

A low-angle photograph of several modern skyscrapers with glass facades, reaching towards a clear blue sky. A white network overlay of interconnected nodes and lines is superimposed over the buildings. The text "Shaping Future Networks" is centered in white, bold, sans-serif font.

# Shaping Future Networks

## **2023** Network and Communication Solutions

- Cyber Security
- Edge and Cloud
- 5G and uCPE
- OT Security

# NCS

## Network and Communication Solutions

Cyber Security  
Edge and Cloud  
5G and uCPE  
OT Security

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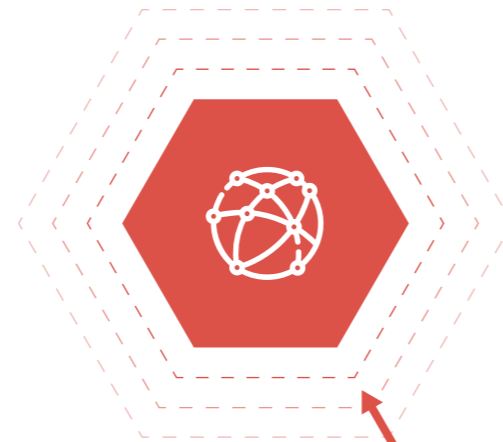
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# NCS's Core Competencies



## Network Technology

Network technology embodied in the intelligent network platform designed by NEXCOM offers a complete range of network interfaces and throughputs. NEXCOM invests in cutting-edge network technologies and will continue to lead the industry.



## Remote Management

For efficient management and maintenance of a large number of network platforms deployed in different locations, NEXCOM offers various interfaces for In-band and Out-of-band management. This significantly reduces the operational burden and maintenance costs.



## Acceleration

In some network applications, the acceleration engine designed for network packet processing is critical in enhancing overall performance. NEXCOM is capable of integrating Intel® QAT technology, Ethernet switch, and other kinds of acceleration engines.



## Design and Manufacturing Services

## High Availability

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



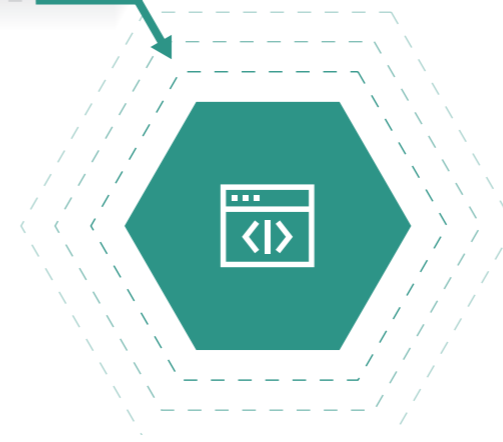
## High-Performance Computing

Computing power is the core of network applications. NEXCOM provides a wide range of computing platforms, from RISC platform, entry-level x86 Atom to high-end Xeon Scalable Processors to meet different computing power needs.



## Software Solutions

NEXCOM has comprehensive RD teams for FW and SW development, including CPLD, MCU, BIOS, Linux kernel drivers, system and application software. Moreover, self-developed Atlas OS, or embedded systems on CentOS, Ubuntu, OpenWrt, BMC are also available.



# NCS Software Capabilities



## 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.

## Firmware Failover Mechanism

One of the problems of the traditional network appliances' design in terms of automatic system failover is the restoration of factory defaults. To overcome this challenge, reduce operator maintenance costs and enhance user experience, NEXCOM offers a firmware-based technical solution.

NEXCOM designs its appliances with a failover management controller. It is a controller powered by the Standby power supply, which can be MCU, CPLD or EC, etc., and is responsible for monitoring system startup failures or receiving failure event notifications. There are several ways to monitor and notify the system.



Watchdog is triggered by OS with time count: if the time count exceeds the limit, then it will be treated as system boot failure and the system will restart with an alternate OS.



Button Onclick can be a physical button or a virtual key. Once the Onclick event has been received from the outside, BIOS will immediately restart with the backup OS for recovery.



API (Application Programming Interface) is the communication bridge between BIOS and OS, interacting between these two layers of adjustment tools.

## Out-of-Band Management

The key to OOB management for NCS' appliances 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.

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).

## 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™ provides a user-friendly interface for advanced network management

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.

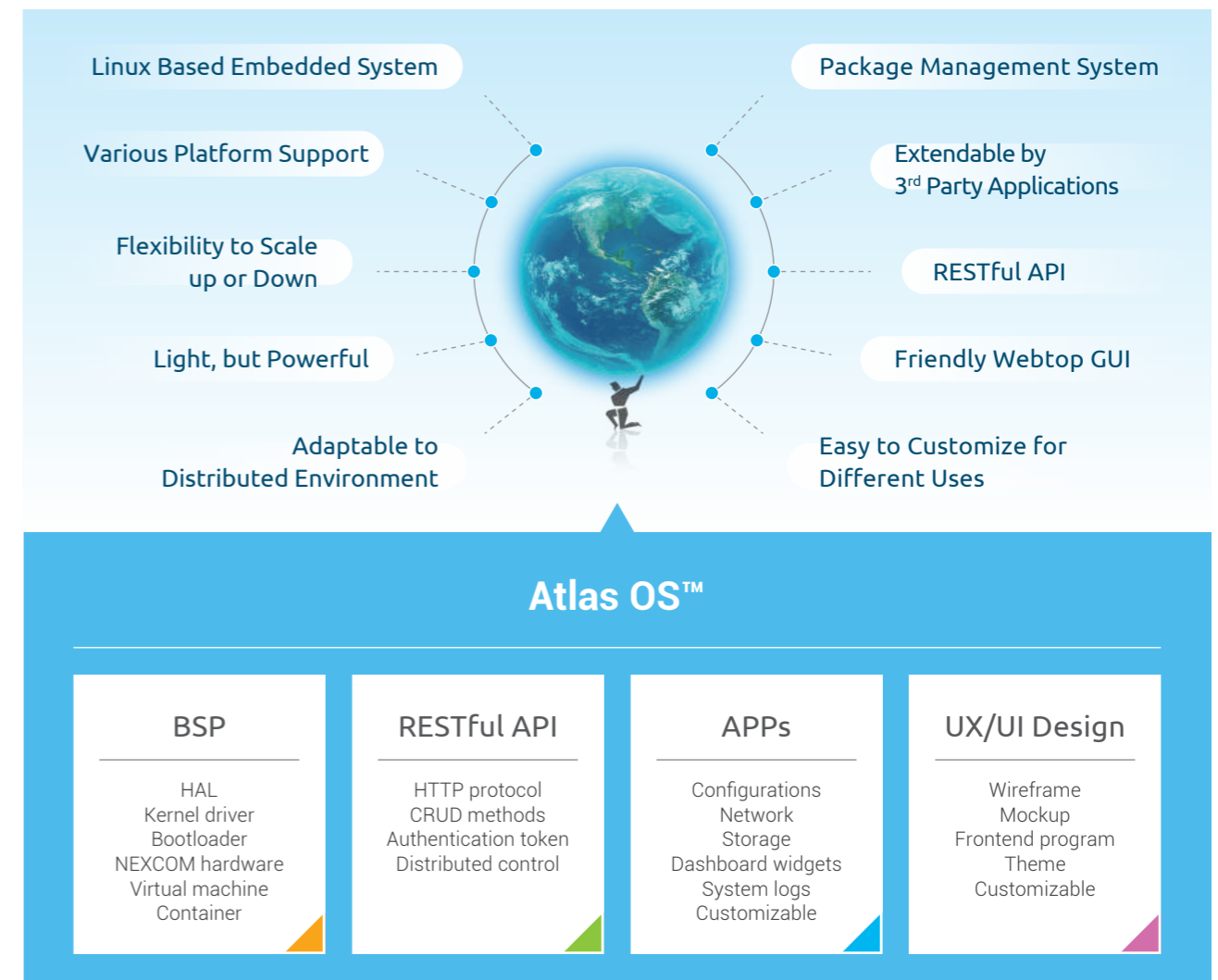
Atlas webtop not only brings the desktop operation experience

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.

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.

RESTful API support 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.



# NCS Product Portfolio

NEXCOM provides a wide range of appliances to meet the needs of different network applications



## Cyber Security

NEXCOM delivers the trusted and reliable platforms for network security appliances. With the integration of leading technology from CPU, PCI-Express, expansion cards, and I/O accelerations, the security and performance of customers' applications are greatly improved.

All cyber security appliances are divided according to their performance and functionality into 4 groups: desktops, entry-level, mid-range and performance rackmounts, to make sure businesses of all sizes can find the perfect appliance to secure their sensitive data.



### High performance

NEXCOM advanced network security appliance is capable of fulfilling complex enterprise networks and fit for intensive security workloads.



### Mainstream

NEXCOM communication appliances utilize multi-core processors, provide a wide range of features and deliver mighty protection to the mid-size enterprise networks.



### Entry level

NEXCOM platforms, with networking capability and configuration flexibility, offering outstanding network protection for small business and SOHO.



### Desktop

NEXCOM compact desktop gateways combine significant LAN capabilities and provide effective network protection for SOHO.

## OT Security

NEXCOM offers industrial firewall solutions for deployments on Smart Factories. Their compact DIN rail design creates convenience for fitting into existing network architecture.

They also provide optional wireless connectivity, OOB remote management, and operates in settings with wide temperature ranges. OOB function makes remote management even more convenient, and wide temperature design ensures stable operation even under harsh environments.



### ISA Series

Fanless industrial security appliances in a compact DIN rail form factor with Intel Atom® processor for various OT use cases: protecting key



assets and isolating between network segments, wireless connectivity & delay-sensitive communication between devices.

## Edge and Cloud

Following the trend that shifts the function of centralized cloud computing to devices residing along the so-called edges of distributed networks, NEXCOM offers a versatile portfolio of appliances to be deployed at the Edge to bring cost efficiency and flexibility.

Those models are designed to support SDN and NFV workloads to enable 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.



### Datacenter

NEXCOM datacenter appliances feature multi-core processors to ensure a great variety of selection for most efficient deployment and offer server-grade LAN functions.



### SD-WAN

SD-WAN product line offers Intel- and Arm-based appliances with flexible core count to provide enough virtualization power to run a variety of VNF.



### Cell site router

Meets ITU-T Recommendations for 5G networks and provides PTP (IEEE 1588v2) and SyncE features. It connects to GNSS and receives accurate timing data to improve network efficiency.



### 5G uCPE

NEXCOM designs adaptive flexible uCPE for cloud-native applications at the edge. The latest models also feature optional wireless connectivity.

## Expansion Cards

NEXCOM's 1U and 2U rackmount network appliances adopt a variety of expansion cards for additional valued features, such as OOB, QAT, adaptor for wireless modules, and a variety of LAN modules, with up to 200GbE per one slot. NEXCOM's LAN modules come in different form factors, port types (copper or fiber), port counts, speeds, and choice of with or without bypass.



### LAN modules



### Wireless adaptor

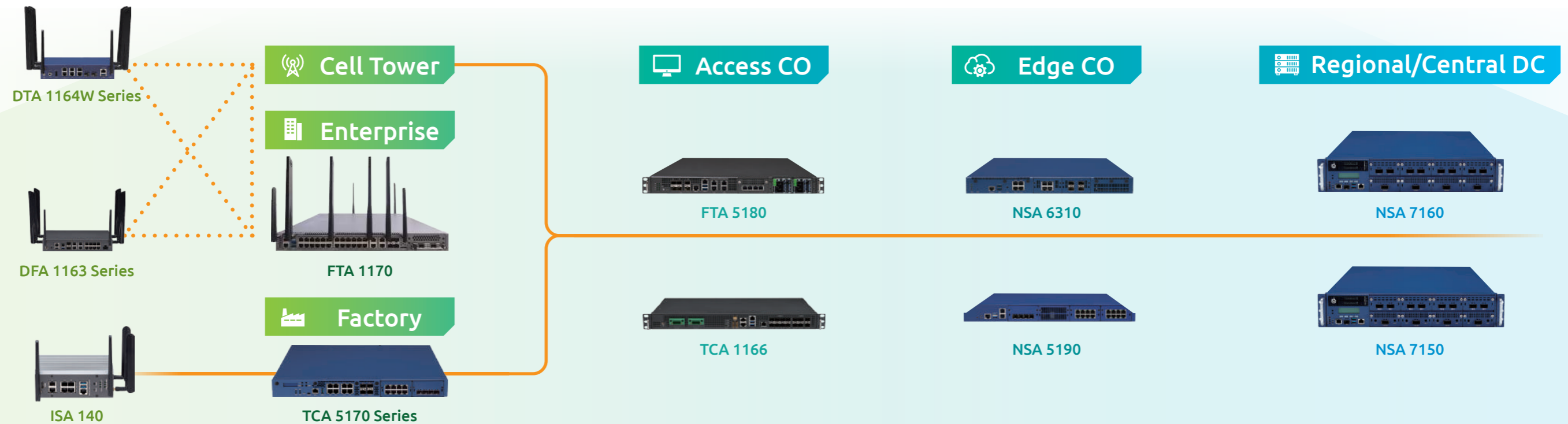


### Fiber bypass



### QAT card

# Network Infrastructure Solutions



## Fixed Access

### DTA 1164W Series

- Intel® C3000R processor
- 6 x RJ45 + 2 x RJ45 / SFP
- Supports 5G/LTE & Wi-Fi 5/6, PoE+

### DFA 1163 Series

- Intel® C3000R processor
- 5G FR1+FR2/LTE, TSN switch
- mini-PCIe for Wi-Fi 5/6
- Supports PoE+

### ISA 140

- DIN rail, fanless design
- 6 x 1GbE RJ45
- Supports Wi-Fi and LTE

### FTA 1170

- Intel Atom® processor P series
- 4 x DDR4 RDIMM
- 1 x M.2 NVMe & 2 x 2.5" SSD
- 24 x 2.5 GbE switch copper ports
- PoE+ support
- 1 x PCIe3 x16 FHFL expansion

### TCA 5170 Series

- Intel® Xeon® D-2100NT processor
- 8 x DDR4 RDIMM
- 1 x 2.5 & 1 x M.2 SSD
- 8 x GbE RJ45 & 4 x SFP+
- 2 x LAN module slots
- Intel® QAT



## Edge

### FTA 5180

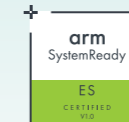
- Intel® Xeon® D-1700 processor
- 4 x DDR4 RDIMMs
- 2 x M.2 SATA SSD
- 2 x 10G & 2 x 2.5G RJ45
- 6 x SFP+
- 1 x PCIe4 x8 LAN module slot

### TCA 1166 (Coming Soon)

- Intel Atom® C3000 processor
- 1 x DDR4-1866 ECC memory slot, up to 8GB
- 8 x 1G SFP post with PTP & SyncE
- 6 x 10G SFP+ ports with PTP & SyncE
- Redundant (1+1) DC input DC (-36~-72V)
- Supports GNSS module (optional)

### NSA 6310

- NXP® LX2160A multicore processor
- 4 x DDR4 ECC-UDIMM, up to 64GB
- 1 x 2.5" internal SSD/HDD bay
- 4 x 1GbE RJ45 ports
- 2 x SerDes LAN module slots
- Supports Wi-Fi and LTE



### NSA 5190 (ODM Only)

- 12th Gen Intel® Core™ processor
- 4 x DDR4 UDIMMs
- 2 x 2.5" SSD
- 4 x LAN module slots
- 1 x BMC module
- 1 x PCIe4 x4 low profile expansion

## Core

### NSA 7160

- Dual 4th Gen Intel® Xeon® Scalable processor
- 20 x DDR5 RDIMM
- 8 x PCIe5 LAN Module slots
- 1 x PCIe5 x16 FHFL expansion slot
- IPMI 2.0
- Intel® PFR and Intel® QAT

### NSA 7150

- Dual 3rd Gen Intel® Xeon® Scalable processor
- 20 x DDR4 RDIMM
- 8 x PCIe4 LAN Module slots
- 1 x PCIe4 x16 low profile expansion slot
- IPMI 2.0
- Intel® QAT



# Global Networking Trends



## NFVi

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

## Multi-functionality

The new network architecture brings a challenge of switching from dedicated, purpose-built appliances to multi-purpose boxes able to adapt to various application scenarios.

## SASE

Digital transformation moving security to the cloud. Secure access service edge (SASE) is a network architecture that combines VPN and SD-WAN capabilities with cloud-native security functions.

## AI

New network architecture unleashes more possibilities for IoT applications and various real-time applications of AI.

## 8

## Industry 4.0

Industry 4.0 and digital transformation became an essential part of smart manufacturing. Building a reliable network between devices is the first step towards a secure future of OT.

## 7

## 5G/mmWave

mmWave technology let users to experience higher speeds and seamless connectivity across many applications. Its frequency range is within the 24 GHz and 300 GHz.

## 6

## FWA

5G FWA technology is an alternative way to provide broadband with wireless connectivity and features high bandwidth, high reliability, and low latency.

## 5

## Energy Saving

Now more and more companies have environmental concerns and want to reduce their carbon footprint which leads them to greener network solutions with lower power consumption.

# Fast and Easy Network Functions Virtualization Deployments



5G network has brought its undeniable advantages of higher speed, lower latency, and broader bandwidth. However, its full potential is yet to be explored and put into practice.

workload-optimized hardware and software solutions that are ISV certified, OEM validated, and performance verified.

To provide a reliable NFVI platform to the market, NEXCOM leverages the latest Intel® technologies to develop NSA 7150 and verify it as Intel® Select Solutions for the NFVI v3.

NSA 7150 is a high-performance 2U rackmount and features enhancements in multi-core computing performance, high memory capacity, high-speed I/O interface to support NEXCOM proprietary LAN modules. NSA 7150 has onboard connectors for optional support of TPM 2.0 and BMC modules.

Virtualization is a growing service delivery paradigm that relies on high-performance COTS servers

The network infrastructure is now moving towards an open architecture where cloud-native applications like VNF ride on generic COTS hardware in the SDN context. Virtualization offers many benefits to network services, but it can be challenging and complex to deploy.

It is truly tempting to be lured to action upon seeing a ready solution easy to deploy and put into service right away. CommSPs need a reliable source to make sure the solution risks them little on time, money, resources on verifying and tuning software settings to make the appliance operate according to its purposes.

