NMX-WP-N1512 N-Series Windowing Processor, 4x1

Overview

The NMX-WP-N1512 4x1 Windowing Processor allows you to display multiple real-time HD streams on a single screen simultaneously. Four window streams (from N1000 Series Encoders) are connected to the four independent network ports labeled **U0**-**U3**. Each window stream can then be cropped, scaled, and positioned according to stored presets (such as quad, picture-in-picture, etc.) or in any user-defined configuration. The combined output AV stream is then routed as a single N1000 stream to one or more displays via a single output network port (any of the ports **P0**-**P2**).

NOTE: For proper operation, all four U ports must be connected to active streams.
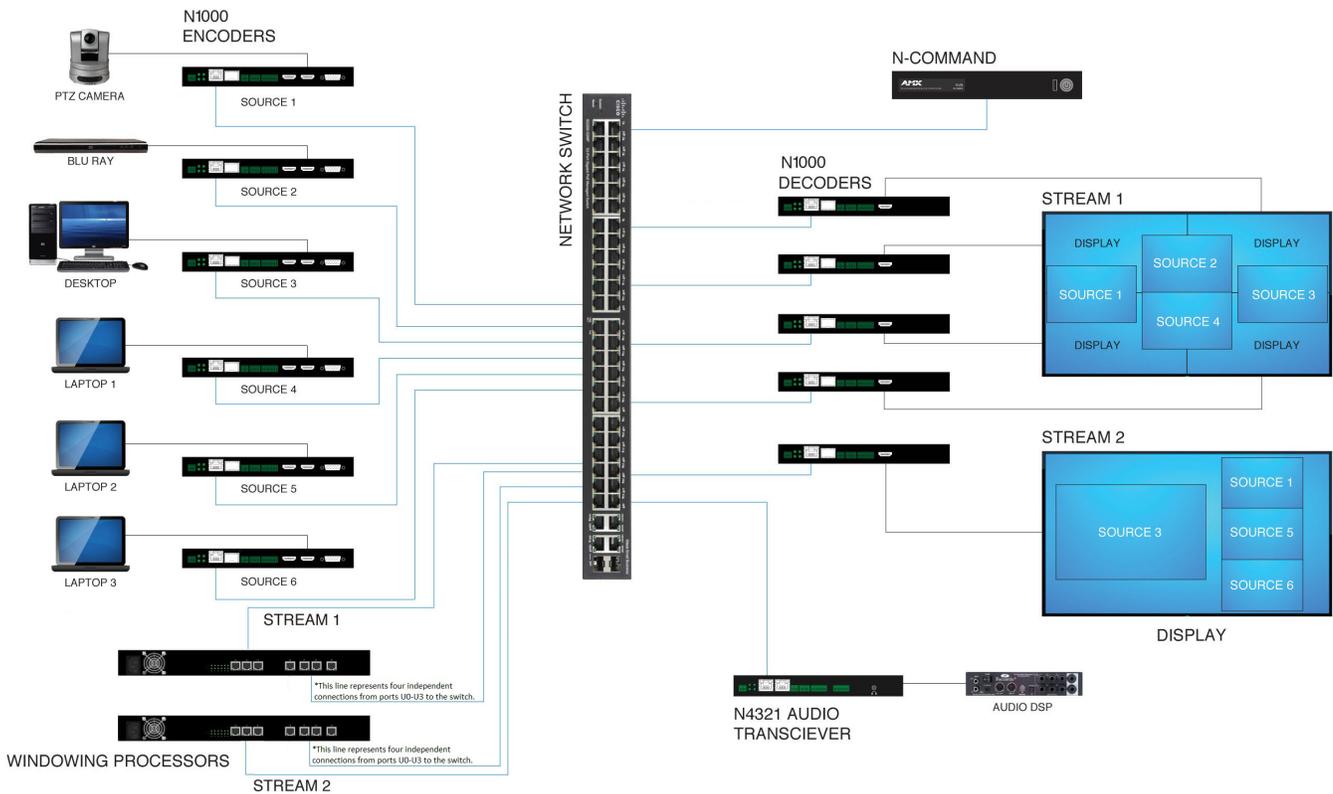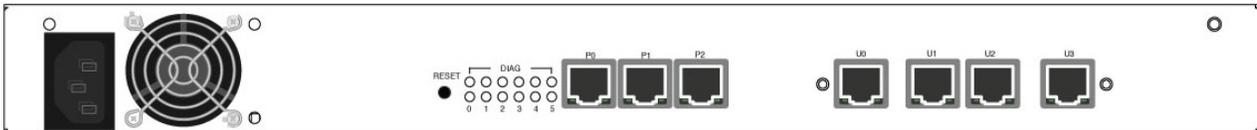
IMPORTANT: To avoid creating a network loop, never connect more than one P port to the same network segment.

