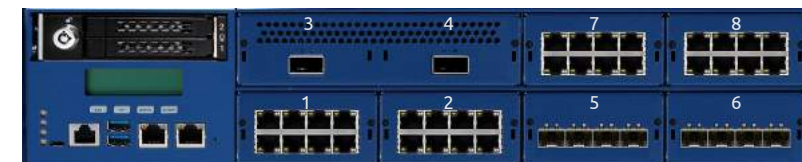
## Ordering Information


### Barebone

#### • NSA 7145 (P/N: 10S00714500X0)


2U Intel® Xeon® PCH C621, with LCM, 2 swappable 2.5" HDD tray, 3 swappable system fans, 8 LAN module (NI/NX series) bays, 700W PSU

Model	P/N Controller	Interface	Type	Port Number	Bypass/Segment	Expansion Slot	Location Slot
NX 140F	10S20140F01X0	XL710-BM1	PCIe x8	4 SFP+	None	None	All Slot
NX 142F	10S20142F01X0	XL710-BM1	PCIe x8	4 SFP+	2 bypass	None	All Slot
NX 142F-LR	10S20142F03X0	XL710-BM1	PCIe x8	4 SFP+	2 bypass	None	All Slot
NX 120F	10S20120F00X0	X710-BM2	PCIe x8	2 SFP+	None	None	All Slot
NI 140F	10SK000NI02X0	i350AM4x1	PCIe x8	4 SFP	None	None	All Slot
NI 180F	10S10180F01X0	i350AM4x2	PCIe x8	8 SFP	None	None	All Slot
NI 142C	10SK000NI03X0	i350AM4x1	PCIe x8	4 Copper	2 bypass	None	All Slot
NI 180C	10S10180C01X0	i350AM4x2	PCIe x8	8 Copper	None	None	All Slot
NI 184C	10S10184C01X0	i350AM4x2	PCIe x8	8 Copper	4 bypass	None	All Slot
NI 142F	10S10142F01X0	i350AM4x1	PCIe x8	4 SFP	2 bypass	None	All Slot
NI 121F	10S10121F01X0	i350AM2x1	PCIe x8	2 SFP	1 bypass	None	All Slot
NI 140C	10S10140C01X0	i350AM4x1	PCIe x8	4 Copper	None	None	All Slot
NV 120F	10S50120F01X0	XXV710-AM2	PCIe x8	2 QSFP	None	None	All Slot
NC220Q28M	10S30022002X0	MT27708A0-FDCF-CE	PCIe x16	2 QSFP28	None	None	1,2/ 3,4/ 5,6/ 7,8





Proven Partner



### Main Features

- NXP QorIQ T4240 communications processor, 1.8GHz
- Up to 6GB DDR3 memory
- 1 x mini-PCIe expansion
- 8 GbE LAN ports, optional 4-port SFP+/10GBase-T module
- On-board 2GB NAND Flash, 128MB NOR flash
- Removable SD card at front

## Product Overview

NEXCOM 1U network security appliance NSA 5640 is designed for advanced Unified Threat Management (UTM) solutions with multi-Gigabit throughput. The NSA 5640 features NXP's QorIQ T4240 24 virtual-core communications processor integrated with Data Path Acceleration Architecture (DPAA) packet handling infrastructure. Combining up to 6GB of DDR3 memory and high-speed networking and interconnect interfaces, the NSA 5640 bolsters network security and network responsiveness in the face of high volume network traffic and the escalating cyber threats.

## Specifications

### Main Board

- NSB
- NXP QorIQ T-series CPU T4240, Up To 12 CPU core, 1.8GHz

### Main Memory

- SDRAM
  - 3 DIMM slots, support 2GB per DIMM
  - Support DDR3 1866/2133 UDIMM/RDIMM
- NOR Flash
  - 128MB 16-bit NOR Flash
- NAND Flash
  - 2GB SLC NAND Flash
- 2 Kbit 24C02 I2C EPPROM
- SD connector to interface

### LAN Features

- 8 x GbE ports
- 4 x 10G SFP+ ports

### Expansion

- 1 x mini-PCI-E connector
- 8 x PCI-E connector

### I/O Interface-Front

- 8 x Copper GLAN ports
- 4 x SFP + 10G ports
- 2 x USB 2.0 ports
- 1 x RJ45 type console port
- 1 x Power LED

- 1 x Reset: hardware reset
- 1 x SD slot

### Devices

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

### Power Input

- ATX power supply, 300W

### Dimensions

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

### Weight

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

### Certifications

- CE approval
- FCC Class A
- UL

## Ordering Information

### Barebone

- **NSA 5640 (P/N: 10S00564000X0)**  
NXP QorIQ architecture CPU T4240, 1.8GHz, on-board 128M NOR Flash, 2G NAND Flash 3 x DDR3 DIMM Sockets, 8 GbE LAN + 4 x 10G SFP+



### 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°C~40°C
- Storage temperature : -20°C~75°C
- Relative humidity : 10%~90% non-condensing