For this reason, Intel® has created a special program – Intel® Select Solutions. This program speeds time to value with

NSA 7150 perfectly fits for deployments in various scenarios, including 5G public and private networks

By choosing NSA 7150, CommSPs not only save their time and investments on their quest for a verified platform with pre-defined settings but also get a high-performance appliance with a set of value-added features for efficient deployment in existing and future network infrastructures.

## Key Benefits

- Faster evaluation
- Fast and easy deployment
- Workload-optimized performance

## NSA 7150

2U Rackmount Performance Appliance with Dual 3rd Gen Intel® Xeon® Scalable Processor, 8 x PCIe 4 LAN Module Slots



Model (P/N)	<b>NSA 7150</b> (P/N: 10S00715000X0)
Processor	Dual 3rd Gen Intel® Xeon® Scalable processor
Cores	Up to 72
Memory (Max.)	1280 for RDIMM / 2560 for LRDIMM
Storage	> 1 TB
LAN Module Expansion	8
PFR	Yes*
TPM 2.0	Yes (optional)
Intel® QAT	Yes
IPMI 2.0 BMC	Yes (optional)
Expansion Card	PCIe4 x16 low profile Riser card

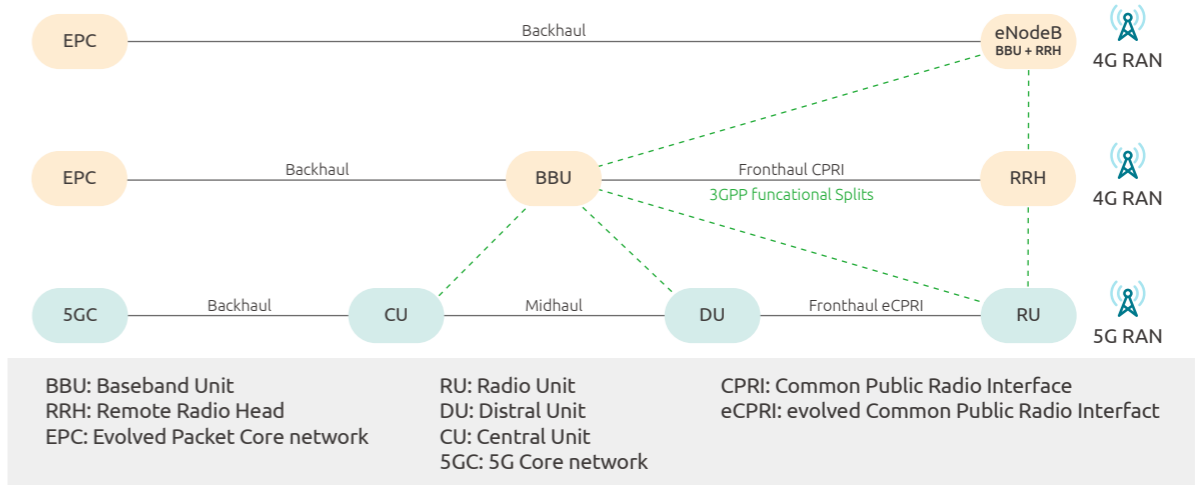
\* For ODM Projects only

## Other NEXCOM appliances for NFVi workloads

Model (P/N)	 <b>NSA 7160</b> (P/N: 10S00716000X0)	 <b>NSA 6310</b> (P/N: 10S00631000X1)	 <b>TCA 5170</b> (P/N: 10CA0517000X0)
CPU	4th Gen Intel® Xeon® scalable	NXP® Layerscape® LX2160A	Intel® Xeon® D
Cores	Upto 52	8/12/16	4/8/14
Memory	up to 1024GB per RDIMM	Up to 64GB	Up to 256GB
Ethernet Ports	0	4 x GbE RJ45	8 x GbE RJ45 4 x SFP+
LAN Expansions	8	2	2



# From Purpose-Built to Multi-Purpose Appliances



## 5G O-RAN architecture enables an efficient, flexible, and fast network system

Open RAN architecture brings up completely new potential applications for a fully connected society. O-RAN has already become an irreversible trend with numerous benefits. It allows service providers to quickly introduce new services to market, improve operational efficiency, and diversify suppliers to put together an efficient, flexible, and fast network system.

To fully unleash the performance of 5G networks, the O-RAN platform is composed of a collection of interfaces that meet O-RAN standard requirements to host the relevant O-RAN functions, the supporting software components, and the appropriate management and orchestration functions.

Unlike a highly integrated architecture in 4G LTE, under which RAN (Radio Access Network) includes BBU (Baseband Unit) and RRU (Remote Radio Unit), the architecture of O-RAN is composed of a hardware layer including CU (Central Unit), DU (Distributed Unit), and RU (Radio Unit) as well as software for the control and management of transmission interfaces

between different layers.

NSA 7160 is a perfect high-performance appliance for service providers and enterprise professionals. Its unique flexible design allows it to be deployed at any stage of the 5G network (RU, DU, CU).

## NSA 7160 features a unique flexible design that allows it to be deployed at any stage of the 5G O-RAN architecture

NSA 7160 features dual 4th Gen Intel® Xeon® Scalable CPUs. Built-in crypto acceleration can reduce the performance impact of full data encryption and increase the performance of encryption-intensive workloads.

NSA 7160 supports Intel® QuickAssistTechnology, enhancing data processing capabilities. It features eight LAN module slots with PCIeGen5 interface for the fastest data transfer. The presence of RunBMCenables remote management to hardware and software, offering extra administrative convenience.

## NSA 7160

2U Rackmount Performance Appliance w/ Dual 4th Gen Intel® Xeon® Scalable Processor and 8 x PCIe5 LAI Module Slots



Model (P/N)	<b>NSA 7160</b> (P/N: 10S00716000X0)
Processor	Dual 4th Gen Intel® Xeon® scalable processor
Cores	Up to 52
Memory (Max.)	16 (8+8) DDR5 memory DIMMs, up to 1024GB per RDIMM
Storage	2 x 2.5" swappable SSD/HDD, 1 x M.2 2280 (Key B+M) socket
Expansion	8 x PCIe5 LAN module slots 1 x PCIe4 x16 slot with CXL1.1 for FHFL card
TPM 2.0	Yes
Intel® QAT	Yes
IPMI 2.0 BMC	Yes (optional)

## Other NEXCOM multi-purpose appliances

Model (P/N)	 <b>NSA 3190A</b> (P/N: 10S00319000X0)	 <b>NSA 5190</b> (ODM Only)	 <b>NSA 7150</b> (P/N: 10S00715000X0)
CPU	10th Gen Intel® Core™ Intel® Xeon® Intel® Pentium® Intel® Celeron®	12th Gen Intel® Core™	3rd Gen Intel® Xeon® scalable
Ethernet Ports	8 x 2.5GbE RJ45	2 x 2.5GbE RJ45	0
LAN Expansions	1	4	8

# Build Secure and Cloud-Native Networks with SASE



Digital transformation is the trend that enterprises embrace to increase efficiency, enhance customer satisfaction, pursue new market opportunities, boost profitability and maintain a competitive edge. The migration to the successful digital transformation is an initiative to adopt enterprise applications to the cloud. Most of the applications now are running in the cloud than in traditional enterprise data centers, and the majority of these applications are being consumed as software-as-a-service (SaaS).

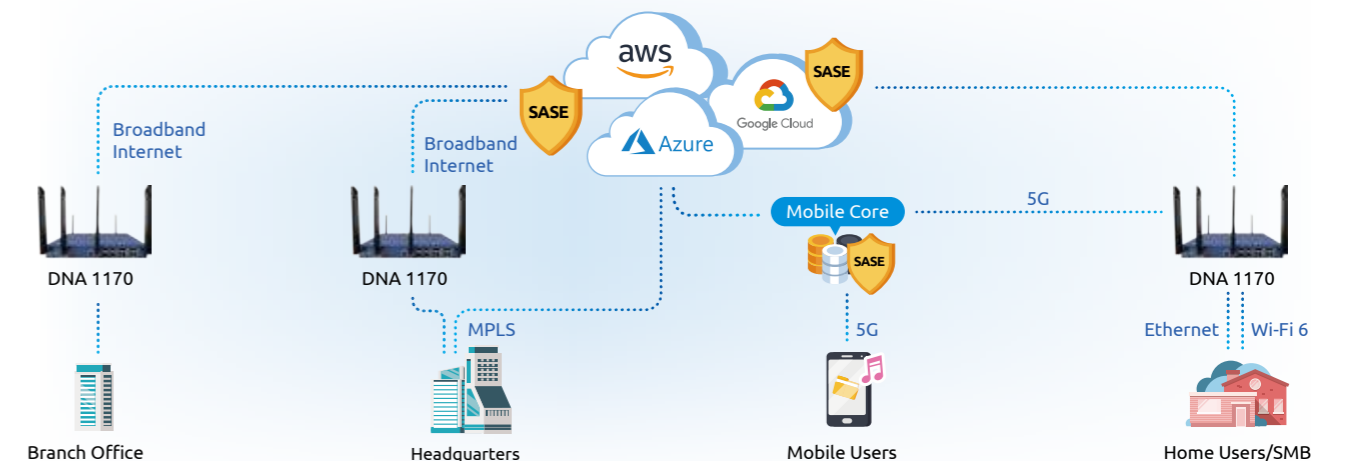
In 2019, Gartner came out with the SASE architecture that coined the Security Service Edge (SSE), a cloud-delivered security solution comprising Secure Web Gateway (SWG), Firewall-as-a-Service (FWaaS), Cloud Access Security Broker (CASB), and Zero Trust Network Access (ZTNA). Combining SSE and SD-WAN eliminated the cost and complexity of managing multiple on-premises next-generation firewalls and achieving the cloud-first, SASE architecture.

## Enterprises need to transform the WAN and security architecture and security architecture

To realize the full promise of digital transformation, enterprises need to transform the WAN and security architecture, not just one or the other. Traditionally, all applications were running in the corporate data center and it made lots of Ethernet traffic to the corporate data center, where next-generation firewalls were deployed for advanced security inspection. Nowadays, many of applications are moving to the cloud but WAN and security transformation are still taking the traditional router-centric wide area networks impair application performance, increase employee frustration, and are expensive.

## DNA 1170 is an advanced SD-WAN platform, adopting SASE architecture and optimizing networking performance

NEXCOM's DNA 1170 is an advanced SD-WAN platform based on an Intel Atom P5300 processor, adopting SASE architecture, optimizing networking performance with Intel QAT, and expanding multi-connectivity to the cloud through copper, fiber, and wireless (5G/Wi-Fi) connectivity. DNA 1170 can integrate with modern cloud-delivered security services to ensure consistent policy enforcement and access control for users, devices, applications, and IoT. This enables enterprises to meet compliance requirements, prevent downtime, and mitigate the risk of data compromise associated with a security breach.



## DNA 1170

Desktop Cyber Security Appliance w/ Intel Atom® C5000 Processor, 8 x 1GbE Copper and 4 x 10GbE Fiber Ports

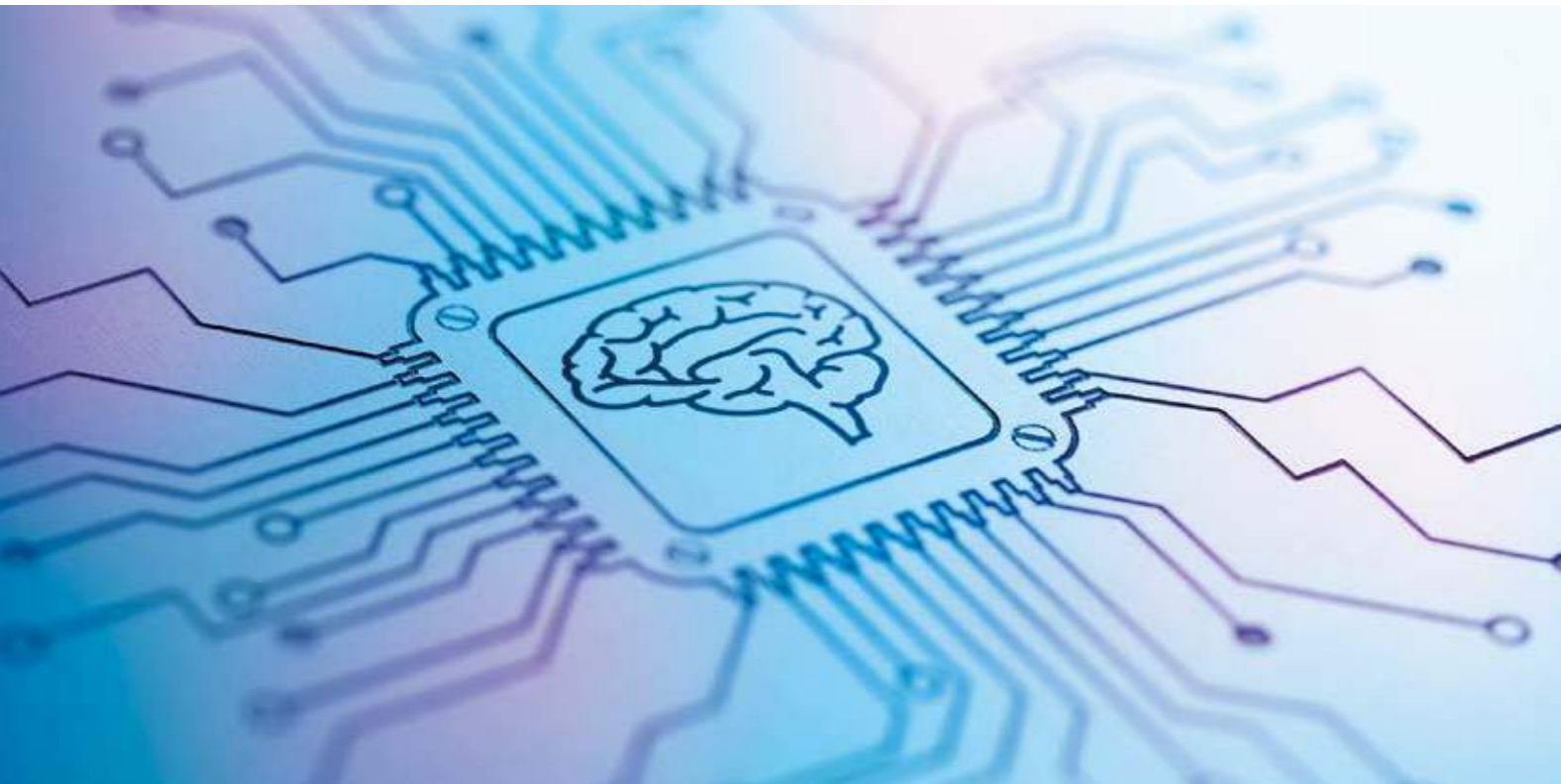


Model (P/N)	<b>DNA 1170</b> (P/N: TBC)
Processor	Intel Atom® C5315/C5325 processor
Cores	Up to 8
Memory (Max.)	2 x DDR4 2933 SODIMM, up to 16GB
Storage	1 x M.2 2242 for SATA 3.0, 1 x 2.5" SSD (optional)
Expansion	8 x 1GbE RJ45 ports (4 x 1GbE RJ45 ports can optionally serve as bypass ports) 4 x SFP+ ports
TPM	Yes (optional)
Wireless Connectivity	1 x mini-PCIe slot for Wi-Fi 6 module, 1 x M.2 3042 Key B for 5G/LTE module

## Other NEXCOM appliances for SASE applications

Model (P/N)	<b>DTA1164W Series</b> (ODM Only)	<b>DFA 1163 Series</b> (P/N: 10FA0116300X0)	<b>FTA 1170</b> (P/N: 10FT0117000X0)
Processor	Intel Atom® processor C3436L	Intel Atom® C3558R/C3758R	Intel Atom® P5322
Cores	4	4/8	8
Ethernet Ports	6 x 1GbE RJ45 & 2 x SFP 8 x 1GbE RJ45	1 x 10GbE SFP+ port 12 x RJ45 ports (with optional PoE+ support)	24 x 2.5GbE switch 4 x 10GbE RJ45 NIC 2 x 10GbE SFP+ switch 2 x 10GbE SFP+ NIC
Wireless Connectivity	1 x mini-PCIe slot for Wi-Fi 5/6 module 1 x M.2 3042/3052 for 4G LTE/5G (FR1) module	1 x mini-PCIe slot for Wi-Fi 6 module 1 x M.2 3042/3052 Key B slot for 4G LTE/5G module	1 x mini-PCIe slot for Wi-Fi 6 module 1 x M.2 3052 Key B for 5G module

# Artificial Intelligence in Edge Computing



New network architecture provides excellent environments for further development of various IoT applications, such as autonomous driving, Internet of Vehicles (IoV), Smart Logistics, Virtual Reality (VR), Augmented Reality (AR), smart traffic signs, and various real-time applications of AI.

Computing platforms suitable for artificial intelligence need to have powerful parallel computing capabilities and support a substantial amount of memory.

## AI at the Edge offers lower latency and cost compared to the cloud

AI at the Edge offers lower latency and cost compared to the Cloud, 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 Internet service providers 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.

FTA 5180 is NEXCOM's new 1U Intel-based rackmount for deployments at the Edge. Powered by Intel® Xeon® D-1700 processor, FTA 5180 handles cryptography acceleration with ease via embedded Intel® QAT. Intel® Xeon® D-1700 processor features the much-desired built-in AI, enhanced security, advanced IO, and Ethernet capabilities.

FTA 5180 offers 10 high-bandwidth interfaces for speedy connections, including six 10G SFP+, two 10GBaseT, and two 2.5GBaseT ports. The 10GbE fiber ports are an essential configuration at the edge, which effectively alleviates transmission bottlenecks when mobile IoT applications compete for computing resources. The copper ports, ready with PoE++ capability, could offer a 90W output when connecting PoE powered devices.

FTA 5180 also supports 5G and Wi-Fi modules installation, offering extra FWA capability and connecting a variety of devices seamlessly. When it comes to high availability & serviceability, the BMC module and power redundancy are features built into FTA 5180.

