The Migration Plan for the NPort 6000 Series

Moxa Technical Support Team

support@moxa.com

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About Moxa

Moxa is a leading provider of edge connectivity, industrial computing, and network infrastructure solutions for enabling connectivity for the Industrial Internet of Things. With 35 years of industry experience, Moxa has connected more than 82 million devices worldwide and has a distribution and service network that reaches customers in more than 80 countries. Moxa delivers lasting business value by empowering industry with reliable networks and sincere service for industrial communications infrastructures. Information about Moxa's solutions is available at www.moxa.com.

How to Contact Moxa

Tel: 1-714-528-6777
Fax: 1-714-528-6778

1 Introduction

This document assists engineers in conducting a comprehensive evaluation before purchasing an NPort 6000-G2 as a replacement for the NPort 6000. It addresses all aspects of the transition, from dimensions and mounting types to software configurations. We strongly recommend reviewing this guide and considering the NPort 6000-G2 Series as part of the next generation of your comprehensive solution.

2 Appearance, Dimensions, and Mounting Types

When considering upgrading from the NPort 6000 to the NPort 6000-G2 Series, you should first determine if the change is because of an application, system, or device server update.

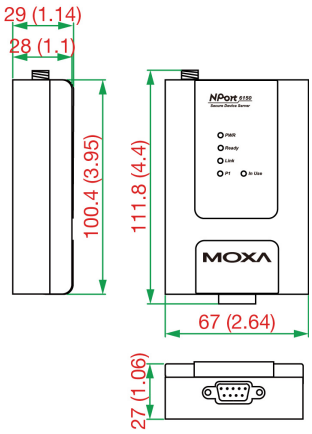
If the change affects the entire system, the specifics of appearance, size, or mounting might be less important since you can adapt to the new system. You can find all the information you need to design a new system in Chapter 2.

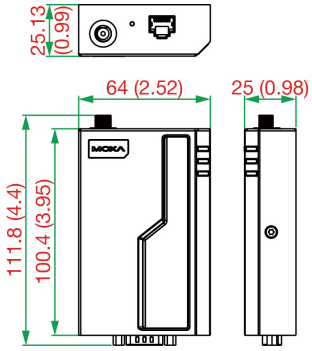
However, if it is only a minor change involving the device server, the dimensions and interfaces of the NPort 6000-G2 Series become crucial. Variations in these aspects may incur extra costs if the new models need you to change connection cables or have more space.

2.1 Dimensions

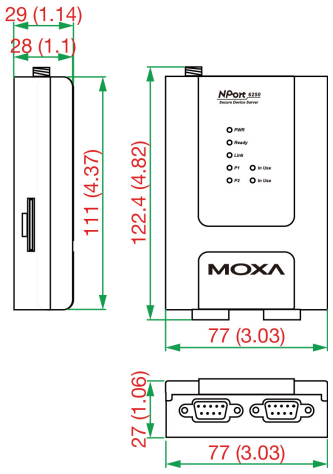
To avoid additional costs when switching from an NPort 6000 device server to an NPort 6000-G2, the dimensions of the NPort 6000-G2 are the same or smaller than those of the NPort 6000. This ensures that you do not need to change their existing designs. The detailed dimensions for both the NPort 6000 and NPort 6000-G2 are as below.

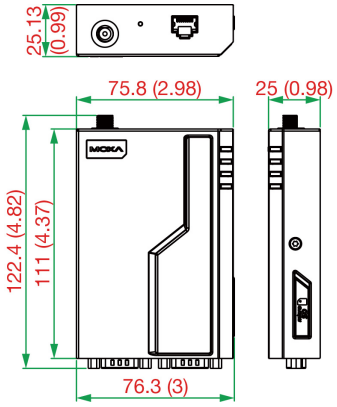
Without Ears	**NPort 6150**	**NPort 6150-G2**
Dimensions	67 x 111.8 x 29 mm	64 x 111.8 x 25 mm



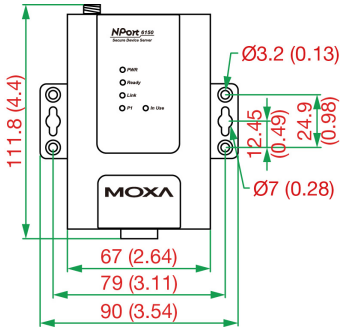


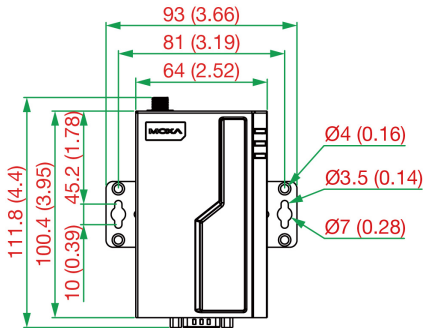
Without Ears	**NPort 6250**	**NPort 6250-G2**
Dimensions	77 x 122.4 x 29 mm	76.3 x 122.4 x 25 mm



