

**Case Study: The uCPE Gateway  
for Non-Stop Data Center  
Security  
(NA362)**

## Cybersecurity – Keeping Data Safe Anywhere

In today's connected world, as enterprises struggle to regulate their increasingly complex networks, the ability to ensure cybersecurity compliance and data protection has never been more important. While IoT brings tremendous convenience and valuable insights to help optimize business operations, fast-growing numbers of connected devices also create possible vulnerabilities where data could be stolen or misused. To make things worse, cybercriminals are likely to take advantage of the recent boom in AI and exploit new vulnerabilities for conducting illicit activities, making cyberattacks more sophisticated and difficult to detect.

In order to keep information safe all the way from endpoint devices to the cloud, the security center needs to provide not just 24x7 monitoring on cloud services, but also the know-how and guidance required for quickly identifying and eradicating potential online threats before they launch attacks. A multifunctional on-premises security gateway appliance is essential to implementing such protective measures. Besides allowing organizations to prioritize network traffic to increase throughput and bandwidth utilization and manage myriad event logs, the network security appliance can be further deployed as a cybersecurity defense system to guard digital assets against security risks or malicious attacks at all times.

## Axiomtek's NA362 Offers Comprehensive Network Security

### Challenges

The security service provider needs a reliable network appliance that can deliver 24x7 visibility by monitoring their network activity and cloud services, with features including cloud/network resource monitoring, vulnerability scans, data loss protection (DLP), and so on. This on-premises security gateway appliance has to be designed in a compact size for simplified integration and installation. It also needs to run on a high-core-count processor with efficient power consumption.

### Main requirements

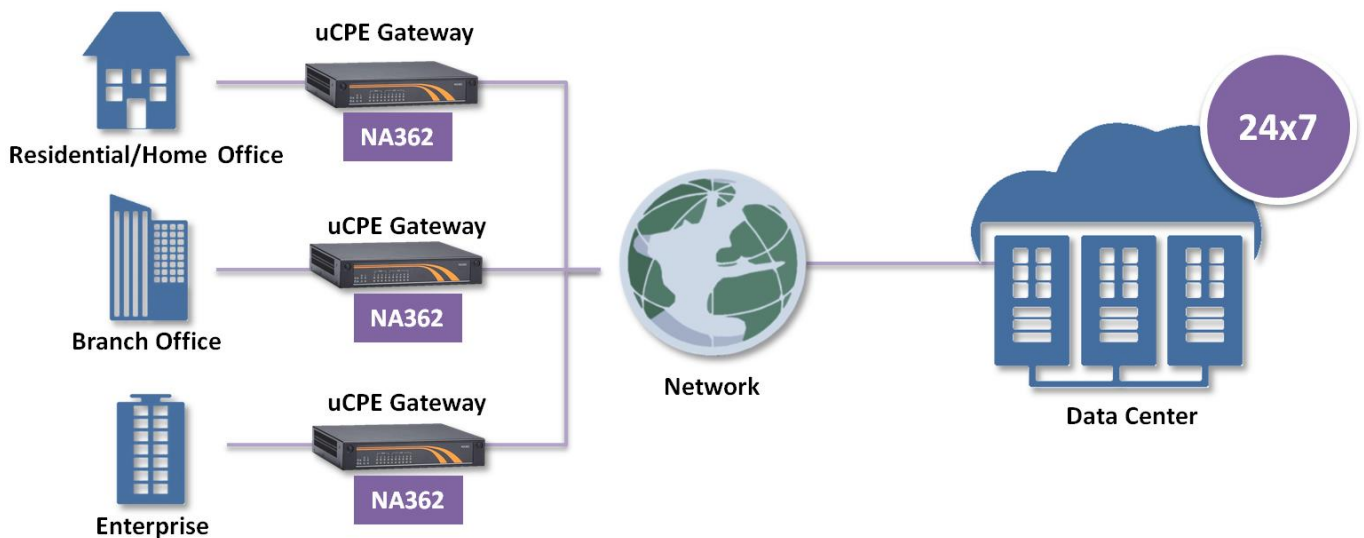
- Compact size and simple site deployment
- Multi-core computing (high core count) with power-efficiency
- Compliance with security regulations
- Supports consistent management interfaces
- Crypto-encryption and decryption functions

### Axiomtek's solution

Axiomtek has proposed its NA362, a small form factor desktop network security appliance with Intel® Atom® C3000 CPU (codenamed Denverton). The NA362 enables a wide array of uCPE (Universal Customer Premises Equipment) applications, including VPN, firewall, gateway, SD-WAN and vCPE. To ensure data confidentiality and integrity, the NA362 features the Intel® QuickAssist Technology (Intel® QAT) to accelerate data processing and cryptographic key management, such as symmetric encryption and authentication, asymmetric encryption including RSA, DH, and ECC, as well as digital signatures and lossless data compression. It also supports the Intel® Data Plane Development Kit (Intel® DPDK), which greatly boosts packet processing performance and throughput, allowing more time for data plane applications. This slim-type network communication platform comes equipped with one 2.5" SATA3 HDD and one mSATA for sufficient storage. It supports wireless communications through a PCI Express Mini Card slot for Wi-Fi, 3G and LTE connectivity, capable of extending cloud-centric technologies to fit the telco network.

The NA362 is a versatile on-premises security gateway that comes with standardized software APIs. Not only does it deliver extraordinary performance and power efficiency to streamline customer site deployments, but it is also extremely useful in safeguarding data transport across different networks and platforms. Together with a full range of protection technologies plus crypto key management, the NA362 enables enterprises to strengthen the security of their networks against emerging threats, from the data center to the edge.

### Application Diagram – NA362 as an uCPE Gateway



## System Configurations – NA362



- Server-grade Intel® Atom® processor C3338/C3558/C3758 (Denverton)
- Four DDR4 R-DIMM for up to 128 GB of memory or U-DIMM for up to 64 GB of memory
- Six 10/100/1000 Mbps Ethernet ports (Intel® i210) and four SFP+ ports
- Wi-Fi/3G/LTE through PCI Express Mini Card slot for optional wireless connectivity
- Supports Intel® QuickAssist Technology (Intel® QAT)
- Supports Intel® Data Plane Development Kit (Intel® DPDK)
- Suitable for VPN, firewall, and network bandwidth controller applications

\*For detailed specifications, visit [www.axiomtek.com](http://www.axiomtek.com) and go to: [Products > Systems & Platforms > Network Communication Platform > Compact Network Appliance > NA362](#).

## About Axiomtek Co., Ltd.

Axiomtek has experienced extraordinary growth in the past 30 years because of our people, our years of learning which resulted in our tremendous industry experience, and our desire to deliver well-rounded, easy-to-integrate solutions to our customers. These factors have influenced us to invest in a growing team of engineers including software, hardware, firmware and application engineers. For the next few decades, our success will be determined by our ability to lead with unique technologies for AIoT and serve our key markets with innovatively-designed solution packages of hardware and software – coupled with unmatched engineering and value-added services that will help lessen the challenges faced by our systems integrator, OEM and ODM customers and prospects alike. We will continue to enlist more technology partners and increase collaborations with our growing ecosystem who are leaders in their fields. With such alliances, we will create synergy and better deliver solutions, value and the expertise our customers need.

Axiomtek is a Member of the Intel IoT® Solutions Alliance. A global ecosystem of more than 800 industry leaders, the Alliance offers its Members unique access to Intel technology, expertise, and go-to-market support—accelerating deployment of best-in-class solutions.