## FTA 5180 leverages Intel® Xeon® D processor with built-in AI capabilities

## FTA 5180

1U Rackmount nexCPE™ Appliance with Intel® Xeon® D-1700 Processor, 6 x 10GbE SFP+, 2 x 10GbE RJ45, 2 x 2.5GbE RJ45 Ports, and 1 x LAN Module Slot



Model (P/N)	<b>FTA 5180</b> (P/N: 10FT0518000X0)
Processor	Intel® Xeon® D-1700
Cores	Up to 10
Memory	up to 256GB
Storage	> 1 TB
LAN Module Expansion	1
Ethernet Ports	6 x 10GbE SFP+ 2 x 10GbE BaseT RJ45 PoE++ 2 x 2.5GbE RJ45 PoE++
TPM 2.0	Yes (onboard)
Intel® QAT	Yes
IPMI 2.0 BMC	Yes
Wireless Connectivity	1 x M.2 3042 Key B slot for 5G FR1 module 1 x mini-PCIe slot for Wi-Fi module

## Other NEXCOM appliances for AI applications

Model (P/N)	 <b>NSA 5190</b> (ODM Only)	 <b>NSA 7141</b> (P/N: 10S00714102X0)	 <b>NSA 7160</b> (P/N: 10S00716000X0)
CPU	12th Gen Intel® Core™	Intel® Xeon®	4th Gen Intel® Xeon® scalable
Cores	Up to 16	Up to 28	Up to 52
Memory	up to 128GB	Up to 256GB	Up to 1024GB per RDIMM
Expansion Card	PCIe4 x4 connector for low profile Riser card	PCIe3 x16 connector for low profile Riser card	1 x PCIe4 x16 slot with CXL1.1 for FHFL card
LAN Expansions	4	4	8

# Heading for Carbon Footprint Reduction



The trend toward energy efficiency in the telecom industry is driven by a combination of environmental concerns, cost savings, regulatory pressure, and reputation. As energy costs continue to rise and climate change becomes an increasingly urgent issue, CommSPs are more likely to switch their attention to more power-efficient equipment that consumes less power while delivering better performance.

## Energy-efficient networking is conditioned by environmental impact, cost savings & regulatory pressure

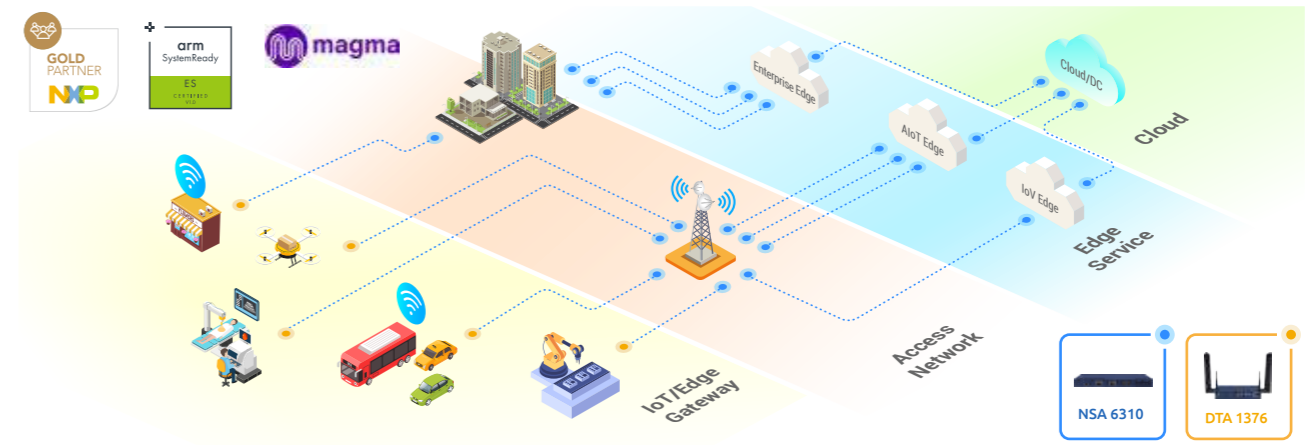
The power efficiency of a system is determined by the amount of power it consumes in proportion to its performance or functionality. Arm-based solutions are known for using RISC (Reduced Instruction Set Computing) architecture that features several advantages, including increased performance, energy efficiency, and scalability. This makes Arm-based appliances a popular choice for many power-efficient systems that can meet the demands of a wide range of applications.

## Arm-based network solutions offer increased performance, energy efficiency, and scalability

NEXCOM's latest Arm-based edge computing devices – DTA 1376 & NSA 6310, offer energy-efficient designs, for service providers that are looking for sustainable network solutions; and shows an undeniable advantage that may be deployed in remote areas with limited power resources. Their additional wireless extensibility allows CommSPs and WISPs to create a private LTE/5G network or extend wireless coverage with fewer efforts and expenditures.

## DTA 1376 & NSA 6310 are Arm SystemReady™ ES certified and Opus Magma AGW validated

Both appliances have obtained Arm SystemReady™ ES (Embedded Server) certification to ensure the compatibility between cloud-native software at the edge and hardware devices. Also, both have been validated with Opus Magma multi-architecture containerized Access Gateway (AGW) stack, ready to be deployed and act as EPC in localized mobile networks.



### DTA 1376

Arm-Based Desktop uCPE for Wireless Broadband Applications w/ NXP® Layerscape® LS1046A SoC Processor



Model (P/N)	<b>DTA 1376</b> (P/N: 10TA0137600X0)
Processor	NXP® Layerscape® LS1046A
Cores	4 Cortex-A72
Memory (Max.)	1 x DDR4 2133 SO-DIMM ECC socket, up to 16GB
Storage	1 x SPI NOR Flash 64MB for U-Boot, 1 x M.2 2242 Key M, supports NVMeSSD with PCIe Gen3 x2 1 x Micro SD slot (optional)
Expansion	7 x 1GbE RJ45 ports
DPAA	Yes
Wireless Connectivity	1 x mini-PCIe for Wi-Fi 5 module, 1 x M.2 3042/3052 for 4G LTE/5G FR1 module

### NSA 6310/6310-1GE

1U Rackmount uCPE w/ NXP® Layerscape® Processor, 4 x GbE RJ45 Ports and 2 x LAN Modules



Model (P/N)	<b>NSA 6310</b> (P/N: 10S00714102X0)	<b>NSA 6310-1GE</b> (P/N: 10S00631001X1)
Processor	NXP® Layerscape® LX2160A SoC processor	
Cores	Up to 16	
Memory (Max.)	Up to 64GB	
Storage	> 1 TB	
LAN Module Expansion	2 x SerDes 10GbE LAN modules	2 x SerDes 1GbE LAN modules
Ethernet Ports	4 x 1GbE RJ45 ports	
Wireless Connectivity	1 x mini-PCIe for Wi-Fi module, 1 x M.2 2242 Key B with SIM slot for LTE module	
SDK	Yes	

# Wireless uCPE for Seamless Connectivity



5G FWA technology is an alternative way to provide broadband with wireless connectivity. FWA does not just replace traditional wired connections, which need longer deployment time as well as greater investments in cable infrastructure, it also features all of the key 5G's advantages: high bandwidth, high reliability, and low latency.

16 GB of DDR4 ECC memory, M.2 SATA 2242 Key M 8GB SSD, six 1GbE RJ45 copper ports, and two 1GbE SFP+ fiber ports). Front Ethernet I/O can be optioned for eight RJ45 copper ports instead (DTA 1164WA). Other optional features include, 4G LTE or 5G (sub 6G) module through M.2 3042/3051 interfaces, mini-PCIe slots for Wi-Fi 5 & Wi-Fi 6, PoE supporting up to 30W (802.11at) with 72W 54V PoE power adaptor.

## 5G FWA technology provides broadband with wireless connectivity

Services and capabilities based on conventional CPEs are typically provided through fixed-function proprietary boxes installed on customer premises. Complex to manage, expensive to upgrade, constrained with vendor-specific configurations, these purpose-built hardware are increasing liabilities in a dynamic context where being adaptive and flexible is everything.

NEXCOM's latest uCPE, DTA 1164W, is based on Intel Atom® C3000R processor. This power-efficient SoC is ideal to be used in a variety of light scale-out workloads that require high density and high I/O integration, covering almost all networking use such as, routers, switches, storage, to security appliances.

Additional highlights of DTA 1164W include, a maximum of

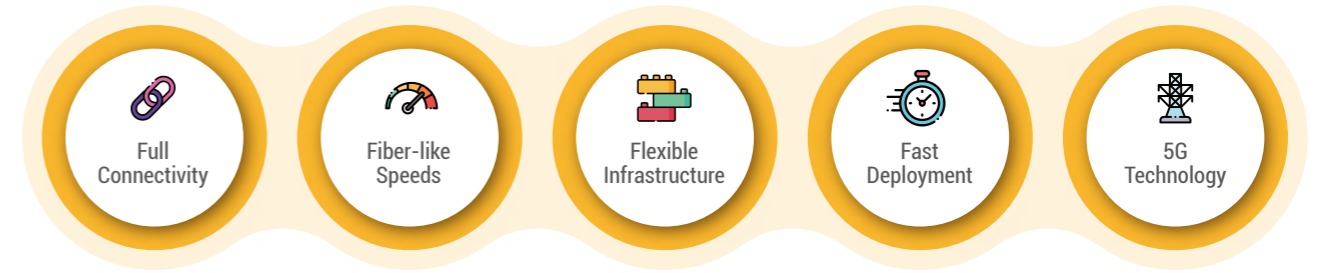
## DTA 1164W is a flexible solution for multi-connectivity and high expandability

NEXCOM DTA 1164W is designed to offer a rich set of optional features, allowing IT professionals to use the boxes across a wide range of deployment scenarios and use cases, including 5G public and private networks.

DTA 1164W delivers excellent performance per watt and PoE functionality. In addition, Wi-Fi 5/6 and 4G LTE/5G together will fulfill customers' requirements with ease.

NEXCOM's DTA 1164W is a good solution with the agility for multi-connectivity, high expandability. It helps users create a securely connected workplace as well as explores the possibilities in the 5G era.

## FWA Key Benefits





### DTA 1164W

Network Function Virtualization and Software-Defined Appliance with Intel Atom® SoC C3000R processor



Model (P/N)	<b>DTA 1164W</b> (P/N: 10TA0116408X0)
Processor	Intel Atom® processor C3436L
Cores	4
Memory (Max.)	up to 16GB
Ethernet Ports	6 x 1GbE RJ45 + 2 x SFP
PoE Support	Two ports with PoE+ (up to 30W per port)
TPM 2.0	Yes (Optional)
Intel® QAT	Yes
Wireless Connectivity	1 x mini-PCIe slot for Wi-Fi 5 and 6 1 x M.2 3042/3052 for 4G LTE and 5G (FR1)

## NEXCOM FWA appliances

Model (P/N)	 <b>DTA 1164WA</b> (P/N: 10TA0116404X0)	 <b>DTA 1164W-LITE</b> (P/N: 10TA0116411X0)	 <b>DTA 1164WA-LITE</b> (P/N: 10TA0116412X0)
CPU	Intel Atom® C3436L	Intel Atom® C3436L	Intel Atom® C3436
Ethernet Ports	8 x 1GbE RJ45	6 x 1GbE RJ45 2 x SFP	8 x 1GbE RJ45
Wireless Connectivity	4G LTE 5G FR1 and FR2 Wi-Fi 5 and 6	4G LTE or Wi-Fi 5 and 6	4G LTE or Wi-Fi 5 and 6
Power Adaptor	65W	36W	36W

# mmWave Technology Enables Full-blast 5G Experience



<b>5G FR2 (mmWave)</b> 24 GHz+				
<b>5G FR1 (sub-6GHz)</b> 2 GHz to 6GHz				
<b>5G DSS/4G</b> 600 MHz to 2 GHz				

With IoT devices increasing daily and most aspects of life are becoming digital, demand for low latency and high bandwidth connections is on the rise.

In order to meet the high demand and provide a reserve for the future, mmWave technology has heaved in sight. It covers 5G frequency range 2, which is within the 24 GHz and 300 GHz range, or more specifically, within the upper limits of radio waves or the range of microwaves.

In comparison, LTE and LTE Advanced networks run below 1 GHz. Whereas, 5G sub-6GHz functions within the mid-range bands of 3.4 GHz and 6 GHz.

With mmWave technology enabled, users can experience eMBB (enhanced Mobile Broadband) with higher speeds and seamless connectivity across many applications. mmWave specification maximizes the full network potential of fifth-generation wireless connectivity.

NEXCOM's latest professional uCPE, DFA 1163 Series, is based on Intel Atom® C3000 processor and designed to accommodate all of the applications mentioned above. It features Intel QAT® technology with built-in crypto engine for CPU offload. This professional uCPE integrates PoE+ function, powering the IoT devices and Ethernet-based equipment.

## DFA 1163 Series supports 5G FR1 & FR2 and Wi-Fi 6 modules to fulfill wireless broadband connection

One 10GbE SFP+ LAN port is added for data up-stream to the back-end Ethernet switches and even further to central servers. In addition, DFA 1163 Series features copper ports with different link speeds, two 2.5GbE RJ45 ports and eight 1GbE Ethernet switch ports to enable Ethernet services for IoT devices, such as, VLAN and QoS.

NEXCOM professional uCPE DFA 1163 Series offers agility for multi-connectivity and high expandability in creating a securely connected workplace while experiencing the outstanding potential of the 5G network technology.

## DFA 1163 Series

Desktop Professional uCPE for Wireless Broadband Applications with Intel Atom® Processor C3000R



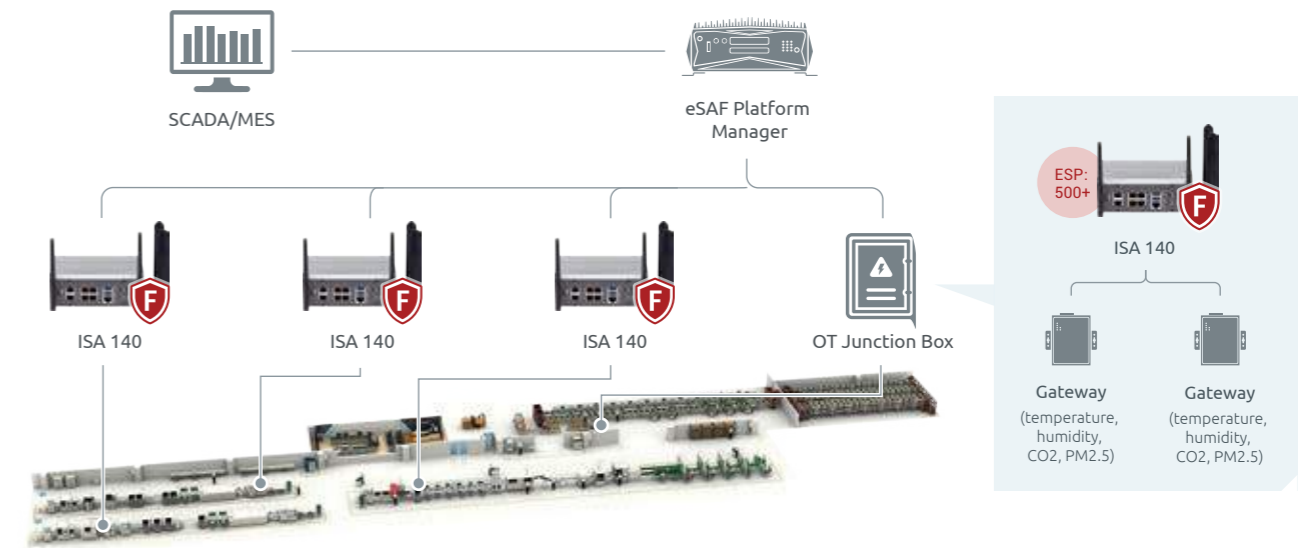
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Memory	2x DDR4 2400 ECC RDIMM/UDIMM, up to 64GB
Storage	1 x 8GB onboard eMMC 1 x PCIe3 x4 M.2 2280 Key M SSD
Ethernet Ports	2 x 2.5GbE RJ45 (with optional PoE+ support) 2 x 1GbE RJ45 (with optional PoE+ support) 8 x 1GbE RJ45 Switch (with optional PoE+ support) 1 x 1GbE SFP 1 x 10GbE SFP+
TPM 2.0	Yes (onboard)
Intel® QAT	Yes
Wireless Connectivity	1 x mini-PCIe slot for Wi-Fi 6 module 1 x M.2 3042/3052 Key B slot for 4G LTE/5G (FR1/FR 2) module

Model (P/N)	DFA 1163 (P/N: 10FA0116300X0)	DFA 1163A (P/N: 10FA0116301X0)	DFA 1163M (P/N: 10FA0116302X0)
CPU	Intel Atom® C3558R	Intel Atom® C3758R	Intel Atom® C3758R
Core count	4	8	8
4G, 5G FR1 support	v	v	v
5G FR2 support	x	x	v
Ethernet Switch	x	x	v

mmWave maximizes the full network potential of 5G connectivity

# Zero Compromise IoT Network Security



## ISA 140

Fanless Industrial Security Appliance in a Compact DIN Rail form Factor with Intel Atom® Processor and 6 x 1GbE RJ45 Ports



Building a reliable network between devices is the first step towards a secure OT future for smart manufacturing. For the purposes of collecting and analyzing all data generated during the manufacturing processes, literally every single device, unit, or fixture, has to be equipped with sensors while connected to the internal network.

The Out-of-Band (OOB) remote management function and bypass mechanism make ISA 140 a winner in cost-effectiveness in terms of either operation or management. OOB supports remote power on, shut down, and reboot of devices while the bypass mechanism keeps accessibility of network connections, making the days of OT professionals a lot easier.

### Reliable OT network is the first step towards a secure future of IoT

Unlike the high-performance IT security units, which are usually huge in size but scarce in number, what better fits OT security contexts is a rather large number of lightweight units.

To offer a cost-effective cybersecurity solution, NEXCOM introduces ISA 140, a compact industrial firewall solution in ruggedized design.

Powered by dual-core Intel Atom® processor, the ISA 140 features six 1GbE RJ45 ports, ensuring safe connectivity for processing multiple devices with no compromise on protection. This Wi-Fi/LTE ready appliance offers extensive network coverage as well as high reliability.