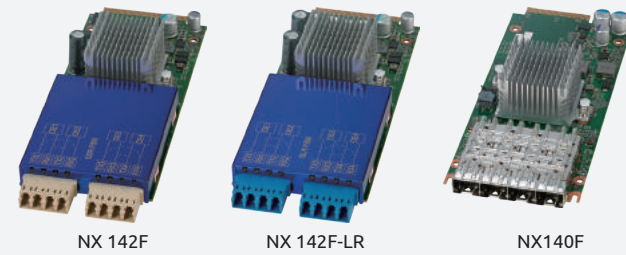
## Ordering Information

- **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



# NX Series LAN Module

10GbE Fiber Port LAN Module



## 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 PCIe8 interface with PKG
- **NX 142F-LR (P/N: 10S20142F03X0)**  
Intel® XL710-AM1 10GbE module 4 fiber ports with 2 bypass segment (single mode) by PCIe8 interface with PKG
- **NX 140F (P/N: 10S20140F01X0)**  
Intel® XL710-AM1 10GbE module 4 fiber ports by PCIe8 interface with PKG
- **NX 120F (P/N: 10S20120F00X0)**  
Intel® X710-AM2 10GbE module 2 fiber ports by PCIe8 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°C~40°C
- Storage temperature : -20°C~75°C
- 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

# NC 220Q28M

100GbE LAN Module



## Main Features

- Mellanox ConnectX®-4
- Supporting up to 2x100GbE QSFP28 ports

## Specifications

### LAN Features

Module Type	Controller	Bypass	Link Speed	Media Type	I/O ports
NC 220Q28M	MT27708A0-FDCF-CE (Single-host)	0	100G	Fiber	2 QSFP28
NC 220Q28M2	MT27708A0-FDCF-CEM (Multi-host)	0	100G	Fiber	2 QSFP28

### Dimensions

- PCBA dimension: 167mm x 152mm x 1.6mm

### Environment

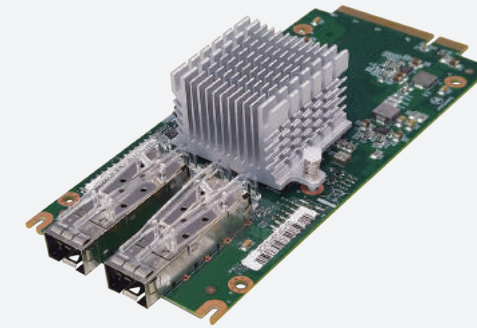
- Operating temperatures: 0°C~40°C
- Storage temperature: -20°C~75°C
- Relative humidity: 10%~90% non-condensing

## Ordering Information

- **NC 220Q28M (P/N: 10S30022002X0)**  
2 x QSFP28 Ports w/ MT27708A0-FDCF-CE (single-host)
- **NC 220Q28M2 (P/N: 10S30022005X0)**  
2 x QSFP28 Ports w/ MT27708A0-FDCF-CEM (multi-host)

# NV 120F

25GbE Fiber Port LAN Module



## Main Features

- Intel® XXV710-AM2 LAN controller
- Supporting up to 25GbE SFP28 fiber ports

## Specifications

### LAN Features

Module	Controller	Bypass	Link Speed	Media Type	I/O Ports
NV 120F	XXV710-AM2	None	25G/10G	Fiber	2 SFP28C

### 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

- **NV 120F (P/N: 10S50120F01X0)**  
Intel® XXV710-AM2 25GbE module 2 fiber ports by PCIe x8 interface with PKG





## 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 PCIe x8 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 PCIe x4 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°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 5150(P/N: 10S00515000X0)

Support 4th generation Intel® Core™ processors, 4 DDR3 memory slots, 8 PCIe GbE LAN ports, MO-297 socket, USB ports, VGA port, 1 PCIe x4 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 Coletto 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 5160/5160A

Intel® Xeon® Processor D-1500 Product Family (Broadwell-DE),  
1U Rackmount with 8GbE LAN, 2 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+
- Two LAN modules support

## Product Overview

NEXCOM security hardware NSA 5160 helps small and medium-sized businesses (SMBs) scrutinize network traffic with ease. Featuring Intel® Xeon® processor D-1500 Product Family, the NSA 5160 delivers scalable computing performance, high port density, and easy expansions of high-speed networking interface. By simplifying deployment, configuration, and management of network security controls, NEXCOM security hardware can fend off unauthorized access, patch potential security loopholes, and create protected networks for business environments.

## Specifications

### Main Board

- NSB 5160
- Intel® Xeon® processor D-1500 product family
- Support IPMI 2.0 (option)
- Two LAN module slots

### Main Memory

- 4 x DDR4 2133 memory DIMM support ECC/non-ECC/registered memory, max.128G

### LAN Features

- LAN chip: Intel® i211-AT
- CS422T dual 10G PHY
- 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 10GbE SFP+ ports
- 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 bay (default) or 2 x 2.5" HDD/SSD bay

### Dimensions

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

### 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 5160A (P/N: 10S00516001X0)**  
1U Intel® Broadwell-DE D-1548 6C/2.0GHz with 2 x 10GbE + 8 1GbE LAN ports, 2 LAN Module (NI/NX series) bays, w/o LCM kit