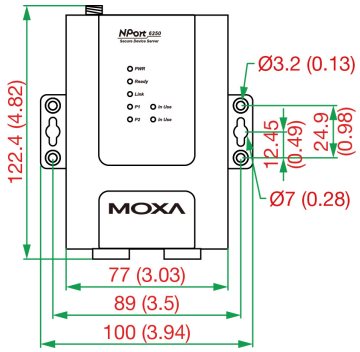


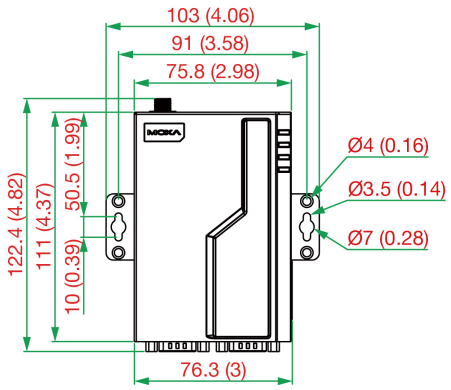
With Ears	**NPort 6150**	**NPort 6150-G2**
Dimensions	90 x 111.8 x 29 mm	93 x 111.8 x 25 mm



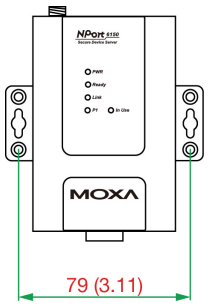
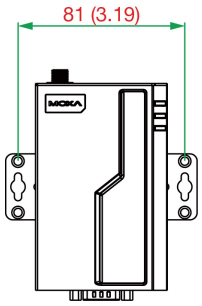


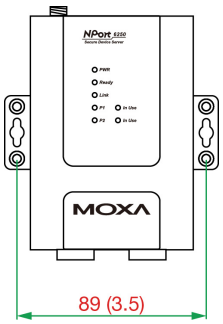
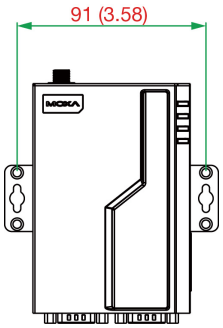
With Ears	**NPort 6250**	**NPort 6250-G2**
Dimensions	100 x 122.4 x 29 mm	103 x 122.4 x 25 mm



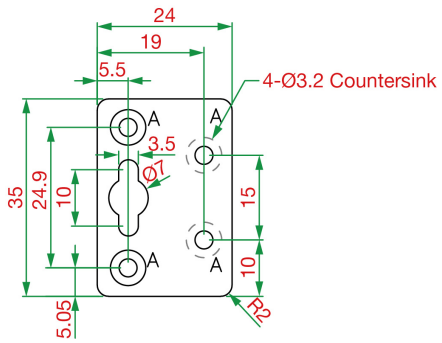
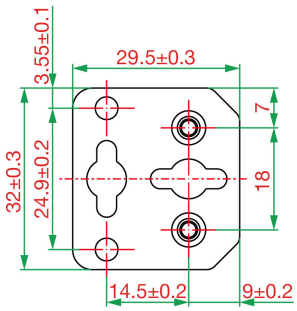


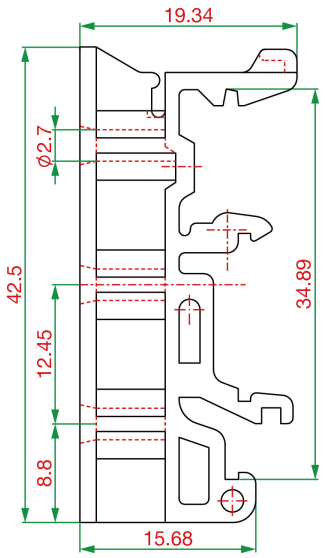
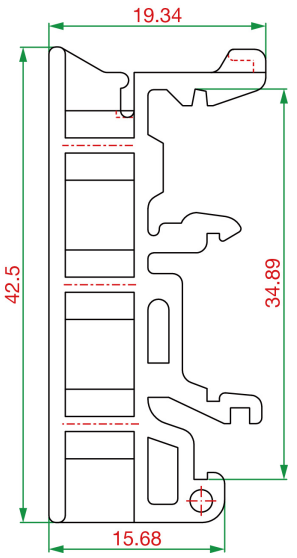
The keyhole dimensions differ slightly between the NPort 6100 and the NPort 6100-G2 (79 mm vs 81 mm), and between the NPort 6200 and the NPort 6200-G2 (89 mm vs 91 mm), with a 2 mm variation in each case. You may have to adjust the placement of the wall screws, if it's possible. Find the distances between the keyholes below.