### ISA 140 ensures a high number of connections to devices with no compromise on protection

ISA 140 manages and monitors communications between devices and forward event reports to the war room. Furthermore, it protects the production from cyber threats, external and internal threats, and its network segregation effectively stops damage from spreading.

ISA 140 makes zero compromise in performance while maintaining high intensity in event reporting. This helps minimize the number of units to be deployed, as well as the total cost for operation and maintenance.

Model (P/N)	<b>ISA 140</b> (P/N: 10L10014000X0)
Processor	Intel Atom® processor x6212RE, BGA type
Cores	2
Memory (max.)	Up to 16GB
Ethernet Ports	6 x 1GbE RJ45
Bypass	1 pair
TPM 2.0	Yes (onboard)
Wireless	Wi-Fi and 4G LTE
OOB Remote Management	Yes

## Other NEXCOM appliances for OT Security applications

Model (P/N)	 <b>ISA 140S</b> (ODM Only)	 <b>ISA 141</b> (Coming Soon)	 <b>ISA 142</b> (Developing)
CPU	Intel Atom® x6414RE	Intel Atom® x6413E	Intel Atom® x6413E
Cores	4	4	4
Ethernet Ports	3 x 2.5GbE RJ45	3 x 1GbE RJ45	3 x 1GbE RJ45 8/16 x 1GbE switch
Wireless Connectivity	N/A	2 x miniPCIe slots for Wi-Fi 6E 2 x M.2 3042 Key B slots for LTE/5G	N/A
OOB Support	Yes	Yes	Yes

# 2023 Featured Products



## NSA 7160

2U Performance Appliance with 8 x PCIe5 LAN Module Slots for Network Security and 5G Network Applications

- Dual 4th Gen Intel® Xeon® scalable processor
- 16 x DDR5 4800 ECC RDIMM
- 2 x 2.5" swappable SSD/HDD
- 8 x PCIe5 LAN module slots
- 1 x PCIe4 x16 slot with CXL1.1 for FHFL card
- 1 x IPMI 2.0 RunBMC module



## NSA 5190

1U Rackmount w/ 12th Gen Intel® Core™ Processor, 2 x 2.5G RJ45 Ports, and 4 x LAN Module Slots

- 12th Gen Intel® Core™ processor
- 4 x DDR4 2666/3200 non-ECC/ECC UDIMM
- 2 x 2.5G RJ45 ports
- 4 x LAN module slots
- 1 x BMC module
- 1 x PCIe4 x4 connector for low profile riser card



## NSA 3190A

1U Rackmount w/ Intel® Xeon® W Processor, 8 x 2.5GbE RJ45 ports, and 1 x LAN Module

- Intel® Comet Lake processor (LGA1200)
- 2 x DDR4 ECC/non-ECC (2666/2933) UDIMM
- 2 x 2.5" internal SSD/HDD
- 8 x 2.5GbE RJ45 ports
- 1 x LAN module slot
- Optional TPM support



## NSA 6310

1U Rackmount uCPE w/ NXP® Layerscape® Processor, 4 x GbE RJ45 Ports and 2 x LAN Modules

- NXP® LX2160A multicore processor
- 4 x DDR4 ECC-UDIMM, up to 64GB
- 1 x M.2 2280
- PCIe Gen3 x8 with SR-IOV
- 4 x 1GbE RJ45 ports
- 2 x LAN module slots



## DTA 1376

Arm-Based Desktop uCPE for Wireless Broadband Applications w/ NXP® Layerscape® LS1046A SoC Processor

- NXP® Layerscape® LS1046A SoC processor, BGA type
- 1 x DDR4-2133 SO-DIMM ECC socket, up to 16GB
- 1 x M.2 2242 NVMe SSD
- 7 x 1GbE RJ45 ports
- 1 x M.2 3042/3052 for 4G LTE/5G (FR1) module
- 1 x mini-PCIe slot for Wi-Fi 5 module



## FTA 5180

High-end Edge Appliance in a Short 1U Rackmount Form Factor for 5G Fronthaul Applications

- Intel® Xeon® D-1734NT processor
- 4 x RDIMM/UDIMM sockets
- 6 x 10G SFP+ ports
- 2 x 10GbBaseT RJ45 PoE++ ports
- 2 x 2.5G RJ45 PoE++ ports
- 1 x LAN module slot



## FTA 1170

1U Professional uCPE with Multiple I/O Interfaces, Optional Wireless Connectivity and Switching Capabilities

- Intel Atom® P5322 SoC processor, BGA type
- 24 x 2.5GbE RJ45 switch ports
- 4 x 10GbE RJ45 NIC ports
- 2 x 10GbE SFP+ switch ports
- 2 x 10GbE SFP+ NIC ports
- 1 x PCIe Gen3 x16 interface LAN module slot



## TCA 1166

1U Cell Site Router with PTP (IEEE 1588v2) and SyncE Features to Improve Network Efficiency

- Intel Atom® C3308 SoC processor, BGA type
- 1 x DDR4 2400 8GB ECC memory module
- 8 x 1G SFP ports with PTP & SyncE
- 6 x 10G SFP+ ports with PTP & SyncE
- Redundant (1+1) DC input (-36~72V)
- Supports GNSS Module (optional)



## DFA 1163 Series

Desktop Professional uCPE for Wireless Broadband Applications with Optional Support for mmWave Connectivity

- Intel Atom® C3000R series SoC, BGA type
- 2 x DDR4 ECC RDIMM/UDIMM
- 1 x SFP+ port
- 12 x RJ45 ports (with optional PoE+ support)
- 1 x mini-PCIe slot for Wi-Fi 6 module
- 1 x M.2 3042/3052 Key B slot for 4G LTE/5G (FR1 & FR2) module






## ISA 141

Fanless OT Security DIN Rail Appliance with Intel Atom® Processor, 3 x 1GbE RJ45 Ports, Dual 5G and Dual Wi-Fi



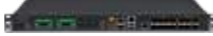
- Intel Atom® x6413E processor
- 3 x 1GbE RJ45 with 1 combo port
- 2 x miniPCIe slots for Wi-Fi 6E modules
- 2 x M.2 3042 Key B slots for LTE/5G modules
- Dual DC (9~36VDC)
- Supports OOB



# Product Selection Table

	Network Security Rackmount Appliances		
Model			
	<b>NSA 7160</b>	<b>NSA 3190A</b>	<b>NSA 1160/1160A</b>
Form Factor	2U	1U	1U
Processor	Dual 4th Gen Intel® Xeon® scalable processor	Intel® 10th Gen Core™/Intel® Xeon® Intel® Pentium®/Intel® Celeron®	Intel® Atom® C3000 series, BGA type
Cores	Up to 52	Up to 10	Up to 16
Memory	Up to 2TB	Up to 32GB	Up to 128GB
LAN Ports	-	8 x 2.5GbE RJ45	8 x 1GbE RJ45 / 6 x GbE RJ45 & 2 x 10GbE SFP+
LAN Module Slots	8	1	0/1
TPM	Optional	Optional	V
Virtualization Technology*	Intel® VT-x	Intel® VT-x	Intel® VT-x
Virtualization Technology for Directed I/O*	Intel® VT-d	Intel® VT-d	Intel® VT-d
SR-IOV**	V	V	V
Built-In Crypto Engine*	Intel® QAT	Intel® QAT	Intel® QAT
Secure Data Encryption and Decryption*	Intel® AES-NI	Intel® AES-NI	Intel® AES-NI





\*Supported by selected CPU  
 \*\*Supported by selected LAN modules

	Network Security Desktop Appliances	Cell Site Router	
Model			
	<b>DNA 130 Series</b>	<b>DNA 1170</b>	<b>TCA 1166</b>
Form Factor	Desktop	Desktop	1U
Processor (BGA Type)	Intel® Atom® x5-E3900 series	Intel® Atom® C5000 series	Intel® Atom® C3000 series
Cores	Up to 4	Up to 8	Up to 2
Memory	Up to 4GB	Up to 16GB	32GB
LAN ports	5 x 1GbE RJ45	8 x 1GbE RJ45 4 x 10GbE SFP+	1 x RJ45 for TOD & 1PPS 1 x RJ45 for BITS 8 x 1GbE SFP with PTP & SyncE 6 x 10GbE SFP+ with PTP & SyncE
TPM	N/A	Optional	N/A
Virtualization Technology*	Intel® VT-x	Intel® VT-x	Intel® VT-x
Virtualization Technology for Directed I/O*	Intel® VT-d	Intel® VT-d	Intel® VT-d
Built-In Crypto Engine*	n/a	Intel® QAT	Intel® QAT
Secure Data Encryption and Decryption*	Intel® AES-NI	Intel® AES-NI	Intel® AES-NI
Wireless Connectivity	4G LTE, Wi-Fi	4G LTE, 5G, Wi-Fi	GPS

\*Supported by selected CPU

Edge & Cloud Rackmount Appliances			
			
<b>NSA 6310</b>	<b>TCA 5170 Series</b>	<b>FTA 5180</b>	<b>FTA 1170</b>
1U	1U	1U	1U
NXP® Layerscape® LX2160A SoC	Intel® Xeon® D-2100 series	Intel® Xeon® D-1700 series	Intel® Atom® P5300 series
Up to 16	Up to 14	10	8
Up to 64GB	Up to 256GB	Up to 256GB	Up to 1024GB
4 x GbE RJ45	8 x 1GbE RJ45 4 x 10GbE SFP+	2 x 10GbE RJ45 2 x 2.5GbE RJ45 6 x 10GbE SFP+	24 x 2.5GbE RJ45 switch 4 x 10GbE RJ45 2 x 10GbE SFP+ switch 2 x 10GbE SFP+
2	2	1	1
N/A	V	V	V
KVM	Intel® VT-x	Intel® VT-x	Intel® VT-x
KVM	Intel® VT-d	Intel® VT-d	Intel® VT-d
V	V	V	V
DPAA2	Intel® QAT	Intel® QAT	Intel® QAT
SEC (security engine)	Intel® AES-NI	Intel® AES-NI	Intel® AES-NI

We reserve the right to change specifications and product descriptions at any time without prior notice.

Edge & Cloud Desktop Appliances	Industrial Appliance		
			
<b>DTA 1376</b>	<b>DTA 1164W Series</b>	<b>DFA 1163 Series</b>	<b>ISA 140</b>
Desktop	Desktop	Desktop	DIN Rail
NXP® Layerscape® LS1046A	Intel® Atom® C3000R series, SoC	Intel® Atom® C3000R series, SoC	Intel® Atom® x6212RE
4	Up to 4	8	Up to 2
Up to 16GB	Up to 16GB	Up to 64GB	16GB
7 x 1GbE RJ45 ports	6 x 1GbE RJ45 & 2 x 1GbE SFP Or 8 x 1GbE RJ45	2 x 2.5GbE RJ45 2 x 1GbE RJ45 8 x 1GbE RJ45 Switch 1 x 1GbE SFP 1 x 10GbE SFP+	6 x 1GbE RJ45 ports
N/A	Optional	Optional	V
KVM	Intel® VT-x	Intel® VT-x	Intel® VT-x
KVM	Intel® VT-d	Intel® VT-d	Intel® VT-d
DPAA1	Intel® QAT	Intel® QAT	N/A
SEC (security engine)	Intel® AES-NI	Intel® AES-NI	Intel® AES-NI
5G (FR1), 4G LTE, Wi-Fi 5	5G (FR1), 4G LTE, Wi-Fi 6	5G (FR1/2), 4G LTE, Wi-Fi 6	4G LTE, Wi-Fi 6

We reserve the right to change specifications and product descriptions at any time without prior notice.

# NSA 7160

2U Rackmount Performance Appliance  
w/ Dual 4th Gen Intel® Xeon® Scalable Processor and  
8 x PCIe5 LAN Module Slots



## Main Features

- Dual 4th Gen Intel® Xeon® scalable processor
- 16 x DDR5 4800 ECC RDIMM
- 2 x 2.5" swappable SSD/HDD
- 2 x Management ports
- 1300W 1+1 CRPS redundant power supply
- 8 x PCIe5 LAN module slots
- 1 x PCIe4 x16 slot with CXL1.1 for FHFL card
- 1 x IPMI 2.0 RunBMC module

## Product Overview

NEXCOM's NSA 7160 is a 2U rackmount high-performance networking appliance intended for networking security and 5G network applications. Based on the 4th Gen Intel® Xeon® product family (formerly: Eagle Stream), NSA 7160 features enhancements in multi-core computing performance, high memory capacity, high-speed I/O interface, and Intel® QAT hardware acceleration by selected CPU SKUs with DPDK to support NEXCOM propriety and standard OCP 4C+ interface LAN modules for both enterprise and telecommunication applications.

## Specifications

### Main Board

- Dual Intel® 4th Gen Xeon® Scalable processor, socket LGA 4677
- PCH: Intel® Emmitsburg (C741)
- Supports 4 x UPI between CPUs
- TPM 2.0 onboard

### Memory

- 16 (8+8) DDR5 memory DIMMs, up to 2TB for RDIMM

### Storage

- 2 x 2.5" swappable SSD/HDD
- 1 x M.2 2280 (Key B+M) socket

### Interface External

- Button: Power & reset & NMI
- LED: PWR/STBY/HDD/ERR
- 2 x 2.5" swappable SSD/HDD bays
- 2 x USB 3.0 ports
- 1 x RJ45 type console
- 8 x PCIe5 LAN module slots (OCP 4C+ interface)

- 2 x Management ports (1 x RJ45 & 1 x SFP)
- 1 x VGA port (for models with BMC installed only)
- 3 x Swappable smart fans
- 2 x Power inlets
- 1 x LCM module

### Interface internal

- 1 x IPMI 2.0 RunBMC module
- 1 x PCIe4 x16 slot with CXL1.1 for FHFL card

### Power

- 1300W 1+1 CRPS redundant power supply

### Dimension and Weight

- Chassis dimension: 438 mm x 800 mm x 88 mm
- Carton dimension: 1015 x 688 x 285 mm
- Without packing: 21.9 Kg
- With packing: 30.58 Kg

## Environment

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

## Certification

- CE/FCC Class A

## Ordering Information

### Barebone

- **NSA 7160 (P/N: 10S00716000X0)**  
2U w/ dual 4th Gen Intel® Xeon® Scalable processor w/ QAT hardware acceleration by selected CPU SKUs, LCM, 8 x LAN module slots

# NSA 7150/7150A

2U Rackmount Performance Appliance  
w/ Dual 3rd Gen Intel® Xeon® Scalable processor and  
8 x PCIe4 LAN Module Slots



## Main Features

- Dual 3rd Gen Intel® Xeon® Scalable processor (socket P + 4189-pin)
- Supports Intel® Optane™ Persistent Memory
- 20 x DDR4 3200 ECC RDIMM/LRDIMM
- 2 x 2.5" swappable SSD/HDD
- 8 x PCIe4 LAN module slots
- 1 x PCIe4 x16 low profile riser card
- 1300W 1 + 1 CRPS redundant power supply
- Supports OCP NIC 3.0
- Supports IPMI 2.0 BMC (optional)
- Supports Intel® QAT (NSA 7150A)

## Product Overview

The NSA 7150 is a 2U rackmount high-performance networking appliance intended for networking security and 5G network applications. Based on 3rd Gen Intel® Xeon® product family (codenamed Whitley), NEXCOM's NSA 7150 features enhancements in multi-core computing performance, high memory capacity, high speed I/O interface, and Intel® QAT hardware acceleration with DPDK to support NEXCOM proprietary LAN modules and OCP NIC 3.0 modules for both enterprise and telecommunication applications.