Model	P/N Controller	Interface	Type	Port Number	Bypass/Segment	Expansion Slot	Location Slot
NX 140F	10S20140F01X0	XL710-BM1	PCIe x8	4 SFP+	None	None	All Slot
NX 142F	10S20142F01X0	XL710-BM1	PCIe x8	4 SFP+	2 bypass	None	All Slot
NX 142F-LR	10S20142F03X0	XL710-BM1	PCIe x8	4 SFP+	2 bypass	None	All Slot
NX 120F	10S20120F00X0	X710-BM2	PCIe x8	2 SFP+	None	None	All Slot
NI 140F	10SK000NI02X0	i350AM4x1	PCIe x8	4 SFP	None	None	All Slot
NI 180F	10S10180F01X0	i350AM4x2	PCIe x8	8 SFP	None	None	All Slot
NI 142C	10SK000NI03X0	i350AM4x1	PCIe x8	4 Copper	2 bypass	None	All Slot
NI 180C	10S10180C01X0	i350AM4x2	PCIe x8	8 Copper	None	None	All Slot
NI 184C	10S10184C01X0	i350AM4x2	PCIe x8	8 Copper	4 bypass	None	All Slot
NI 142F	10S10142F01X0	i350AM4x1	PCIe x8	4 SFP	2 bypass	None	All Slot
NI 121F	10S10121F01X0	i350AM2x1	PCIe x8	2 SFP	1 bypass	None	All Slot
NI 140C	10S10140C01X0	i350AM4x1	PCIe x8	4 Copper	None	None	All Slot
NV 120F	10S50120F01X0	XXV710-AM2	PCIe x8	2 QSFP	None	None	All Slot
NC220Q28M	10S30022002X0	MT27708A0-FDCF-CE	PCIe x16	2 QSFP28	None	None	1,2







## 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

## Product Overview

NEXCOM security hardware NSA 5170 helps small and medium-sized businesses (SMBs) scrutinize network traffic with ease. Featuring Intel® Xeon® E3-1200 V5 Product Family, the NSA 5170 delivers scalable computing performance, high port density, and easy expansions of high-speed networking interface. By simplifying deployment, configuration, and management of network security controls, NEXCOM security hardware can fend off unauthorized access, patch potential security loopholes, and create protected networks for business environments.

## 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 Micro USB 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 x8 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 1 or 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

### Certifications

- CE Approval
- FCC Class A
- UL

## Ordering Information

### Barebone

- **NSA 5170 (P/N: TBC)**  
Supports Intel® 6th gen. XEON®/Core™/Pentium® processors, 4 DDR4 memory slots, 6PCIe GbE LAN ports, CFast socket, USB ports, VGA port, three PCIe x8 LAN expansion slot (front), w/o LCM
- **NX 140F**  
Intel® XL710-AM1 10GbE module 4 fiber ports by PCIe x8 interface with PKG
- **NX 142F**  
Intel® XL710-AM1 10GbE module 4 fiber ports with 2 bypass segment (multi mode) by PCIe x8 interface with PKG
- **NI 140F**  
Intel® I350 module 4 fiber ports with PCIe x8 interface with PKG
- **NI 180F**  
Intel® I350 module 8 fiber ports with PCIe x8 interface with PKG
- **NI 142C**  
Intel® I350 module 4 copper ports with 2 bypass segment by PCIe x8 interface with PKG
- **NI 180C**  
Intel® I350 module 8 copper ports by PCIe x8 interface with PKG
- **NI 184C**  
Intel® I350 module 8 copper ports with 4 bypass segment by PCIe x8 interface with PKG
- **NI 142F**  
Intel® I350 module 4 fiber ports with 2 bypass segment by PCIe x8 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	PCIe x8	4 SFP+	None	None	All slot
NX 142F	10S20142F01X0	XL710-BM1	PCIe x8	4 SFP+	2 bypass	None	All slot
NX 142F-LR	10S20142F03X0	XL710-BM1	PCIe x8	4 SFP+	2 bypass	None	All slot
NX 120F	10S20120F00X0	X710-BM2	PCIe x8	2 SFP+	None	None	All slot
NI 140F	10SK000NI02X0	i350AM4x1	PCIe x8	4 SFP	None	None	All slot
NI 180F	10S10180F01X0	i350AM4x2	PCIe x8	8 SFP	None	None	All slot
NI 142C	10SK000NI03X0	i350AM4x1	PCIe x8	4 copper	2 bypass	None	All slot
NI 180C	10S10180C01X0	i350AM4x2	PCIe x8	8 copper	None	None	All slot
NI 184C	10S10184C01X0	i350AM4x2	PCIe x8	8 copper	4 bypass	None	All slot
NI 142F	10S10142F01X0	i350AM4x1	PCIe x8	4 SFP	2 bypass	None	All slot
NI 121F	10S10121F01X0	i350AM2x1	PCIe x8	2 SFP	1 bypass	None	All slot
NI 140C	10S10140C01X0	i350AM4x1	PCIe x8	4 copper	None	None	All slot

# NSA 1150

New Intel Atom® Processor C2358, up to 2 Cores 1.7GHz  
with QuickAssist, BGA Type, with 6 PCIe GbE LAN Ports



## Main Features

- Intel Atom® processor C2358, 2 Core 1.7 GHz with QuickAssist, 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 PCIe x4 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: 430mmx260mm x 44mm

### Weight

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

### Environment

- Operating temperatures : 0°C~40°C
- Storage temperature : -20°C~75°C
- 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

4th Generation Intel® Core™ Processor 1U Rackmount  
with 8 PCIe GbE LAN & LAN Module



## Main Features

- 1U rackmount network platform
- 4th generation Intel® Core™ processors
- Support two DDR3 1333/1600 memory, up to 16GB
- Support one PCIe x8 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°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 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





## Main Features

- 1U rackmount network platform
- Support 6th/7th gen. Intel® Xeon®/Core™/Pentium® processors
- Support DDR4 2400 ECC & REG, up to 32GB
- Support one LAN module slot
- Internal two 2.5" HDD bay
- Single 250 watt PSU

## Product Overview

NEXCOM NSA 3170/3170A is a network communication platform based on 6th/7th generation Intel® Core™ i3/i5/i7 processor E3-1200 v6 product family. The NSA 3170/3170A is equipped with quad-core computing power, fast DDR4 memory with ECC, and advanced technologies for deliver extra performance boost at a low power envelope for efficient energy use. The network communication platform NSA 3170 will make either an ideal edge server or a network security appliance in SMB networks.

