



Nano-N3061

Desktop Network Security Appliance

Technical Support Documentation

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|--------------------------|---------------------------------|
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| Product: | Nano-N3061 |
| Platform: | 10th Gen Intel® Core™ Processor |
| Classification: | Network Security |

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All product specifications are subject to change without notice.

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1. Product Overview

The Nano-N3061 is a desktop network security appliance purpose-built for firewall, VPN gateway, SD-WAN, and network security applications. Its multiple Ethernet ports and fanless design make it ideal for deployment as a dedicated security appliance at the network edge.

1.1 Key Features

- Fanless Aluminum Design
- 10th Gen Intel® Core™ Processor
- 6 × Intel i226-V 2.5G LAN Ports
- (4 × POE optional)
- 1 × M.2 3052 B-key (5G modem optional)
- 3 × M.2 (support WiFi and 4G/5G)
- 2 × DDR4, Max. 64 GB
- Support TPM 2.0 security encryption

1.2 Target Applications

The Nano-N3061 is suitable for Firewall, VPN, Network Server, Network Security, Router etc..

1.3 Package Contents

Verify the following items are included in the package:

| Item | Qty | Description |
|---------------------------|-----|---------------------|
| Intel® Core™ i3/i5 12V 5A | 1 | - |
| Power Adapter 1 | 1 | - |
| Intel® Core™ i7 12V 7.5A | 1 | - |
| Power Cord | 1 | CN, US, UK, EU etc. |
| VESA Bracket | 1 | Standard |

NOTE: If any item is missing or damaged, contact IWILL Technology support immediately at support@iwilltech.co.uk.

2. Hardware Specifications

Complete technical specifications for the Nano-N3061.

| SYSTEM | |
|-----------------|---|
| Model | Nano-N3061 |
| Processor | 10th Gen Intel® Core™ Processor |
| Memory | 2 x DDR4 2666MHz SODIMM, Max. 64 GB |
| BIOS | AMI EFI BIOS |
| Graphics | Intel® UHD Graphics |
| Display Ports | 1 x DP DP interface resolution up to 4096 x 2160@60Hz) 1 x M.2 |
| Storage | 1 x 2.5-inch HDD/SSD |
| Expansion | 1 x M.2 2230 E-key (support WiFi, Bluetooth) 1 x M.2 3052 B-key (USB 3.0 signal, support 4G/5G), 1 x Nano-SIM Slot on the plate |
| Ethernet | 6 x Intel i226-v 2.5G LAN Ports, LAN 3-6 can be 802.3af standard POE LAN (option) |
| OS Support | Windows 10, Windows 11, Linux, iKuai, pfSense |
| I/O PORTS | |
| Ports | 1 x Power Button 1 x RJ45 COM Port (support console) 6 x RJ45 1000Mbps LAN Ports 1 x DC-In 1 x DP 1 x HDMI |
| POWER & OTHER | |
| Power Input | DC 12V |
| ENVIRONMENT | |
| Operating Temp. | 0■ ~ 50■ (Commercial HDD), -20■ ~ 50■ (Industrial SSD), surface air flow |
| Humidity | 0% ~ 95% (non-condensing) |
| Certifications | CE, CCC, FCC Class A, RoHS |
| MECHANICAL | |
| Dimensions | 186 x 126.5 x 66 mm |
| Weight | 1.3 kg |

3. I/O Interfaces & Connectivity

3.1 Front Io

| Connector | Description |
|-----------|-------------------------------------|
| 1 | 1 x Power Button |
| 1 | 1 x RJ45 COM Port (support console) |
| 6 | 6 x RJ45 1000Mbps LAN Ports |
| 1 | 1 x DC-In |

3.2 Rear Io

| Connector | Description |
|-----------|-------------|
| 1 | 1 x DP |
| 1 | 1 x HDMI |

Ethernet / LAN

- 6 x Intel i226-v 2.5G LAN Ports, LAN 3-6 can be 802.3af standard POE LAN (option)

WARNING: Always power off the unit and disconnect all power sources before connecting or disconnecting any internal components.