With Ears	**NPort 6150**	**NPort 6150-G2**
Dimensions		

With Ears	**NPort 6250**	**NPort 6250-G2**
Dimensions		

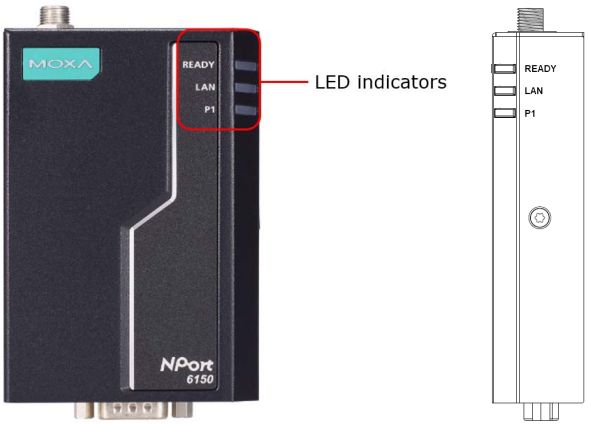
The dimensions of the NPort 6000-G2's wall-mounting kit (WK-32-01) and the DIN-rail mounting kit (DK-43-01) differ from the ones used by the NPort 6000 based on the new design. But the positions of the holes for screw on the wall or on the DIN-rail kit are the same. The dimensions for both wall-mount and DIN-rail kits are detailed below.

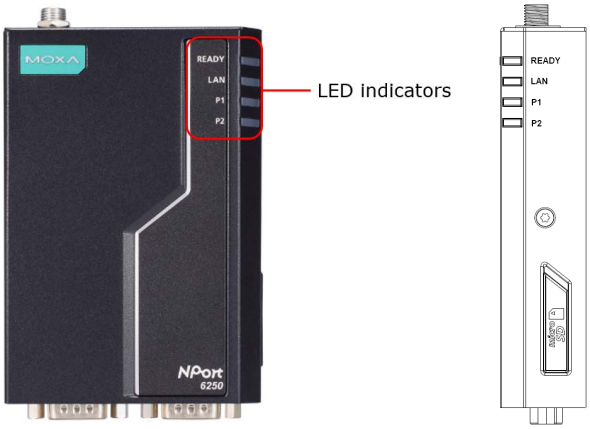
	WK-35-02 (NPort 6100/6200 uses)	**WK-32-01 (NPort 6100-G2/6200-G2 uses)**
Dimensions	35 x 24 x 1.2 mm 	32 x 29.5 x 2 mm 

	DK35A (Green) (NPort 6100/6200 uses)	**DK-43-01 (Black) (NPort 6100-G2/6200-G2 uses)**
Dimensions	42.5 x 19.34 x 10 mm 	42.5 x 19.34 x 10 mm 

2.2 Appearance

Moxa relocated the LED indicators from the device's center to its upper right side, making them visible from the front and side. The power input is kept on the upper left side of the device and the serial port(s) is at the bottom.

NPort 6150	NPort 6150-G2
	

NPort 6250	NPort 6250-G2
	

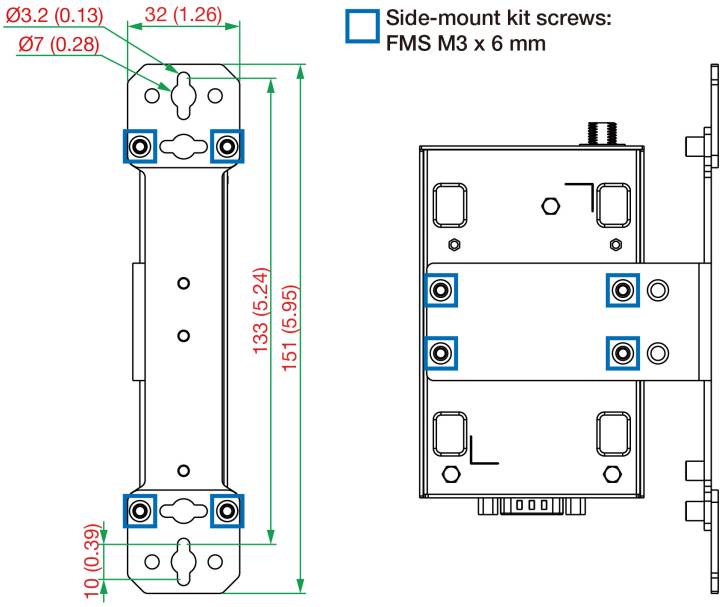
2.3 Mounting Types

We have refined the design to address limited spaces, as device servers are frequently housed in cabinets. Space on the DIN-rail is the most critical factor. Typically, the upper and lower areas accommodate cables such as power, Ethernet, or serial cables. However, the DIN-rail for mounting devices like PLCs, switches, or device servers is fixed. Freeing up space on the DIN-rail may allow for better heat dissipation or the addition of a new device. The NPort 6100-G2/6200-G2 offer side-mounted options to meet this need.

