

A Passion
for Innovation



2020 Network and Communication Solutions

- Edge & Cloud Solutions
- x86 Network Application Appliances
- RISC Network Application Appliances

NCS

Network and Communication Solutions

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x86 Network Application Appliances
RISC Network Application Appliances

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Network Security Appliances

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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 eight global businesses, which are Industrial Mesh, Intelligent Digital Security, Intelligent Platforms and Services, Mobile Computing Solutions, Medical and Healthcare Informatics, Network and Communication Solutions, Smart Manufacturing, and Open

Robotics and Machinery. 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.



EMBOX	Industrial Mesh: Industry 4.0 Outdoor Wireless Solutions, IoT Sensor Networking, ARM/MCU Embedded Board Design and Manufacturing Services
GreenBase	Intelligent Digital Security: IP Video Surveillance Cameras, Mobile Cameras, ANPR/LPR Network Cameras, Panoramic Cameras, NVR Server Platform
IPS	Intelligent Platforms and Services: Smart City, Smart Retail, Digital Signage, Interactive Kiosks, Hospitality, Gateway, AI Edge and ODM Customization Services
MCS	Mobile Computing Solutions: Computerized Vehicle Telematics, In-Vehicle Panel Computers, In-Vehicle AI, Railway Computers, Vehicle Mount Displays, Modular Vehicle Computer Systems, In-Vehicle Networking Switches, Mobile NVR
MHI	Medical and Healthcare Informatics: Total Solutions with a Variety of Medical IT Systems
NCS	Network and Communication Solutions: Network Security, HPC, Telecommunications, Storage, SDN/NFV, Industrial Security
NexAIoT	Smart Manufacturing: iAT2000 Cloud SCADA and Enterprise War Room, Predictive Diagnostic Maintenance, IoT Edge Solutions, Industry 4.0 Project Execution
NexCobot	Open Robotics and Machinery: Industrial Robot Controllers, EtherCAT Motion Control, Smart M2M Solutions, Educational Robots, Smart Retail Solutions

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 eight 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

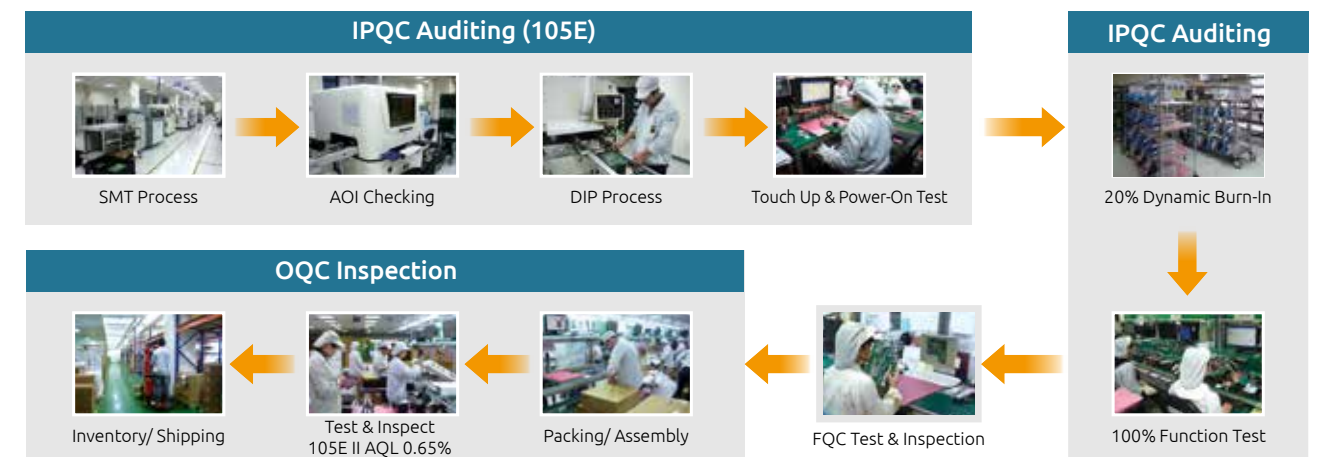
The manufacturing of delicate products requires a high-level technology, craftsmanship, standards and time-to-market efficiency. Over years continual investment in advanced manufacturing equipment and systemic training programs has enabled NEXCOM to obtain optimal manufacturing efficiency.

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.



Global Fulfillment Service

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

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



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.

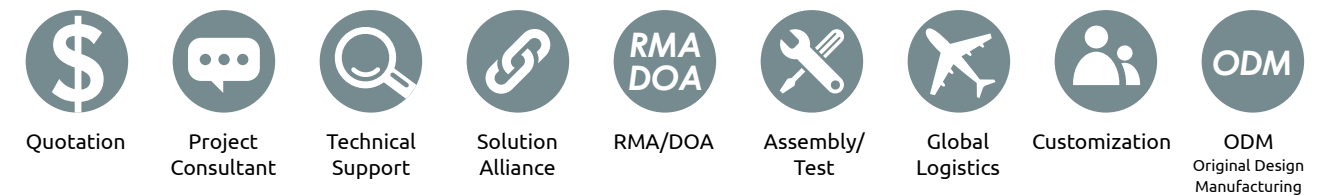


Service Pledge and Connection

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

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

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

Design and Manufacturing Services (DMS)

Customized Service for Tailor-Made Solutions

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

Unique DMS Features

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

Prompt Time-to-Market



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

Flexible Design and Manufacturing



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

Rigid Quality Control



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

Extensive DMS Experience



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

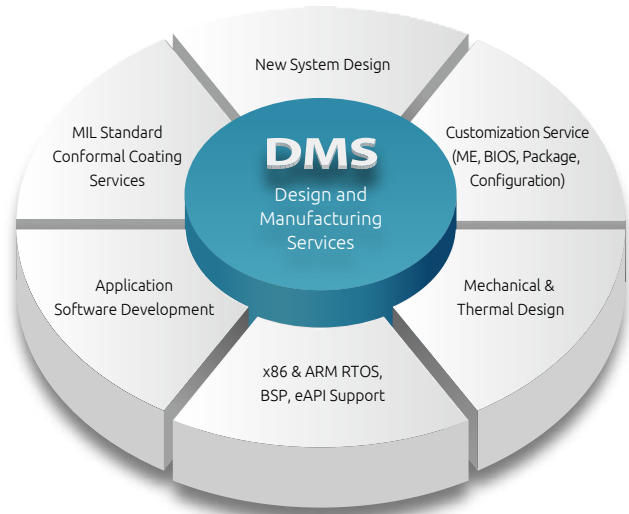
Scope of DMS Work

Original Design Manufacturing Service (ODMS)

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

Customization to Order Service (CTOS)

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



Service of DMS

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

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

Professional Conformal Coating Solution

Get Ruggedized with NEXCOM Cost-Effective Conformal Coating Service for 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.

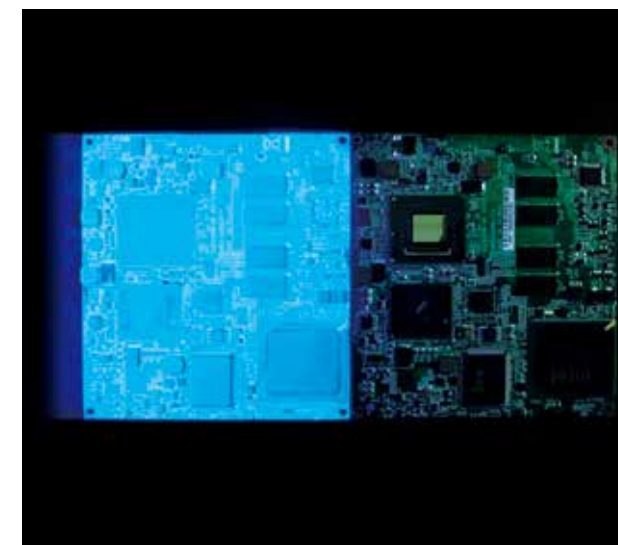
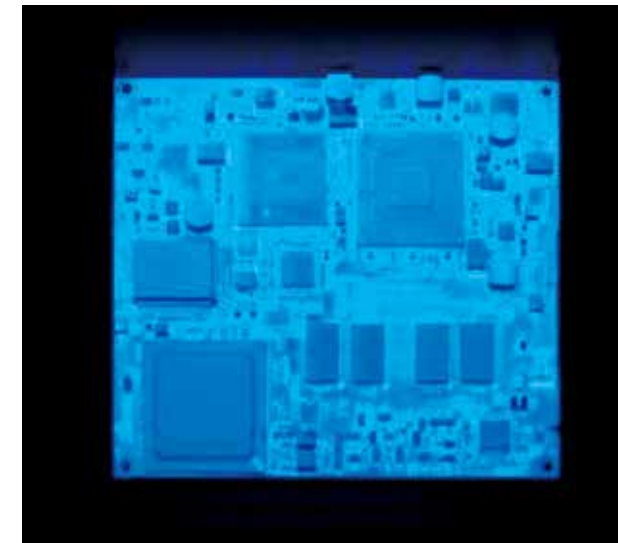
Smart Masking Technology

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

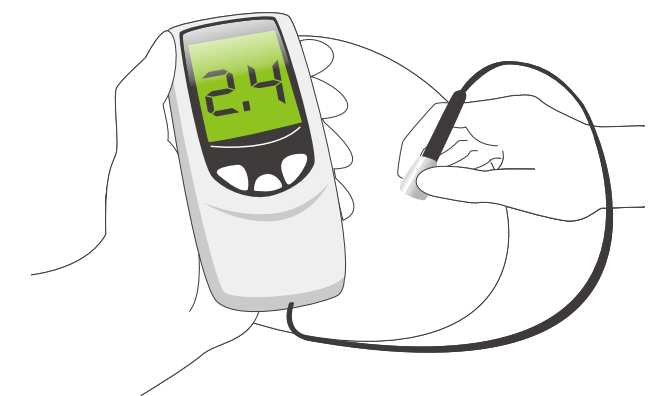
NEXCOM's deflux cleaning system is also equipped with an onboard cleanliness testing system which allows a user to program a desired cleanliness level. This assures that cleanliness levels will be consistent batch after batch.

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.

NCS's Core Competencies



Hardware Technology

To meet the needs of different network applications, the intelligent network platform must be able to adapt to different network configurations, creates flexibility and scalability in computing power and availability. Therefore NEXCOM hardware technology encompasses below six major concepts:

High-Performance Computing

Computing power is the core of the network applications. NEXCOM offers a wide range of computing platforms, from RISC

platform and low-end x86 Atom, from Core i CPUs to high-end Scalable Xeon Processors to meet different computing power needs.

Network Technology

Network technology is the key to intelligent network applications. Technology embodied in the intelligent network platform designed by NEXCOM forms a complete range of network interface and throughput. NEXCOM invests on cutting-edge network technologies and will continue to lead this industry.



Acceleration

The very basis of network application comes down to process packets. In some network applications such as VPN, forwarding, deep packet inspection, etc., the acceleration engine that designed for network packet processing is critical to enhancing overall performance. NEXCOM is capable of integrating Intel® QAT technology, Ethernet switch and other kinds of acceleration engine.

Remote Management

It is vital for IT & OR personnel to efficiently manage and maintain a large number of network platforms deployed in different locations and keep the operational costs to the minimum. In light of this, NEXCOM integrates various remote management technologies, such as Intel® AMT vPro™, IPMI, etc., to provide customers with management interfaces for In-band and out-of-band, significantly reducing the operational burden and maintenance costs of onsite IT personnel.

Availability

NEXCOM's intelligent network platform consists a WDT (Watch Dog Timer) mechanism, which allows soft-reboot with software functions. NEXCOM also integrates LAN bypass, Dual BIOS, RAID Storage, Hot Swappable Fans, and PSU redundancy, and other technologies to maintain service availability.

Modular Design

Depending on different user cases, network configuration varies. It is possible to combine high and low bandwidth and different port numbers on the same platform. NEXCOM specializes in modular design, providing a comprehensive series of network modules, when incorporated into NEXCOM's intelligent network platforms, providing maximum flexibility to optimize its network configuration for their application scenarios.

Software Technology

NCS has a wealth of experience in fulfilling customers' various software customization requirements across both horizontal and vertical integrations. From board level to application layer, from x86 to RISC, from in-band management to out-of-band management, NCS provides optional features and SW/FW designs in creating unique appliances for customers.



We have comprehensive R&D teams for FW and SW development, including CPLD, MCU, BIOS, Linux kernel drivers, system software, and application software. We also develop embedded systems on various distributions, such as CentOS, Ubuntu, OpenWrt, BMC, and, especially, self-developed OS.

Our vertical experience in HW-FW-SW design helps us perform better control-flow analyses on system applications, while horizontal experience in appliance development enables us to truly understand the necessities of different system hierarchies. We also provide high-level system views and design analysis to help customers find their ideal solution.