## Specifications

### Main Board

- NSB 3170/3170A
- Support 6th/7th gen. Intel®/Core™/Pentium® processors
- Intel® H110/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
- 1x 8GbE copper/fiber expansion LAN module (by project)

### Power Input

- ATX power supply 250W

### I/O Interface-Rear

- 1 x VGA Port
- 1 x Power button switch
- 2 x USB 2.0 ports

### Chassis Dimensions

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

### Weight

- Without packing: 5.2 KG
- With packing: 8 KG

### 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 6th gen. Intel®/Core™/Pentium® processors or 7th gen. Intel®/Core™ processors 2 DDR4 memory slots, 6GbE copper LAN ports, SATA DOM, USB ports, VGA port, w/o LCM

#### • NSA 3170A (P/N: 10S00317001X0)

Intel® C236 PCH, supporting 6th gen. Intel® Xeon®/Core™/Pentium® processors or 7th gen. Intel® Xeon®/Core™ processors, 2 DDR4 memory slots, 8GbE copper LAN ports, SATA DOM, USB ports, VGA port, 1 PCIe x8 LAN expansion slot (front), w/o LCM

Model	P/N Controller	Interface	Type	Port Number	Bypass/Segment	Expansion Slot	Location Slot
NX 140F	10S20140F01X0	XL710-BM1	PCIe x8	4 SFP+	None	None	All Slot
NX 142F	10S20142F01X0	XL710-BM1	PCIe x8	4 SFP+	2 bypass	None	All Slot
NX 142F-LR	10S20142F03X0	XL710-BM1	PCIe x8	4 SFP+	2 bypass	None	All Slot
NX 120F	10S20120F00X0	X710-BM2	PCIe x8	2 SFP+	None	None	All Slot
NI 140F	10SK000NI02X0	i350AM4x1	PCIe x8	4 SFP	None	None	All Slot
NI 180F	10S10180F01X0	i350AM4x2	PCIe x8	8 SFP	None	None	All Slot
NI 142C	10SK000NI03X0	i350AM4x1	PCIe x8	4 Copper	2 bypass	None	All Slot
NI 180C	10S10180C01X0	i350AM4x2	PCIe x8	8 Copper	None	None	All Slot
NI 184C	10S10184C01X0	i350AM4x2	PCIe x8	8 Copper	4 bypass	None	All Slot
NI 142F	10S10142F01X0	i350AM4x1	PCIe x8	4 SFP	2 bypass	None	All Slot
NI 121F	10S10121F01X0	i350AM2x1	PCIe x8	2 SFP	1 bypass	None	All Slot
NI 140C	10S10140C01X0	i350AM4x1	PCIe x8	4 Copper	None	None	All Slot
NV 120F	10S50120F01X0	XXV710-AM2	PCIe x8	2 SFP28	None	None	All Slot



## Main Features

- 1U rackmount network platform
- Supports Intel® 6th/7th gen. Xeon®/Core™/Pentium® processors
- Support DDR4 2400 ECC & REG, up to 32GB
- Support one PCIe x8 expansion (half length)
- Internal two 2.5" HDD bay
- Redundant 400 watt PSU

## Product Overview

NEXCOM NSA 3170HA is a network communication platform based on Intel® Xeon® processor E3-1200 v5/ v6 product family. The NSA 3170HA is equipped with quad-core computing power, fast DDR4 memory with ECC, and advanced technologies for deliver extra performance boost at a low power envelope for efficient energy use. Also, a maximum of sixteen GbE ports can be implemented through LAN module. The network communication platform NSA 3170HA will make either an ideal edge server or a network security appliance in SMB networks.

## Specifications

### Main Board

- NSB 3170A
- Supports Intel® 6th/7th gen. Xeon®/Core™/Pentium® processors
- 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
- 1 x LAN module slot

### I/O Interface-Rear

- 1 x Rear PCIe x8 expansion slot (half length)

- 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

- 220W 1+1 redundant power supply

### Chassis Dimensions

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

### Weight

- Without packing: 8.2 kg
- With packing: 11.8 kg

### 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 3170HA (P/N: 10S00317001X0)

Intel® C236 PCH, supporting Intel® 6th/ 7th gen. Xeon®/Core™ Pentium® processors, 2 DDR4 memory slots, 8GbE copper LAN ports, SATA DOM, USB ports, VGA port, one PCIe x8 LAN expansion slot (front),one PCIe x8 LAN expansion slot (rear) w/o LCM