Classic **New Side-mount Options**

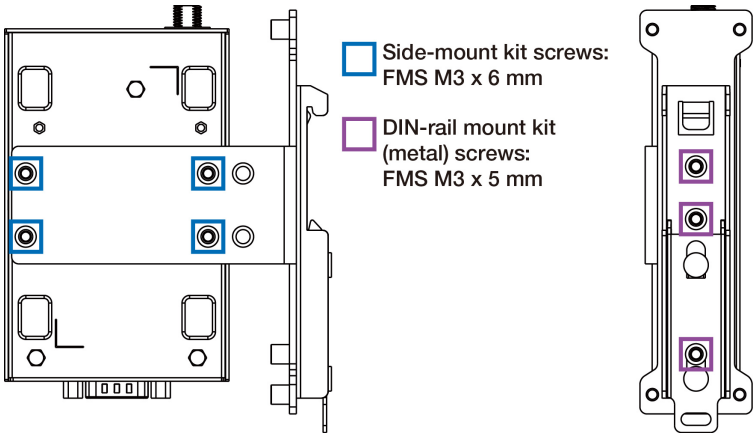
The NPort 6100-G2/6200-G2 device servers come with a wall-mount kit for wall or cabinet mounting. The NPort 6100-G2/6200-G2's wall-mount holes are identical to the NPort 6100/6200's, enabling direct installation without modifications. You can order a DIN-rail kit or side-mount kit separately for different placement options.

Side Mounting (New installation options for the NPort 6100-G2/6200-G2)

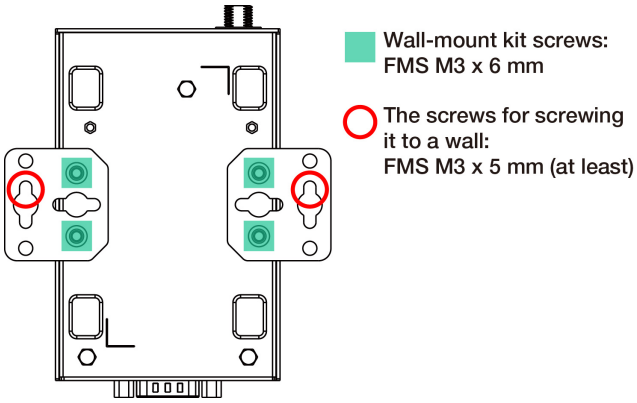


The redesigned NPort 6100-G2/6200-G2 now supports side mounting, saving space on DIN-rails or walls. The SK-115-01 side-mounting kit comes with eight screws for attaching it to the device server, the wall-mount kit, and finally, the wall.

If you prefer to mount the NPort 6100-G2/6200-G2 on a DIN rail with the side-mounting kit, purchase the DIN-rail mounting kit DK-115-01, which includes the side-mounting kit and the DIN-rail mounting kit. Included are three screws to attach the DIN-rail mounting kit to the side-mounting kit before mounting it on the DIN rail.

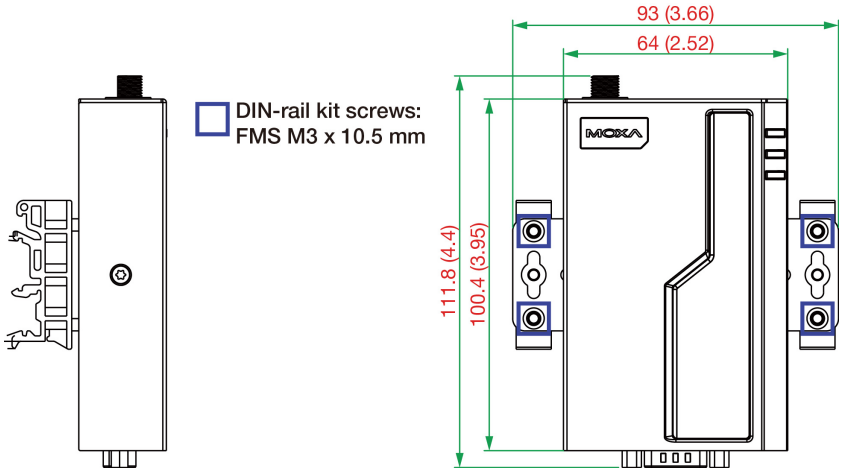


Wall Mounting



The wall-mount kit screws (highlighted with a green square in the above figure) will be included in the box. You may use them to screw the wall-mount kit onto the NPort 6100-G2/6200-G2 device servers.

DIN-rail Mounting



After purchasing the DIN-rail mounting kit, DK-43-01, you will receive a mounting kit with four screws (highlighted in a blue square above) for you to screw the DIN-rail mounting kit to the wall-mount kit. The device server can now be attached to the DIN rail.

3 Software Transition

Regarding cybersecurity concerns, the NPort 6100-G2/6200-G2 Series only supports Device Search Utility v3.x and later. Moxa developed the next generation of communication protocol between the Device Search Utility v3.x and the NPort 6100-G2/6200-G2 Series. Most of the commands and responses are encrypted to secure communications. If you would like to further cooperate with Moxa about the new communication protocol, contact the sales representative in your region.