## Specifications

### Main Board

- Dual 3rd Gen Intel® Xeon® Scalable processor
- Intel® C627A w/ Intel® QAT (NSA 7150A)
- Supports 3 x UPI between CPUs
- Supports 8 x PCIe4 LAN modules
- Supports IPMI 2.0 BMC (optional)

### PCH

- NSA 7150: Intel® Lewisburg Refresh LBG-1G (C621A)
- NSA 7150A: Intel® Lewisburg Refresh LBG-T (C627A)

### Memory

- Support 20 (10 + 10) DDR4 memory DIMMs (up to 1280GB for RDIMM and up to 2560GB for LRDIMM)
- Support Intel® Optane™ persistent memory (Barlow Pass)

### Storage

- 2 x 2.5" swappable SSD/HDD
- 1 x M.2 2280 (Key M) socket

### Interface External

- Button: power & reset & NMI
- LED: PWR/STBY/HDD/ERR
- 2 x 2.5" swappable SSD/HDD bays
- 2 x USB 3.0 ports
- 1 x RJ45 type console
- 8 x LAN module slots + 1 x PCIe4 x16 low profile card
- 8 x OCP NIC 3.0 slots + 1 x PCIe4 x16 low profile card (optional)

- 4 x LAN module slots + 1 x PCIe4 x16 FHFL card (optional)
- 2 x Management ports
- 1 x VGA port (NSA 7150A)
- 3 x Swappable smart fans
- 2 x Power inlets
- LCM module

### Interface internal

- TPM 2.0 module (optional)
- BMC module (optional)

### Power

- 1300W 1 + 1 CRPS redundant power supply

### Dimension and Weight

- Chassis dimension: 438 mm x 650 mm x 88 mm
- Carton dimension: 867 mm x 688 mm x 249 mm
- Without packing: 16.72 kg
- With packing: 25 kg

### Environment

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

### Certification

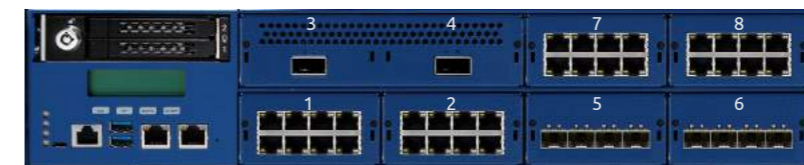
- CE/FCC Class A

## Ordering Information

### Barebone

- **NSA 7150 (P/N: 10S00715000X0)**  
2U w/ Dual 3rd Gen Intel® Xeon® Scalable processor, w/o QAT, LCM, 8 x LAN module slots, w/o VGA port and BMC module
- **NSA 7150A (P/N: 10S00715001X0)**  
2U w/ Dual 3rd Gen Intel® Xeon® Scalable processor, w/ QAT, LCM, 8 x LAN module slots, with VGA port and BMC module

Model	P/N	Interface	Type	Port Number	Bypass/Segment	Expansion Slot	Speed	Location Slot
NI 184CX1W	2BS10184C04X0	i350AM4x2	PCIe x8	8 Copper	4 bypass	None	1G	3,4/7,8
NI 180CW	2BS10180C02X0	i350AM4x2	PCIe x8	8 Copper	None	None	1G	3,4/7,8
NI 142CX1W	2BS10142C02X0	i350AM4x1	PCIe x8	4 Copper	2 bypass	None	1G	3,4/7,8
NI 140C-OS	2BS10140C00X0	i350AM4x1	PCIe x8	4 Copper	None	None	1G	1,2/5,6
NI 142CX1-OS	2BS10142C00X0	i350AM4x1	PCIe x8	4 Copper	2 bypass	None	1G	1,2/5,6
NI 180C-OS	2BS10180C00X0	i350AM4x2	PCIe x8	8 Copper	None	None	1G	1,2/5,6
NI 184CX1-OS	2BS10184C02X0	i350AM4x2	PCIe x8	8 Copper	4 bypass	None	1G	1,2/5,6
NX 120F-OS	2BS20120F00X0	XL710-BM2	PCIe x8	2 SFP+	None	None	10G	1,2/5,6
NX 140FW	2BS20140F06X0	XL710-BM1	PCIe x8	4 SFP+	None	None	10G	3,4/7,8
NX 140F-OS	2BS20140F02X0	XL710-BM1	PCIe x8	4 SFP+	None	None	10G	1,2/5,6
NX 140C2F2W	2BS20140F07X0	EZX710TM4	PCIe x8	2 Copper+ 2 SFP+	None	None	10G	3,4/7,8
NX 142FX1W	2BS20142F05X0	XL710-BM1	PCIe x8	4 SFP+	2 bypass	None	10G	3,4/7,8
NX 142FX1W-LR	2BS20142F06X0	XL710-BM1	PCIe x8	4 SFP+	2 bypass	None	10G	3,4/7,8
NX 142FX1-OS	2BS20142F01X0	XL710-BM1	PCIe x8	4 SFP+	2 bypass	None	10G	1,2/5,6
NX 142FX1-LR-OS	2BS20142F02X0	XL710-BM1	PCIe x8	4 SFP+	2 bypass	None	10G	1,2/5,6
NX 121FX1-OS	2BS20121F02X0	XL710-BM2	PCIe x8	2 SFP+	1 bypass	None	10G	1,2/5,6
NX 121FX1-LR-OS	2BS20121F03X0	XL710-BM2	PCIe x8	2 SFP+	1 bypass	None	10G	1,2/5,6
NV 120FW	2BS50120F01X0	XXV710-AM2	PCIe x8	2 SPF28	None	None	25G	3,4/7,8
NQ 120FW	2BS40120F01X0	XL710-BM2	PCIe x8	2 QSFP+	None	None	40G	3,4/7,8
NC 120FMS4W	2BS30012002X0	MT28808A0-FCCF-EV	PCIe x8	2 QSFP28	None	None	100G	3,4/7,8
NC 120FIS4-OS	2BS30012001X0	EZE810CAM2	PCIe x16	2 QSFP28	None	None	100G	1,2/5,6
NL 110FM-OS	2BS60011000X0	MT28924A0-NCCF-VE	PCIe x16	1 QSFP28/56	None	None	200G	1,2/5,6





## 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	I350-AM4x1	PCIe x8	4 SFP	None	None	All Slot
NI 180F	10S10180F01X0	I350-AM4x2	PCIe x8	8 SFP	None	None	All Slot
NI 142C	10SK000NI03X0	I350-AM4x1	PCIe x8	4 Copper	2 bypass	None	All Slot
NI 180C	10S10180C01X0	I350-AM4x2	PCIe x8	8 Copper	None	None	All Slot
NI 184C	10S10184C01X0	I350-AM4x2	PCIe x8	8 Copper	4 bypass	None	All Slot
NI 142F	10S10142F01X0	I350-AM4x1	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	I350-AM4x1	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

# NSA 5190 (ODM only)

1U Rackmount Appliance with 12th Gen Intel® Core™ Processor, 2 x 1GbE RJ45 Ports, and 4 x LAN Module Slots



## Main Features

- 12th Gen Intel® Core™ processor
- 4 x DDR4 2666/3200 non-ECC/ECC UDIMM, up to 128GB
- 1 x M.2 2280 Key M (SATA)
- 1 x TPM module
- 1 x PCIe 4 x4 connector for low profile riser card
- 2 x 1GbE RJ45 ports
- 4 x LAN module slots

## Product Overview

NSA 5190 is a 1U rackmount appliance with the newest Intel® Core™ processor and latest PCIe 4.0 interface. It is capable of managing heavy workloads without overloading the CPU and proceeding with big data volumes in a shorter time. NSA 5190 is a modular, flexible network solution, which will ideally fit into SD-WAN, web monitoring, load balancing, and network virtualization deployments.

## Specifications

### Main Board

- 12th Gen Intel® Core™ Processor, formerly Alder Lake, max 125W
- PCH: R680E

### Main Memory

- 4 x DDR4 2666/3200 non-ECC/ECC UDIMM with up to 32GB per slot (max. up to 128GB)

### Storage

- 1 x M.2 2280 Key M (SATA)

### Interface External

- 2 x Buttons: power/reset
- 4 x LEDs: PWR1/PWR2/FAN/SYS
- 2 x USB 3.0 ports
- 1 x RJ45 console port
- 2 x 1GbE RJ45 ports
- 4 x LAN module slots (2 x PCIe4 x8; 1 x 2PCIe4 x4; 1 x 2PCIe3 x4)
- 3 x Swappable smart fans
- 2 x Power inlets for redundant PSU

### Interface Internal

- 1 x PCIe4 x4 connector for low profile riser card
- 1 x TPM2.0 module

### Power

- 550W CRPS (1+1) redundant PSU

### Dimension and Weight

- Chassis dimension (mm): 438 x 470 x 44mm (W x D x H)

### Environment

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

## Ordering Information

### Barebone

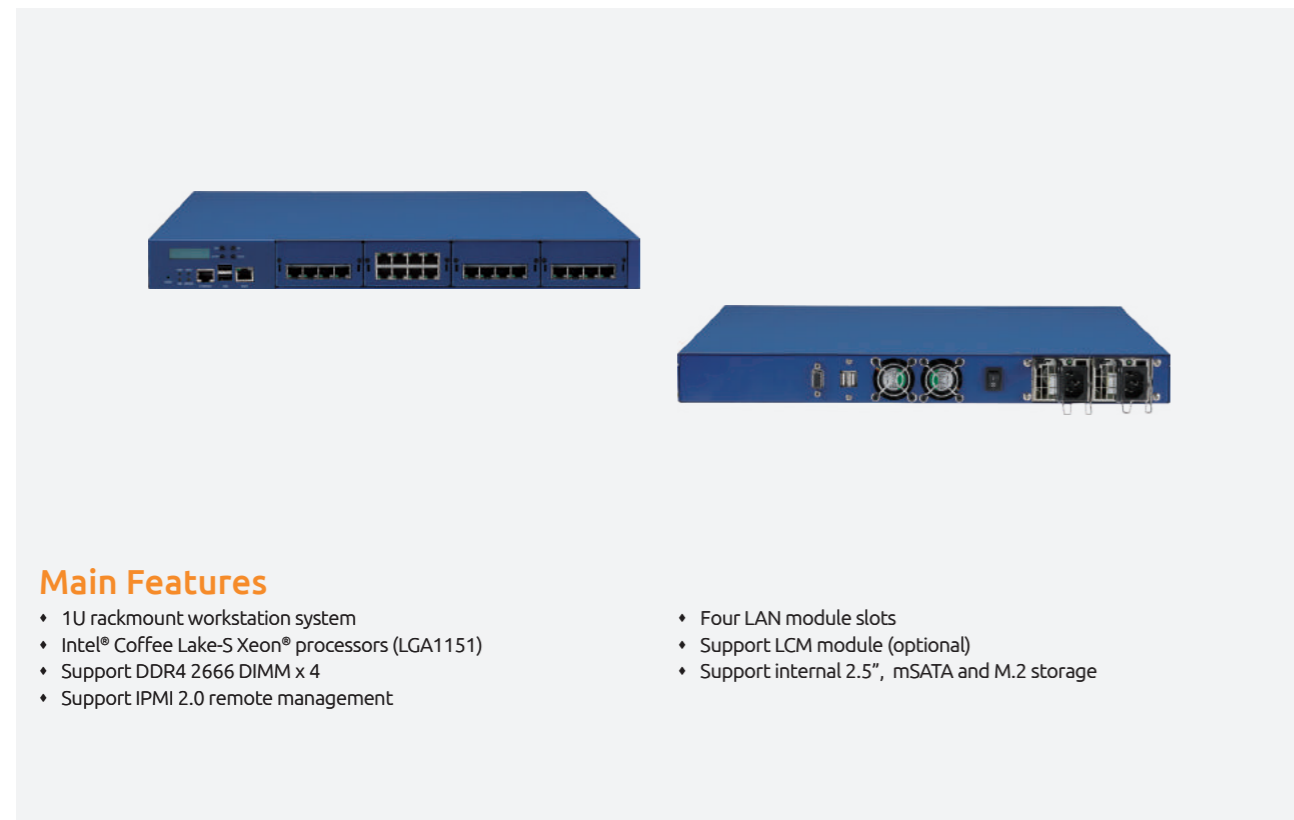
- **NSA 5190 (P/N: 10S00519000X0) for ODM projects only**  
1U w/ 12th Gen Intel® Core™ processor, 2 x 1GbE RJ45 ports and 1 x TPM2.0 module

For optimal performance, the below configuration of LAN modules is recommended.

Model	P/N	Controller	Interface	Port Number	Bypass/Segment	Expansion Slot	Speed	Location Slot
NX 140F	10S20140F01X0	XL710-BM1	PCIe x8	4 x SFP+	None	None	10GbE	1
NA 1000-L26	10SK0100001X0	LBG-M, C626	PCIe x8	n/a	None	None	n/a	2
NI 180C	10S10180C01X0	i350AM4	PCIe x8	8 x RJ45	None	None	1GbE	3, 4
NI 184CX1	10S10184C08X0	i350AM4	PCIe x8	8 x RJ45	4	None	1GbE	3, 4

To check the availability of other compatible LAN modules, please contact your responsible NEXCOM account manager or fill in the online inquiry form.





### 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 470mm 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

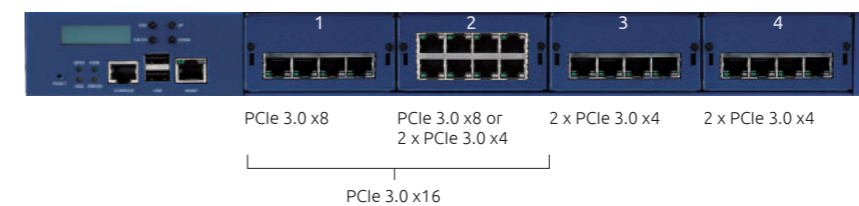
### Ordering Information

#### 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	I350-AM4x1	PCIe x8	4 SFP	None	None	All Slot
NI 180F	10S10180F01X0	I350-AM4x2	PCIe x8	8 SFP	None	None	2, 3, 4
NI 142C	10SK000NI03X0	I350-AM4x1	PCIe x8	4 Copper	2 bypass	None	All Slot
NI 180C	10S10180C01X0	I350-AM4x2	PCIe x8	8 Copper	None	None	2, 3, 4
NI 184C	10S10184C01X0	I350-AM4x2	PCIe x8	8 Copper	4 bypass	None	2, 3, 4
NI 142F	10S10142F01X0	I350-AM4x1	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	I350-AM4x1	PCIe x8	4 Copper	None	None	All Slot
NC220Q28M	10S30022002X0	MT27708A0-FDCF-CE	PCIe x16	2 QSFP28	None	None	1, 2



# NSA 3190A

1U Rackmount Entry Level Appliance w/ Intel® Comet Lake Processor (LGA1200),  
8 x 2.5 GbE LANs and 1 x LAN Module



## Main Features

- Intel® Comet Lake processor (LGA1200)
- 2 x DDR4 ECC/non-ECC (2666/2933) UDIMM
- 2 x 2.5" internal SSD/HDD
- 1 x SATA3 for SATA DOM
- 1 x M.2 2242 Key M
- 8 x 2.5 GbE RJ45 LAN ports
- 1 x LAN module
- Single power supply

## Product Overview

NSA 3190A is a network communication appliance intended for secure workloads and lower energy consumption. Based on the Intel® Comet Lake processor, NEXCOM's NSA 3190A features high performance computing, flexible I/O, and cost-effective design in processing traffic for network security applications. With up to 8 2.5GbE RJ45 LAN ports and NVME expansion cards, it also gives opportunities for customization. NSA 3190A is an ideal edge server or a network security appliance in small and medium business networks.

## Specifications

### Main Board

- Intel® Comet Lake processor (LGA1200), up to 80W
- Intel® W480
- TPM 2.0 (optional)
- Dual BIOS

### Main Memory

- 2 x DDR4 2666/2933 ECC/non-ECC UDIMM, up to 32GB

### Storage

- 2 x 2.5" internal SSD/HDD bays
- 1 x M.2 2242 Key M (SATA)
- 1 x SATA3 for SATA DOM

### Interface-External

- Buttons: Power & reset
- LED: HDD/GPIO
- 2 x USB 3.0 ports
- 1 x RJ45 console
- 8 x 2.5 GbE RJ45 LAN ports
- 1 x LAN module slot
- 1 x HDMI

### Interface-Internal

- 2 x Fixed smart fans
- 1 x Power inlet
- 1 x Low profile standard PCIe x8 expansion slot
- LCM

### Riser card

- NVMe with 2 x M.2 SSD

### Power

- 300W single power supply

### Dimensions and Weight

- Chassis dimension: 430mm x 300mm x 44mm
- Carton dimension: 544mm x 506mm x 205mm
- Without packing: 4.7kg
- With packing: 7.5kg

### Environment

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

## Ordering Information

### Barebone

- **NSA 3190A (P/N: 10S00319000X0) for ODM projects only**  
1U w/ Intel® Comet Lake processor, 8 x 2.5GbE, 1 x LAN module, single PSU

Model	P/N	Controller	Speed	I/O ports	PCIe	Bypass	Location slot
NI 140C	10S10140C01X0	I350-AM4 x 1	1G	4 x RJ45	PCIe x4	0	All slots
NI 180C	10S10180C01X0	I350-AM4 x 2	1G	8 x RJ45	2 x PCIe x4	0	All slots
NI 140F	10S20140F01X0	I350-AM4 x 1	1G	4 x SFP	PCIe x4	0	All slots
NI 180F	10S10180F01X0	I350-AM4 x 2	1G	8 x SFP	2 x PCIe x4	0	All slots
NI 184CX1	10S10184C08X0	I350-AM4 x 2	1G	8 x RJ45	2 x PCIe x4	4	All slots
NI 142CX1	10S10142C09X0	I350-AM4 x 1	1G	4 x RJ45	PCIe x4	2	All slots
NX 140F	10S20140F01X0	XL710-BM1	10G	4 x SFP+	PCIe x8	0	All slots
NX 142F	10S20142F01X0	XL710-BM1	10G	4 x SFP+	PCIe x8	2	All slots
NX 142FX1	10S20142F19X0	XL710-BM1	10G	4 x SFP+	PCIe x8	2	All slots
NX 142FX1-LR	10S20142F20X0	XL710-BM1	10G	4 x SFP+	PCIe x8	2	All slots
NX 121FX1	10S20121F12X0	X710-BM2	10G	2 x SFP+	PCIe x8	1	All slots
NX 121FX1-LR	10S20121F13X0	X710-BM2	10G	2 x SFP+	PCIe x8	1	All slots
NV 120F	10S50120F01X0	XXV710-AM2	25G	2 x SFP28	PCIe x8	0	All slots
NQ 120F	10S40120F04X0	XL710-BM2	40G	2 x QSFP+	PCIe x8	0	All slots

# 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 2.5 GbE, 1 x LAN module, single PSU

Model	P/N Controller	Controller	PCIe	Bypass	Speed	I/O ports
NI 142C	10SK000NI03X0	I350-AM4x1	x4	2	1G	4 RJ45
NI 140C	10S10140C01X0	I350-AM4x1	x4	0	1G	4 RJ45
NI 184C	10S10184C01X0	I350-AM4x2	x4x4	4	1G	8 RJ45
NI 180C	10S10180C01X0	I350-AM4x2	x4x4	0	1G	8 RJ45
NI 180F	10S10180F01X0	I350-AM4x2	x4x4	0	1G	8 SFP
NI 140F	10SK000NI02X0	I350-AM4x1	x4	0	1G	4 SFP
NI 142F	10S10142F01X0	I350-AM4x1	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

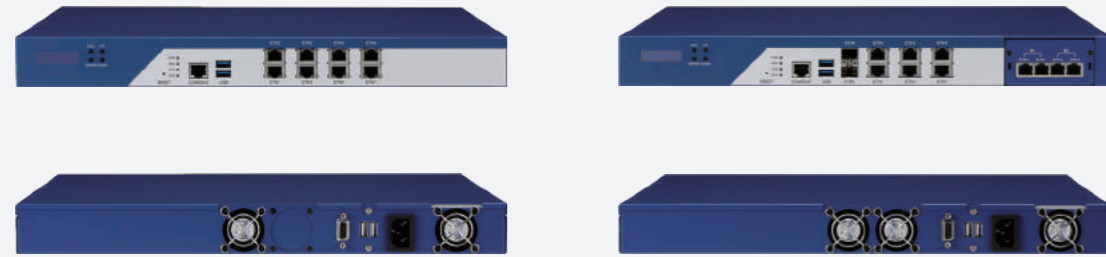
### Barebone

- **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	I350-AM4x1	x4	2	1G	4 RJ45
NI 140C	10S10140C01X0	I350-AM4x1	x4	0	1G	4 RJ45
NI 184C	10S10184C01X0	I350-AM4x2	x4x4	4	1G	8 RJ45
NI 180C	10S10180C01X0	I350-AM4x2	x4x4	0	1G	8 RJ45
NI 180F	10S10180F01X0	I350-AM4x2	x4x4	0	1G	8 SFP
NI 140F	10SK000NI02X0	I350-AM4x1	x4	0	1G	4 SFP
NI 142F	10S10142F01X0	I350-AM4x1	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 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 NSA1160/1160A 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	I350-AM4x1	PClex8	4 SFP	None	None	All Slot
NI 142C	10SK000NI03X0	I350-AM4x1	PClex8	4 Copper	2 bypass	None	All Slot
NI 142F	10S10142F01X0	I350-AM4x1	PClex8	4 SFP	2 bypass	None	All Slot
NI 121F	10S10121F01X0	i350AM2x1	PClex8	2 SFP	1 bypass	None	All Slot
NI 140C	10S10140C01X0	I350-AM4x1	PClex8	4 Copper	None	None	All Slot

# NSA 1170

1U Rackmount Cyber Security Appliance w/ Intel Atom® P5300  
Processor, 8 x 1GbE RJ45 and 8 x 10GbE SFP+ Ports



## Main Features

- Intel Atom® P5322 processor SoC, BGA type
- 2 x SO-DIMM DDR4 3200 8GB ECC memory modules
- 1 x M.2 2242 Key M slot
- 3 x USB 3.0
- 1 x RJ45 management port
- 8 x 1GbE RJ45 ports
- 8 x 10GbE SFP+ ports
- 2 x 2.5"SSD (optional)

## Product Overview

1U network security appliance NSA 1170 helps small and medium enterprises build a securely connected workplace. Based on Intel Atom® P5300 processor series, it features excellent performance per watt and server-grade Ethernet connectivity through eight 1GbE copper and ten 10GbE fiber ports. Embedded Intel® QuickAssist Technology provides security and compression acceleration capabilities to improve performance and efficiency across the enterprise network.