To achieve larger stacked configurations, additional Windowing Processors can be used as input streams.

N1512 Windowing Processor Front View

N1512 Windowing Processor Rear View

Establishing Connection

Before using your N1512 unit, it must be configured using the free N-Able device management software. However, you will not be able to configure units until they are in the same subnet as the host computer. N-Series devices are shipped in **DHCP** mode and the IP address will be assigned automatically based on the network DHCP server. If no DHCP server is found, the unit will use **Auto IP** mode with a default IP address of 169.254.xxx.xxx.

The sample steps below show how the required changes to the host computer's IP settings are made in a Windows environment.

Steps for IP address configuration:

1. From the **Control Panel > Network and Internet** dialog box, select **Network and Sharing Center**.
2. Select **Change adapter settings**.
3. Select the wired interface connected to your AV network.
4. Click the **Properties** button.
5. Scroll down in the list to the **Internet Protocol Version 4 (TCP/IPv4)** option. Highlight it and click the **Properties** button.
6. Enable the **Use the following IP address** option, and enter the static IP address *provided to you by your network administrator*.
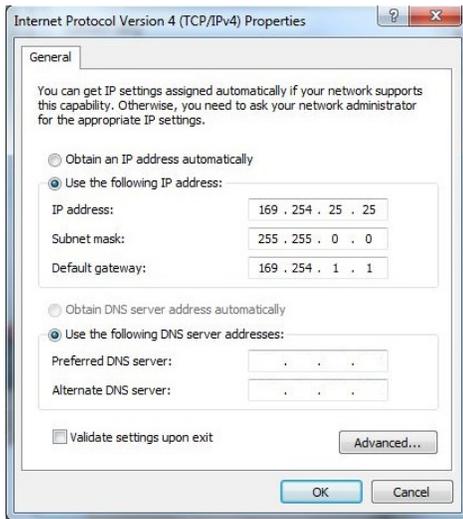
FIG.1 SETTING A STATIC IP ADDRESS

NOTE: If the computer does not need Internet access, you can simply enter a unique 169.254.xxx.xxx IP address with a 255.255.0.0 subnet mask. Please contact your network administrator if you are unsure of how to configure the existing interface. If the computer has a statically-assigned IP address, click on the Advanced button. Then click Add to enter a unique 169.254.xxx.xxx address with a subnet of 255.255.0.0.

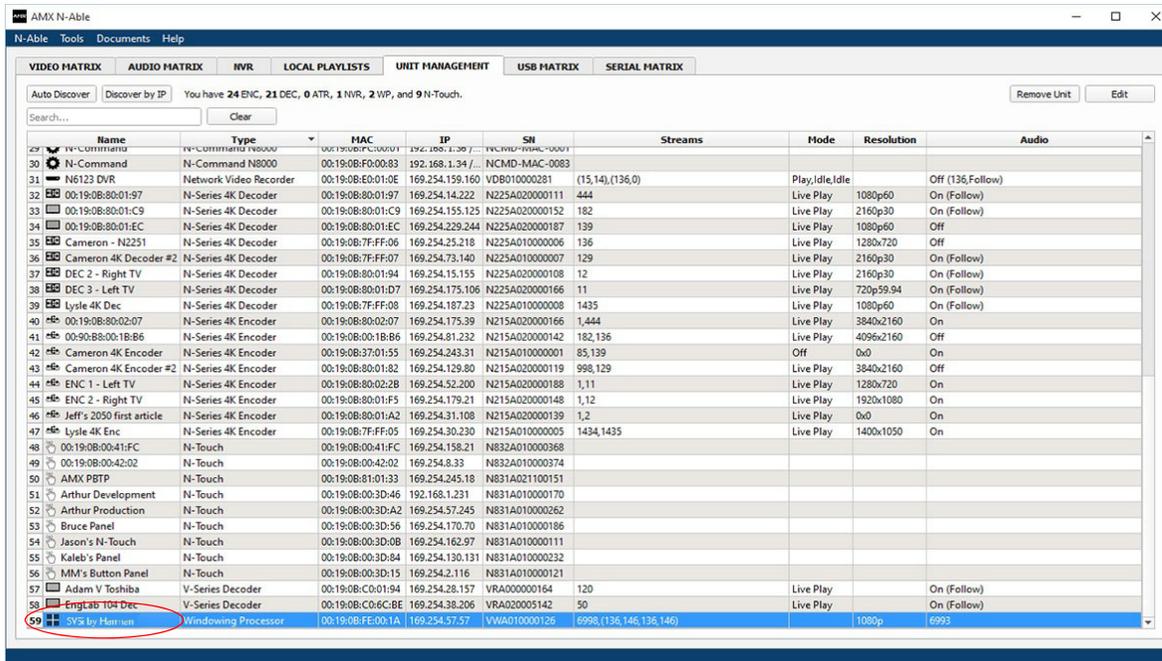## Steps for auto discovering devices on the network:

1. Use the host computer to download and install the latest version of N-Able:
   PC version - *http://www.amx.com/products/N-ABLE-PC.asp*
   Mac version - *http://www.amx.com/products/N-ABLE-MAC.asp*
2. Attach your N1512 unit(s) to the layer-3 network switch.
3. Disable the wireless adapter on your computer (it must be hard-wired to the switch).
4. Connect the host computer to the layer-3 network switch.
5. Open the N-Able application.

If all devices do not appear automatically in N-Able, click the **Auto Discover** button on the **Unit Management** tab. This issues a broadcast command that will discover all units even if they are not in the same IP subnet.

NOTE: A web server is built into the N1512 and can be accessed directly by typing the unit's IP address into your web browser (without the need for N-Able). Internet Explorer is not a supported web browser.

Logging in Using N-Able Software

Once the units have been discovered in N-Able, view them on the **Unit Management** tab. N1512 units have **Windowing Processor** listed in their **Type** fields (as shown in FIG. 2).

FIG. 2 FINDING UNIT ON THE UNIT MANAGEMENT TAB

Double-click any device to view its control page. If prompted, enter **admin** and **password** as the default username and password. This brings up the page shown in FIG. 3.

Click links at top of page to access the other configuration pages.

FIG. 3 ACCESSING CONFIGURATION PAGES

Arrangement Page

The **Arrangement** page (shown in FIG. 4) is the main control area. It is a combination of arrange, stretch, and skew options. The view in the top portion of the page represents the overall screen setup you are creating. From there, position and stretch windows by dragging-and-dropping, resizing, or directly inputing values.