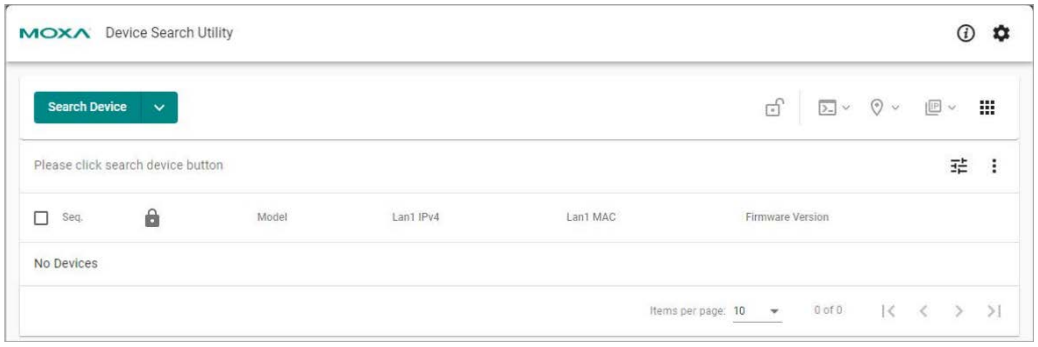
The Device Search Utility v3.x also supports the NPort 5000, NPort 6000, and other NPort Series. If you want to manage the existing NPort products, like the NPort 5000 or NPort 6000, we recommend you upgrade the Device Search Utility to version 3.x or later. It supports all the NPort products.

3.1 Device Search Utility

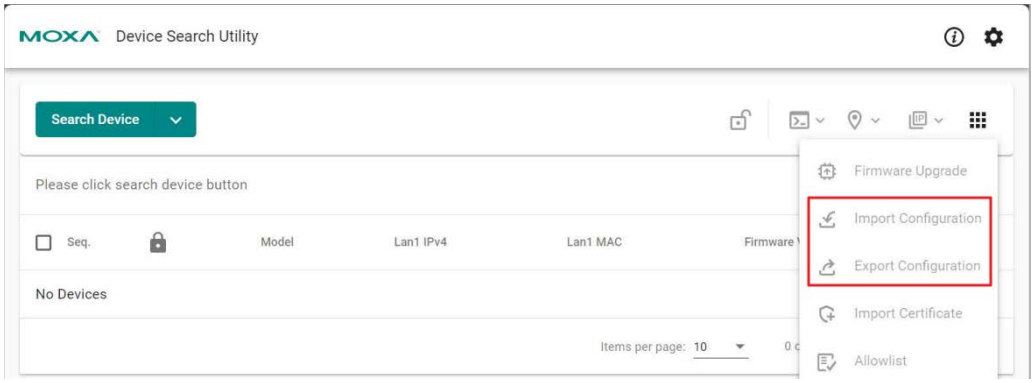
The NPort 6100-G2/6200-G2 can only be supported by Device Search Utility v3.x. Download the utility from the NPort's product support page. The major changes in Device Search Utility v3.x are as below:

1. Web user interface
2. Supporting import certificate
3. Batch configuration, including import/export configuration, import certificate, firmware update, restart, reset, etc.
4. COM mapping support
5. Multilingual support
6. Saves searched list to file

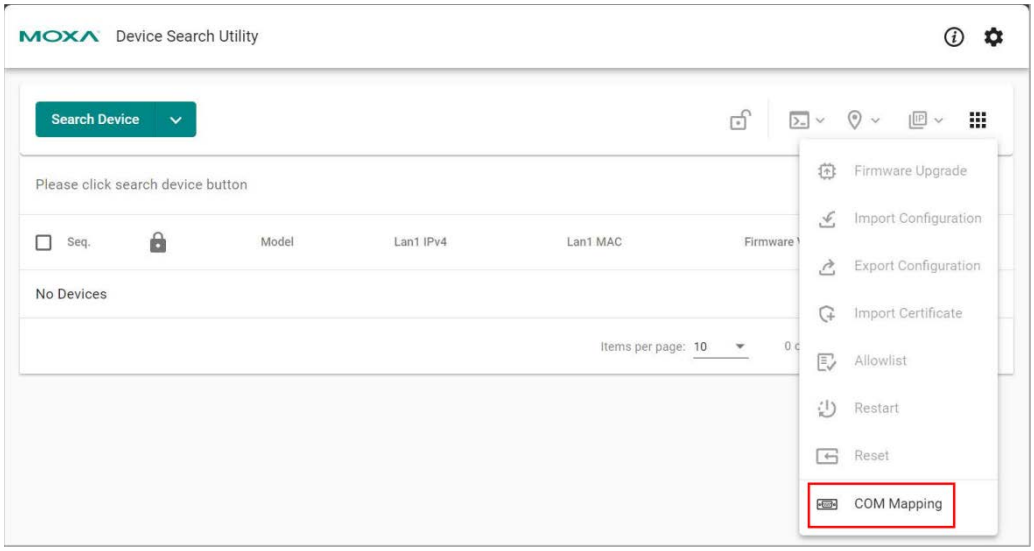
After upgrading to Device Search Utility v3.x, it's easy to find the new web user interface.