Software Solutions

NCS has countless software solutions to fit customers' needs, from low-level FW mechanisms and device drivers, to comprehensive OS solutions and integration support.

Atlas OS™ – NCS' complete system solution

Atlas OS™ is designed as a Linux-based network appliance OS that provides comprehensive system software and hierarchical design from board driver to front-end GUI. The well-defined system architecture can be adapted for different platforms or



virtualizations, combine with different peripherals, and collect various applications to become a specific customized appliance or network function.

Atlas OS™ has a modern management webtop UI which is highly modular and developed for single-page application (SPA). With a quick, smooth, interactive, and user-friendly experience, its dual desktop design decreases front-end loading and separates workspace and dashboard to reduce unnecessary background operational noise.

Atlas webtop not only brings the desktop operation experience to end users but also the ability to manage installed applications. Furthermore, users can construct each Atlas device as a specific appliance by installing different packages.

Currently, Atlas network modules such as PoE, L2 switch,

and NAS are available, with more features in development. Combined with Atlas network functions and applications, Atlas OS™ can be a physical appliance (i.e., NAS and PoE switches) or VNF for providing container- or VM-based services like DHCP and SNMP.

The flexible and modular design of Atlas OS™ also makes fulfilling customization requirements convenient: simply select which packages to install.

One of the most important features in Atlas OS™ is support for RESTful API, which enables communication among devices and application services, as well as distributed environment deployment and management. Our management webtop apps use RESTful API to connect backend or remote devices so that users can conveniently use one webtop to manage different devices or VNFs in each Atlas app.



Out-of-Band Management with BMCs

The key to OOB management for NCS' mainstream/ performance solutions is the baseboard management controller (BMC). The BMC is mainly used to monitor system states and record information (e.g., fans, temperature, voltage), as well as to manage simple problems when they occur (e.g., to reboot). In addition, you can also use BMCs to update BMC/BIOS/CPLD

firmware. What's more, IPMI commands or SOL/KVM functions can allow users to remotely operate, diagnose, and repair systems without even entering data centers (e.g., installing the OS by mounting the optical disk drive on the BMC via KVM). NCS' BMC also supports Dual BIOS architecture, which effortlessly operates through the solid integration of HW/BIOS/CPLD/BMC. It also synchronizes with hardware design for customizing IPMI

OEM Commands (e.g., failure LED). NCS is excited to announce that its BMCs are currently available in x86 solutions and is currently working towards supporting more server products, along with RISCs.

Third-Generation Network Bypass

NCS has just launched the third generation of its Ethernet bypass. The network bypass solution provides intelligent protection to network security equipment, such as firewalls, IPS, DPI, and UTM. Its end goal is to protect enterprise network traffic and services from the risk of a network being congested – or even unreachable – due to appliance issues, external attacks, and power failures, among other reasons.

The newest network bypass function is a comprehensive upgrade that keeps system software developers' needs top of mind. The innovative, highly integrated HW-FW-SW design completely consolidates software and hardware protection mechanisms, as well as more wide-ranging functions, to deal with system software crashes and hardware device failures, not to mention offers friendly settings, control interfaces, and

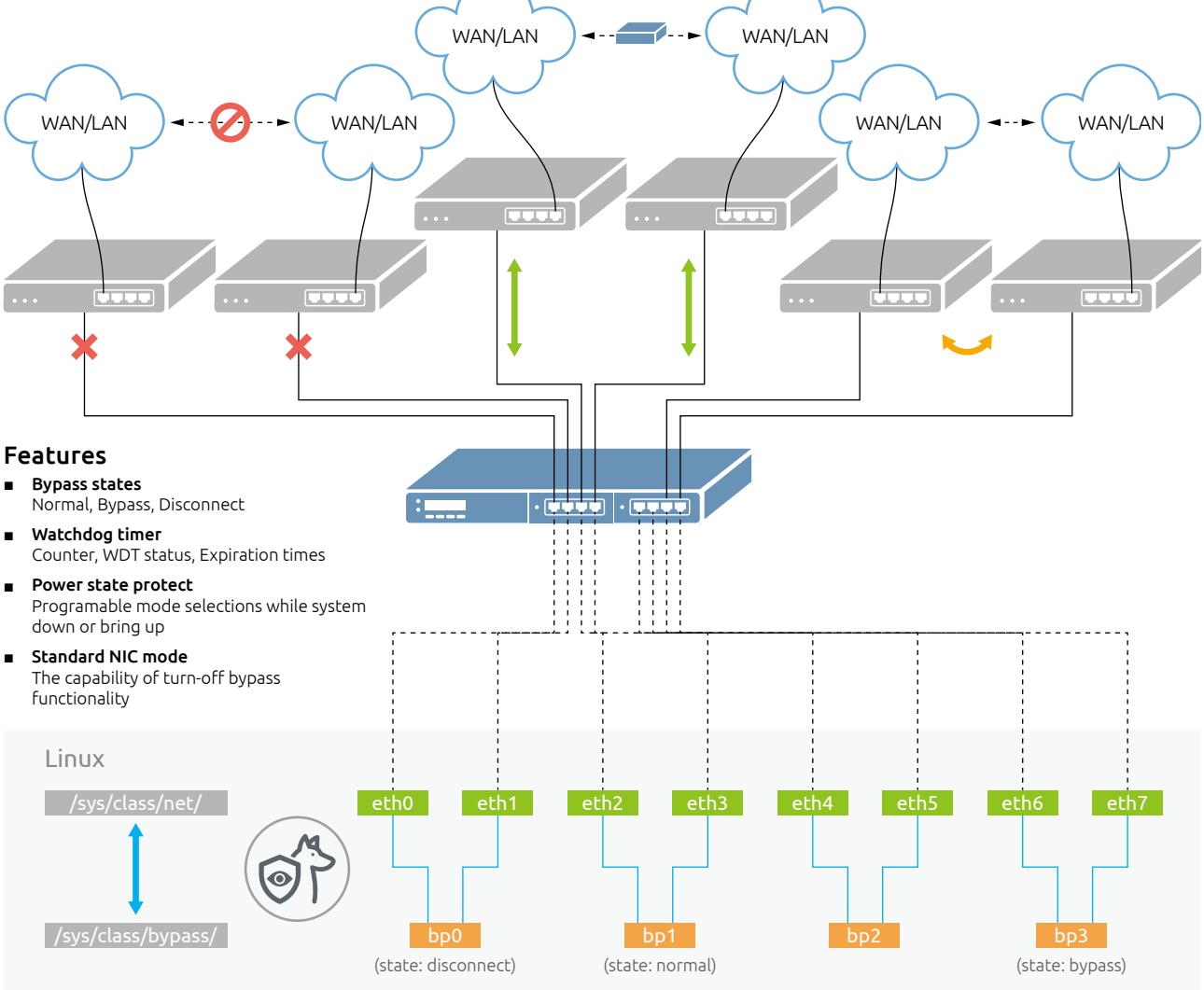
extensibility for system developers.

The upgraded bypass' capabilities also include full triple states, friendly watchdog timer, enable/disable functionality, and complete statuses. The new HW architecture of bypass LAN modules removes any motherboard dependencies and creates consistent behaviors and experiences. The new-generation bypass is also a solution which has SW hooks that adapt to Linux sysfs stacks and establishes relationships between OS bypass segments and net devices. Lastly, it comes with kernel device driver and library.

Linux Driver Support

NCS provides support for fine-tuning and porting of existing drivers to resolve platform issues, upstream bugs, and other special requirements. For system and application developers, we also provide drivers for specific HW designs that are adaptable for Linux stack APIs, avoiding the inconvenience of self-defining their own interfaces. This allows developers to effortlessly develop device drivers straight from a universally compatible Linux stack library.

Network Bypass



Paradigm Shift: From Purpose-built Appliances to NFVI



Traditional IT infrastructure was built using dedicated devices to meet functional network needs and not much else. Examples include dedicated firewalls, load balancers, and routers. However, with the rapid growth of IoT and mobile networking devices, combined with the gradual deployment of 5G networks, more diverse and challenging types of data traffic have emerged, and the importance of information security has increased exponentially. New and complicated usage cases and applications make new deployments, upgrades, and replacements of network functions and components more frequent occurrences than ever before. Thus, traditional IT infrastructure building methods cannot meet the demands presented by such rapid changes.

Challenge: Old IT infrastructure models no longer work

To illustrate, take an e-commerce service that leverages traditional IT infrastructure. It blocks and filters malicious traffic at the front end with dedicated firewalls. One day, said e-commerce company launches a popular promotion program, leading to a dramatic increase in network traffic that far exceeds the handling capacity of its existing firewall. As preparations to handle the increase were not made in advance, buying and deploying additional firewalls to expand capacity in time will be very difficult. Even if the e-commerce company can

somehow manage to buy and deploy additional firewall devices, once their promotion ends, those dedicated appliances will sit idle as traffic goes back to pre-event levels. This case illustrates the rigidity of traditional IT network infrastructure, which has become a limitation for the growth of business revenue and cause for increased operating costs in today's rapidly changing business environment.

Solution: NFVI for a more dynamic environment

There exists a way to efficiently pool and distribute the computing power of IT infrastructure through standardized hardware. Users can flexibly configure the capacity of various network functions according to real-time needs. For example, for more firewall capacity, infrastructure can allocate additional computing resources to firewall defenses, not in a timeframe of days but minutes, with no additional hardware required. Then the system auto-assigns computing resources to other functions should firewalls become a lower priority. This kind of intelligent, centralized, yet highly adaptive topology makes up the architecture known as NFVI (Network Function Virtualization Infrastructure).

NFVI architecture uses standardized general-purpose hardware to simplify IT operation and maintenance. Shared computing

power reduces investment in dedicated hardware. Flexible virtualized network function deployment responds quickly to changing business conditions and significantly reduces hardware resource waste and idleness.

Conclusion

NEXCOM proudly introduces the NSA 7146. The NSA 7146 offers a 2U rackmount network appliance based on the Intel® Xeon® Scalable processor family and delivers a workload-optimized platform for NFVI. It comes ready with the new 2nd Generation Xeon® Scalable processors (codenamed Cascade Lake-R) with increased, built-in AI acceleration and hardened security. The NSA 7146 features enhancements to computing performance through dual scalable processors and flexible NEXCOM Ethernet modules rated for 1GbE up to 100GbE.

The embedded C627 chipset supports Intel® QuickAssist Technology (Intel® QAT) to accelerate heavy network

encryption/decryption from the CPU. The NSA 7146 also includes IPMI 2.0 remote management and swappable system fans for simple operation and easy maintenance. The CRPS redundant power supply additionally prevents service interruption caused by single PSU failures. The appliance has further completed verification as Intel® Select Solutions for NFVI and vCDN. Thus, the NSA 7146 is an excellent option for deployment of Network Function Virtualization Infrastructure in a fast-changing business world.

Notes:

CDN stands for "Content Delivery Network," which provides video services with low latency. For this specific purpose, Intel® has published a list of Intel® Select Solutions for vCDN. All verified solutions have completed a list of CDN test sets and meet certain criteria, including OpenSSL speed benchmarks, video transcoding, and video distribution. The ISS for vCDN program helps users find suitable platforms to build their CDN infrastructure. NEXCOM is proud to be a long-term partner of Intel®.

Intel® Select Solution NSA 7146 HW Configuration



NSA 7146

2U Rackmount Performance Appliance w/ Dual Intel® Xeon® Scalable Processor and 8 x LAN Modules



Module (P/N)	NSA 7146 (P/N: 10S00714600X0)
Processor Family	Dual Intel® Xeon® Scalable
Cores	Max. 48
Memory (Max.)	512GB
LAN Module	8
Remote Management	IPMI 2.0 management
TPM 1.2/2.0	Yes
Intel® VT-x	Yes
Intel® VT-d	Yes
Intel® AES-NI	Yes
Intel® QAT	Yes
Intel® Select Solution	NFVI forwarding platform NFVI vCDN

Edge Computing and Intel® Select Solutions for uCPE



Edge Computing

Over the past few decades, cloud computing has experienced extensive development and increasing application due to its high cost efficiency and flexibility. Much of the growth in cloud services has been achieved through consolidation, in which computer network management functions operate in a centralized manner. With the rapid development of Internet of Things applications, conventional centralized cloud computing began encountering challenges such as high latency, low spectral efficiency (SE), security risks, and non-adaptive machine communication.

To address these challenges, a new technology called edge computing is driving a trend that shifts the function of centralized cloud computing to devices residing along the so-called edges of distributed networks. Several edge computing technologies have evolved to offer decreased latency, improved SE, and support for comprehensive machine communication.