Model	P/N Controller	Interface	Type	Port Number	Bypass/Segment	Expansion Slot	Location Slot
NX 140F	10S20140F01X0	XL710-BM1	PCIe x8	4 SFP+	None	None	All Slot
NX 142F	10S20142F01X0	XL710-BM1	PCIe x8	4 SFP+	2 bypass	None	All Slot
NX 142F-LR	10S20142F03X0	XL710-BM1	PCIe x8	4 SFP+	2 bypass	None	All Slot
NX 120F	10S20120F00X0	X710-BM2	PCIe x8	2 SFP+	None	None	All Slot
NI 140F	10SK000NI02X0	i350AM4x1	PCIe x8	4 SFP	None	None	All Slot
NI 180F	10S10180F01X0	i350AM4x2	PCIe x8	8 SFP	None	None	All Slot
NI 142C	10SK000NI03X0	i350AM4x1	PCIe x8	4 Copper	2 bypass	None	All Slot
NI 180C	10S10180C01X0	i350AM4x2	PCIe x8	8 Copper	None	None	All Slot
NI 184C	10S10184C01X0	i350AM4x2	PCIe x8	8 Copper	4 bypass	None	All Slot
NI 142F	10S10142F01X0	i350AM4x1	PCIe x8	4 SFP	2 bypass	None	All Slot
NI 121F	10S10121F01X0	i350AM2x1	PCIe x8	2 SFP	1 bypass	None	All Slot
NI 140C	10S10140C01X0	i350AM4x1	PCIe x8	4 Copper	None	None	All Slot
NV 120F	10S50120F01X0	XXV710-AM2	PCIe x8	2 SFP28	None	None	All Slot



# NSA 3640

NXP QorIQ LS-series CPU LS2085A/LS2088A  
up to 8 CPU Cores, up to 2.0GHz



## Main Features

- NXP QorIQ LS2085A/LS2088A 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

## Product Overview

The NSA3640 brings server-class performance into a cost and feature optimized 1U whitebox appliance for advanced Unified Threat Management (UTM) and vECPE solutions with multi-10 Gigabit throughput. The NSA 3640 features NXP's QorIQ LS2085A/LS2088A eight ARM® Cortex®- A57/A72 cores communications processor includes NXP's second generation data path acceleration architecture (DPAA2).

DPAA2 provides the infrastructure required to support simplified and secure networking interface and accelerator sharing by multiple general purpose CPU cores which can provide the fast data transfer including end-to-end encryption can be provided without compromising VNF performance or increasing cost. With higher performance and greater throughput for enterprise deployments in NFV use cases such as vECPE and SD-WAN.

## Specifications

### Main Board

- NSB 3640
- NXP QorIQ SOC process LS2085A/LS2088A, 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 PCIe x8 slot
- 1 x PCIe x4 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

### Devices

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

### I/O Interface-Rear

- 1 x Expansion slot for PCIe x8

### 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)**  
NXP QorIQ architecture CPU LS2085A/LS2088A, up to 2.0GHz, on-board 128MB NOR Flash, 1G NAND Flash, 5 x DDR4 DIMM sockets, 4 x 10G RJ45, and 4 x 10G SFP+ LAN ports

# DNA 120

Intel Atom® Processor E3800 Product Family BGA Type,  
with 4 PCIe GbE LAN ports



## Main Features

- Intel Atom® processor E3815, BGA type
- DDR3L 1600 SO-DIMM memory, Max. 8GB
- Support 4 PCIe GbE LAN ports
- Support one mini-PCle1 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-PCle 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°C~40°C
- Storage temperature : -20°C~75°C
- 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°C~40°C
- Storage temperature : -20°C~75°C
- 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

# DNA130-E

Intel® Celeron® SOC up to 2 cores 2.4G, BGA type,  
with 4 GbE Copper LAN ports



## Main Features

- Intel® Celeron® processor N3350, BGA type
- On-board DDR3L-1866MHz non-ECC memory 4GB
- Support 4 GbE LAN ports
- M.2 2242 socket
- Micro USB

## Specifications

### Main Board

- DNB130-E
- Intel® Celeron® processor N3350, BGA type

### Main Memory

- On- board DDR3L-1866MHz non-ECC memory 4GB

### LAN Features

- 4 x LAN controller: realtek 811G
- Support 10/100/1000 link speed
- 4 x Copper ports

### Expansion

- 1 x mini-PCIe slot
- 2 x Antenna holes

### I/O Interface-Front

- Power status/storage status/LAN status

### I/O Interface-Rear

- 2 x USB 2.0 ports
- 1 x RJ45 type console port
- 4 x Copper LAN ports
- 1 x Power button
- 1 x HDMI port
- 1 x Micro USB

### Devices

- 1 x M.2 2242 socket

### Power Input

- 40W power adapter

### Dimensions

- Chassis dimension: 225\*150\*44mm
- Carton dimension: 275\*230\*185mm

### Weight

- Without packing: 1.1Kg
- With packing: 2.1Kg

### Certifications

- CE approval
- FCC Class B
- UL

## Ordering Information

### Barebone

- **DNA130-E (P/N: 10L00013000X1)**  
Intel® Celeron® processor N3350, BGA type, on-board DDR3L-1866 MHz Non-ECC memory 4G , 4 copper LAN ports , M.2 2242 socket , 2.0 USB port



# NSA 1150

New Intel Atom® Processor C2358, up to 2 Cores 1.7GHz with QuickAssist, BGA Type, with 6 PCIe GbE LAN Ports



## Main Features

- Intel Atom® processor C2358, 2 Core 1.7 GHz with QuickAssist, 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 PCIe x4 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°C~40°C
- Storage temperature : -20°C~75°C
- 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

# DNA 1160

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



## Main Features

- Intel Atom® processor C3000 series SoC, BGA type
- 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 (Type-A)
- Backup power supporting (optional)

## Specifications

### Main Board

- DNB 1160
- Intel Atom® processor C3000 series, BGA type

### Main Memory

- 2 x DDR4-2133 Long-DIMM ECC memory, max. 32GB

### LAN Features

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

### Expansion

- 2 x mini-PCIe slot (one with SIM Sokcet for 3G/4G module)
- 3 x Antenna holes (SMA type)