Upon execution, Device Search Utility v3.x instantly finds available NPort device servers on the network. Select multiple NPort 6000 devices and export the configuration files. Import them to the NPort 6000-G2 models to complete the configuration transition.



If you want to add the NPort 6100-G2/6200-G2 to the network and map new virtual COM ports, select the COM Mapping function to execute the NPort Windows Driver Manager (introduced in the next section) to complete it.



Refer to the Device Search Utility v3.x User Manual on the NPort's product support page for instructions.

3.2 Windows Driver Manager

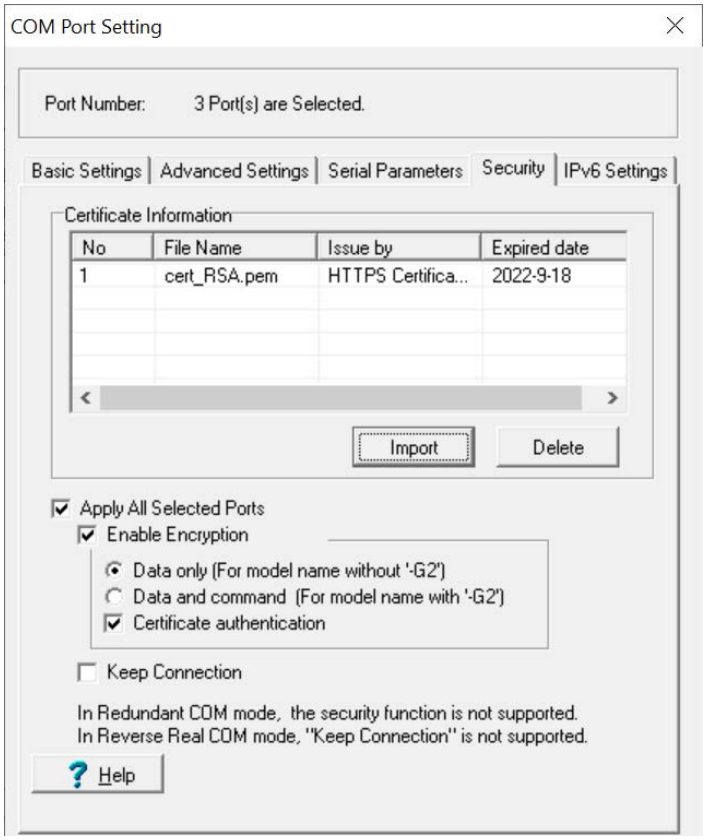
The NPort 6000-G2 is required to use Windows Driver Manager v3.6 (supporting Windows 7 to 10, Server 2008 R2 to Server 2019) and v4.3 (supporting Windows 11 and after, Windows Server 2022 and after).

Don't worry if your computer already has earlier versions installed with COM ports mapped. The COM mapping will remain kept after upgrading the software to v3.6 or v4.3.

Most of the utility functions remain the same. Because of cybersecurity concerns, all the TCP sessions between the NPort 6000-G2 and the NPort Windows Driver Manager will be encrypted, including the data port and command port. If you've secured your connection using the NPort 6000 (data port encryption only), you will need to enable data and command to use NPort 6000-G2 Series devices.

Select the virtual COM port (mapped for NPort 6000-G2) and click the **COM Port Settings**, switch to **Security** tab to enable the **Enable Encryption** and **Data and command** option.

Data only is for the NPort 6000 models.
Data and command is for the NPort 6000-G2 models.