## Specifications

### Main Board

- Intel Atom® P5322 processor SoC, BGA type, 8 cores w/QAT

### Memory

- 2 x SO-DIMM DDR4 8GB ECC memory modules, up to 16G

### Storage

- 1 x M.2 2242 slot (M Key SATA interface)

### Expansion

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

### Interface External

- 8 x 1GbE RJ45 ports
- 8 x 10GbE SFP+ ports
- 1 x RJ45 console port
- 1 x RJ45 management port
- 3 x USB 3.0
- Power & reset buttons

- LEDs: Status/MGMT/HA/PWR1/PWR2/SSD
- 1 x Ground screw

### Interface Internal

- 1 x M.2 2242 Key M slot
- 1 x TPM header

### Power

- Single AC power supply (reserved design for redundant AC+AC or DC+DC)

### Power Input

- DC 12V/3.33A 40W power adaptor

### Dimension and Weight

- Chassis dimension (mm): 438 mm x 300mm x 44mm (W x D x H)
- Package dimension (mm): TBD
- Without package: TBD
- With package: TBD

## Environment

- Operating temperature: 0°C~40°C
- Storage temperature: -20°C~70°C
- Relative humidity: 0%~95% non-condensing

## Certifications

- CE Approval
- FCC Class B


## Ordering Information

### • NSA 1170 (P/N: TBC)

Intel Atom® P5322 processor, BGA type, 8 cores, 2 x SO-DIMM DDR4 3200 8GB ECC memory modules, 8 x 1GbE RJ45 and 8 x 10GbE SFP+ ports

# NSA 6310/6310-1GE

1U Rackmount uCPE  
w/ NXP® Layerscape® Processor,  
4 x GbE RJ45 Ports and 2 x LAN Modules



**GOLD PARTNER**  
NXP



**arm**  
SystemReady  
ES  
CERTIFIED  
V1.0



NSA 6310

NSA 6310-1GE

### Main Features

- NXP® LX2160A multicore processor
- 4 x DDR4 ECC-UDIMM, up to 64GB
- 1 x M.2 2280
- PCIe Gen3 x8 with SR-IOV
- Supports 1/10GbE Ethernet connectivity
- Supports KVM/QEMU
- Redundant power supply
- OS: NXP® LSDK (Ubuntu UserLand)

## Product Overview

1U rackmount uCPE NSA 6310, powered by the NXP® Layerscape® LX2160A SoC processor, helps telecom companies build virtualized environments and edge applications. This appliance combines sixteen ARM® Cortex®-A72 processor cores with high-performance data path accelerators for networking and telecom/enterprise uses. It features a flexible I/O networking design to supports up to 10Gb Ethernet connectivity, together with leveraging FPGA or GPU cards for edge computing.

## Specifications

### Main Board

- NXP® Layerscape® LX2160A SoC, BGA type, 16 Cortex®-A72 CPU cores, running up to 2.2GHz
  - LX2160A, 16 cores
  - LX2120A, 12 cores
  - LX2080A, 8 cores

### Main Memory

- 4 x DDR4 3200 ECC-UDIMM sockets or 4 x DDR4 2666 ECC-UDIMM sockets

### Storage

- 1 x 2.5" internal SSD/HDD bay
- 1 x M.2 2280 Key B, supports SATA 3.0 signal

### Interface External

- 4 x LED: 0/1/2/3
- Button: reset
- 1 x Console port
- 2 x USB 3.0 type-A ports
- 4 x 1GbE RJ45 ports
- 1 x Micro SIM card slot
- 2 x SerDes LAN module slots
- 1 x PCIe card slot
- 2 x Fixed smart fans
- 2 x Power inlets

### Interface Internal

- 1 x mini-PCIe for Wi-Fi module
- 1 x M.2 2242 Key B with SIM slot for LTE module
- Micro SD slot

### Power

- 550W 1+1 CRPS redundant PSU

### Dimensions and Weight

- Chassis dimension: 430 mm x 480 mm x 44 mm
- Package dimension: 665 mm x 586 mm x 225 mm
- Without packing: 7.95kg
- With packing: 12.97kg

### Environment

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

### Certifications

- CE/FCC Class A
- LVD

### Software Development Kit

- NXP® Layerscape® SDK 20.04-NEXCOM NSA 6310 revision
- Supports Ubuntu UserLand (LTS kernel v5.4.3)

## Ordering Information

### Barebone

- NSA 6310 (P/N: 10S00631000X1)**  
1U NXP® Layerscape® LX2160A SoC processor, 16 cores, 4 x 1GbE RJ45 ports and 2 x SerDes 10GbE LAN modules

Model	P/N	Controller	Type	Port Number	Bypass/Segment	Expansion Slot	Location Slot
NSK7602	20SK0760200X1	Marvell 88X3340P	SerDes x4	4 x 10GbE RJ45	None	None	1
NSK7100	20SK0710000X1	Inphi CS4223	SerDes x4	4 x SFP+	None	None	2



- NSA 6310-1GE (P/N: 10S00631001X1)**  
1U NXP® Layerscape® LX2160A SoC processor, 16 cores, 4 x 1GbE RJ45 ports and 2 x SerDes 1GbE LAN modules

Model	P/N	Controller	Type	Port Number	Bypass/Segment	Expansion Slot	Location Slot
NSK7601	20SK0760100X1	Marvell 88E1543	SerDes x4	4 x 1GbE RJ45	None	None	All slots



# TCA 5170 Series

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-2100 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

## 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 (TCA 5170)
  - D-2177NT, 14 cores w/ QAT (TCA 5170B)
  - D-2146NT, 8 cores w/ QAT (TCA 5170C)

### 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 Key M, 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 Key E
- 1 x M.2 3042 Key B 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

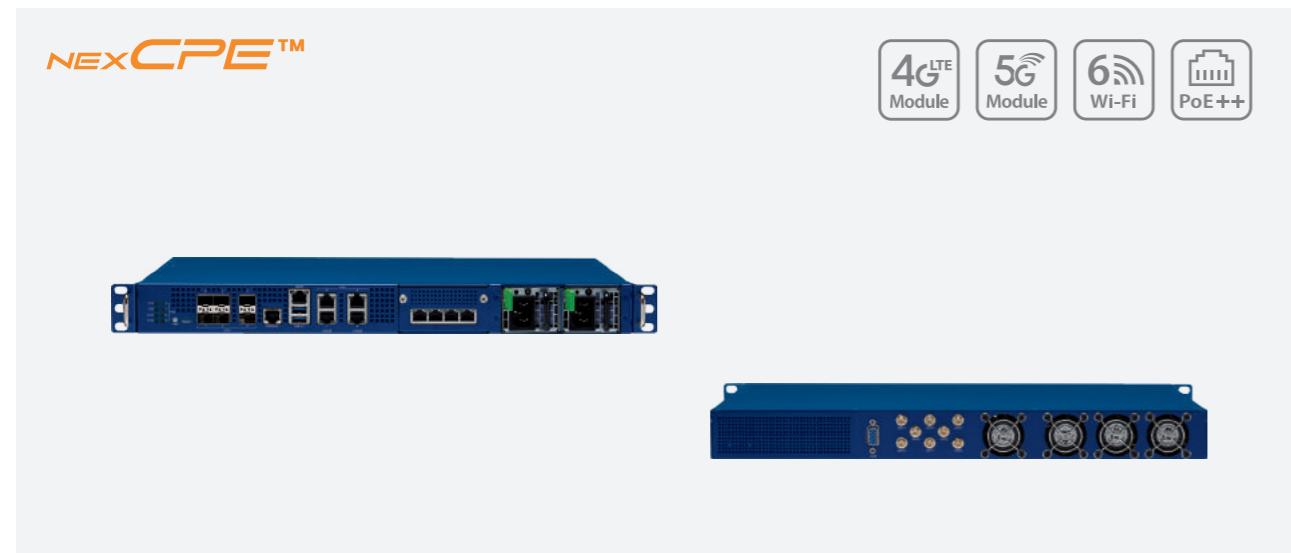
## Ordering Information

- **TCA 5170 (P/N: 10CA0517000X0)**  
1U Intel® Xeon® D-2123IT w/o Intel® QAT, w/ 4 x 10GbE & 8 x 1GbE LAN ports, 2 LAN module slots
- **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
- **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	I350-AM4x1	PCIe x8	4 SFP	None	None	All Slot
NI 180F	10S10180F01X0	I350-AM4x2	PCIe x8	8 SFP	None	None	All Slot
NI 142C	10SK000NI03X0	I350-AM4x1	PCIe x8	4 Copper	2 bypass	None	All Slot
NI 180C	10S10180C01X0	I350-AM4x2	PCIe x8	8 Copper	None	None	All Slot
NI 184C	10S10184C01X0	I350-AM4x2	PCIe x8	8 Copper	4 bypass	None	All Slot
NI 142F	10S10142F01X0	I350-AM4x1	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	I350-AM4x1	PCIe x8	4 Copper	None	None	All Slot
NV 120F	10S50120F01X0	XXV710-AM2	PCIe x8	2 SPF28	None	None	All Slot

# FTA 5180

1U Rackmount nexCPE™ Appliance w/ Intel® Xeon® D-1700 Processor, 6 x 10G SFP+,  
2 x 10G RJ45, 2 x 2.5G RJ45 Ports, and 1 x LAN Module Slot



**4G LTE Module** **5G Module** **6 Wi-Fi** **PoE++**

### Main Features

- Intel® Xeon® D-1734NT processor
- 4 x RDIMM/UDIMM socket, support ECC/non ECC, up to 256GB
- 2 x M.2 2242 Key M with SATA signal
- 6 x 10G SFP+ ports
- 2 x 10GBaseT RJ45 PoE++ port
- 2 x 2.5G RJ45 PoE++ ports
- 1 x LAN module slot
- Supports IPMI2.0
- Supports Intel® QAT
- TPM2.0 onboard

## Product Overview

FTA 5180 is a high-end networking appliance in 1U rackmount form factor for edge computing applications. With Intel® Xeon® D-1700 LCC processor inside, it provides impeccable performance and enables 10 high-bandwidth interfaces for speedy connections, including 6 x 10GbE SFP+ ports, and 2 x 10GbE & 2 x 2.5GbE RJ45 PoE++ ports. FTA 5180 features BMC and out-of-band (OOB) remote management. It also supports 5G (sub-6 GHz) and Wi-Fi modules installation, offering extra FWA capability and connecting a variety of devices seamlessly.

## Specifications

### Main Board

- Intel® Xeon® D-1734NT, SoC, BGA type, 8 cores, w/QAT
- TPM2.0 onboard
- Dual BIOS onboard

### Main Memory

- 4 x DDR4 2666 RDIMM/UDIMM ECC/non ECC sockets, up to 256GB

### Storage

- 2 x M.2 2242 Key M SATA SSD

### Interface External

- Button: PWR/reset
- LED: PWR/SSD/SYS1/SYS2/PoE
- 8 x SMA connectors
- 2 x USB 3.0 ports
- 1 x RJ45 console port

- 1 x RJ45 management port
- 6 x 10G SFP+ ports
- 2 x 10GBaseT RJ45 PoE++ ports
- 2 x 2.5G RJ45 PoE++ ports
- 1 x VGA port
- 1 x LAN module slot
- 2 x AC power inlets
- 4 x Smart fans

### Interface Internal

- 1 x M.2 3042 Key B slot for 5G module
- 1 x mini-PCIe slot for Wi-Fi module

### Power

- 650W (1+1) redundant PSU

### Dimension and Weight

- Chassis dimension (mm): 438 x 370 x 44mm (W x D x H)

### Environment

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

### Environment

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

### Certification

- CE/FCC class A
- CE-LVD

## Ordering Information

### • FTA 5180 (P/N: 10FT0518000X0)

1U rackmount nexCPE™ appliance w/ Intel® Xeon® D-1734NT processor, 6 x 10G SFP+, 2 x 10G RJ45, 2 x 2.5G RJ45 ports, and 1 x LAN module slot

# FTA 1170/1170A

1U Rackmount Professional uCPE w/ Intel Atom® Processor, 24 x 2.5GbE & 4 x 10GbE Copper Ports, 4 x 10GbE Fiber Ports, 1 x LAN Module Slot



**Main Features**

- Intel Atom® P5300 processor series SoC, BGA type
- 4 x 288-pin DDR4 DIMM socket
- 1 x mini-PCIe slot for Wi-Fi 6 module
- 1 x M.2 3052 Key B for 5G FR1 module
- 1 x SO-DIMM DDR4 260-pin for BMC module
- 24 x 2.5GbE RJ45 switch ports
- 4 x 10GbE RJ45 NIC ports
- 2 x 10GbE SFP+ switch ports
- 2 x 10GbE SFP+ NIC ports
- 1 x PCIe Gen3 x16 interface LAN module slot

## Product Overview

FTA 1170/1170A features Intel Atom® P5300 processor and integrates multiple I/O interfaces, a total of 24 x 2.5GbE and 4 x 10GbE RJ45 ports with PoE+ capability (FTA 1170), 4 x 10GbE fiber ports, and 1 x LAN module slot. FTA 1170 offers optional support of modules for wireless connectivity, including 4G LTE, 5G FR1, and Wi-Fi 5/6. FTA 1170A also features three swappable fans, two redundant power supplies and out-of-band (OOB) management for the convenience of remote control.

## Specifications

### Main Board

- Intel Atom® processor P5300 SoC, BGA type, 8-24 cores (up to 85W), w/ Intel® QAT
- TPM 2.0 onboard

### Main Memory

- 4 x DDR4 2933 ECC RDIMM, UDIMM sockets, max. memory capacity up to 256GB for RDIMM and 128GB for UDIMM

### Storage

- 1 x 8G eMMC 5.1 onboard
- 2 x 2.5" internal SSD/HDD
- 1 x M.2 2280 NVMe (Key M, PCIe x4)

### Interface External

- Button: reset
- LED for power/HDD/LAN/5G/Wi-Fi 6/PoE status
- 1 x RJ45 console port
- 1 x RJ45 management port
- 2 x USB 3.0 port

- 1 x nano-SIM slot
- 24 x 2.5GbE switch ports with PoE+ (FTA 1170) / 24 x 2.5GbE switch ports (FTA 1170A)
- 4 x 10GbE RJ45 NIC with PoE+ (FTA 1170) / 4 x 10GbE RJ45 NIC ports (FTA 1170A)
- 2 x 10GbE SFP+ switch ports
- 2 x 10GbE SFP+ NIC ports
- 8 x SMA connectors (front: 4 x for 5G/4G LTE, 2 x for Wi-Fi 5/6 antennas; back: 2 x for Wi-Fi 5/6 antennas)
- 1 x PCIe Gen3 x16 interface LAN module slot

### Interface internal

- 1 x mini-PCIe slot for Wi-Fi 6
- 1 x M.2 3052 Key B for 5G
- 1 x SO-DIMM DDR4 260-pin for IPMI module
- 4 x SPI connectors for PoE+ modules

### Power

- 1 x CRPS 550W 12V AC PSU + 1 x CRPS 1000W 54V PoE+ PSU (FTA 1170)
- 2 x CRPS 550W 12V AC Redundant PSU (FTA 1170A)

### Dimension and Weight

- Chassis dimension (mm): 438mm x 542 mm x 44mm (W x D x H)
- Package dimension (mm): 570mm x 741 mm x 226mm (W x D x H)
- Without packing: 10.1kg
- With packing: 12.1kg

### Environment

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

### Certification

- CE/FCC class A
- CE-LVD

## Ordering Information

- **FTA 1170 (P/N: 10FT0117000X0)**  
Intel Atom® processor P5322, SoC, BGA type, 8 cores, 1 x CRPS 550W 12V AC PSU, 1 x CRPS 1000W 54V PoE+ PSU, 24 x 2.5GbE & 4 x 10GbE RJ45 ports with PoE+
- **FTA 1170A (P/N: 10FT0117001X0)**  
Intel Atom® processor P5322, SoC, BGA type, 8 cores, 2 x CRPS 550W 12V AC redundant PSU, 24 x 2.5GbE & 4 x 10GbE RJ45 ports w/o PoE+

# TCA 1166

1U Cell Site Router (CSR) w/ Intel Atom® Processor C3000 with  
8 x 1GbE SFP and 6 x 10GbE SFP+ Ports with PTP & SyncE



## Main Features

- Intel Atom® C3000 processor series SoC, BGA type
- 1 x SO-DIMM DDR4 2400 8GB ECC memory installed
- 1 x M.2 2242 Key M slot
- Redundant 1 + 1 DC input (-36~72V)
- 1 x RJ45 port for TOD & 1PPS
- 1 x RJ45 port for BITS
- 8 x 1G SFP with PTP & SyncE
- 6 x 10G SFP+ with PTP & SyncE
- Supports GNSS module (optional)

## Product Overview

NEXCOM's TCA 1166 is a 1U cell site gateway, it aggregates data traffic from multiple Edge devices and transports it to the core network. TCA 1166 provides PTP (IEEE 1588v2) and SyncE features to meet 5G applications. It integrates high-speed and port density, with fiber, copper, and other network ports in a compact design, while connecting to GNSS to receive accurate timing data, improving network efficiency.