What were until recently nascent technologies and applications are now increasingly driving a shift in the computing and communication landscape that moves the responsibilities of centralized cloud computing onto edge device networks. Software defined networking (SDN) and the associated concept of network function virtualization

(NFV) are emerging solutions for networks. In particular, NFV enables edge devices to provide computing services and operate network functions by creating multiple virtual machines (VMs). Moreover, the ultra-low latency offered by edge computing goes well with 5G communications, as high speed radio access networks (RANs) make big bandwidth and low latency absolute must-haves.

NEXCOM TCA 5170 1U rackmount products are designed with ideal features for universal customer premises equipment (uCPE) platforms and are a verified Intel® Select Solutions for uCPE. They expand customer service portfolios in ways that solve the challenges mentioned above.

Meanwhile, as a 1U network security appliance, the TCA 5170 helps medium enterprises build a securely connected workplace and delivers significant performance enhancement when running multiple virtual network functions in software defined wide area networks (SD-WANs). Based on the Intel® Skylake-D Xeon® SoC (BGA type), the TCA 5170 packs excellent performance per watt, QuickAssist Technology, Intel® Virtualization Technology (Intel® VT), scalability, vulnerability management solutions, accelerated data cryptography, and server-grade LAN functions, all in a small form factor. The TCA 5170 network security appliance creates safe environments for network communications to connect employees and businesses.

Intel® Select Solutions for uCPE

As consumers demand more sophisticated services over increasingly advanced networks such as cloud, mobility, IoT, and AI, seeking solutions to work toward network virtualization for communications and cloud services providers is becoming more challenging.

Meanwhile, small business owners also encounter connectivity issues when adopting current consumer-graded IT communication appliances for business purposes. This problem persists through the transition of IT infrastructure from traditional standalone communication appliances (such as load balancers, edge routers, industry firewalls, and VPNs) to virtualized appliances, where a great variety of network functions run on general purpose servers.

NEXCOM's universal customer premises equipment (uCPE)

platform products are excellent solutions for expanding customer portfolios in a world transitioning to 5G and looking beyond. As more speed and greater responsiveness become even more imperative, NEXCOM solutions step up to the challenge.

Intel® Select Solutions for uCPE provide a foundation for the development of universal customer premises equipment products with a solution reference design and performance verification. Certified systems bring the powerful performance of Intel® Xeon®-D processors to edge communication service provider networks for agile provisioning.

As a verified Intel® Select Solutions for uCPE, NEXCOM products offer a faster and more efficient deployment path for trustworthy and reliable infrastructure configurations that support virtual network enhancements and help meet emerging customer workload demands in network communications.

Intel® Select Solution TCA 5170 HW Configuration



TCA 5170

Intel® Xeon®-D 2100 (Skylake-D) SoC Processors, 1U Rackmount with 8GbE Copper, 4 x 10GbE Fiber, 2 LAN Module



Module (P/N)	TCA 5170 (P/N: 10CA0517000X0)
Processor Number	Intel® Xeon® D-2100 series processor
Memory	8 x 16GB DDR4 2666 DIMM ECC/non-ECC memory, max. 256GB
Networking	2 Pairs LAN bypass (8 x 1GbE integrated 2 x Intel® Ethernet controller I350 LAN chip)
Storage	1 x Intel® Solid State Drive Data Center @ 480 GB 1 x 2.5" HDD bay 1 x M.2 2280 length M-key socket
Intel® QAT	Yes
Intel® Select Solution	uCPE uCPE with Cent OS uCPE with ADVA Ensemble Connector
TPM 1.2/2.0	Yes
Front I/O	1 x USB 3.0 1 x Micro USB type console port 1 x Management LAN port 8 x Copper RJ45 ports 4 x SFP+ fiber ports 1 x 16x2 LCM (optional) 2 x LAN module slots (optional; refer LAN module list) 4 x SMA connector holes for RF antenna cable

Artificial Intelligence in Edge Computing



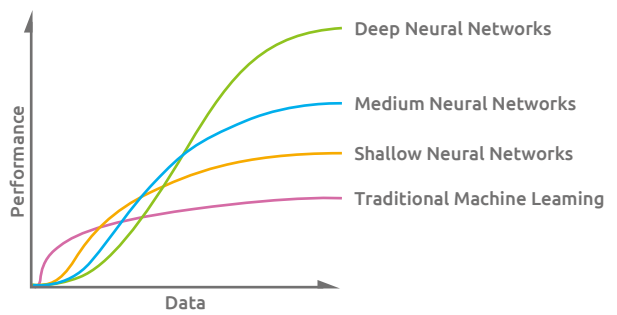
The invention of the first computer also launched the development of AI (Artificial Intelligence). In the 1980s, the expert system began to be popular, as computers used knowledge from a large number of experts as input. The computer judged answers according to users' questions. Though the experts' knowledge was vast, it was still impossible to input every bit of knowledge into computers, so the expert system became impractical in the end.

The advancement of semiconductor technology has increased computing power at the same time that the cost of semiconductors has decreased. Similarly, new AI technology is on the rise. Artificial neural networks based on the advantages of semiconductor technology also provide excellent environments for further development of various fields, such as autonomous vehicles, dialogue robots, medical illness detection, network security, smart manufacturing, and more. Overall, AI has the potential to deliver an additional global economic value of around \$13 trillion by 2030.

Current AI mainly uses artificial neural network technology to perform deep learning and applies the deep learning model to specific applications. There are several characteristics that need specific consideration.

First, the computational characteristics of the artificial neural network: when both the amount of data used for learning and number of layers of the neural network are greater, the performance of the learning model is better. Artificial neural networks need to handle big data and

model parameters through an enormous amount of matrix computation. Therefore, computing platforms suitable for artificial intelligence need to have powerful parallel computing capabilities and support a substantial amount of memory.



Secondly, there are two steps to applying an artificial neural network to a specific case. The first is to learn a usable model from big data (AI training) and then deploy the model on-site (AI inference). In training, because it requires a huge amount of computing power, it repeatedly adjusts model parameters, mostly in the cloud data center. Once a viable model is trained, it can be deployed to the site. There are many ways to deploy the trained model: in the cloud, to the endpoint, or to the edge. These deployment methods have their individual advantages and disadvantages.

When the inference model is deployed in the cloud's data center, the advantage is that it's centralized and easy to manage and maintain. The disadvantage is that all data must be uploaded to the cloud to be processed. When the amount

of data needing to be uploaded is very large, the cost of the uplink bandwidth will be considerable, and, secondly, when the inference model is deployed in the cloud, the result of the backhaul inference will be delayed. For some critical applications, the delay is not only inconvenient but also more likely to cause damage.

When the inference model is deployed to the endpoint, for example, the embedded box PC deployed at the endpoint has the advantage of low latency, but the disadvantage is that a large number of machines need to be deployed in the endpoints to cover the service area, compounding equipment costs. Spread out, hundreds or even thousands of inference embedded PCs become a big challenge in terms of operation and maintenance.

Edge computing combines the advantages of both of the previous methods, while offering low latency and cost, as well as ease of operation and maintenance. Its basic concept is inference engine deployment close to and within the same local area network as the endpoints. Purchasing uplink bandwidth services through the ISP is unnecessary, thus reducing data upload costs. At the same time, because the edge computing platform and endpoints are in the same local area network, it

greatly reduces latency, and deployment is also centralized. Less equipment needs deployment, making it easy to control and upkeep.

In view of the AI inference model's deployment requirements, NEXCOM introduces NSA7141, a high-performance edge computing platform based on the Intel® scalable processor family. The CPU provides up to 28 computing cores and 258GB of memory. For the model's parallel computing requirements, the NSA7141 supports PCIx16 slots for GPU cards, which are widely used in AI inference accelerators.

In terms of operation and maintenance, the NSA7141 is equipped with two management ports, which can be used for remote management, and redundant PSUs to avoid service interruptions caused by single power failures. In addition, the NSA7141's flexible LAN module design can be used with NEXCOM's own LAN module series, which provides a wide range of network bandwidths with different interfaces. The LAN module card includes a LAN bypass function as a layered, backup mechanism. When the main system stops service for any reason, this function switches data to another system, thus maintaining service availability and assisting customers in quickly deploying AI services.

Intel® Single Xeon® 1U Rackmount NSA 7141 HW Configuration

NSA 7141

Intel® Xeon® Processor Scalable Family, 1U Rackmount with 4 LAN Module & PCIe x16 Extension



Module (P/N)	NSA 7141 (P/N: 10S00714102X0)
Processor Number	Intel® Xeon® processor scalable family
Memory	8 x DDR4 RDIMM, support 2133/2400/2666, up to 256 GB 2 x Intel® Optane™ DC persistent memory (Apache Pass)
Networking	Optional LAN module Support 1GbE/10GbE/25GbE/40GbE/100GbE link speed LAN bypass
Storage	2 x 2.5" Internal SSD/HDD 1 x M.2 2242 B-Key 1 x M.2 2242 B-Key
Front I/O	1 x Micro USB type and 1x RJ45 type console ports 1 x VGA 2 x Management LAN port 2 x USB 3.0 port 4 x LAN module slots (x8, x8, x8, x8 or x16, x8, x8)
Internal I/O	1 x PCIe x16 expansion slot

RISC (ARM/MIPS/PowerPC) SoC Capabilities



Over the last decade, NEXCOM has gained a strong foothold across the world in the area of RISC SoCs with our quality design and exceptional manufacturing capabilities, especially critical nowadays as leading network security companies deploy millions of boxes powered by SoCs.

We have dedicated team members in Sales, Product Management, and R&D ready to support our customers. Specifically within our R&D team, each member has rich design experience in various types of products – some with even more than 20 years.

Wide Range of Capabilities in a Changing World

NEXCOM’s RISC SoC capabilities are not limited to network security appliances. Our products range from module to 5U, commercial-grade to industrial-grade, with fan to fanless, and wired to wireless. These products include 40G Ethernet switches, 10G-EPON OLT with 100G Ethernet switch board, industrial-grade firewalls and NAS, network appliances with Wi-Fi and LTE support, network storage with two to 24 bays, and even vehicular multimedia with touchscreen, among others. We’re capable of designing and making Wi-Fi and PoE modules in-house or, for the utmost savings in cost and space for our customers, developing options such as on-board PCBAs. Our professional know-how in installing

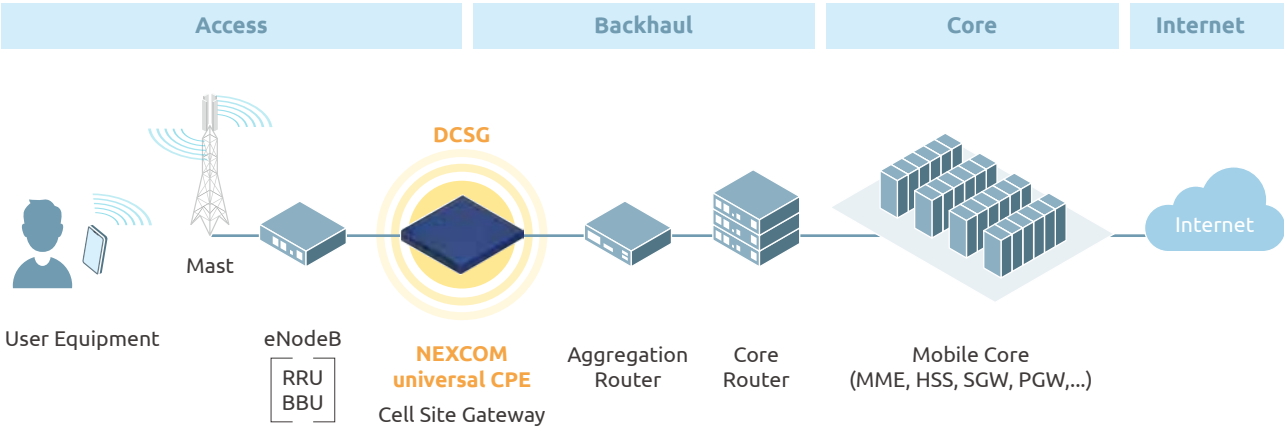
multiple Wi-Fi/LTE/GPS antennas on a compact desktop chassis also helps customers resolve critical issues among Wi-Fi/LTE/GPS systems. All of these capabilities help address the complexities of the 5G era’s fluctuating IT infrastructure.

Strategic Partnerships Help Us Excel

Our strategic partners include NXP, Marvell/Cavium, Broadcom, Intel, Qualcomm, and Amazon/Annapurna, all top-of-the-line in network communications technology. We at NEXCOM have positioned ourselves as part of the driving force to transform network infrastructure and have thus been actively involved in developing the IoT network ecosystem. We’ve not only taken the lead in technological innovation by developing 100G/40G/25G Ethernet but are also especially experienced in RF technology for Wi-Fi/LTE designs. NEXCOM has always been well known for its industrial-grade design, such as in rugged fanless appliances for various applications.

Why NEXCOM?