### I/O Interface-Front

- Power status/HDD status/LAN status

### I/O Interface-Rear

- 2 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
- FCC Class B
- UL

## Ordering Information

### Barebone

- **DNA 1160 (P/N: 10L00116000X0)**  
Intel Denverton SoC Atom® C3338, 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
- **DNA 1160A (P/N: 10L00116002X0)**  
Intel Denverton SoC Atom® C3558, BGA type, 2 x DDR4 memory slots, 8 copper LAN ports, CFast socket, 2 x USB 3.0, mini-PCIe slot



## Main Features

- Intel Denverton-NS Atom® base SoC 8~16 cores, BGA type Core: goldmont w/ 2MB or 1MB L2 Quick assist: up to 20Gbps crypto + 20Gbps compression Virtualization: Intel® VT-x, Intel® VT-d, SR-IOV, VMDq
- DDR4-2400 ECC or non-ECC UDIMM, max.64GB
- Support 2 x 10GbE SFP+ ports and 6 x 1GbE LAN ports
- Internal one 2.5" HDD bay, on-board eMMC 5.0
- USB 3.0 connector x 2
- TPM 1.2/2.0 supported

## Specifications

### Main Board

- vDNB 1160
- Next gen. Intel Atom® processor C3000 series, BGA type

### Main Memory

- 4 x DDR4-2400 ECC or non-ECC DIMM socket; Max.64GB

### LAN Features

- 2 x 10GbE SFP+ port
- 4 x 1GbE RJ45 copper ports: from Intel® i350 -AM4
- 2 x 1GbE RJ45 copper ports: from Marvell PHY

### Storage

- 1 x 2.5" SATA HDD/SSD bay (internal)
- 1 x SATA connector (for SATA DOM)
- 1 x M.2 2242 SSD socket

### Expansion

- Proprietary PCIe socket supporting LTE module, COMBO ports
- Module...etc. by ODM requirement
- 1 x M.2 2230 slot for Wi-Fi module (E key)

### I/O Interface-Front

- 2x USB 3.0 ports
- 1 x RJ45 type console port
- 2 x SFP+ ports
- 6 x Copper ports
- 1 x Power button; 1 x reset button
- 1 x 4 green LED indicators: power status/HDD status system status/user define (all LEDs are programmable)
- DC jack with lock (12V/5A)

### I/O Interface-Rear

- 4 x SMA connector holes for RF cable (Wi-Fi, 3G/4G modem...etc.)

### Power Input

- 60W power adaptor

### Dimensions

- Chassis dimension: 260mm x 241mm x 44mm
- Carton dimension: 421mm x 291mm x 160mm

### Weight

- Without packing: 1.9kg
- With packing: 3.2kg

### Certifications

- CE approval
- FCC Class B
- UL

## Ordering Information

### Barebone

- **vDNA 1160 (P/N: 10L00116003X0)**  
Intel Denverton-NS Atom® base SoC 8~16 cores, BGA type, 4 DDR4 memory slots, 6 Copper LAN ports, 2 SFP+ Fiber ports, 2 USB 3.0 ports, 2.5" HDD bay



## Main Features

- Cavium CN7010 1.2GHz single core CPU bases on cnMIPS64
- On-board 1GByte DDR3 (4x128Mx16-bit). 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 (4x128Mx16-bit). 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





## Main Features

- Cavium Octeon-TX CN80/81xx CPU based on ARMv8.1 64-bit architecture
- On-board 1GBytes SLC NAND flash. Can support up to 2GBytes
- On-board DDR4, default 1GB 32-bit with 4-bit ECC, up to 2GB (CN80xx)
- On-board DDR4, default 2GB 64-bit with 8-bit ECC, up to 4GB (CN81xx)
- On-board 4GBytes eMMC
- Support 802.3bz 10G standard which can be backward compatible with 1/2.5/5Gbps
- Support secure boot
- Support 1-pair bypass feature
- Flexible daughter boards design to support Wi-Fi, 3G/LTE and PoE (2-port 802.3at or 4-port 802.3af)
- Dual power DC inputs by Industrial Phoenix 2-pin type (9V-36V DC) and standard coaxial power type with screw (12V DC)
- Fanless mechanical design

## 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 CPUs. Daughter board design is flexible to support different features, like Wi-Fi, 3G/LTE and PoE. It is a universal platform which can be for below applications.

- SD-WAN Control Plane
- vCPE (Virtualized CPE)
- uCPE (Universal CPE)
- Firewall/IPS/AntiVirus
- VPN and network security appliance
- SMB routers
- Industrial IoT gateway
- Industrial networking appliance
- Vehicle applications

## Specifications

### CPU

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

### Memory

- On-board 128MB SPI Flash for system boot-up or other storage purpose.
- On-board 1GBytes SLC NAND flash. Can support up to 2GBytes.
- On-board DDR4
  - CN80xx: default 1GBytes 32-bit with 4bit ECC. Can support up to 2GBytes
  - CN81xx: default 2GBytes 64-bit with 8bit ECC. Can support up to 4GBytes
- On-board 4GBytes eMMC for system boot-up or other storage purpose

### 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 1-pair bypass feature

### Other I/Os

- One USB 3.0 Host
- One Micro SD Card reader with protective cover
- One RJ45 console

### Indicators and Buttons

- LEDs for Power, Alarm, WAN, DMZ, LAN(1~4), 10G, USB, SD and internet
  - With WiFi and LTE daughter board assembled: Optional LEDs for 2.4GHz(Wi-Fi), 5GHz(Wi-Fi) and LTE
  - With PoE daughter board assembled: Optional "PoE(1~4)" LEDs and one "MAX" LED
- One reset to default button
- One system reboot button