This area is also used to manipulate other settings such as borders, backgrounds, presets, mode, and input streams.Select from any number of default or user-defined presets. Slide windows around on command for attention-getting displays while seamlessly switching AV streams in and out as needed.
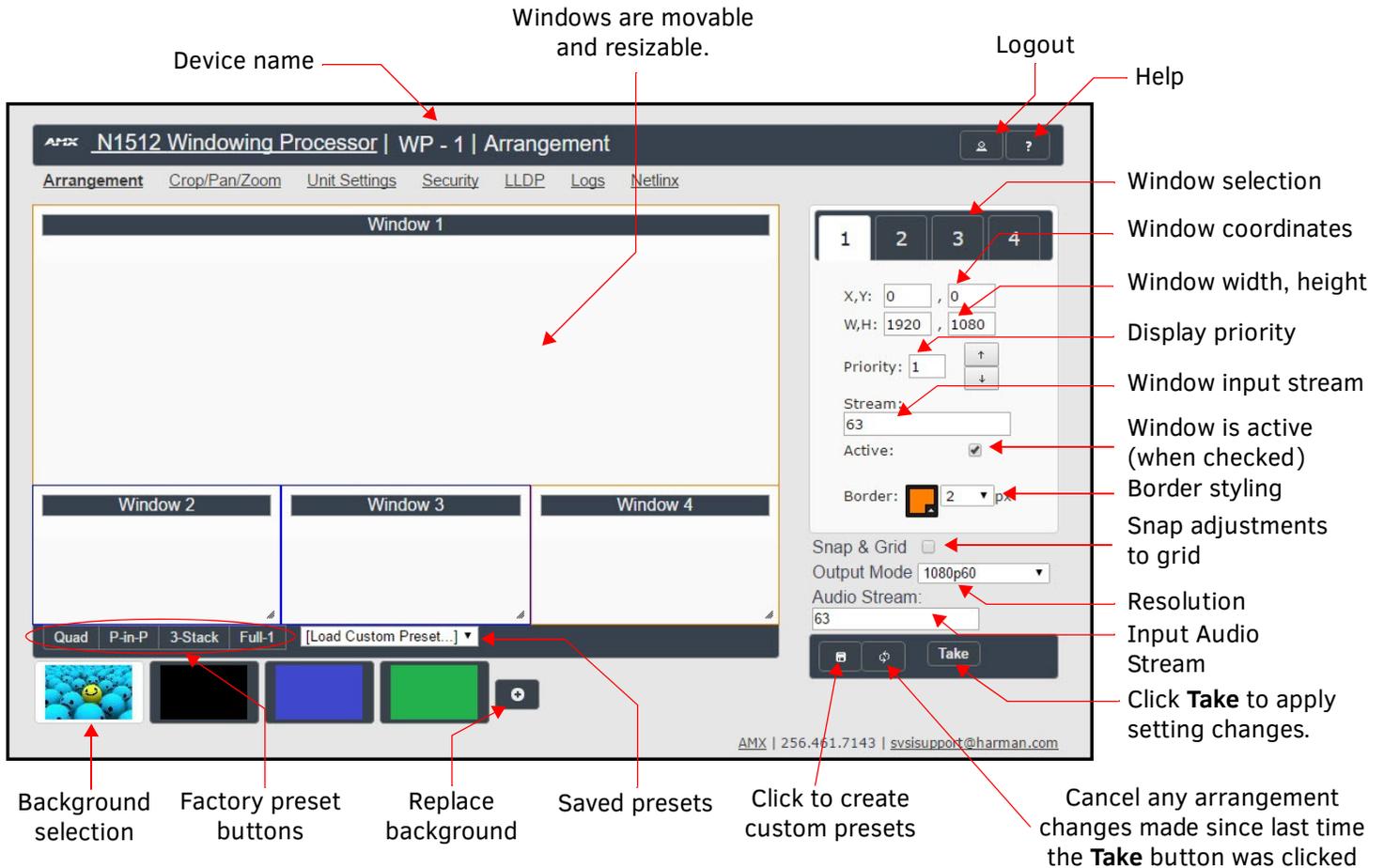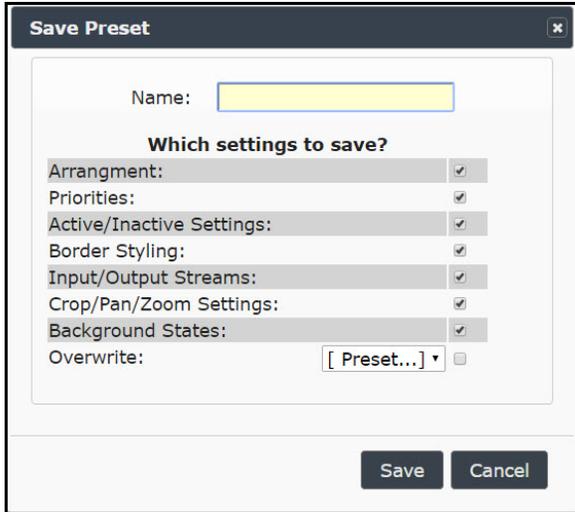

FIG.4 ARRANGEMENT PAGE

FIG.5 SAVE PRESET DIALOG BOX

Presets

Using either pre-configured (factory) presets or custom presets that you create yourself, quickly manipulate the arrangement/stretch/skew of the windows.

Create your own presets by clicking the ▣ button (pointed out previously in FIG. 4) and making choices in the **Save Preset** dialog box (shown in FIG. 5).

Preset Examples

Two examples of common factory presets are shown in FIG. 6.
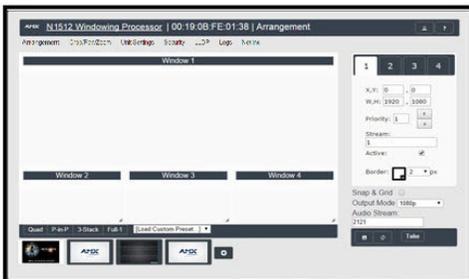
Stored presets Picture in Picture example
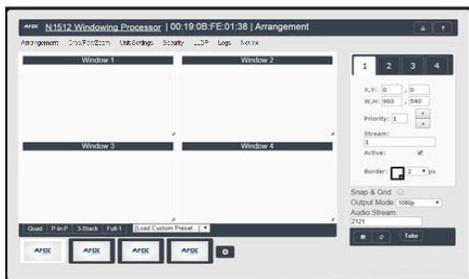
Stored presets Quad example