As our company slogan states, we’re committed to customer success. In order to deliver such an important commitment to our clientele, the Network and Communications Solutions Group continues to be passionate about innovation not only in technology leadership, but also in other equally important



factors across the entire value chain, such as product life cycle management, support and services, global logistics, and supply chain management. All things considered, NEXCOM is a trustworthy partner that will help you to gain a competitive edge amidst the ever changing landscape of the IT world.

NSA 6310 is an open uCPE based on the Layerscape® LX2160A processor, with sixteen 64-bit ARM Cortex-A72 cores. The cores, in combination with integrated hardware acceleration for cryptographic processing, virtual forwarding, and traffic

management, provide support for multi-gigabit routing and network services.

The NSA 6310 white box also offers two SerDes slots, with a choice of four dedicated 25G, 10G, and 1G LAN modules, for customers who need multiple I/Os to satisfy different applications; FPGA/GPU support to extend computing applications, board manager control (BMC) module and IEEE 1588 PTP feature for server-grade network appliances; and optional PoE support for edge deployments.

NXP® Layerscape® Solution



NSA 6310

1U NXP® Layerscape® LX2160A SoC Processors, 4 x GbE RJ45 and 2 x SerDes Module Slot



Module (P/N)	NSA 6310 (P/N: 10S00631000X1)			
Processor Number	NXP® Layerscape® LX2160A processor			
Memory	4 x DDR4 3200 ECC-DIMM sockets, up to 64GB			
Networking	2 x SerDes LAN modules support 25G/10G/1G			
Storage	1 x 2.5" internal SSD/HDD bays 1 x M.2 2280 B Key, supports SATA signal			
PoE at/af Spport	Yes			
IEEE1588 PTP	Yes, optional			
TPM 2.0	Yes, optional			
Remote Management	Yes			
Arm Server Ready	Planning			
Dual Boot	Yes			

LAN Module	NSK 7400	NSK 7100	NSK 7602	NSK 7601
Speed/Port Type	25G SFP28 x 4	10G SFP+ x 4	10G RJ45 x 4	1G RJ45 x 4

* Only for use with NSA 6310

Security Hardware Increases Efficiency and Protects Networks



NEXCOM's security hardware platform, ISA 1120A, copes with software-design flexibility while offering shielded industrial network protection. Leveraging Intel® x86 architecture, security software vendors can shorten time to market against escalating industrial cyber threats. Layered protection combined with accelerated encryption/decryption can be deployed with industrial-grade ISA 1120A which helps factories build secure network access for remote asset monitoring, maximized system uptime, and operating reliability.

The security hardware allows fast software design, development, and time to industrial markets. Based on Intel® Atom™ processor E3815, ISA 1120A offers a design-friendly environment, thus lowering efforts and costs to industrial markets with tailor-made security software protection.

The security hardware also helps build secure VPN access for remote monitoring, which leads to real-time supervision of operations and optimized production efficiency over the factory floor. SSL VPN encrypts data before transmission while decrypting it at the authorized end to prevent eavesdropping and tampering. Intel® AES New Instructions (Intel® AES NI) speeds up data encryption and decryption with enhanced efficiency. Besides secure networking, ISA 1120A supports one LAN Bypass port for fail-safe access. Abnormal equipment operating can be remotely detected and fixed in

time, thus extending uptime.

The firewall functionality can also be added in the security hardware platform. For instance, rigid whitelists can be created to authorize access to specific programs and IP addresses. Combined with VPN, remote access to supervision of operations and data can be implemented securely, fending off performance deficiency caused by cyber attacks.

To ensure operating reliability in demanding industrial applications, the security hardware has wide-temperature durability from -40 to 70 degree Celsius. Fanless design eliminates overheating from dust ingress while wide voltage tolerance from 9 to 30V DC avoids system damages from unstable power supplies.

Industrial Gateway Solutions

ISA 1120A

Intel Atom® Processor E3800 Product Family,
with 4 PCIe GbE LAN ports,
1 pair bypass, Fanless &
DIN Rail



Network & Communication Solutions: Your Reliable Partner for Future Networks

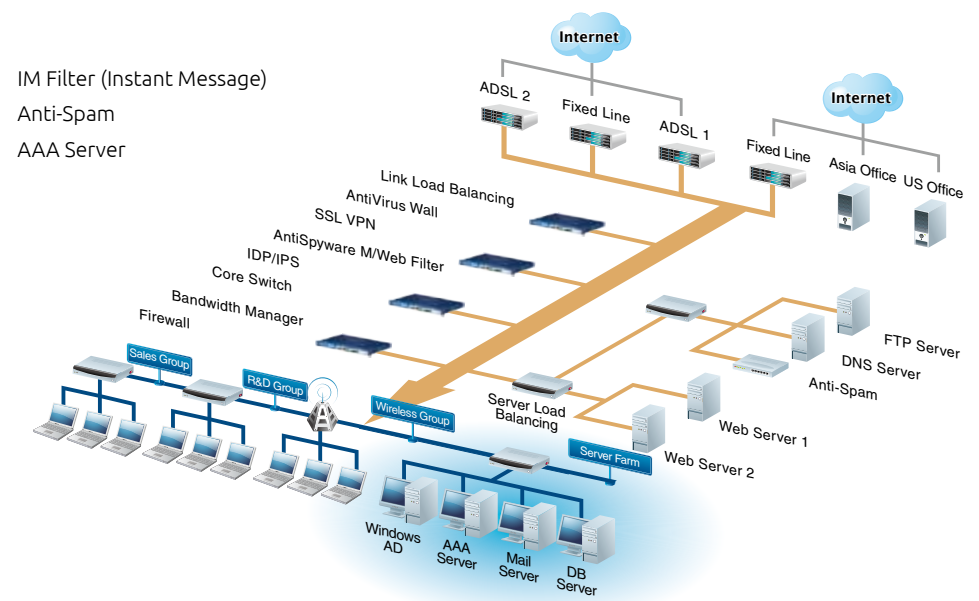


Is Your Info Protected?

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

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



2020 New Products

NSA 7146

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

- 2U, 19" Rackmount,
- 2nd Generation Intel Xeon Scalable Processors
- Intel® QuickAssist technology
- Max. 512GT/s bandwidth via 8x swappable LAN modules
- IPMI supported for out-of-band management
- Design for 24x7 services via swappable SSD, fan and power supply modules



NSA 6310

1U NXP® Layerscape® LX2160A SoC Processors, 4 x GbE RJ45 and 2 x SerDes Module Slot

- NXP® Layerscape® LX2160A SoC, BGA type
- 4 x DDR4-3200 ECC-DIMM
- PCIe Gen3 x8 with SR-IOV
- 2 x SerDes LAN modules support 25G/10G/1G
- Optional IEEE1588 PTP
- Optional BMC support with Management port
- Optional PoE at/af support
- Operating system: NXP® LSDK (Ubuntu userland)

NSA 7141

Intel® Xeon® Processor Scalable Family, 1U Rackmount with 4 LAN Module & PCIe x16 Extension

- Single Intel® Xeon® processor Scalable family
- DDR4 2133/2400/2666 ECC & REG, up to 256GB
- Modular design supports 4x LAN Modules
- PCIe x16 Expansion slot on rear side
- Internal 2.5" SATA HDD/SSD
- 1+1 ATX Redundant Power Supply
- Optional TPM Module



TCA 5170

1U Rackmount uCPE w/ Intel® Xeon® Skylake-D SoC Processor, 8 x GbE RJ45, 4 x 10GbE Fiber and 2 x LAN Modules

- Intel® Xeon® D-2123IT SoC, BGA type
- 8 x DDR4-2400 RDIMM
- 1 x 2.5 SSD, 1 x M.2 2280
- 8 x GbE RJ45 & 4 x 10GbE Fiber
- 2 x LAN modules
- Redundant power supply



NSA 5181

Intel® Xeon® (Coffee Lake-S) Processors (LGA1151) 1U Rackmount with 4 LAN Modules

- 1U rackmount workstation system
- Intel® Xeon® (Coffee Lake-S) processors (LGA1151)
- Support DDR4 2666 DIMM x 4
- Support IPMI 2.0 remote management
- Four LAN module slots
- Support LCM module (optional)
- Support internal 2.5", mSATA and M.2 storage



DTA 1164

Virtualization Networks and Software-Defined Appliance w/ Intel Atom® C3000 Series SoC, BGA type Processor, 8 x GbE RJ45 (co - layout design to support 2 x SFP ports)

- Intel Atom® C3000 Series SoC, BGA type
- 1 x DDR4-2400 SO-DIMM
- 1 x M.2 SATA 2242 M Key
- 8 x GbE RJ45 (reserve co - layout design to support 2 x SFP ports)
- 1 x M.2 3042/3052 B Key for LTE/5G support (Sub 6G)
- 1 x mPCIe slot for Wi-Fi support
- Optional PoE at/af support



NSA 3180A/HA

1U Rackmount Entry Level Appliance w/ Intel® Coffee Lake Processor (LGA1151), 8 x GbE LANs and 1 x LAN Module

- Intel® Coffee Lake Processor (LGA1151)
- 2 x DDR4 2666 UDIMM slots
- 2 x 2.5" internal SSD/HDD
- 1 x M.2 2280 M key
- 8 x GbE RJ45 LAN ports
- 1 x LAN module
- 1 x PCIe x8 slot (optional)
- Single power supply



NSK 6301

NEXCOM Proprietary Wireless Module for 1U/2U Rackmount System

- Support Wi-Fi, 4G and 5G LTE modules
- Features for SD-FWA and testing platform
- 1 x Minicard for Wi-Fi
- 1 x M.2 3042 for 4G LTE
- 1 x M.2 3052 for 5G LTE (Sub 6G)
- 8 x SMA antenna holes

Product 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

<div>Model</div> <div>Form Factor</div> <div>Processor</div> <div>Cores</div> <div>Mem (max.)</div> <div>Default LAN port (s)</div> <div>LAN Module</div> <div>TPM</div> <div>Intel® VT-x</div> <div>Intel® VT-d</div> <div>SR-IOV</div> <div>Intel® QAT</div> <div>Intel® AES-NI</div>	
	NSA 7146
	2U
	Dual Intel® Xeon® processor scalable family
	Max. 56
	512 GB
	2x Intel® I210-AT for management port
	8
	TPM 1.2/2.0
	V
	V
	V***
	V
	V

*** Supported by selected LAN module







<div>Model</div> <div>Form Factor</div> <div>Processor</div> <div>Cores</div> <div>Mem (max.)</div> <div>Default LAN port (s)</div> <div>LAN Module</div> <div>TPM</div> <div>Intel® VT-x</div> <div>Intel® VT-d</div> <div>SR-IOV</div> <div>Intel® QAT</div> <div>Intel® AES-NI</div>	
	NSA 1160/1160A
	1U
	Intel Atom® C3000 series, BGA type
	Max. 16
	128 GB
	6 for NSA 1160A (4 x Intel® I211-AT, 2 x Marvell PHY 88E1543, 2 x SoC) 8 for NSA 1160 (4 x Intel® I211-AT, 4 x Marvell PHY 88E1543)
	2
	TPM 2.0
	V
	V
	V***
	V
	V










*** Supported by selected LAN module

			
NSA 7141	NSA 5181	NSA 5170C	NSA 3180A/3180HA
1U	1U	1U	1U
Intel® Xeon® processor scalable family	8th/9th gen. Intel® Xeon®/Core™/Pentium® processors	Intel® Xeon® Skylake-D SoC, BGA type	8th/9th gen. Intel® Xeon®/Core™/Pentium® processors
Max. 22	Max. 6	Max. 16	Max. 6
256 GB	64 GB	256 GB	32 GB
2 x Intel® I210-AT for management port	2 x Intel® I210-AT for management port	8 x Intel® I211-AT, 1 x Intel® I210-AT for management port	8 x Intel® I211-AT
4	2	2	1
TPM 1.2/2.0	TPM 2.0	TPM 1.2/2.0	TPM 2.0
V	V	V	V
V	V	V	V
V***	V***	V***	V***
V	V	V	V
V	V	V	V

			
DNA 130/130A/130B	DNA 1160/1160A	DTA 1160	DTA 1162
Desktop	Desktop	Desktop	Desktop
Intel Atom® processor x5-E3900 series, BGA type	Intel Atom® C3000 series, BGA type	Intel Atom® C3000 series, BGA type	Intel Atom® C3000 series, BGA type
Max. 4	Max. 12	Max. 16	Max. 4
4 GB	32 GB	64 GB	32 GB
5 x Intel® I211-AT	4 x Intel® I211-AT 4 x Marvell PHY 88E1543	4 x Intel® I350-AM4 4 x Marvell PHY 88E1543	2 x Intel® I211-AT (DTA 1162A) 4 x Marvell PHY 88E1543
		(Flexible I/O)**	
TPM 2.0		TPM 1.2/2.0	TPM 1.2/2.0
	V	V	V
	V	V	V
		V	
	V	V	V
	V	V	V