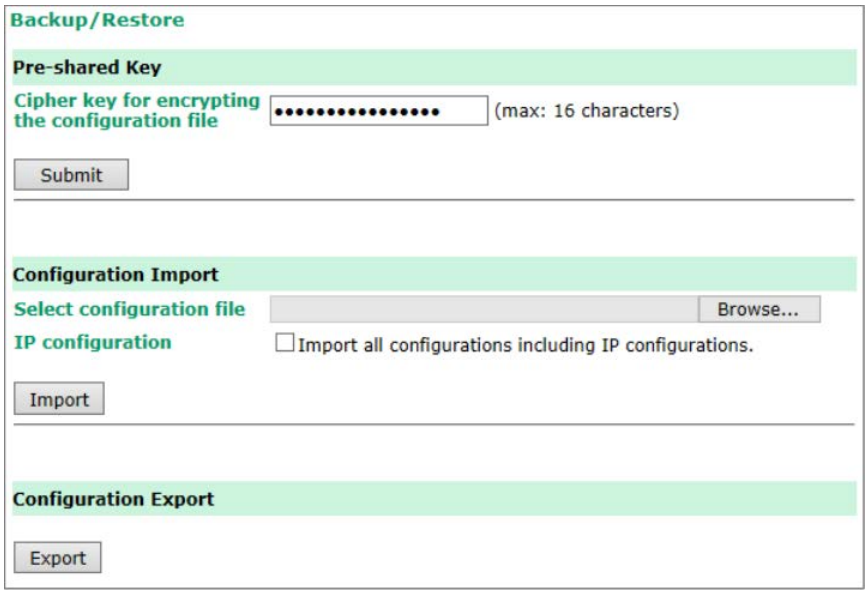


4 Configuration Transition From NPort 6000 to NPort 6000-G2

The NPort 6000 Series, introduced to the market in 2006, has a notably long product life cycle. Given its extensive history, engineers may not be familiar with every detail of its configuration settings. This unfamiliarity can lead to hesitation when transitioning to the new NPort 6000-G2 Series, as engineers might be concerned about replicating the settings of the original NPort 6000. To address this issue, the NPort 6000-G2 Series offers a solution by allowing engineers to directly import configuration files from the NPort 6000 Series. This feature facilitates the seamless transfer of existing settings from the NPort 6000 to the new NPort 6000-G2 Series.

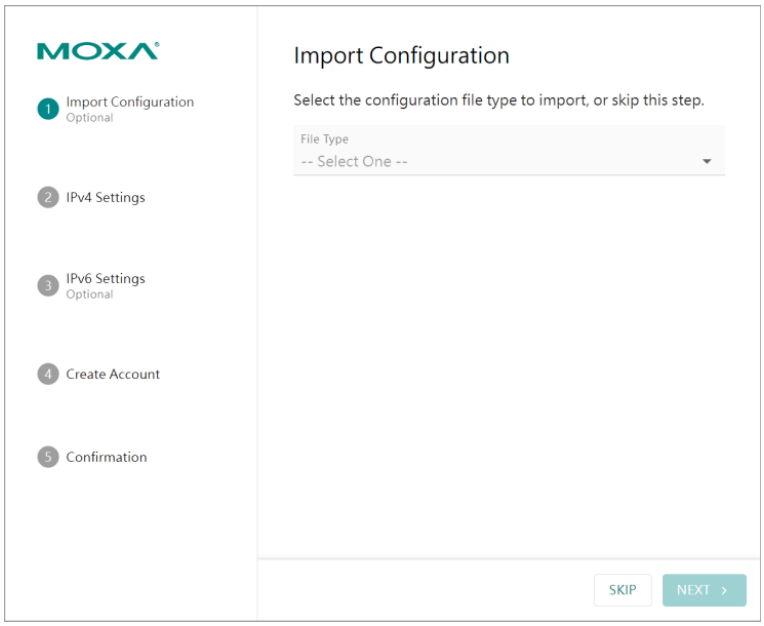
4.1 Export Configuration File rom an NPort 6000

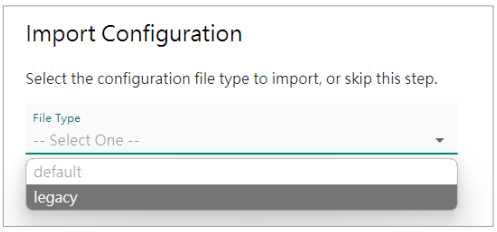
Log in to the web console of the NPort 6000 and navigate to the **System Configuration > Backup/Restore** page. Enter the pre-shared key as the password for the other NPort to import the file. Click the **Export** button to save the existing configuration settings.



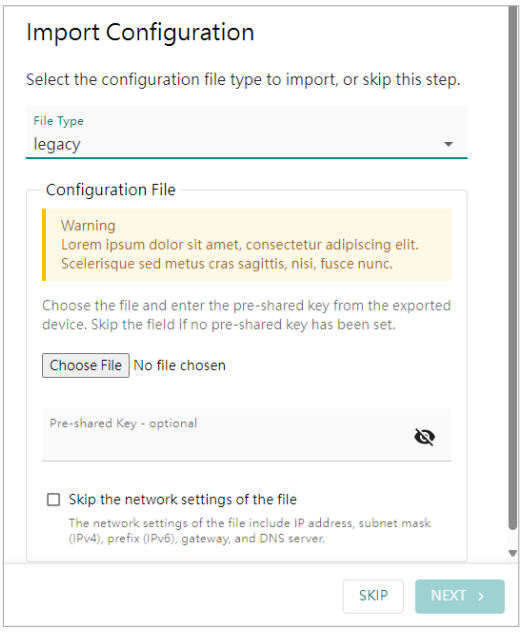
4.2 Import Configuration File to an NPort 6000-G2

When you log into the web console of the NPort 6000-G2 for the first time by entering **https://192.168.127.254**, you will trigger the first-time login process. The first step in is to prompt you to import an existing configuration file.

