



1U6L-ADL

Rackmount Network Security Appliance

Technical Support Documentation

Document Version:	1.0
Date:	February 2026
Product:	1U6L-ADL
Platform:	Onboard Intel H610 chipset
Classification:	Network Security

IWILL Technology | WhatsApp: +852 914 61951

United Kingdom
www.iwilltech.co.uk
support@iwilltech.co.uk

Poland
www.iwill.pl
wsparcie@iwill.pl

MENA Region
www.iwillmena.com
support@iwillmena.com

Denmark
www.iwill.dk
stotte@iwill.dk

Portugal & Spain
www.iwill.pt
apoyo@iwill.pt

Bulgaria
www.iwill.bg
support@iwill.bg

All product specifications are subject to change without notice.

Table of Contents

- 1. Product Overview**
- 2. Hardware Specifications**
- 3. I/O Interfaces & Connectivity**
- 4. Mechanical Dimensions**
- 5. BIOS Configuration**
- 6. Operating System Installation**
- 7. Network & Firewall Deployment**
- 8. Expansion Module Installation**
- 9. Mounting Guide**
- 10. Maintenance & Troubleshooting**
- 11. Warranty & Support**
 - Appendix A — Order Information & Accessories

1. Product Overview

The 1U6L-ADL is a rackmount 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

- Rack-mounted network security application
- Onboard Intel H610 chipset
- 12th/13th Gen Intel® Core™ i3/i5/i7 LGA1700
- 2 x DDR4 U-DIMM, Max. 64GB/128GB
- 6 x Intel i210-AT 1000Mbps LAN Ports
- 1 x PCIe x8
- Support console, 2 groups of bypass, TPM2.0

1.2 Target Applications

The 1U6L-ADL 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
Power Cord	1	CN, US, UK, EU etc.

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 1U6L-ADL.

SYSTEM	
Model	1U6L-ADL
Processor	Onboard Intel H610 chipset
Memory	2 x DDR4 3200MHz U-DIMM, Max. 64GB/128GB
BIOS	AMI UEFI BIOS
Graphics	Intel® UHD Graphics 730/770
Display Ports	1 x HDMI 1 x M.2 (M-Key 2280 support SATA)
Storage	1 x 3.5-inch HDD/SSD or 2 x 2.5-inch HDD/SSD (optional) 1 x PCIe x8 (4 x Optical Ports or 4 x Network Ports optional) 1 x M.2 (M-Key 2280, supports SATA SSD) 1 x M.2 (E-Key 2230, supports WiFi/Bluetooth) 1 x M.2 (B-Key 3042, supports 4G)
Expansion	Expansion Ports (standard configuration doesn't include): 8 x GPIO 1 x COM Port (RS232/RS485 optional) 4 x USB 2.0 1 x USB 3.0 (built-in Type-A Port)
Ethernet	6 x Intel i210-AT 1000Mbps LAN Ports (2 sets of bypass) 90 ~ 264V (47Hz ~ 63Hz)
OS Support	Windows 10, Windows 11, Linux, pfSense
I/O PORTS	
Ports	1 x COM Port (support Console) 2 x USB 3.0 6 x RJ45 LAN Ports (2 groups of bypass) 1 x Power Button 1 x HDMI 1 x AC Power
POWER & OTHER	
Other Functions	Watchdog (level 0-255), Diskless boot, Wake on LAN, Auto power on, Timingboot
ENVIRONMENT	
Operating Temp.	0■ ~ 50■, surface air flow
Humidity	5% ~ 95% (non-condensing)
Certifications	CE, CCC, FCC Class A, RoHS
MECHANICAL	
Dimensions	482 x 471 x 44.5 mm
Weight	6.11 kg

3. I/O Interfaces & Connectivity

3.1 Front Io

Connector	Description
1	1 × COM Port (support Console)
2	2 × USB 3.0
6	6 × RJ45 LAN Ports (2 groups of bypass)
1	1 × Power Button

3.2 Rear Io

Connector	Description
1	1 × HDMI
1	1 × AC Power

Ethernet / LAN

- 6 × Intel i210-AT 1000Mbps LAN Ports (2 sets of bypass)
- 90 ~ 264V (47Hz ~ 63Hz)

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	482 x 471 x 44.5 mm
Weight	6.11 kg

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

5. BIOS Configuration

The 1U6L-ADL uses AMI UEFI 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 UEFI 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
Watchdog Timer	Advanced	Configure hardware watchdog for automatic system recovery

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 1U6L-ADL 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

- Expansion Ports (standard configuration doesn't include):
 - 8 x GPIO
 - 1 x COM Port (RS232/RS485 optional)
 - 4 x USB 2.0
 - 1 x USB 3.0 (built-in Type-A Port)

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 x 3.5-inch HDD/SSD or 2 x 2.5-inch HDD/SSD (optional)
- 1 x PCIe x8 (4 x Optical Ports or 4 x Network Ports optional)
- 1 x M.2 (M-Key 2280, supports SATA SSD)
- 1 x M.2 (E-Key 2230, supports WiFi/Bluetooth)
- 1 x M.2 (B-Key 3042, supports 4G)

9. Mounting Guide

9.1 VESA / Desktop Mounting

The 1U6L-ADL supports VESA mounting (check rear panel for mounting hole pattern). Use M3 or M4 screws as appropriate — do not exceed the maximum thread depth.

9.2 Rack Mounting

The 1U6L-ADL is designed for standard 19-inch rack installation. Slide the unit into the rack and secure with the front panel rack ears using the supplied screws.

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 1U6L-ADL 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

WhatsApp: +852 914 61951

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
1U6L-ADL CPU Specification	1U6L-ADL CPU Specification
Configuration 1 Intel® Core™ i3-12100 St	Configuration 1 Intel® Core™ i3-12100 Standard I/O
Configuration 2 Intel® Core™ i5-12400 St	Configuration 2 Intel® Core™ i5-12400 Standard I/O
Configuration 3 Intel® Core™ i7-12700 St	Configuration 3 Intel® Core™ i7-12700 Standard I/O
Configuration 4 Intel® Core™ i3-13100 St	Configuration 4 Intel® Core™ i3-13100 Standard I/O
Configuration 5 Intel® Core™ i5-13400 St	Configuration 5 Intel® Core™ i5-13400 Standard I/O
Configuration 6 Intel® Core™ i7-13700 St	Configuration 6 Intel® Core™ i7-13700 Standard I/O

A.2 Included Accessories

Item	Qty	Specification
Power Cord	1	CN, US, UK, EU etc.

IWILL Technology | WhatsApp: **+852 914 61951**

United Kingdom

www.iwilltech.co.uk
support@iwilltech.co.uk

Poland

www.iwill.pl
wsparcie@iwill.pl

MENA Region

www.iwillmena.com
support@iwillmena.com

Denmark

www.iwill.dk
stotte@iwill.dk

Portugal & Spain

www.iwill.pt
apoyo@iwill.pt

Bulgaria

www.iwill.bg
support@iwill.bg

All product specifications are subject to change without notice.