LAN Module Support List

Speed/ Port Type	Module List	P/N						
			NSA 7146	NSA 7145	NSA 7141	NSA 7136	NSA 7131	NSA 5181
1 GbE x 2	NI 121F	10S10121F01X0	V	V	V	V	V	V
1 GbE x 4	NI 140C	10S10140C01X0	V	V	V	V	V	V
	NI 140F	10S20140F01X0	V	V	V	V	V	V
	NI 142C	10SK000NI03X0	V	V	V	V	V	V
	NI 142CX1	10S10142C09X0	V	V	V	V	V	V
	NI 142F	10S10142F01X0	V	V	V	V	V	V
	NI 180C	10S10180C01X0	V	V	V	V	V	V
1 GbE x 8	NI 180F	10S10180F01X0	V	V	V	V	V	V
	NI 184C	10S10184C01X0	V	V	V	V	V	V
	NI 182-C4F4	10S10182C02X0	V	V	V	V	V	V
	NI 184CX1	10S10184C08X0	V	V	V	V	V	V
	NX 120F	10S20120F00X0	V	V	V	V	V	V
10 GbE x 2	NX 121F	10S20121F11X0			V	V	V	V
	NX 140F	10S20140F01X0	V	V	V	V	V	V
10 GbE x 4	NX 142F	10S20142F01X0	V	V	V	V	V	V
	NV 120F	10S50120F01X0	V	V	V	V	V	V
25 GbE x 2	NQ 120F	10S40120F04X0	V	V	V	V	V	V
100 GbE x 2	NC 220FMS3	10S30022008X0	V	V	V	V	V	
	NC 220FMM3	10S30022007X0	V	V	V	V	V	
	NC 220Q28M	10S30022002X0	V	V	V	V	V	

								
TCA 5170	NSA 5170C	NSA 5160	NSA 5160A	NSA 3180A	NSA 3180HA	NSA 3170A	NSA 3170HA	NSA 1160A
V	V	V	V	V	V	V	V	V
V	V	V	V	V	V	V	V	V
V	V	V	V	V	V	V	V	V
V	V	V	V	V	V	V	V	V
V	V	V	V	V	V	V	V	V
V	V	V	V	V	V	V	V	V
V	V	V	V	V	V	V	V	
V	V	V	V	V	V	V	V	
V	V	V	V	V	V	V	V	
V	V	V	V	V	V	V	V	
V	V	V	V	V	V	V	V	
V	V	V	V	V	V	V	V	
V	V	V	V	V	V	V	V	
V	V	V	V	V	V	V	V	
V	V	V	V					
V	V	V	V					

NSA 7146

2U Rackmount Performance Appliance
w/ Dual Intel® Xeon® Scalable Processor and 8 x LAN Modules



Main Features

- Dual Intel® Xeon® scalable processor (LGA3647)
- 16 x DDR4-2666 RDIMM
- 2 x 2.5" swappable SSD/HDD
- 2 x Management ports
- 8 x LAN modules
- Supports Intel® QAT
- Redundant power supply
- Supports IPMI 2.0 remote management
- Intel® Select Solution for NFVI, VCDN (RHEL), and NFVI FP

Product Overview

The NSA 7146 is a 2U rackmount high-performance security appliance intended for more secure workloads and lower energy consumption in contributing to a greener world. Based on the Intel® Xeon® product family (codenamed Skylake-SP), NEXCOM's NSA 7146 features enhancements of in multi-core computing performance, flexible I/O throughput and interface, and Intel® QAT hardware acceleration technology to process network traffic for both enterprise and telecommunication applications.

Specifications

- Main Board**
- Dual Intel® Xeon® Skylake-SP scalable processor (LGA3647), up to 165W
 - Supports 2 x UPI between CPUs
 - Intel® C627 w/ Intel® QAT
 - Supports IPMI 2.0
 - Supports Dual BIOS

- Main Memory**
- 16 x DDR4 2133/2400/2666 RDIMM sockets, up to 512GB

- Storage**
- 2 x 2.5" swappable SSD/HDD
 - 1 x CFast

- Interface-External**
- Button: Power & Reset
 - LED: Power/HDD/GPIO/System
 - 2 x 2.5" swappable SSD/HDD bays
 - 2 x USB 3.0 ports
 - 2 x USB 2.0
 - 1 x RJ45 type console
 - 8 x PCIe x8 LAN module slots
 - 2 x Management ports
 - 1 x VGA port
 - 3 x Swappable smart fans
 - 2 x Power inlets
 - LCM module

- Interface-Internal**
- TPM 1.2/2.0 module (optional)

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

- Dimensions and Weight**
- Chassis dimension: 440.6 mm x 570 mm x 88 mm
 - Carton dimension: 774 mm x 636 mm x 293 mm
 - Without packing: 19 kg
 - With packing: 25 kg

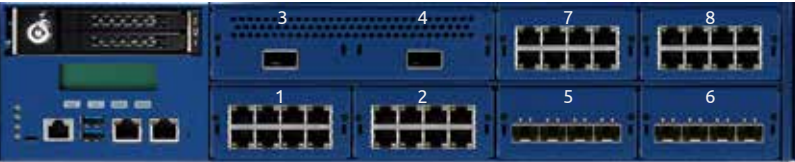
- Environment**
- Operating temperature: 0°C~40°C
 - Storage temperature: -20°C~75°C
 - Relative humidity: 10%~90%, non-condensing

- Certifications**
- CE/FCC Class A
 - UL

Ordering Information

- Barebone**
- NSA 7146 (P/N: 10S00714600X0)**
2U w/ Dual Intel® Xeon® Scalable Processor, w/ QAT, IPMI, LCM and 8 x LAN modules

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 SPF28	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

- 1U compact rackmount
- Single Intel® Xeon® Scalable processor family, up to 140W
- 8 x DDR4 RDIMM, support 2133/2400/2666, up to 256 GB
- 4 x PCIe x8 LAN module slots, up to 100G QSFP28
- 2 x 2.5" SSD/HDD internal bracket
- 1 x M.2 2242 B key
- 1 x FHHL PCIe x16 expansion slot
- 3 Swappable fans
- 450W redundant power supply
- TPM module option

Product Overview

NEXCOM has released the 1U network security appliance NSA 7141 to take on more VNFs workloads and lower energy consumption to contribute to a greener world. Based on Intel® Xeon® scalable processor family (codenamed Purley), NEXCOM NSA 7141 features enhancements in computing performance, system responsiveness, I/O throughput and hardware design for virtual network functions for both enterprise and telecommunication applications. Support PCIe x16 extension slot for more application use like AI engine or crypto/decrypt Accelerator.

Specifications

- Main Board**

 - NSB 7141 (PCH C621)
 - Single Intel® Xeon® scalable processor family
 - 1 x PCIe x16 expansion slot

LAN Features

 - Optional LAN module
 - Support 1GbE/10GbE/25GbE/40GbE/100GbE link speed
 - LAN bypass
 - * please see LAN module list information

I/O Interface-Front

 - Power status/HDD status/HW monitor/GPIO LEDs
 - 1 x Power button and 1 x reset button
 - 1 x Micro USB type and 1x RJ45 type console ports
 - 1 x VGA
 - 2 x Management LAN port
 - 2 x USB 3.0 port
 - 4 x LAN module slots (x8, x8, x8, x8 or x16, x8, x8)

I/O Interface-Rear

 - 1 x PCIe x16 expansion slot
 - 3 x Swappable system fan

Main Memory

 - 8 x DDR4 RDIMM, support 2133/2400/2666, up to 256 GB
- 2 x Intel® Optane™ DC persistent memory (Apache Pass)

Storage Device

 - 2 x 2.5" internal SSD/HDD
 - 1 x SATA DOM
 - 1 x M.2 2242 B-Key

Power Input

 - 450W redundant power supply

Dimensions

 - Chassis dimension: 438 mm x 600 mm x 44 mm
 - Packing dimension: 773 mm x 588 mm x 221 mm

Weight

 - Without packing: 10.91 kg
 - With packing: 14 kg

Environment

 - Operating temperatures: 0°C~40°C
 - Storage temperature: -20°C~80°C
 - Relative humidity: 10%~90% non-condensing

Certifications (Plan)

 - CE approval
 - FCC Class A

Ordering Information

Barebone

• NSA 7141 (P/N: 10S00714102X0)

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 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 SPF28	None	None	All Slot
NC 220Q28M	10S30022002X0	MT27708A0-FDCF-CE	PCIe x16	2 QSFP28	None	None	1,2/3,4
NC 220FMS3	10S30022008X0	MT27808A0-FCCF-CE	PCIe x16	2 QSFP28	None	None	1,2/3,4



Main Features

- 1U rackmount workstation system
- Intel® Coffee Lake-S Xeon® processors (LGA1151)
- Support DDR4 2666 DIMM x 4
- Support IPMI 2.0 remote management
- Four LAN module slots
- Support LCM module (optional)
- Support internal 2.5", mSATA and M.2 storage

Product Overview

NEXCOM network appliance NSA 5181 helps small and medium-sized businesses (SMBs) scrutinize network traffic with ease. Featuring Intel® Xeon® E Series Product Family, the NSA 5181 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 network appliance can fend off unauthorized access, patch potential security loopholes, and create protected networks for business environments.

Specifications

- Main Board**

 - NSB 5180
 - Intel® Coffee Lake-S Xeon® processors (LGA1151)
 - Intel® C246
- Main Memory**

 - 4 x DDR4 2666 memory DIMM support ECC/non-ECC memory, up to 64GB
- LAN Features**

 - Support 4 x swappable LAN modules
 - Support up to 1 x 100GbE LAN module
 - LAN bypass
 - * Please see LAN module list for more information
- I/O Interface-Front**

 - Power status/HDD status/Error/GPIO LEDs
 - 1 x Management ports (LAN chip: Intel® i210)
 - 2 x USB 2.0 ports
 - 1 x RJ45 type console port
 - 1 x Reset button
 - 4 x PCIe Gen.3 LAN module slots
- I/O Interface-Rear**

 - 1 x VGA port
 - 1 x Power button switch
 - 2 x USB 2.0 port

- Storage Device**

 - 1 x mSATA
 - 1 x M.2 2280
 - 1 x 2.5" HDD bay
- Power Input**

 - Power supply 300W (1+1) redundant PSU
- Dimensions**

 - Chassis dimension: 438mm x 480mm x 44mm
 - Carton dimension: 665mm x 547mm x 226mm
- Weight**

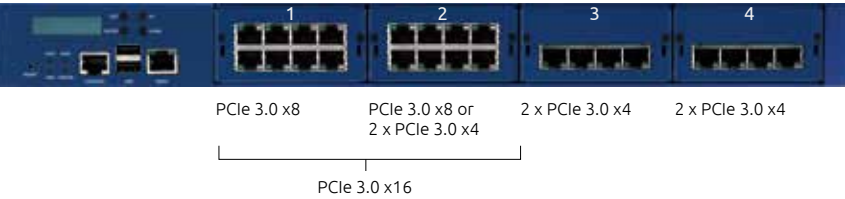
 - Without packing: 7.5 KG
 - With packing: 10.5 KG
- Certifications**

 - CE Approval
 - FCC Class A

Ordering Information

- Barebone**
- **NSA 5181 (P/N: 10S00518100X0)**
Intel® Coffee Lake-S, Xeon® E processor with 4 x DDR4 DIMM, 4 x LAN modules, IPMI and redundant 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	1, 2
NX 142F	10S20142F01X0	XL710-BM1	PCIe x8	4 SFP+	2 bypass	None	1, 2
NX 120F	10S20120F00X0	X710-BM2	PCIe x8	2 SFP+	None	None	1, 2
NI 140F	10SK000NI02X0	i350AM4x1	PCIe x8	4 SFP	None	None	All Slot
NI 180F	10S10180F01X0	i350AM4x2	PCIe x8	8 SFP	None	None	2, 3, 4
NI 142C	10SK000NI03X0	i350AM4x1	PCIe x8	4 Copper	2 bypass	None	All Slot
NI 180C	10S10180C01X0	i350AM4x2	PCIe x8	8 Copper	None	None	2, 3, 4
NI 184C	10S10184C01X0	i350AM4x2	PCIe x8	8 Copper	4 bypass	None	2, 3, 4
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
NC220Q28M	10S30022002X0	MT27708A0-FDCF-CE	PCIe x16	2 QSFP28	None	None	1, 2





Main Features

- 1U workstation rack mount system
- Intel® Skylake-S Xeon®/Core™/Pentium® processor
- Support DDR4 2400
- Four LAN module slots
- Support LCM module (optional)

Product Overview

NEXCOM network appliance NSA 5170C helps small and medium-sized businesses (SMBs) scrutinize network traffic with ease. Featuring Intel® Xeon® product family, the NSA 5170C 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 network appliance can fend off unauthorized access, patch potential security loopholes, and create protected networks for business environments.