## Specifications

### Specification

- Intel Atom® C3308 processor SoC, BGA type, 2 cores

### Main Memory

- 1 x SO-DIMM DDR4 2400 8GB ECC memory module installed, 8GB

### Storage

- 1 x M.2 2242 Key M slot (SATA interface)

### Interface External

- 4 LEDs: PWR/FAN/Sync/GPS
- 1 x SW programmable button
- 8 x 1GbE SFP with PTP & SyncE
- 6 x 10GbE SFP+ with PTP & SyncE
- 1 x RJ45 For TOD & 1PPS
- 1 x RJ45 for BITS
- 1 x RJ45 console port
- 2 x USB 3.0 ports
- 1 x RJ45 MGMT port

- 2 x 1 micro BNC for 1 PPS in/out
- 2 x 1 micro BNC for 10MHz in/out
- 1 x SMA for GNSS antenna (optional)
- 1 x Ground screw

### Interface internal

- 1 x M.2 2242 Key M slot (SATA interface)
- 1 x SO-DIMM socket for optional BMC module
- 2 x 5-pin header for optional GNSS module

### Power

- Redundant 1 + 1 DC input (-36~72V), more than 150W per power supply

### Dimension and Weight

- Chassis dimension (mm): 438 x 240 x 44 (W x D x H)
- Package dimension (mm): TBD
- Without package: TBD
- With package: TBD

## Environment

- Operating temperature: -40°C~70°C
- Storage temperature: -40°C~70°C
- Relative humidity: 0%~95% non-condensing

## Certification

- CE/FCC class A
- LVD

## Ordering Information

### Barebone

- **TCA 1166 (P/N: 10CA0116600X0)**  
Intel Atom® processor C3308, BGA type 2 cores, 1 x SO-DIMM DDR4 2400 8GB ECC memory, 8 x 1GbE SFP and 6 x 10GbE SFP+ ports with PTP & SyncE



# DFA 1163 Series

Desktop Professional uCPE for Wireless Broadband Applications  
w/ Intel Atom® Processor C3000R



**Main Features**

- Intel Atom® processor C3000R
- 2 x DDR4 ECC RDIMM/UDIMM
- 1 x 10GbE SFP+ port
- 12 x RJ45 ports (with optional PoE+ support)
- Supports Wi-Fi 6
- Supports 4G LTE and 5G FR1 SA/NSA modes
- Supports 5G FR2 NSA mode (DFA 1163M only)

## Product Overview

Based on the 5G FWA (Fixed Wireless Access) technology, DFA 1163 Series is a compact desktop professional uCPE designed for wireless broadband applications. It features Wi-Fi 6, 5G FR1/FR2 and PoE+ for flexible connectivity. DFA 1163 Series is perfect for 5G security gateway, edge computing, SD-WAN, VPN, and routing deployment at the enterprise edge.

## Specifications

### Main Board

- Intel Atom® processor C3000R
  - Intel Atom® processor C3558R, BGA type, 4 cores/ 2.4 GHz for DFA 1163
  - Intel Atom® processor C3758R, BGA type, 8 cores/ 2.4 GHz for DFA 1163A
  - Intel Atom® processor C3758R, BGA type, 8 cores/ 2.4 GHz for DFA 1163M
- TPM 2.0 onboard

### Main Memory

- 2 x DDR4 2400 ECC RDIMM/UDIMM, up to 64GB

### Storage

- 1 x 8G onboard eMMC
- 1 x PCIe3 x4 M.2 2280 Key M SSD

### Interface External

- Button: power and reset
- LAN ports LED indicators: active/link speed

- 8 x LED indicators: power/PoE/MGMT/SSD/WLAN/5G LTE
- 1 x USB 3.0 connector combined with RJ45 console port
- 1 x USB 3.0 connector combined with RJ45 management port
- 1 x SIM slot (for dual nano SIM card)
- 2 x 2.5GbE RJ45 NIC ports (with optional PoE+ support)
- 2 x 1GbE RJ45 NIC ports (with optional PoE+ support)
- 8 x 1GbE RJ45 switch ports (with optional PoE+ support)
- 1 x 1GbE SFP port
- 1 x 10GbE SFP+ port
- 2 x Fixed smart fans
- 2 x Power inlets (1 x 12V, 1 x 54V)
- 6 x Antenna holes (4 x for 4G LTE/5G antennas, 2 x for Wi-Fi 6 antennas)

### Interface-Internal

- 1 x mini-PCIe slot for Wi-Fi 6 module
- 1 x M.2 3042/3052 Key B slot for 4G LTE/5G module

### Power

- 90W 12V AC power adapter
- 310W 54V PoE power adapter (optional)

### Dimension and Weight

- Chassis dimension (mm): 253.5mm x 226mm x 44mm (W x D x H)
- Package dimension (mm): 380mm x 320mm x 232mm (W x D x H)
- Without package: 3.81 kg
- With package: 4.98 kg

### Environment

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

### Certification

- CE/FCC class B

## Ordering Information

- **DFA 1163 (P/N: 10FA0116300X0)**  
Intel Atom® processor C3558R, BGA type 4 cores/2.4 GHz, 2 x DDR4-2400 DIMM ECC memory, max. 64 GB
- **DFA 1163A (P/N: 10FA0116301X0)**  
Intel Atom® processor C3758R, BGA type 8 cores/2.4 GHz, 2 x DDR4-2400 DIMM ECC memory, max. 64 GB
- **DFA 1163M (P/N: 10FA0116302X0)**  
Intel Atom® processor C3758R, BGA type 8 cores/2.4 GHz, 2 x DDR4-2400 DIMM ECC memory, max. 64 GB, 5G FR1/FR2 support

# DTA 1164W Series

Network Function Virtualization and Software-Defined Appliance  
with Intel Atom® SOC C3000R



## Main Features

- Intel Atom® processor C3000R series SoC, BGA type
- DDR4-2400 ECC memory SO-DIMM, up to 16GB
- 6 x 1GbE RJ45 + 2 x SFP ports (reserve design to support 8 x 1GbE RJ45)
- Two ports with PoE+, supports up to 30W (802.3at)
- M.2 SATA 2242 Key M
- M.2 3042/3052 for 4G LTE and 5G (FR1)
- mini-PCIe slot for Wi-Fi 5 and 6
- Supports Intel® QAT
- Supports 5G NR NSA/SA network

## Product Overview

The desktop uCPE DTA 1164W helps small and medium enterprises build a securely connected workplace. Based on Intel's Atom® C3000R processor, the DTA 1164W packs excellent performance per watt and PoE+ functionality, all in a small form factor. This compact network appliance is perfect for cloud native deployments, while its flexible, multiple configuration easily adapts to today's dynamic IT environments.

## Specifications

### Main Board

- Intel Atom® processor C3436L, BGA type, 4 cores, 1.30 GHz
- Supports Intel® QAT

### Main Memory

- 1 x DDR4-2400 SO-DIMM ECC, up to 16GB

### Storage

- 1 x M.2 2242 Key M SATA

### LAN Features

- 6 x 1GbE RJ45 + 2 x SFP ports (reserve design to support 8 x 1GbE RJ45)
- Support 10/100/1000 link speed

### Interface External

- SW1/SW2/power/SSD LEDs
- Ethernet LED: active/link speed

- 1 x USB 3.0 (support software power control)
- 1 x SIM slot
- 2 x DC-in (12V for system, 54V for PoE)
- 1 x Power button
- 1 x RJ45 console + 1 x USB 3.0 port
- 1 x Reset button
- 2 x Antenna holes for Wi-Fi 5 or 6
- 2 x Antenna holes on each chassis side for 5G/4GLTE support (4 x total)
- 6 x 1GbE RJ45 + 2 x SFP ports
- Two ports with PoE+, supports up to 30W (802.3at)
- Two SFP ports can optionally serve as RJ45 ports

### Interface-Internal

- mini-PCIe slot for Wi-Fi 5/6 module
- M.2 3042/3052 for 4G LTE/5G (FR1) module
- 1 x M.2 2242 storage socket
- 1 x TPM header

## Power

- 65W 12V AC power adapter (DTA 1164W/1164WA)
- 36W 12V AC power adapter (DTA 1164W-LITE/1164WA-LITE)
- 72W 54V PoE power adapter (optional)

## Dimension and Weight

- Chassis dimension (mm): 225mm x 150mm x 44mm (W x D x H)
- Package dimension (mm): 343 x 258 x 212 (W x D x H)
- Without packing: 1.5kg
- With packing: 2.5kg

## Environment

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

## Certification

- CE/FCC class B

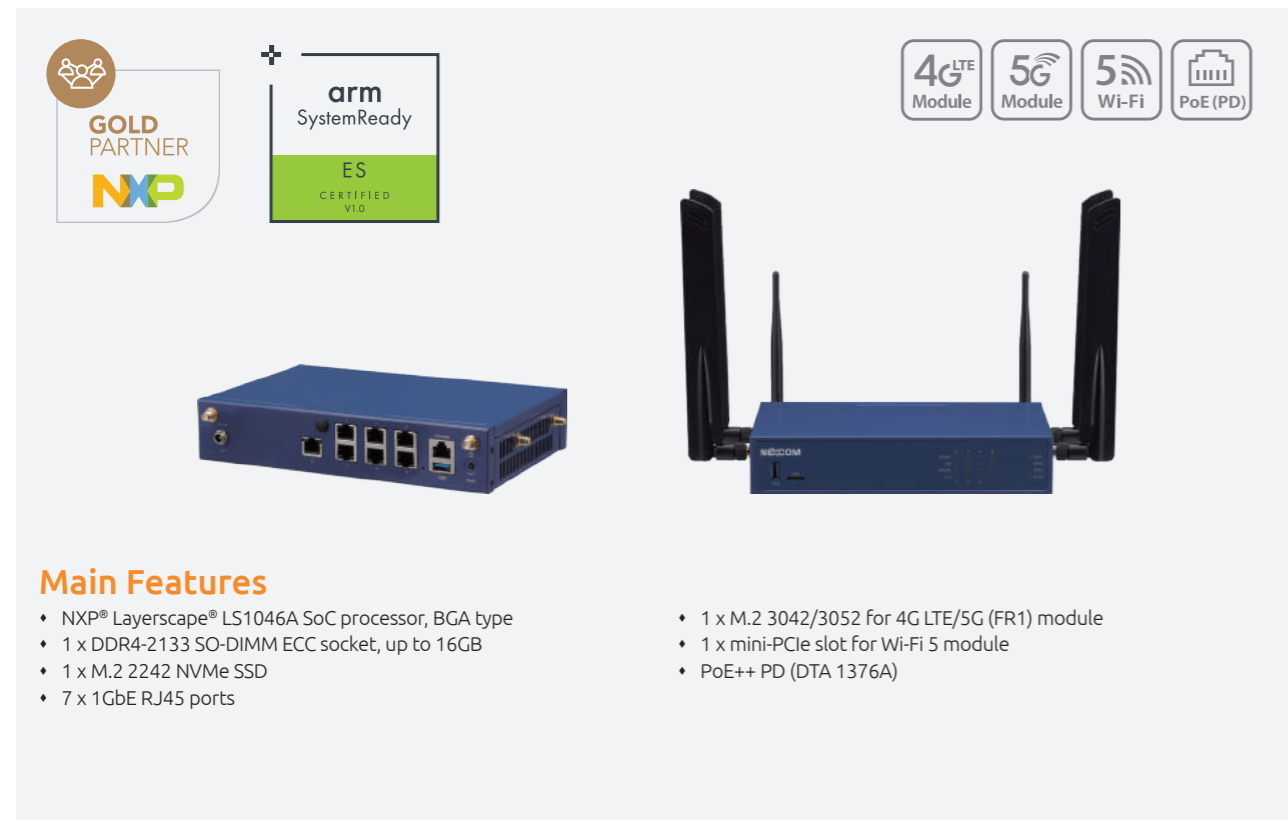
## Ordering Information

- **DTA 1164W (P/N: 10TA0116408X0)**  
Intel Atom® processor C3436L, BGA type, 4 cores, 1.30 GHz, 6 x 1GbE RJ45+2 x SFP ports, 65W power adapter
- **DTA 1164WA (P/N: 10TA0116404X0)**  
Intel Atom® processor C3436L, BGA type, 4 cores, 1.30 GHz, 8 x 1GbE RJ45, 65W power adapter
- **DTA 1164W-LITE (P/N: 10TA0116411X0)**  
Intel Atom® processor C3436L, BGA type, 4 cores, 1.30 GHz, 6 x 1GbE RJ45 + 2 x SFP ports, 36W power adapter
- **DTA 1164WA-LITE (P/N: 10TA0116412X0)**  
Intel Atom® processor C3436L, BGA type, 4 cores, 1.30 GHz, 8 x 1GbE RJ45, 36W power adapter

\* LITE SKUs are available without any add-on modules, with only 1 x LTE or 1 x Wi-Fi module option.

# DTA 1376/1376A

Arm-Based Desktop uCPE for Wireless Broadband Applications  
w/ NXP® Layerscape® LS1046A SoC Processor



**Main Features**

- NXP® Layerscape® LS1046A SoC processor, BGA type
- 1 x DDR4-2133 SO-DIMM ECC socket, up to 16GB
- 1 x M.2 2242 NVMe SSD
- 7 x 1GbE RJ45 ports
- 1 x M.2 3042/3052 for 4G LTE/5G (FR1) module
- 1 x mini-PCIe slot for Wi-Fi 5 module
- PoE++ PD (DTA 1376A)

## Product Overview

DTA 1376 is a cost-effective Arm-based uCPE in compact design with seven 1GbE copper ports and additional support for wireless connectivity. Powered by NXP® Layerscape® LS1046A SoC processor, with quad 64-bit Arm® Cortex®-A72 cores, DTA 1376 supports DPAA (data path acceleration architecture) to provide a set of networking acceleration to small and medium enterprises. DTA 1376A SKU operates as PoE PD (powered device) to extend from indoor to semi-outdoor usage where power outlet is not accessible.

## Specifications

### Main Board

- NXP® Layerscape® LS1046A SoC processor, BGA type, 4 Cortex-A72 cores, 1.8GHz
- Supports DPAA

### Memory

- 1 x DDR4 2133 SO-DIMM ECC socket, up to 16GB

### Storage

- 1 x SPI NOR Flash 64MB for U-Boot
- 1 x M.2 2242 Key M, supports NVMe SSD with PCIe Gen3 x2
- 1 x Micro SD slot (optional)

### LAN Features

- 7 x 1GbE RJ45 ports

### Interface External

- SW1/SW2/SW3/power LEDs
- Ethernet LED: active/link speed

- 2 x USB 3.0
- 1 x Nano sim slot
- 1 x DC-in 12VDC
- 1 x Power button
- 1 x RJ45 console port
- 1 x Reset button
- 6 x SMA connectors (sides: 4 x for 4G LTE/5G antennas, back: 2 x for Wi-Fi 5 antennas)
- 7 x 1GbE RJ45 ports

### Interface internal

- 1x mini-PCIe for Wi-Fi 5 module
- 1x M.2 3042/3052 for 4G LTE/5G FR1 module
- 1x M.2 2242 Key M for NVMe SSD
- 1x Micro SD slot (optional)

### Power

- 1 x 40W 12V AC power adapter
- 1 x RJ45 port for PoE++ PD (DTA 1376A)

## Dimension and Weight

- Chassis dimension (mm): 225mm x 150mm x 44mm (W x D x H)
- Package dimension(mm): 343 x 258 x 212 (W x D x H)
- Without packing: 1.5kg
- With packing: 2.5kg

## Environment

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

## Certification

- CE/FCC class B
- LVD

## Software Development Kit

- NXP® Layerscape® SDK 20.04-NEXCOM DTA 1376 revision

## Ordering Information

- **DTA 1376 (P/N: 10TA0137600X0)**  
NXP® Layerscape® LS1046A processor, SoC, BGA type, 4 Cortex-A72 cores, 1.8GHz, 7 x 1GbE RJ45 ports
- **DTA 1376A (P/N: TBC)**  
NXP® Layerscape® LS1046A processor, SoC, BGA type, 4 Cortex-A72 cores, 1.8GHz, 7 x 1GbE RJ45 ports, with PoE++ PD function supported

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

### 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



## 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

## Product Overview

Desktop network security appliance DTA 1160 helps small and medium enterprises build a securely connected workplace. Based on the new Intel Atom® processor C3000, the DTA 1160 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 dual core SoC Intel Atom® processor C3000 integrated with Intel® QuickAssist Technology, the DTA 1160 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