4. Mechanical Dimensions

All dimensions are in millimeters (mm).

| Parameter | Value |
|--------------------|---------------------|
| Overall Dimensions | 186 × 126.5 × 66 mm |
| Weight | 1.3 kg |

NOTE: For detailed technical drawings with mounting hole positions, contact IWILL Technology at support@iwilltech.co.uk.

5. BIOS Configuration

The Nano-N3061 uses AMI EFI BIOS. Access the BIOS setup by pressing **DEL** or **F2** during the POST screen at boot.

5.1 Entering BIOS Setup

1. Connect a USB keyboard to the unit.
2. Power on the system.
3. Press **DEL** or **F2** repeatedly as the splash screen appears.
4. The AMI EFI BIOS setup utility will load.

5.2 Important BIOS Settings

| Setting | Location | Description |
|---------------------------|--------------------|--|
| Boot Order | Boot Tab | Set primary boot device (SSD, USB, PXE) |
| Power On After Power Loss | Advanced > ACPI | Set to [Power On] for automatic startup on power restoration |
| Wake-on-LAN | Advanced > Network | Enable for remote wake capability over LAN |

NOTE: BIOS menu paths may vary between firmware revisions. If a setting is not found, check adjacent menus or consult IWILL Technology support.

5.3 BIOS Reset

Method 1 (Keyboard): Enter BIOS setup and press **F9** to load optimized defaults, then **F10** to save and exit.

Method 2 (CMOS Reset): Power off, disconnect power, open the chassis, locate the CMOS clear jumper on the motherboard, short for 5 seconds, then remove.

6. Operating System Installation

6.1 Supported Operating Systems

| OS | Notes |
|------------|---|
| Windows 10 | 64-bit (21H2+). Recommended for most deployments. |
| Windows 11 | 64-bit. Requires TPM 2.0 enabled in BIOS. |
| Linux | Ubuntu 22.04+, CentOS, or compatible distributions. |

6.2 Installation via USB

1. Prepare a bootable USB drive with the desired OS image (use Rufus, balenaEtcher, or dd).
2. Insert the USB drive into an available USB port.
3. Enter BIOS (DEL/F2) and set USB as the first boot device.
4. Save and restart. The OS installer should load from USB.
5. Follow on-screen instructions. Select the internal drive as the install target.
6. After installation, re-enter BIOS and restore the internal drive as primary boot device.

6.3 Driver Installation

Windows 10/11 should automatically detect most hardware via Windows Update. For chipset, graphics, and LAN drivers, download the latest versions from Intel's support site or contact IWILL Technology for the driver package.

NOTE: For firewall/router deployments with pfSense, OPNsense, or similar BSD-based OS, verify Intel LAN controller compatibility with the chosen software version before installation.

7. Network & Firewall Deployment

7.1 Supported Firewall / Router Software

| Software | Type | Notes |
|---------------|-------------------|--|
| pfSense | Firewall / Router | FreeBSD-based. Verify Intel NIC compatibility. |
| OPNsense | Firewall / Router | Fork of pfSense with modern UI. |
| Untangle | UTM Gateway | Linux-based unified threat management. |
| VyOS | Network OS | Linux-based routing platform. |
| Ubuntu/Debian | Linux Router | With iptables/nftables for custom setups. |

7.2 Typical Network Topology

With 6 LAN ports, the Nano-N3061 can be deployed as a multi-segment firewall. A common configuration assigns Port 1 as WAN (internet uplink), Port 2 as LAN (internal network), and remaining ports as DMZ, guest network, or additional WAN for failover.

7.3 Console Port

The unit includes a serial console port (RJ45 or DB9) for out-of-band management. Connect via a serial terminal (PuTTY, minicom) at 115200 baud, 8N1.

8. Expansion Module Installation

8.1 Available Expansion Slots

- 1 × M.2 2230 E-key (support WiFi, Bluetooth)
- 1 × M.2 3052 B-key (USB 3.0 signal, support 4G/5G), 1 × Nano-SIM Slot on the plate

8.2 Installation Procedure

1. Power off and disconnect all power sources.
2. Remove the chassis access panel screws.
3. Locate the target expansion slot on the motherboard.
4. Insert the module at a 30° angle and press down until it clicks into the retaining clip.
5. If applicable, connect antenna pigtail cables to the module's U.FL connectors.
6. Replace the access panel and secure with screws.