Specifications

- Main Board**

 - NSB 5170C
 - Intel® Skylake-S Xeon®/Core™/Pentium® processors
 - Intel® C236
- Main Memory**

 - 4 x DDR4 2133/2400 DIMM support ECC/non-ECC memory, max. 64GB
- LAN Features**

 - Swappable LAN modules
 - LAN bypass
 - * Please see LAN module list information
- I/O Interface-Front**

 - Power status/HDD status/2 x GPIO status LEDs
 - 1 x Management ports (LAN chip: Intel® i210)
 - 2 x USB 2.0 ports
 - 1 x RJ45 type console port
 - 1 x Reset button
 - 4 x PCIe Gen.3 LAN module slots (x8, x8, x4, x4)

- I/O Interface-Rear**

 - 1 x VGA port
 - 1 x Power button switch
 - 2 x USB 2.0 port
- Storage Device**

 - 1 x CF card
 - 1 x 2.5" HDD bay
- Power Input**

 - Power supply 300W (1+1) redundant PSU
- Dimensions**

 - Chassis dimension: 438 mm x 480 mm x 44 mm
 - Carton dimension: 665 mm x 547 mm x 226 mm
- Weight**

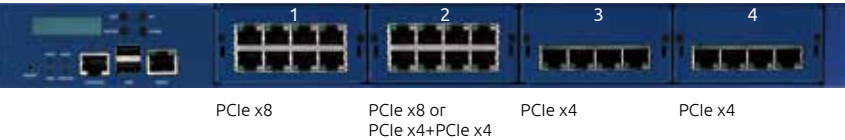
 - Without packing: 7.5 KG
 - With packing: 10.5 KG
- Certifications**

 - CE Approval
 - FCC Class A
 - UL

Ordering Information

- Barebone**
- **NSA 5170C (P/N: 10S00517002X0)**
Supports Intel® Skylake-S Xeon®/Core™/Pentium® processors, 4 x DDR4, 2 x PCIe x8 LAN and 2 x PCIe x4 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	1,2
NX 142F	10S20142F01X0	XL710-BM1	PCIe x8	4 SFP+	2 bypass	None	1,2
NX 120F	10S20120F00X0	X710-BM2	PCIe x8	2 SFP+	None	None	1,2
NI 140F	10SK000NI02X0	i350AM4x1	PCIe x8	4 SFP	None	None	All Slot
NI 180F	10S10180F01X0	i350AM4x2	PCIe x8	8 SFP	None	None	2
NI 142C	10SK000NI03X0	i350AM4x1	PCIe x8	4 Copper	2 bypass	None	All Slot
NI 180C	10S10180C01X0	i350AM4x2	PCIe x8	8 Copper	None	None	2
NI 184C	10S10184C01X0	i350AM4x2	PCIe x8	8 Copper	4 bypass	None	2
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
NC220Q28M	10S30022002X0	MT27708A0-FDCF-CE	PCIe x16	2 QSFP28	None	None	1,2



NSA 3180A

1U Rackmount Entry Level Appliance w/ Intel® Coffee Lake Processor (LGA1151),
8 x GbE LANs and 1 x LAN Module



Main Features

- Intel® Coffee Lake Processor (LGA1151)
- 2 x DDR4 2666 UDIMM slots
- 2 x 2.5" internal SSD/HDD
- 1 x M.2 2280 M key
- 8 x GbE RJ45 LAN ports
- 1 x LAN module
- 1 x PCIe x8 slot (optional)
- Single power supply

Product Overview

The NSA 3180A is a 1U rackmount entry level security appliance intended for secure workloads and lower energy consumption in contributing to a greener world. Based on the Intel® Coffee Lake product family, NEXCOM's NSA 3180A features high performance computing, flexible I/O, and cost-effective design in processing traffic for network security applications.

Specifications

- Main Board**
 - Intel® Coffee Lake Processor (LGA1151), up to 80W
 - Intel® C246
 - TPM 2.0
 - Dual BIOS
- Main Memory**
 - 2 x DDR4 2666 ECC/non-ECC UDIMM, up to 32GB
- Storage**
 - 2 x 2.5" internal SSD/HDD bays
 - 1 x M.2 2280 M key (SATA)
- Interface-External**
 - Button: Power & Reset
 - LED: HDD/Bypass 1/Bypass 2/GPIO
 - 2 x USB 3.0 ports
 - 1 x Micro USB and 1 x RJ45 console
 - 8 x GbE RJ45 LAN ports
 - 2 x LAN bypass pairs
 - 1 x LAN module slot
 - 1 x HDMI
 - 2 x Fixed smart fans
 - 1 x Power inlet
 - 1 x 107 mm x 110 mm PCIe x8 expansion slot (optional)
 - LCM (optional)

- Power**
 - 250W single power supply
- Dimensions and Weight**
 - Chassis dimension: 430 mm x 300 mm x 44 mm
 - Carton dimension: 544 mm x 506 mm x 205 mm
 - Without packing: 4.7 kg
 - With packing: 7.5 kg
- Environment**
 - Operating temperature: 0°C~40°C
 - Storage temperature: -40°C~80°C
 - Relative humidity: 10%~90%, non-condensing
- Certifications**
 - CE/FCC Class A
 - CE-LVD

Ordering Information

- Barebone**
- **NSA 3180A (P/N: 10S00318000X0)**
1U w/ Intel® Coffee Lake Processor, 8 x GbE, 1 x LAN module, single PSU

Model	P/N Controller	Controller	PCIe	Bypass	Speed	I/O ports
NI 142C	10SK000NI03X0	i350AM4x1	x4	2	1G	4 RJ45
NI 140C	10S10140C01X0	i350AM4x1	x4	0	1G	4 RJ45
NI 184C	10S10184C01X0	i350AM4x2	x4x4	4	1G	8 RJ45
NI 180C	10S10180C01X0	i350AM4x2	x4x4	0	1G	8 RJ45
NI 180F	10S10180F01X0	i350AM4x2	x4x4	0	1G	8 SFP
NI 140F	10SK000NI02X0	i350AM4x1	x4	0	1G	4 SFP
NI 142F	10S10142F01X0	i350AM4x1	x4	2	1G	4 SFP
NI 121F	10S10121F01X0	i350AM2x1	x4	1	1G	2 SFP
NX 140F	10S20140F01X0	XL710-BM1	x8	0	10G	4 SFP+
NX 120F	10S20120F00X0	X710-BM2	x8	0	10G	2 SFP+
NX 142F	10S20142F01X0	XL710-BM1	x8	2	10G	4 SFP+
NV 120F	10S50120F01X0	XXV710-AM2	x8	0	25G	2 SFP28

NSA 3180HA

1U Rackmount Entry Level Appliance w/ Intel® Coffee Lake Processor (LGA1151),
8 x GbE LANs and 1 x LAN Module



Main Features

- Intel® Coffee Lake Processor (LGA1151)
- 2 x DDR4 2666 UDIMM slots
- 2 x 2.5" internal SSD/HDD
- 1 x M.2 2280 M key
- 8 x GbE RJ45 LAN ports
- 1 x LAN module
- 1 x PCIe x8 slot for acceleration card (optional)
- Redundant power supply

Product Overview

The NSA 3180HA is a 1U rackmount entry-level security appliance intended for secure workloads and lower energy consumption in contributing to a greener world. Based on the Intel® Coffee Lake product family, NEXCOM’s NSA 3180HA features high performance computing, flexible I/O, redundant PSU, and cost-effective design in processing traffic for network security applications.

Specifications

- Main Board**
- Intel® Coffee Lake Processor (LGA1151), up to 80W
 - Intel® C246
 - TPM 2.0
 - Dual BIOS

- Main Memory**
- 2 x DDR4 2666 ECC/non-ECC UDIMM, up to 32GB

- Storage**
- 2 x 2.5" internal SSD/HDD bays
 - 1 x M.2 2280 M key (SATA)

- Interface-External**
- Button: Power & Reset
 - LED: HDD/Bypass 1/Bypass 2/GPIO
 - 2 x USB 3.0 ports
 - 1 x Micro USB and 1x RJ45 console
 - 8 x GbE RJ45 LAN ports
 - 2 x LAN bypass pairs
 - 1 x LAN module slot
 - 1 x HDMI
 - 2 x Fixed smart fans
 - 2 x Power inlets
 - 1 x FHHL PCIe x8 expansion slot (optional)
 - LCM (optional)

- Power**
- 450W 1+1 redundant power supply
- Dimensions and Weight**
- Chassis dimension: 430 mm x 480 mm x 44 mm
 - Carton dimension: 632 mm x 567 mm x 203 mm
 - Without packing: 7.6 kg
 - With packing: 10.6 kg

- Environment**
- Operating temperature: 0°C~40°C
 - Storage temperature: -40°C~80°C
 - Relative humidity: 10%~90%, non-condensing

- Certifications**
- CE/FCC Class A
 - CE-LVD

Ordering Information

- Barebone**
- **NSA 3180HA (P/N: 10S00318001X0)**
 - 1U w/ Intel® Coffee Lake Processor, 8 x GbE, 1 x LAN module, dual PSU

Model	P/N Controller	Controller	PCIe	Bypass	Speed	I/O ports
NI 142C	10SK000NI03X0	i350AM4x1	x4	2	1G	4 RJ45
NI 140C	10S10140C01X0	i350AM4x1	x4	0	1G	4 RJ45
NI 184C	10S10184C01X0	i350AM4x2	x4x4	4	1G	8 RJ45
NI 180C	10S10180C01X0	i350AM4x2	x4x4	0	1G	8 RJ45
NI 180F	10S10180F01X0	i350AM4x2	x4x4	0	1G	8 SFP
NI 140F	10SK000NI02X0	i350AM4x1	x4	0	1G	4 SFP
NI 142F	10S10142F01X0	i350AM4x1	x4	2	1G	4 SFP
NI 121F	10S10121F01X0	i350AM2x1	x4	1	1G	2 SFP
NX 140F	10S20140F01X0	XL710-BM1	x8	0	10G	4 SFP+
NX 120F	10S20120F00X0	X710-BM2	x8	0	10G	2 SFP+
NX 142F	10S20142F01X0	XL710-BM1	x8	2	10G	4 SFP+
NV 120F	10S50120F01X0	XXV710-AM2	x8	0	25G	2 SFP28

NSA 3170A

Intel® 6th/7th Xeon®/Core™/Pentium® Processors (Skylake-S/Kaby Lake-S),
1U Rackmount with 8GbE LAN & 1 LAN Module



Main Features

- 1U rackmount network appliance
- Support 6th/7th gen. Intel® Xeon®/Core™/Pentium® processors
- Support DDR4 2400 ECC & non-ECC UDIMM, up to 32GB
- Support one LAN module slot
- Internal 2 x 2.5” HDD bay (optional)
- Single 300 watt PSU

Product Overview

NEXCOM NSA 3170A is a network communication appliance based on Intel® Xeon® processor E3-1200 v5/ v6 product family. The NSA 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. Also, a maximum of sixteen GbE ports can be implemented through LAN module. The network communication appliance NSA 3170A will make either an ideal edge server or a network security appliance in SMB networks.

