



# Network Security

## N2000 Series

MSI N2000 are maximized efficiency series network security based on Intel® Atom C2000 series SoC which is to help small business users and residential to be flexibly applied to various network security (Firewall, VPN, vCPE, Wireless and IoT gateway, etc.), to meet the diverse needs of users for future business development.

## Product Appearance

MSI N2000 series contains N2000a, N2000b, N2010, N2020a, N2020b and N2020c.

**N2000a**



**N2000b**



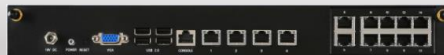
**N2010**



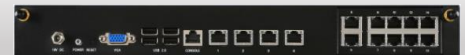
**N2020a**



**N2020b**



**N2020c**







## Introduction & Features

MSI N2000 series are entry level for small business users/residential edge network application. Generally, we can see them set up as a firewall, VPN, at the branch office. Basing on Intel® Atom series SoC so that cope with lightweight workloads for various tasks and growing network infrastructure.

### Maximized efficiency

- ✓ **Maximized efficiency** - Intel® Atom C2000 series CPUs provide efficiency computing and lowest power consumption to take lightweight security network application. (e.g. Intel® Atom C2758 2.4GHz w/ 8 cores, TDP: 20W)
- ✓ **OPEX and CAPEX saving** – MSI N2000 series are built with Atom SoC. They easily locate in branch office, campus, residential by small box design so that reduce cost of establishing. Furthermore, these series are the lowest power consumption for saving your money.
- ✓ **Security application** – Firewall and VPN are common security application for N2000 series by whose advanced Ethernet network function. Moreover, there are POE and wireless function for IoT gateway.
- ✓ **Network virtualization** - Access virtualization through SDN/NFV technology, N2000 series with high core SoC for being a virtualized Customer Premises Equipment (vCPE) so that implement the managed CPE service (Ethernet, VPN) to enterprise branch. And play as an edge network function as IoT gateway/vRouter/vFirewall and so on.



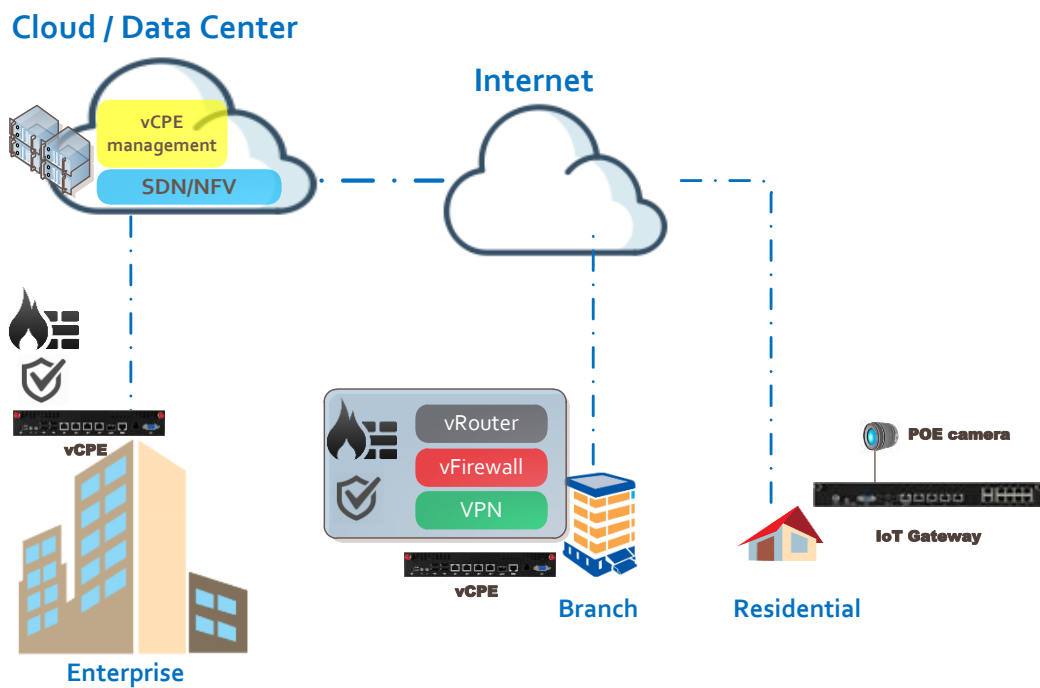
Model	<b>N2000a</b> 	<b>N2000b</b> 	<b>N2010</b> 	<b>N2020a</b> 
Form factor	1U	Small Box	Small Box	Small Box
Dimensions	W(438mm) x H(44mm) x D(330mm)	W(438mm) x H(44mm) x D(330mm)	W(274mm) x H(44mm) x D(115mm)	W(274mm) x H(44mm) x D(162mm)
Color	Black	Black	Black	Black
CPU	1 x Intel® Atom™ Processor C2000 Series	1 x Intel® Atom™ Processor C2000 Series	1 x Intel® Atom™ Processor C2000 Series (max support C2558)	1 x Intel® Atom™ Processor C2000 Series (max support C2558)
Chip	Soc	Soc	Soc	Soc
Memory	2 x DDR3 Slots, 2 channel DDR3, up to 1333/1600MHz UDIMM ECC/non ECC up to 32GB	2 x DDR3 Slots, 2 channel DDR3, up to 1333/1600MHz UDIMM ECC/non ECC up to 32GB	2 x DDR3 Slots, 2 channel DDR3, up to 1333/1600MHz UDIMM ECC/non ECC up to 32GB	2 x DDR3 Slots, 2 channel DDR3, up to 1333/1600MHz UDIMM ECC/non ECC up to 32GB
Storage	1 x internal 3.5" or 2.5" HDD(Optional) 1 x CF Card	1 x internal 3.5" or 2.5" HDD(Optional) 1 x CF Card	1 x SATA DOM(Optional)	1 x internal 2.5" HDD(Optional) 1 x mSATA(Optional)
I/O	LAN Modules: 1 x LAN tray max up to 4 x LAN ports via Network Adapter Front IO: 1 x LED (ALARM/HDD/POWER) 1 x COM port 2 x USB2.0 2 x GbE RJ45 ports 4 x GbE RJ45 ports (w/ 2 pairs bypass) 1 x Power/Reset button	Front IO: 1 x LED (ALARM/HDD/POWER) 1 x COM port 2 x USB2.0 2 x GbE RJ45 ports 4 x GbE RJ45 ports (w/ 2 pairs bypass) 1 x DC Jack 1 x Power/Reset button	Front IO: 2 x Antenna (for Wi-Fi supported) 1 x LED (HDD/POWER) 1 x COM port 4 x USB2.0 1 x GbE SFP ports 4 x GbE RJ45 ports 1 x VGA port 1 x DC Jack 1 x Power 1 x Reset button	Front IO: 1 x LED (ALARM/HDD/POWER) 4 x LAN LEDs Rear IO: 2 x Antenna (for Wi-Fi supported) 1 x COM port 4 x USB2.0 4 x GbE RJ45 ports 1 x VGA port 1 x DC Jack 1 x Power 1 x Reset button
Security	TPM Header	TPM Header	TPM Header	N/A
Power supply	AC Single PSU 150W	DC 19V/65W Adapter	DC 19V/65W Adapter	DC 19V/65W Adapter
NIC module	NIC-100, NIC-101	N/A	N/A	N/A
Accessory	1 x set Ears	1 x set Ears	1 x set Ears	1 x set Ears