WARNING: Always use ESD protection (grounding strap) when handling internal expansion modules. Static discharge can permanently damage components.

8.3 Storage Installation

- 1 × 2.5-inch HDD/SSD

9. Mounting Guide

9.1 VESA / Desktop Mounting

The Nano-N3061 supports VESA mounting (check rear panel for mounting hole pattern). Use M3 or M4 screws as appropriate — do not exceed the maximum thread depth.

WARNING: Ensure adequate ventilation around the unit. Do not block the heatsink fins or ventilation openings.

10. Maintenance & Troubleshooting

10.1 Routine Maintenance

- **Heatsink Cleaning:** Periodically blow out dust from the heatsink fins using compressed air.
- **Connector Inspection:** Check connectors for damage or corrosion, especially in harsh environments.
- **Firmware Updates:** Check with IWILL Technology for BIOS updates that may improve stability.

10.2 Troubleshooting Guide

| Symptom | Possible Cause | Solution |
|----------------------|---------------------------------------|---|
| No power / no LED | Power adapter disconnected or faulty | Verify DC input voltage. Try a different adapter. |
| No display output | Display cable loose or BIOS setting | Reseat display cable. Check BIOS display settings. |
| LAN port not linking | Cable or driver issue | Try different cable/port. Verify driver in OS. Check BIOS LAN enable. |
| System freezes | Memory or storage issue | Reseat RAM. Test with known-good SSD. Enable watchdog. |
| Overheating | Blocked heatsink or high ambient temp | Clean heatsink. Ensure adequate airflow. |
| Boot loop | Corrupted BIOS or OS | Reset BIOS to defaults (F9). Reinstall OS. |

11. Warranty & Support

11.1 Warranty Coverage

The Nano-N3061 is covered by a standard manufacturer warranty. The warranty covers defects in materials and workmanship under normal use conditions. It does not cover damage from misuse, unauthorized modifications, or exposure beyond rated specifications.

11.2 Technical Support

IWILL Technology provides worldwide technical support through regional offices:

| Region | Website | Email |
|------------------|--|--|
| United Kingdom | www.iwilltech.co.uk | support@iwilltech.co.uk |
| MENA Region | www.iwillmena.com | support@iwillmena.com |
| Portugal & Spain | www.iwill.pt | apoyo@iwill.pt |
| Poland | www.iwill.pl | wsparcie@iwill.pl |
| Denmark | www.iwill.dk | stotte@iwill.dk |
| Bulgaria | www.iwill.bg | support@iwill.bg |

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11.3 RMA Process

To initiate a return for repair or replacement, contact IWILL Technology support at the regional office nearest to your location with your product serial number and a description of the issue.

Appendix A — Order Information & Accessories

A.1 Order Configurations

| Configuration | Description |
|--|--|
| Nano N3061 CPU Specification | Nano N3061 CPU Specification |
| Configuration 1 Intel® Core™ i3-10110U S | Configuration 1 Intel® Core™ i3-10110U Standard I/O, 2.5G LAN Port |
| Configuration 2 Intel® Core™ i5-10210U S | Configuration 2 Intel® Core™ i5-10210U Standard I/O, 2.5G LAN Port |
| Configuration 3 Intel® Core™ i7-10810U S | Configuration 3 Intel® Core™ i7-10810U Standard I/O, 2.5G LAN Port Remarks: 1. Since the 5G module requires four antennas, 2 WIFI holes on the panel need to be added to use WIFI and 5G at the same time; 2. The POE function needs to be equipped with a POE power supply module; please consult the pre-sales technical personnel for details. |

A.2 Included Accessories

| Item | Qty | Specification |
|---------------------------|-----|---------------------|
| Intel® Core™ i3/i5 12V 5A | 1 | - |
| Power Adapter 1 | 1 | - |
| Intel® Core™ i7 12V 7.5A | 1 | - |
| Power Cord | 1 | CN, US, UK, EU etc. |
| VESA Bracket | 1 | Standard |

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