Specifications

- Main Board**
 - NSB 3170A
 - Support 6th/ 7th gen. Intel® Xeon®/Core™/Pentium® processors
 - Intel® C236 chipset
- Main Memory**
 - 2 x DDR4 2400 UDIMM, support ECC/non-ECC memory, up to 32GB
- Storage**
 - SATA DOM
 - Internal 2 x 2 .5” HDD bay (optional)
- LAN Features**
 - LAN chip: Intel® I211-AT
 - Support 10/100/1000/10G link speed
 - LAN bypass: 2 pairs
- I/O Interface-Front**
 - Power/HDD/LAN/bypass 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

- Power Input**
 - Single power supply 300W
- 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 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, one PCIe8 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	PClex8	4 SFP+	None	None	All Slot
NX 142F	10S20142F01X0	XL710-BM1	PClex8	4 SFP+	2 bypass	None	All Slot
NX 142F-LR	10S20142F03X0	XL710-BM1	PClex8	4 SFP+	2 bypass	None	All Slot
NX 120F	10S20120F00X0	X710-BM2	PClex8	2 SFP+	None	None	All Slot
NI 140F	10SK000NI02X0	i350AM4x1	PClex8	4 SFP	None	None	All Slot
NI 180F	10S10180F01X0	i350AM4x2	PClex8	8 SFP	None	None	All Slot
NI 142C	10SK000NI03X0	i350AM4x1	PClex8	4 Copper	2 bypass	None	All Slot
NI 180C	10S10180C01X0	i350AM4x2	PClex8	8 Copper	None	None	All Slot
NI 184C	10S10184C01X0	i350AM4x2	PClex8	8 Copper	4 bypass	None	All Slot
NI 142F	10S10142F01X0	i350AM4x1	PClex8	4 SFP	2 bypass	None	All Slot
NI 121F	10S10121F01X0	i350AM2x1	PClex8	2 SFP	1 bypass	None	All Slot
NI 140C	10S10140C01X0	i350AM4x1	PClex8	4 Copper	None	None	All Slot

NSA 3170HA

Intel® 6th/7th Gen. Xeon®/Core™/Pentium® Processors (Skylake-S/ Kaby Lake-S),
1U Rackmount with 8GbE LAN & 1 LAN Module



Main Features

- 1U rackmount network appliance
- Supports Intel® 6th/7th gen. Xeon®/Core™/Pentium® processors
- Support DDR4 2400 ECC & non-ECC UDIMM, up to 32GB
- Support one PCIe x8 expansion (half length)
- Internal 2 x 2.5” HDD bay (optional)
- Redundant 450 watt PSU

Product Overview

NEXCOM NSA 3170HA is a network communication appliance 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 appliance 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 UDIMM, support ECC/non-ECC memory, up to 32GB
- LAN Features**

 - LAN Chip: Intel® I211-AT
 - Support 10/100/1000/10G link speed
 - LAN Bypass: 2 pairs
- I/O Interface-Front**

 - Power/HDD/LAN/bypass LEDs
 - 2 x USB 3.0 ports
 - 1 x Micro USB console port
 - 1 x RJ45 type console port
 - 8 x Ccopper 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

- Storage Device**

 - 1 x SATA DOM (power pin reserved)
 - Internal 2 x 2.5” HDD bay (optional)
- Power Input**

 - 450W 1+1 redundant power supply
- Chassis Dimensions**

 - Chassis dimension: 430mm x 480mm x 44mm
 - Carton dimension : 632mm x 567mm x 203mm
- 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: 10S00317002X0)**
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, one PCIe x8 LAN expansion slot w/o LCM

Model	P/N Controller	Interface	Type	Port Number	Bypass/Segment	Expansion Slot	Location Slot
NX 140F	10S20140F01X0	XL710-BM1	PClex8	4 SFP+	None	None	All Slot
NX 142F	10S20142F01X0	XL710-BM1	PClex8	4 SFP+	2 bypass	None	All Slot
NX 142F-LR	10S20142F03X0	XL710-BM1	PClex8	4 SFP+	2 bypass	None	All Slot
NX 120F	10S20120F00X0	X710-BM2	PClex8	2 SFP+	None	None	All Slot
NI 140F	10SK000NI02X0	i350AM4x1	PClex8	4 SFP	None	None	All Slot
NI 180F	10S10180F01X0	i350AM4x2	PClex8	8 SFP	None	None	All Slot
NI 142C	10SK000NI03X0	i350AM4x1	PClex8	4 Copper	2 bypass	None	All Slot
NI 180C	10S10180C01X0	i350AM4x2	PClex8	8 Copper	None	None	All Slot
NI 184C	10S10184C01X0	i350AM4x2	PClex8	8 Copper	4 bypass	None	All Slot
NI 142F	10S10142F01X0	i350AM4x1	PClex8	4 SFP	2 bypass	None	All Slot
NI 121F	10S10121F01X0	i350AM2x1	PClex8	2 SFP	1 bypass	None	All Slot
NI 140C	10S10140C01X0	i350AM4x1	PClex8	4 Copper	None	None	All Slot

NSA 1160

Intel Atom® Processor C3000 Series,
1U Rackmount with 1 LAN Module



NSA 1160

NSA 1160A

Main Features

- Intel Atom® processor C3000 series SoC, BGA type
- DDR4-2400 ECC/non-ECC UDIMM/RDIMM, up to 128GB
- 8 x GbE RJ45 ports for NSA1160
- 2 x 10GbE SFP+ & 6 x GbE RJ45 ports for NSA1160A

- 1 x LAN module slot for NSA1160A
- 2 x USB3.0 connector
- Two pairs bypass

Product Overview

1U network security appliance NSA1160/1160A helps small and medium enterprises build a securely connected workplace. Based on the new Intel Atom® processor C3000 series, the packs excellent performance per watt, accelerated data cryptography and server-grade LAN functions into a small form factor. This 1U network security appliance can create safe environments for network communication to connect employees and offices.

With Intel Atom® processor C3000 series integrated with Intel® QuickAssist technology, the NSA1160/1160A is designed to help increase both network responsiveness and security by distributing computing power to core applications, ranging from mail servers to firewalls, while using Intel® QuickAssist technology for data encryption and decryption, which were processed by software or a discrete hardware accelerator.

Specifications

- Main Board**

 - NSB 1160/NSB 1160A
 - Intel Atom® processor C3558 for NSA 1160
 - Intel Atom® processor C3758 for NSA 1160A
- Main Memory**

 - 4 x DDR4-2400 ECC/non-ECC UDIMM/RDIMM, up to 128GB
- LAN Features**

 - 8 x 1GbE RJ45 for NSA 1160
 - 2 x 10GbE SFP+ & 6 x GbE RJ45 for NSA 1160A
 - 1 x PCIe x4 LAN module slot for NSA 1160A
 - LAN bypass: 2 pairs
- I/O Interface-Front**

 - Power/HDD/LAN bypass 1/LAN bypass 2 LEDs
 - 1 x Reset button
 - 2 x USB 3.0
 - 1 x RJ45 type console port
 - 1 x LCM (optional)
- I/O Interface-Rear**

 - 1 x VGA
 - 2 x USB 2.0
 - 1 x Power inlet

- Storage Device**

 - 1 x mSATA slot
 - 2 x 2.5" HDD/SSD bay (optional)
- Power Input**

 - 65W power supply for NSA 1160
 - 150W power supply for NSA 1160A
- Dimensions**

 - Chassis dimension: 430mm x 310mm x 44mm
 - Carton dimension: 544mm x 506mm x 205mm
- Weight**

 - Without packing: 5.6Kg
 - With packing: 8.4Kg
- 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 1160 (P/N: 10S00116000X0)**
Intel Atom® C3558, BGA type, 4 x DDR4 memory slots, 8 copper LAN ports, mSATA slot
- NSA 1160A (P/N: 10S00116001X0)**
Intel Atom® C3758, BGA type, 4 x DDR4 memory slots, 2 10GbE + 6 copper LAN ports, 1 LAN module slot, mSATA slot

Model	P/N Controller	Interface	Type	Port Number	Bypass/Segment	Expansion Slot	Location Slot
NI 140F	10SK000NI02X0	i350AM4x1	PClex8	4 SFP	None	None	All Slot
NI 142C	10SK000NI03X0	i350AM4x1	PClex8	4 Copper	2 bypass	None	All Slot
NI 142F	10S10142F01X0	i350AM4x1	PClex8	4 SFP	2 bypass	None	All Slot
NI 121F	10S10121F01X0	i350AM2x1	PClex8	2 SFP	1 bypass	None	All Slot
NI 140C	10S10140C01X0	i350AM4x1	PClex8	4 Copper	None	None	All Slot

TCA 5170

1U Rackmount uCPE w/ Intel® Xeon® Skylake-D SoC Processor,
8 x GbE RJ45, 4 x 10GbE Fiber and 2 x LAN Modules



Main Features

- Intel® Xeon® D-2123IT SoC, BGA type
- 8 x DDR4-2400 RDIMM
- 1 x 2.5 SSD, 1 x M.2 2280
- 8 x GbE RJ45 & 4 x 10GbE Fiber
- 2 x LAN modules
- Redundant power supply
- Intel® Select Solution for uCPE (ADVA Ensemble Connector)

Product Overview

The 1U rackmount uCPE TCA 5170 helps telecom companies build virtualization environments based on Intel® Xeon® D-2123IT processor (Skylake). Packing excellent multi-core CPU performance and server-grade LAN functions into a small form factor, this 1U rackmount uCPE creates virtualized environments for flexible VNF deployments in enterprises and branch offices.

Specifications

- Main Board**
 - Intel® Xeon® Skylake-D SoC, BGA type
 - D-2123IT, 4 cores w/ o QAT
- Main Memory**
 - 8 x DDR4 2400 RDIMM sockets, up to 256GB
- Storage Device**
 - 1 x 2.5" internal SSD/HDD bay
 - 1 x M.2 2280 M key, supports SATA and PCIe x4 signal
- Interface-External**
 - Button: Power & Reset
 - LED: Power/HDD/2 x GPIO
 - 1 x USB 3.0 port
 - 1 x Micro USB type console
 - 8 x GbE RJ45 ports
 - 2 x LAN bypass pairs
 - 4 x 10GbE fiber ports
 - 2 x PCIe x8 LAN module slots
 - 1 x Management port
 - 4 x SMA connectors for Antennas
 - 3 x Fixed smart fans
 - 2 x Power inlets
 - LCM module (optional)

- Interface-Internal**
 - 1 x M.2 2230 E key
 - 1 x M.2 3042 B key with SIM slot
- Power**
 - 450W 1+1 redundant power supply
- Dimensions and Weight**
 - Chassis dimension (mm): 438 x 480 x 44
 - Package dimension (mm): 632 x 567 x 203
 - Without packing: 8kg
 - With packing: 12kg
- Environment**
 - Operating temperature: 0°C~40°C
 - Storage temperature: -20°C~80°C
 - Relative humidity: 10%~90%, non-condensing
- Certifications**
 - CE/FCC Class A

Ordering Information

- **TCA 5170 (P/N: 10CA0517000X0)**
1U Intel® Xeon® D-2123IT w/o QAT, w/ 4 x 10GbE & 8 x 1GbE LAN ports,
2 LAN module slots

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 SPF28	None	None	All Slot

TCA 5170B

1U Rackmount uCPE w/ Intel® Xeon® Skylake-D SoC Processor,
8 x GbE RJ45, 4 x 10GbE Fiber and 2 x LAN Modules





Main Features

- Intel® Xeon® D-2177NT SoC, BGA type
- 8 x DDR4-2666 RDIMM
- 1 x 2.5 SSD, 1 x M.2 2280
- 8 x GbE RJ45 & 4 x 10GbE fiber

- 2 x LAN modules
- Supports Intel® QAT
- Redundant power supply
- Intel® Select Solution for uCPE (CentOS)

Product Overview

The 1U rackmount uCPE TCA 5170B helps telecom companies build virtualization environments based on Intel® Xeon® D-2177NT processor (Skylake). Packing excellent multi-core CPU performance, accelerated data cryptography with Intel® QAT technology, and server-grade LAN functions into a small form factor, this 1U rackmount uCPE, an Intel® Select Solution for uCPE, creates virtualized environments for flexible VNF deployments in enterprises and branch offices.

Specifications

- Main Board**
 - Intel® Xeon® Skylake-D SoC, BGA type
 - D-2177NT, 14 cores w/ QAT
- Main Memory**
 - 8 x DDR4 2666 RDIMM sockets, up to 256GB
- Storage Device**
 - 1 x 2.5" internal SSD/HDD bay
 - 1 x M.2 2280 M key, supports SATA and PCIe x4 signal
- Interface-External**
 - Button: Power & Reset
 - LED: Power/HDD/2 x GPIO
 - 1 x USB 3.0 port
 - 1 x Micro USB type console
 - 8 x GbE RJ45 ports
 - 2 x LAN bypass pairs
 - 4 x 10GbE fiber ports
 - 2 x PCIe x8 LAN module slots
 - 1 x Management port
 - 4 x SMA connectors for antennas
 - 3 x Fixed smart fans
 - 2 x Power inlets
 - LCM module (optional)

- Interface-Internal**
 - 1 x M.2 2230 E key
 - 1 x M.2 3042 B key with SIM slot
- Power**
 - 450W 1+1 redundant power supply
- Dimensions and Weight**
 - Chassis dimension (mm): 438 x 480 x 44
 - Package dimension(mm): 632 x 567 x 203
 - Without packing: 8kg
 - With packing: 12kg
- Environment**
 - Operating temperature: 0°C~40°C
 - Storage temperature: -20°C~80°C
 - Relative humidity: 10%~90%, non-condensing

- Certifications**
 - CE/FCC Class A

Ordering Information

- TCA 5170B (P/N: 10CA0517002X0)**
 - 1U Intel® Xeon® D-2177NT w/ QAT, w/ 4 x 10GbE & 8 x 1GbE LAN ports, 2 LAN module slots

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 SPF28	None	None	All Slot

TCA 5170C

1U Rackmount uCPE w/ Intel® Xeon® Skylake-D SoC Processors,
8 x GbE RJ45, 4 x 10GbE Fiber and 2 x LAN Modules



Main Features

- Intel® Xeon® D-2146NT SoC, BGA type
- 8 x DDR4-2400 RDIMM
- 1 x 2.5 SSD, 1 x M.2 2280
- 8 x GbE RJ45 & 4 x 10GbE Fiber

- 2 x LAN modules
- Redundant power supply
- Intel® Select Solution for uCPE (Ubuntu)

Product Overview

The 1U rackmount uCPE TCA5170C helps telecom companies build virtualization environments based on Intel® Xeon® D-2146NT processor (Skylake). Packing excellent multi-core CPU performance and server-grade LAN functions into a small form factor, this 1U rackmount uCPE creates virtualized environments for flexible VNF deployments in enterprises and branch offices.