Model	N2020b	N2020c
Form factor	Small Box	Small Box
Dimensions	W(378mm) x H(44mm) x D(162mm)	W(378mm) x H(44mm) x D(162mm)
Color	Black	Black
CPU	1 x Intel® Atom™ Processor C2000 Series	1 x Intel® Atom™ Processor C2000 Series
Chip	Soc	Soc
Memory	2 x DDR3 Slots, 2 channel DDR3, up to 1333/1600MHz UDIMM ECC/non ECC up to 32GB	2 x DDR3 Slots, 2 channel DDR3, up to 1333/1600MHz UDIMM ECC/non ECC up to 32GB
Storage	1 x internal 2.5" HDD(Optional) 1 x mSATA(Optional)	1 x internal 2.5" HDD(Optional) 1 x mSATA(Optional)
I/O	Front IO: 1 x LED (ALARM/HDD/POWER) Max up to 14 x LAN LEDs Rear IO: 2 x Antenna (for Wi-Fi supported) 1 x COM port 4 x USB2.0 2 x GbE RJ45 ports w/ POE via optional network adapter 4 x GbE RJ45 ports 1 x VGA port 1 x DC Jack 1 x Power 1 x Reset button	Front IO: 1 x LED (ALARM/HDD/POWER) Max up to 14 x LAN LEDs Rear IO: 2 x Antenna (for Wi-Fi supported) 1 x COM port 4 x USB2.0 10 x GbE RJ45 w/ 2 ports POE via optional network adapter 4 x GbE RJ45 ports 1 x VGA port 1 x DC Jack 1 x Power 1 x Reset button
Security	N/A	N/A
Power supply	DC 19V/65W Adapter	DC 19V/65W Adapter
NIC module	N/A	N/A
Accessory	1 x set Ears	1 x set Ears

MSI N2000 series are built with Intel® Atom SoC to serve lightweight workload at small business user or residential. Traditionally, small box network appliance provides high mobility and agility allocation at different network infrastructure. For example, VPN Ethernet service is generally for every business branch side and factory. Customer needs smaller network devices to locate in diverse places even at outdoor. MSI N2000 series is the smallest and only need little power consumption so that customer no need to build up a complicated IT room or heavy UPS.

Attribute to SDN/NFV technology and OVS with DPDK, the vCPE project enhance lightweight traditional network products into an agile networking function and high performance on vRouter/vFirewall and IoT gateway application. SDN/NFV developing is getting more mature. It's a time to launch network virtualization from vCPE project and adopt MSI N2000 series in your total solution.

Figure 1. N2000 series typical application



MSI N2000 series products

For more information, please visit our website.  
<http://server.msi.com>