- 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

# 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 socket 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

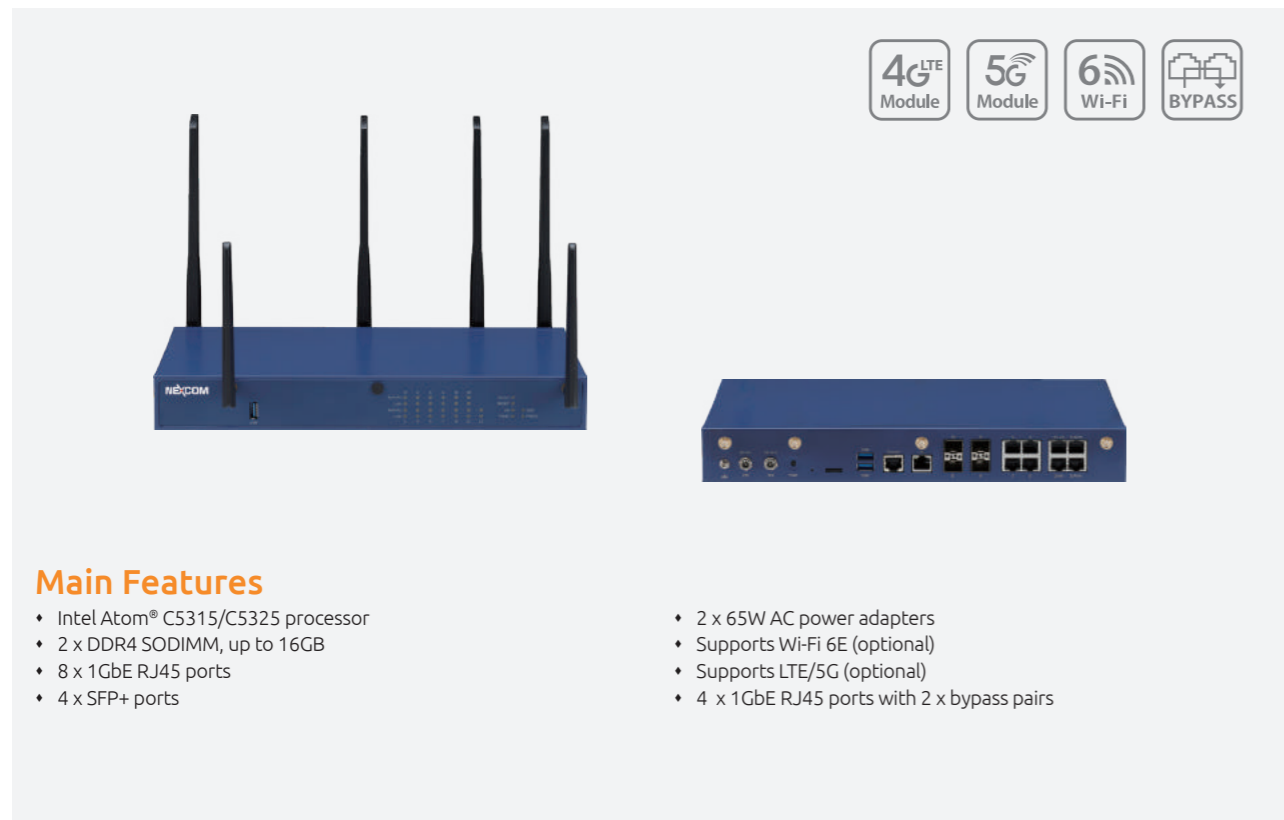
## Ordering Information

### Barebone

- **DNA 1160 (P/N: 10L00116000X0)**  
Intel Atom® processor C3338, 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

# DNA 1170 Series

Desktop Cyber Security Appliance w/ Intel Atom® C5000 Processor,  
8 x 1GbE Copper and 4 x 10GbE Fiber Ports



## Main Features

- Intel Atom® C5315/C5325 processor
- 2 x DDR4 SODIMM, up to 16GB
- 8 x 1GbE RJ45 ports
- 4 x SFP+ ports
- 2 x 65W AC power adapters
- Supports Wi-Fi 6E (optional)
- Supports LTE/5G (optional)
- 4 x 1GbE RJ45 ports with 2 x bypass pairs

## Product Overview

DNA 1170 Series is NEXCOM cyber security appliance offering server-grade performance in a desktop form factor. Powered by Intel Atom® C5000 series processor with up to 8 cores and embedded Intel® QAT feature, it features eight 1GbE copper and four 10GbE fiber ports to meet various requirements for fixed wired connectivity. To meet the increasing demand for wireless connectivity, a dedicated SKU reserves 5G/LTE and/or Wi-Fi 6E modules installation, expanding the maximal quantity of connected devices and adding wireless routes. Optional storage expansion with 2.5" SSD and enabling four ports with bypass function broaden available use cases and application scenarios.

## Specifications

### Main Board

- Intel Atom® C5000 processor w/ QAT
  - Intel Atom® processor C5315, BGA type, 4 cores/2.4 GHz for DNA 1170
  - Intel Atom® processor C5325, BGA type, 8 cores/2.4 GHz for DNA 1170A
  - Intel Atom® processor C5325, BGA type, 8 cores/2.4 GHz for DNA 1170W

### Main Memory

- 2 x DDR4 2933 SODIMM, up to 16GB

### Storage

- 1 x M.2 2242 for SATA 3.0
- 2 x 2.5" SSD SATA 3.0 (DNA 1170W)

### Interface External

- Button: power and reset
- LED: status/MGMT/HA/PWR1/PWR2/SSD/LAN

- LED (optional): bypass/5G LTE/Wi-Fi
- 1 x RJ45 console port
- 3 x USB 3.0 connector
- 1 x Nano SIM slot (DNA 1170W)
- 1 x 1G RJ45 management port
- 8 x 1GbE RJ45 ports
  - 4 x 1GbE RJ45 ports with 2 x bypass pairs
- 4 x SFP+ ports
- 1 x Fixed smart fan
- 2 x Power inlets
- 6 x Antenna holes (4 x antennas for 5G LTE, 2 x antennas for Wi-Fi 6E) (DNA 1170W)

### Interface Internal

- 1 x mini-PCIe slot for Wi-Fi module (DNA 1170W)
- 1 x M.2 3042 Key B for 5G/LTE module (DNA 1170W)
- 1 x TPM header

### Power

- 2 x 65W 19V AC power adapters

### Dimension and Weight

- Chassis dimension (mm): 340mm x 250mm x 44mm (W x D x H)
- Package dimension(mm): TBC
- Without packing: TBD kg
- With packing: TBD kg

### Environment

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

### Certification

- CE/FCC class B

## Ordering Information

### • DNA 1170 (P/N: TBD)

Intel Atom® processor C5315, BGA type 4 cores/2.4 GHz, w/ 4 x SFP+ & 8 x 1GbE RJ45 ports

### • DNA 1170A (P/N: TBD)

Intel Atom® processor C5325, BGA type 8 cores/2.4 GHz, w/ 4 x SFP+ & 8 x 1GbE RJ45 ports

### • DNA 1170W (P/N: TBD)

Intel Atom® processor C5325, BGA type 8 cores/2.4 GHz, w/ 4 x SFP+ & 8 x 1GbE RJ45 ports, 1 x mini-PCIe slot for Wi-Fi module & 1 x M.2 3042 Key B for 5G/LTE module

# 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 pair
- 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



# ISA 140

Fanless Industrial Security Appliance in a Compact DIN Rail Form Factor  
with Intel Atom® Processor and 6 x 1Gbe RJ45 Ports



## Main Features

- Intel Atom® x6212RE (Elkhart Lake) industrial grade processor
- 1 x DDR4 SODIMM slot and support up to 16GB 2400/2667/3200 MT/s
- Storage eMMC up to 8GB for OS
- Storage M.2 Key B slot, supports 2242 for data storage
- 6 x 1Gbe RJ45 with 1 x bypass pair
- 1 x M.2 3042 Key B with USB signal
- 1 x Micro SIM slot
- 1 x Minicard full size with PCIe & USB signal
- Supports OOB

## Product Overview

NEXCOM's ISA 140, powered by Intel's latest dual-core Atom® processor, is a compact, fanless industrial security appliance equipped with six 1GbE ports for network connectivity. It also supports seamless Wi-Fi/LTE connectivity and OOB remote management, and operates in settings with wide temperature ranges. The compact DIN rail design allows IT personnel to easily embed ISA 140 in existing network infrastructure without affecting manufacturing equipment productivity.

## Specifications

### Main Board

- Intel Atom® x6212RE (Elkhart Lake) industrial grade processor
- TPM 2.0 onboard

### Main Memory

- 1 x DDR4 SODIMM slot support 2400/2667/3200 MT/s up to 16GB

### Storage

- Storage eMMC up to 8GB for OS
- Storage M.2 Key B slot, support 2242 for data storage

### Interface External

- 6 x 1GbE RJ45 with 1 bypass pair
- 1 port with OOB support
- 1 x Micro SIM slot
- LED indicator for bypass/LTE/Wi-Fi/SYS/SSD/PWR
- 1 x HDMI
- 1 x Power button
- 1 x Reset button
- 1 x RJ45 for console
- Dual terminal block

- 4 x SMA antenna holes
- 2 x USB 3.0

### Interface Internal

- 1 x DDR4 SODIMM slot
- 1 x M.2 2242 Key B slot
- 1 x M.2 3042 Key B slot
- 1 x Minicard full size slot

### Power

- Dual DC (9~36VDC)

### Dimension and Weight

- System size: 165 x 61.7 x 129.25 mm
- Packaging size: 305 x 245 x 195 mm
- Weight without packaging: 1.3kg
- Weight with packaging: 2.19kg

### Environment

- Operating temperature: -30°C~70°C
  - Up to 70°C without M.2 SSD and wireless modules
  - Up to 60°C with M.2 SSD
  - Up to 40°C with LTE and Wi-Fi modules

- Storage temperature: -40°C~85°C
- Relative Humidity: 5%~95% non-condensing

### Certifications

- CE/FCC Class A

## Ordering Information

- **ISA 140 (P/N: 10L10014000X0)**  
Intel Atom® x6212RE (Elkhart Lake) processor, with 6 x 1GbE RJ45 with 1 x bypass pair

# ISA 141

Fanless ICS Security Appliance in a compact DIN Rail Form Factor with Intel Atom® Processor, 3 x 1GbE RJ45 Ports, Dual 5G and Dual Wi-Fi



## Main Features

- Intel Atom® x6413E processor SoC, BGA type
- 1 x SODIMM DDR4 3200 8GB module
- 1 x 40GB SSD module
- 1 x RJ45 console port
- 2 x USB 3.0
- 3 x 1GbE RJ45 with 1 combo port
- Dual Wi-Fi 6E
- Dual LTE/5G
- Dual DC (9~36VDC)
- Supports OOB

## Product Overview

NEXCOM's ISA 141, powered by Intel's quad-core Atom® processor, is a compact, fanless ICS security appliance equipped with three 1GbE ports for network connectivity with one combo port. It also supports dual Wi-Fi and dual 5G connectivity that offers ICS wireless protection for OT machines, IoT sensors, AGV/AMR, and other essential equipment for Industry 4.0. The compact DIN rail design allows ISA 141 to be easily embedded in existing network infrastructure; while OOB management function let IT personnel maintain the devices remotely.

## Specifications

### Main Board

- Intel Atom® x6414RE processor, 4 cores, 1.5M cache, 1.50 GHz
- TPM 2.0 onboard

### Main Memory

- 1 x SODIMM 3200 8GB memory module

### Storage

- 1 x 8GB eMMC (optional)
- 1 x 40GB 2242 SSD module (default)

### Interface External

- 3 x 1GbE RJ45 ports
  - with 1 Combo port
- 1 x RJ45 Console Port
- 2 x USB3.0 Ports
- 1 x TPM2.0

- Power & Reset Button
- LED: SYS/PWR1/PWR2/SSD/LTE 5G 1,2/WIFI 1,2
- 1 x ground screw
- 4 x Nano SIM slots

### Interface Internal

- 2 x mini-PCIe slots for Wi-Fi 6E modules
- 2 x M.2 3042 Key B slots for LTE/5G modules

### Power

- Dual DC (9~36VDC)

### Dimension and Weight

- Chassis dimension (mm): 165x129.4x68.95mm (W x D x H)
- Package dimension (mm): TBD
- Without package: TBD
- With package: TBD

## Environment

- Operating temperature: -20°C~60°C
- Storage temperature: -40°C~80°C
- Relative humidity: 0%~95% non-condensin

## Certifications

- CE/FCC Class A

## Ordering Information

- **ISA 141 (P/N: TBC)**  
Intel Atom® x6413E processor, BGA type, 4 cores, 1 x SODIMM 8GB memory module, 3 x 1GbE RJ45 ports with 1 combo port



## Main Features

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

## Product Overview

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

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

Atlas OS™ provides real-time information, toolkit, widgets and easy mode of operation; software center provides more application extensions in the future, based on application requirements. iNAS330 also can be networking surveillance storage, with high-resolution camera, the file system could be used on video recording which supports RAID 5 and also that offers the better data protection.

The iNAS330 supports Power over Ethernet (PoE/PoE+) and follows the specifications in IEEE 802.3af/ IEEE 802.3at. It has dual PoE+ interface which supports power redundancy. The iNAS330 is a fanless but high efficient for thermolysis, dust- and water-protected IP 54-rated chassis.

## Specifications

### Hardware Features

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

### Ethernet

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

### Button

- Reset button: Reboot System/Reset to factory default

### LEDs

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

### Power Requirements

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

### HS Control

- Smart heating system

### Physical Characteristics

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

### Environmental Specification

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

### Certifications

- FCC/CE
- RoHS/WEEE

### Compliance

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

### Package Content

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

### Optional Accessories

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

### System Dimensions

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

### Software Features

- OS: Atlas OS™
  - Web-based GUI (based on HTML5 and CSS3)
  - Centralized navigation panel and Dual-desktop system:
    - Navigation Panel: For system configurations, with some toolkits on the toolbar
    - Home: for applications operations
    - Dashboard: For widgets exhibition
- APPs
  - Storage Manager
  - RAID management (JBOD, RAID 1, RAID 5)/Auto RAID rebuilding
  - Data Vault
  - Log Book
  - Software Center
- Widgets
  - System Guardian
  - Network Surveillance

- Configurations
  - Files and permissions
  - Network and connectivity
  - System and devices
- Toolkit
  - Profile: account management
  - Real-time notification
  - System information
  - Network status

### Client O.S. support

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

### Web Browsers Support

- Mozilla Firefox
- Mac Safari
- Google Chrome
- Opera

### Protocol

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

## Ordering Information

- **iNAS 330 (P/N: 10IG0033000X0)**  
Rugged-design industry storage (3-years service & maintenance)

# About NEXCOM

## Shaping Future Networks

Founded in 1992 and headquartered in Taipei, Taiwan, NEXCOM is committed to being a trustworthy partner in building the AIoT digital transformation solutions. To surpass customers' expectations, NEXCOM sets itself apart by leveraging its decades of experience in industrial computing, a highly talented R&D team, and exceptional customer service. With these core strengths, NEXCOM has enabled its customers to win key projects in a diverse range of industries.

With its focus on delivering these core values to better serve customers, NEXCOM integrates its capabilities and operates six global businesses: IoT Automation Solutions (IAS), Intelligent Video Surveillance (IDS), Intelligent Platform @ Smart City (IPS), Mobile Computing Solutions (MCS), Medical & Healthcare Informatics (MHI), Network and Communication Solutions (NCS). This strategic deployment enables NEXCOM to offer

time-to-market, time-to-solution products and services without compromising on cost.

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

Partners can also be assured that NEXCOM's Taiwan-based Headquarters and subsidiary offices in China and the USA have obtained ISO 9001:2015 Certification.



<b>IAS</b>	<b>IoT Automation Solutions:</b> Industrial Automation & I4.0 Execution, Intelligent Edge, Gateway & EWR, Industrial Robot Control, EtherCAT Motion Solutions, Wireless & Embedded Solutions for Industrial IoT
<b>IDS</b>	<b>Intelligent Video Surveillance:</b> IP Video Surveillance Cameras, Mobile Cameras, ANPR/LPR Network Cameras, Panoramic Cameras, NVR Server Platform
<b>IPS</b>	<b>Intelligent Platform @ Smart City:</b> Smart City, Smart Retail, Digital Signage, Interactive Kiosks, Hospitality, Gateway, Edge AI, and ODM Customization Services
<b>MCS</b>	<b>Mobile Computing Solutions:</b> Edge AI Telematics Computer, Vehicle Telematics Computer, Railway Computer, Vehicle Mount Computer, Vehicle Mount Display, In-Vehicle Networking, In-Vehicle HDMI Extender over IP, Fitness Console
<b>MHI</b>	<b>Medical and Healthcare Informatics:</b> Total Solutions with a Variety of Medical IT Systems
<b>NCS</b>	<b>Network and Communication Solutions:</b> Cyber Security, HPC, Telecommunications, Storage, SDN/NFV, 5G, uCPE, ICS Security

## Corporate Vision

To become the industrial leader in providing AIoT digital transformation 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 AIoT digital transformation supplier in vertical application markets
- A quality partner in engineering, manufacturing and services

## Business Strategy

Aiming to better support the activities of all its partners, NEXCOM divides its sales force into six dedicated business units to target rapidly expanding vertical markets. This enables each business unit to focus on strategic channel accounts and repeat order business. Moreover, NEXCOM will provide customers with co-marketing strategies, technical support, ODM services, and project support, which are frequently required everywhere.

NEXCOM has already become a business group focused on innovating comprehensive solutions for Industry 4.0. We help our customers deliver vertical solutions optimized for 5G, AI, AIoT, and Industry 4.0 solutions.

## 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), 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.

## 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 services. Additionally, NEXCOM's technical support team is aligned with ISO 27001 requirements, as they aim to provide timely feedback within 24 hours to resolve technical issues efficiently. This ensures that any potential information security incidents are addressed promptly, minimizing the impact and downtime for customers.

## Green Policy

As a global citizen, NEXCOM places great importance on environmental issues. We are committed to ensuring that our products and services comply with environmental standards and regulations. NEXCOM actively responds to energy-saving and carbon reduction initiatives, prioritizes environmental protection in our operational activities, and holds certificate such as ISO 14064-1 greenhouse gas inventory and ISO 14001 environmental management system. We implement voluntary greenhouse gas inventory, reduce resource and energy consumption, and mitigate environmental risks. We also measure NEXCOM's sustainability and corporate responsibility as an Earth-friendly enterprise through ESG evaluation. NEXCOM will continue to collaborate with peers and suppliers to strive for purification standards, compatibility of technologies, and operational processes to help reduce the potential hazardous substances in our products and manufacturing processes.



<b>Basic Service Warranty</b>	Global Service Network	Re-imaging and ECO Upgrade	eRMA Portal for Traceability	24M Warranty for Off the Shelf Products
<b>Additional Services</b>	Advanced RMA Replacement	Re-branding Repackaging	Component Replacement	Refurbishment ETN (Equivalent-to-New)

Service details may vary by country. Please contact us for more details.

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