Specifications

- Main Board**
 - Intel® Xeon® Skylake-D SoC, BGA type
 - D-2146NT, 8 cores w/ QAT
- Main Memory**
 - 8 x DDR4 2400 RDIMM sockets, up to 256GB
- Storage Device**
 - 1 x 2.5" internal SSD/HDD bay
 - 1 x M.2 2280 M key, supports SATA and PCIe x4 signal
- Interface-External**
 - Button: Power & Reset
 - LED: Power/HDD/2 x GPIO
 - 1 x USB 3.0 port
 - 1 x Micro USB type console
 - 8 x GbE RJ45 ports
 - 4 x 10GbE fiber ports
 - 2 x PCIe x8 LAN module slots
 - 1 x Management port
 - 4 x SMA connectors for Antennas
 - 3 x Fixed smart fans
 - 2 x Power inlets
 - LCM module (optional)

- Interface-Internal**
 - 1 x M.2 2230 E key
 - 1 x M.2 3042 B key with SIM slot
- Power**
 - 450W 1+1 redundant power supply
- Dimensions and Weight**
 - Chassis dimension: 438 mm x 480 mm x 44 mm
 - Package dimension: 632 mm x 567 mm x 203 mm
 - Without packing: 8kg
 - With packing: 12kg
- Environment**
 - Operating temperature: 0°C~40°C
 - Storage temperature: -20°C~80°C
 - Relative humidity: 10%~90%, non-condensing
- Certifications**
 - CE/FCC Class A

Ordering Information

- **TCA 5170C (P/N: 10CA0517003X0)**
1U Intel® Xeon® D-2146NT w/ Intel® QAT, w/ 4 x 10GbE & 8 x 1GbE LAN ports, 2 LAN module slots

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 SPF28	None	None	All Slot

DNA 130

Intel Atom® Processor x5-E3900 Series up to 4 Cores 1.6G, BGA type
with 5GbE Copper LAN Ports



Main Features

- Intel Atom® processor x5-E3900 series SoC, BGA type
- DDR3L SO-DIMM memory, max. 8GB
- Support 5 GbE LAN ports
- On-board eMMC 4GB
- Wi-Fi/LTE (optional)
- USB 2.0 connector
- HDMI type A connector

Product Overview

Desktop network security appliance DNA 130 helps small and medium enterprises build a securely connected workplace. Based on the Intel Atom® processor x5-E3900, the DNA 130 packs excellent performance per watt and LAN functions into a small form factor. This desktop network security appliance can create safe environments for network communication to connect employees and offices.

Specifications

- Main Board**
- DNB130
 - Intel Atom® processor x5-E3900 series, BGA type

- Main Memory**
- 1 x DDR3L SO-DIMM non ECC memory, max. 8GB

- LAN Features**
- 5 x Copper ports
 - LAN bypass: 1 pairs
 - 5 x LAN controller: Intel® i211-AT
 - Support 10/100/1000 link speed

- Expansion**
- 1 x mini-PCIe slot for Wi-Fi or LTE

- I/O Interface-Front**
- Power status/HDD status/LAN status/Wi-Fi status
 - SIM slot

- I/O Interface-Rear**
- 2 x USB 2.0
 - 1 x microUSB type console port (first priority)
 - 1 x RJ45 type console port (secondary)
 - 1 x RJ45 WAN port
 - 4 x RJ45 copper ports
 - 1 x Power button
 - 1 x HDMI type A connector
 - 1 x DC-in
 - 1 x Reset button

- Storage Device**
- 1 x On-board eMMC flash 4GB
 - 1 x mSATA connector

- Power Input**
- DC 12V/3.33A 40W power adaptor

- Dimensions**
- Chassis dimension (mm): 225 (W) x 150 (D) x 44 (H)
 - Carton dimension (mm): 275 (W) x 230 (D) x 185 (H)

- Weight**
- Without packing: 1.1kg
 - With packing: 2.1kg

- Environment**
- Operating temperatures: 0°C~40°C
 - Storage temperature: -20°C~ 80°C
 - Relative humidity: 10%~90% non-condensing

- Certifications**
- CE Approval
 - FCC Class B

Ordering Information

Barebone

- **DNA 130 (P/N: 10L00013002X0)**
Intel Atom® x5-E3930 Apollo Lake SoC, BGA type 2 cores 1.3GHz, 1 x DDR3L non- ECC memory slots, 5 copper LAN ports, eMMC flash 4GB, 2 x USB 2.0
- **DNA 130A (P/N: 10L00013003X0)**
Intel Atom® x5-E3940 Apollo Lake SoC, BGA type 4 cores 1.6GHz, 1 x DDR3L non- ECC memory slots, 5 copper LAN ports, eMMC flash 4GB, 2 x USB 2.0

DNA 1160

Intel Atom® Processor C3000 Series BGA type
with 8 GbE Copper LAN Ports



Main Features

- Intel Atom® processor C3000 series SoC, BGA type
- DDR4-2133 Long-DIMM ECC memory, up to 32GB
- Support 8 GbE LAN ports
- One CFast socket
- USB 3.0 connector (Type A)
- Backup power (optional)

Specifications

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

- Main Memory**
- DDR4-1866/2133 Long-DIMM ECC memory, max. 32GB

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

- Expansion**
- 1 x mini-PCIe slot for Wi-Fi module
 - 1 x mini-PCIe slot with one with SIM Sokcet for LTE module

- I/O Interface-Front**
- LED for 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

- Storage Device**
- 1 x On-board CFAST socket
 - 1 x Internal 2.5" HDD bay (optional)

- Power Input**
- DC 12V/3.33A 40W power adaptor
 - Backup power (optional)

- Dimensions**
- Chassis dimension: 288mm x 186.8mm x 44mm
 - Carton dimension: 431mm x 301mm x 176mm

- Weight**
- Without packing: 1.6kg
 - With packing: 2.9kg

- Environment**
- Operating temperatures: 0°C~40°C
 - Storage temperature: -20°C~ 80°C
 - Relative humidity: 10%~90% non-condensing

- Certifications**
- CE
 - FCC Class B
 - UL

Ordering Information

Barebone

- **DNA 1160 (P/N: 10L00116000X0)**
Intel Atom® processor C3538, BGA type 2 cores/1.5 GHz
1 x DDR4-1866 Long-DIMM ECC memory, Max. 16 GB
- **DNA 1160A (P/N: 10L00116002X0)**
Intel Atom® processor C3558, BGA type 4 cores/2.2 GHz
2 x DDR4-2133 Long-DIMM ECC memory, Max. 32 GB

DTA 1160

Virtualization Networks and Software-Defined Appliance
with Intel Atom® SOC C3758



Main Features

- Intel Atom® C3758 SoC 8 cores, BGA type
- Support Intel® QAT
- Support SR-IOV
- DDR4-2400 ECC/non-ECC UDIMM/RDIMM, up to 64GB
- 2 x 10GbE SFP+ and 6 x 1GbE LAN ports

- 8GB eMMC
- 1 x 2.5" internal SSD bay (optional)
- 2 x USB 3.0 connector
- TPM 1.2/2.0

Specifications

Main Board

- DTB1160
- Intel Atom® C3758, BGA type

Main Memory

- 4 x DDR4-2400 ECC/non-ECC UDIMM/RDIMM socket; up to 64GB

LAN Features

- 2 x 10GbE SFP+ ports
- 4 x 1GbE RJ45 ports from Intel® I350-AM4
- 2 x 1GbE RJ45 ports from Marvell 88E1543

Expansion

- 1 x M.2 2230 slot for Wi-Fi module (E Key)

I/O Interface-Front

- 2 x USB 3.0 ports (5V/1A)
- 1 x RJ45 type console port
- 2 x SFP+ ports
- 6 x RJ45 ports
- 1 x Power button; 1 x Reset button
- Power/HDD/System/SW LEDs
- DC jack with lock (12V/5A)

I/O Interface-Rear

- 3 x SMA holes for Wi-Fi antennas

Storage Device

- 1 x 2.5" internal SSD bay (optional)
- 1 x SATA connector (for SATA DOM)
- 1 x M.2 2242 SSD socket (SATA & NVMe); M Key

Power Input

- DC 12V/5A 60W power adaptor

Dimensions

- Chassis dimension (mm): 240 x 220 x 44
- Carton dimension (mm): 431 x 301 x 176

Weight

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

Environment

- Operating temperatures: 0°C~40°C
- Storage temperature: -20°C~ 80°C
- Relative humidity: 10%~90% non-condensing

Certifications

- CE approval
- FCC Class B
- UL

Ordering Information

Barebone

- **DTA 1160 (P/N: 10TA0116000X0)**
Intel Atom® C3758 base, 8 cores, BGA type 2.2GHz

DTA 1162 Series

Virtualization Networks and Software-Defined Appliance
with Intel Atom® SOC C3000



DTA 1162A

DTA 1162B

Main Features

- Intel Atom® processor C3000 series SoC, BGA type
- Support Intel® QuickAssist Technology
- DDR4-2133 ECC or non-ECC memory SO-DIMM, up to 32GB
- 4 x 1GbE RJ45 & 2 x 1GbE RJ45 for DTA 1162A
- 4 x 1GbE RJ45 & 2 x 1GbE SFP for DTA 1162B

- 1 x M.2 2242 storage socket
- On-board 8GB eMMC 5.0
- 2 x USB 3.0 connector
- TPM 1.2/2.0

Product Overview

Desktop network security appliance DTA 1162A/1162B helps small and medium enterprises build a securely connected workplace. Based on the new Intel Atom® processor C3000, the DTA 1162A/1162B packs excellent performance per watt, accelerated data cryptography and server-grade LAN functions into a small form factor. This desktop network security appliance can create safe environments for network communication to connect employees and offices.

With Intel Atom® processor C3000 integrated with Intel® QuickAssist Technology, the DTA 1162A/1162B is designed to help increase both network responsiveness and security by distributing computing power to core applications, ranging from mail servers to firewalls, while using Intel® QuickAssist Technology for data encryption and decryption, which were processed by software or a discrete hardware accelerator.

Specifications

Main Board

- DTB1162 series
- Intel Atom® processor C3338 w/o Intel® QAT for DTA 1162A
- Intel Atom® processor C3558 w/ Intel® QAT for DTA 1162B

Main Memory

- 1 x DDR4-1866 SO-DIMM ECC/non- ECC memory for DTA 1162A, up to 16GB
- 1 x DDR4-2133 SO-DIMM ECC/non- ECC memory for DTA 1162B, up to 32GB

LAN Features

- 4 x 1GbE RJ45 (88E1543) & 2 x 1GbE RJ45(Intel® I211) for DTA1162A
- 4 x 1GbE RJ45 (88E1543) & 2 x 1GbE SFP (Intel® I210) for DTA1162B
- Support 10/100/1000 link speed

Expansion

- 1 x M.2 2230 for Wi-Fi module (E-Key)
- 1 x M.2 3042 for LTE module with SIM slot on-board (B-Key)

I/O Interface-Front

- Power/System/HDD/LAN LEDs
- 1 x SIM slot

I/O Interface-Rear

- 1 x DC-in
- 1 x Power button
- 2 x USB 3.0
- 1 x RJ45 type console port
- 1 x Reset button
- 3 x SMA connector holes for RF cable

Storage Device

- 1 x 8GB eMMC
- 1 x M.2 2242 M-key socket (SATA)

Power Input

- DC 12V/3.33A 40W power adaptor

Dimensions

- Chassis dimension (mm): 225 x 150 x 44
- Carton dimension (mm): 275 x 230 x 185

Weight

- Without packing: 1.5kg
- With packing: 2.5kg

Environment

- Operating temperatures: 0°C~40°C
- Storage temperature: -20°C~80°C
- Relative humidity: 10%~90% non-condensing

Certifications

- CE Approval
- FCC Class B

Ordering Information

Barebone

- **DTA 1162A (P/N: 10TA0116201X0)**
Intel Devnerton SoC Atom® C3338, BGA type 2 cores 1.5GHz, non Intel® QAT
- **DTA 1162B (P/N: 10TA0116200X0)**
Intel Devnerton SoC Atom® C3558, BGA type 4 cores 2.2GHz, Intel® QAT

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