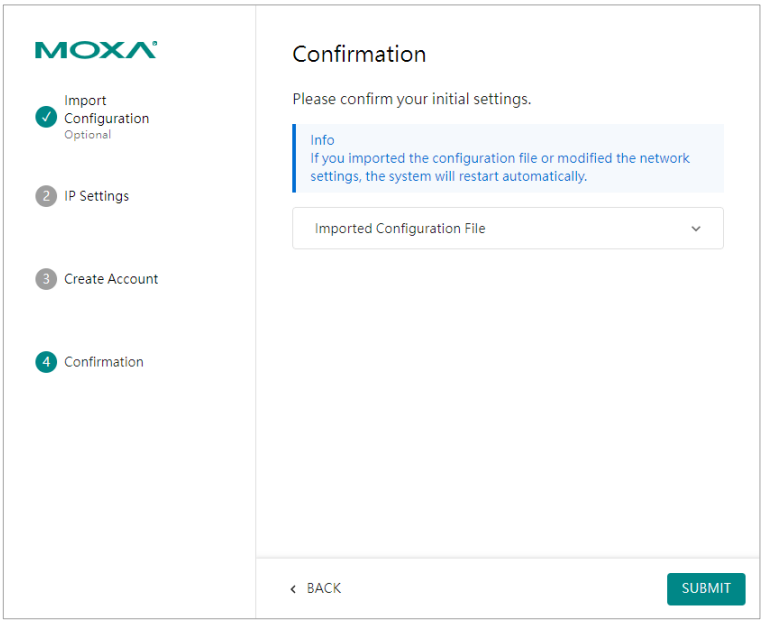




Select the **File Type > legacy** to display the advanced options.

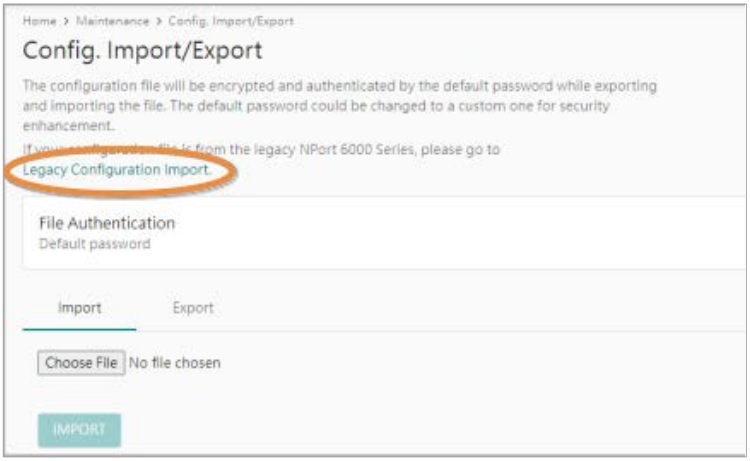


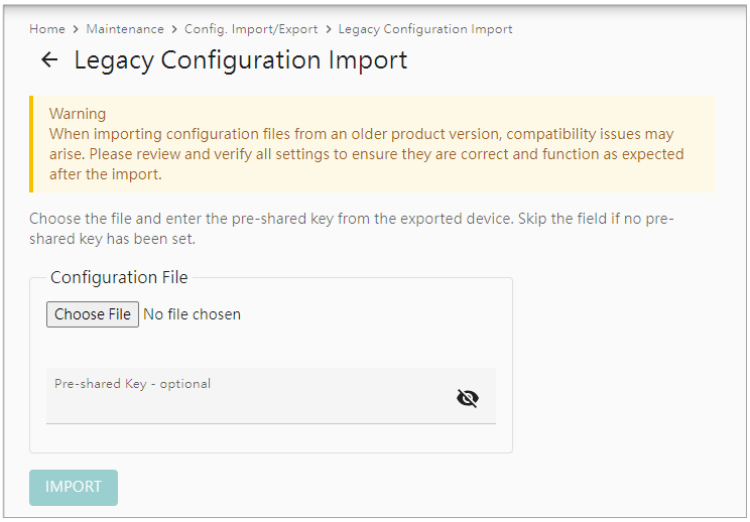
Click the **Choose File** button to select the configuration file from the NPort 6000 and enter the pre-shared key while exporting the configuration file. Click the **NEXT** button.



Click the **SUBMIT** button. The device will import the configuration file and restart itself. All the configuration settings will be imported after the process.

If you missed the first-time login process, you could still log in to the web console and navigate to **Maintenance > Config. Import/Export**. Locate the **Legacy Configuration Import** function and click the hyperlink.





Click the **Choose File** button to select the configuration file from the NPort 6000 and enter the pre-shared key while exporting the configuration file. Click the IMPORT button to replicate the configuration settings.

5 Frequently Asked Questions

5.1 Why Some Configuration May Not Be Imported From an NPort 6000 to an NPort 6000-G2

Certain functions are not supported by the NPort 6000-G2 Series. When you import a configuration file from the NPort 6000, the NPort 6000-G2 Series will retain the default settings for these unsupported functions. The following functions are not supported by the NPort 6000-G2 Series:

a. BOOTP
b. Ethernet Modem mode of Operation Modes
c. Printer mode of Operation Modes
d. PPPoE
e. DDNS
f. Cipher setting
g. User table of Operation Mode
h. High secure mode
i. Unsupported event settings