## ID/Mechanical



## Optional Daughter Boards

- Wi-Fi and 3G/LTE:
  - One PCIe slot for half/full-size Wi-Fi PCIe card via PCIe signal
  - One PCIe slot for 3G/LTE module via USB signal
  - One SIM card slot with Tray for Micro SIM card
- PoE
  - Supports 4-port PoE for up to 2-port 802.3at or 4-port 802.3af (65W)

## HW Monitor

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

## Power Input

- Standard coaxial power type with screw. (PoE only can be supported from this one)
  - External AC to DC desktop power adapter
  - Power input: 100V~240VAC
  - Power output: DC12V/65W (non-PoE). DC12V/150W(PoE)
- Industrial Phoenix 2-pin type
  - DC9V~36V

## Dimension

- 199.5 x 105 x 185 mm

## Weight

- 3.5Kg

## Installation

- Desktop and DIN-RAIL

## Environment

- Operation temperature: -40°C~70°C
- Storage temperature: -40°C~85°C
- Humidity: 5% to 95% maximum (Non-condensing)
- Fanless design
- IP40

## Certifications

- FCC class B
- UL
- CE/CB

## Ordering Information

- **DNA 1520 (P/N: 10L00152000X0)**  
CN8020 1.0G dual-core main board with Wi-Fi/LTE and PoE daughter boards
- **DNA 1520 (P/N: 10L00152001X0)**  
CN8020 1.0G dual-core main board only without Wi-Fi/LTE and PoE daughter boards
- **DNA 1520 (P/N: 10L00152002X0)**  
CN8120 1.5G dual-core main board only without Wi-Fi/LTE and PoE daughter boards



## Main Features

- 2 Gigabit Ethernet ports for data/power redundancy with PoE+
- Data protection in harsh environments
- Fully compliant with EN50155 (railway applications), EN61373 (vibrations & shocks)
- Wide temperature range support, -40°C ~ 70°C
- IP rating: IP 54 (NEMA)

## Product Overview

The iNAS 330 is extremely rugged-design network-attached storage (NAS), which was designed to provide high performance, reliability storage in harsh environments. Equipped with SSD storage technology, it is able to record the data correctly in harsh environments, such as oil exploration, transportation, and industrial automation..., etc.

Furthermore, it offers several data backup options. It supports FTP service and SMB/CIFS protocol for file sharing among cross-platforms.

Atlas OS™ provides real-time information, toolkit, widgets and easy mode of operation; software center provides more application extensions in the future, based on application requirements. iNAS 330 also can be networking surveillance storage, with high-resolution camera, the file system could be used on video recording which supports RAID 5 and also that offers the better data protection.

The iNAS 330 supports Power over Ethernet (PoE/PoE+) and follows the specifications in IEEE 802.3af/ IEEE 802.3at. It has dual PoE+ interface which supports power redundancy. The iNAS 330 is a fanless but high efficient for thermolysis, dust- and water-protected IP 54-rated chassis.

## Specifications

### Hardware Features

- Computer
  - Processor: dual Cortex®-A9 CPU
  - Storage: up to 3 x 2.5" HDD/SSD (optional)

### Ethernet

- 2 x Gigabit LAN ports for data redundancy (M12)
- 1 x Gigabit LAN port for management (M12)

### Button

- Reset button: reboot system/reset to factory default

### LEDs

- Power LED: power On/Off
- System LED: system status
- PoE/temp LED: PoE/temp status
- HDD LED: HDD1, HDD2, HDD3 (read/write/fail)
- LAN LED: 10/100/1000M x3 (link/activity)

### Power Requirements

- Input: PoE (IEEE 802.3af), or PoE + (IEEE 802.3at)
- Power redundancy

### HS Control

- Smart heating system

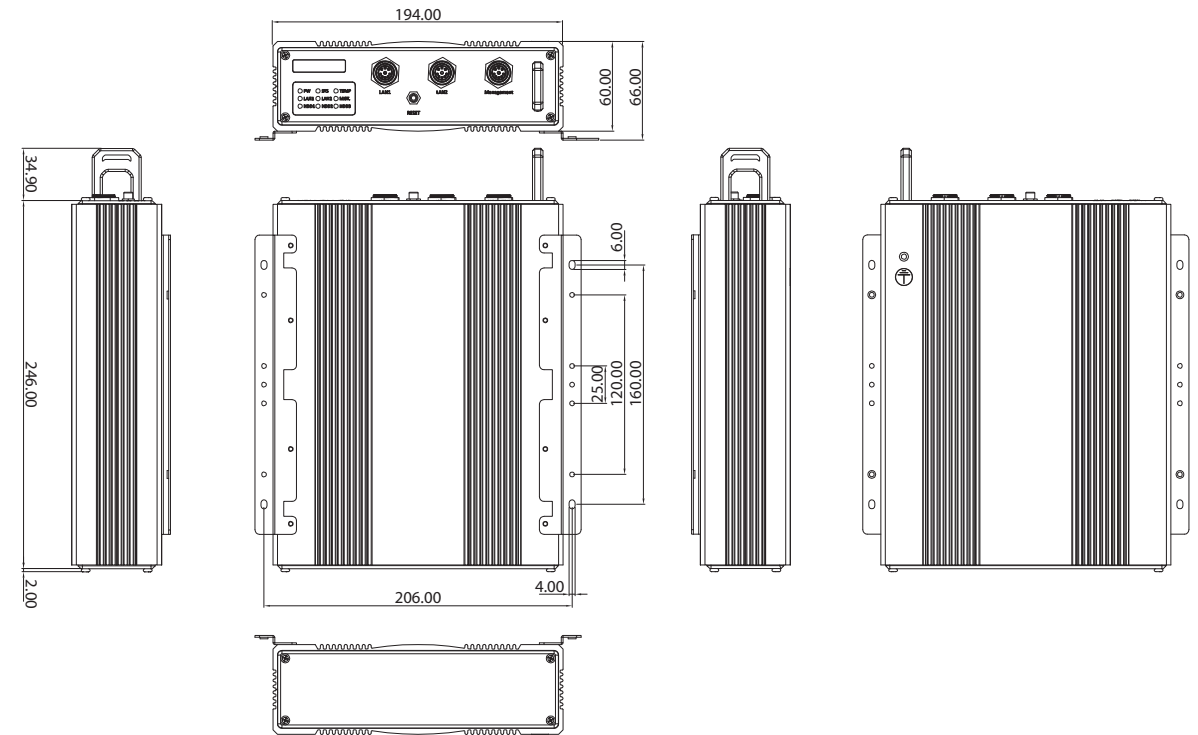
### Physical Characteristics

- Fanless
- Housing: metal, IP 54 protection
- Mounting: wall mount (optional)

### Environmental Specification

- Operating temperature:
  - 40°C ~ +70°C (-40°F ~ +158°F) For SSD
  - 25°C ~ +55°C (-13°F ~ +131°F) For HDD
- Storage temperature: -40°C ~ 85°C (-40°F ~ 176°F)
- Humidity: 5% - 95%, non-condensing

## Dimension Drawing



### Certifications

- FCC/CE
- RoHS/WEEE

### Compliance

- EN50155 (railway applications)
- IEC61373 (vibrations & Shocks)
- EN60950; EN61000 (immunity, emission)
- EN60068-2-30/IEC68-2-30 (environmental testing)

### Package Content

- iNAS 330 unit x 1
- QIG x 1
- CD x 1

### Optional Accessories

- Wall-mount-kit: 2 extra brackets and screws
- M12 cables: waterproof 8pin male M12 to RJ45 gigabit Ethernet cable, rated IP67

### System Dimensions

- 246mm (w) x 194mm (D) x 60mm (H) (9.69" x 7.64" x 2.36")

### Software Features

- OS: Atlas OS™
  - Web-based GUI (based on HTML5 and CSS3)
  - Centralized navigation panel and Dual-desktop system:
    - Navigation panel: For system configurations, with some toolkits on the toolbar
    - Home: For applications operations
    - Dashboard: For widgets exhibition
- APPs
  - Storage manager
  - RAID management (JBOD, RAID1, RAID 5)/Auto RAID rebuilding
  - Data vault
  - Log book
  - Software center

### Widgets

- System guardian
- Network surveillance

### Configurations

- Files and permissions
- Network and connectivity
- System and devices

### Toolkit

- Profile: account management
- Real-time notification
- System information
- Network status

### Client O.S. support

- Windows 7+, Windows Server 2003 R2, 2008, 2008 R2 & 2012 or later
- Linux & UNIX
- Mac OS X 10.7 or later

### Web Browsers Support

- Mozilla Firefox
- Mac Safari
- Google Chrome
- Opera

### Protocol

- HTTP/H - SAMBA 2 (CIFS), open SSL (TLS),FTP / FTPS
- HTTP 1.1 / HTTPS
- IPv4, Link Aggregation, DHCP, NTP, HTTP Authentication
- RESTful API

## Ordering Information

- **iNAS330 (P/N: 101G0033000X0)**  
Rugged-design industry storage (3-years service & maintenance)

**OS: Atlas OS™**

- Web-based GUI (HTML5/CSS3)
- RESTful APIs
- A centralized navigation panel and dual desktops system
  - Navigation panel: For system configurations, with some toolkits on the toolbar
  - Home desktop: For applications operations
  - Dashboard: For widgets exhibition
- Extensible by package installations

**Default Installed Packages:**

Configuration	
File Sharing Services	CIFS/SMB 2, FTP/FTPS TLS 1.0/1.1/1.2
Users	-
Network Settings	IPv4, DHCP, Link aggregation
Atlas Settings	HTTP/HTTPS 1.1, TLS 1.0/1.1/1.2
SNMP	v1/v2c, v3
Security	OpenSSL 1.0.2e
Locale Date/Time	RTC, NTP
Power Management	Wake-on-Lan, schedule on/off
System Recovery	-
Toolkit	
Profile	Multiple languages
Notification	-
Information	Model information, software version
Network	Interfaces connections
App	
Storage Manager	JBOD/RAID1/RAID5; ext4
Data Vault	Folder sharing: CIFS/FTP; File preview: Images
Log Book	-
Software Center	-
Widget	
System Guardian	-
Network Surveillance	-
Storage care	-

# ISA 1120A

Intel Atom® Processor E3800 Product Family BGA Type, with  
4 PCIe GbE LAN ports

**Main Features**

- Intel Atom® processor E3815, BGA type
- DDR3-1066 SO-DIMM memory, Max. 8GB
- Support 4 PCIe GbE LAN ports
- Support -40°C~70°C 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°C~70°C
- Storage temperature : -40°C~85°C
- 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°C~70°C



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