FIG.6 PRESET EXAMPLES

Crop/Pan/Zoom Page

The **Crop/Pan/Zoom** page allows finer control of the individual windows. See FIG. 7.
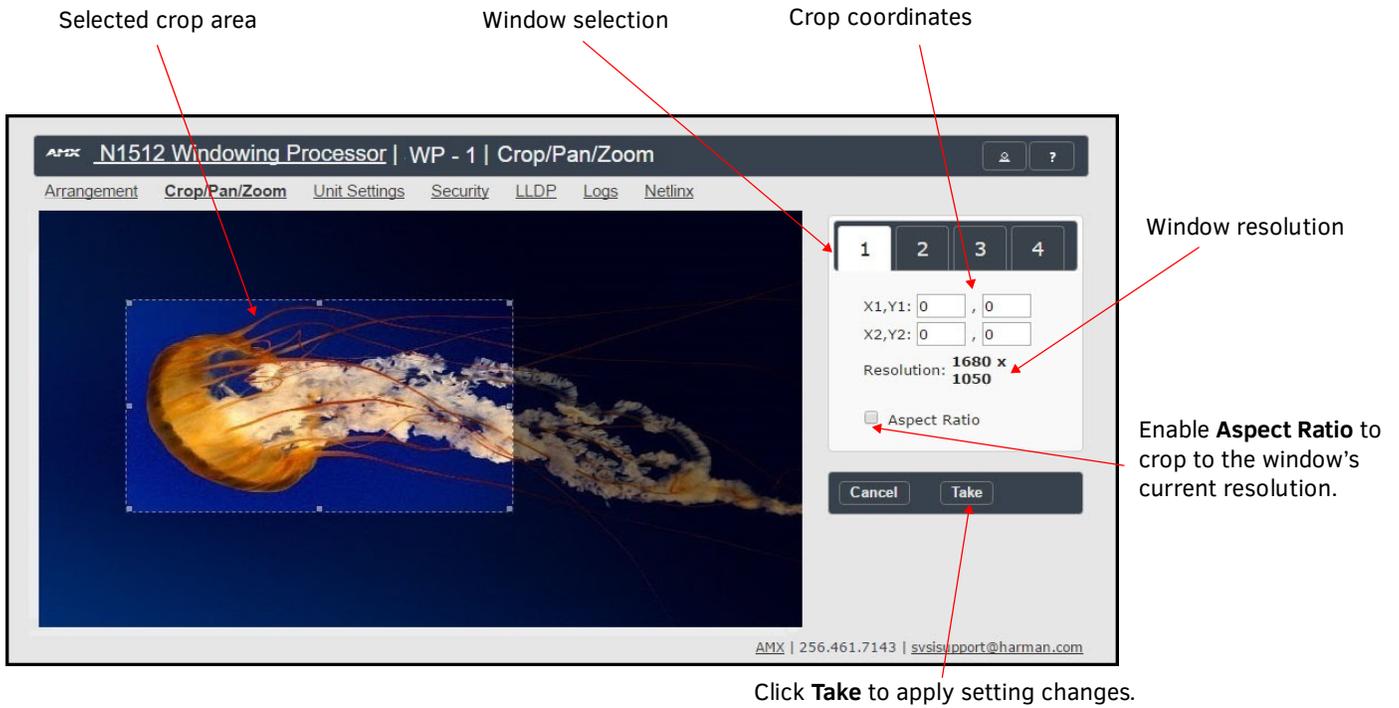
Selected crop area   Window selection   Crop coordinates

Window resolution

Enable **Aspect Ratio** to crop to the window's current resolution.

Click **Take** to apply setting changes.

FIG.7 CROP/PAN/ZOOM PAGE

Unit Settings Page

The **Unit Settings** page (shown in FIG. 8) allows you to configure unit and network settings as well as import/export presets for your Windowing Processor. Available options include:

- **Device Name**: Configure a user-friendly name for your unit.
- **Stream Output**: Enable this option prior to viewing the output of the N1512 with a Decoder. When enabled, you can route AV streams in N-Able (or your other configuration choice) to the four windows and route the output of the N1512 to an N1000 Decoder to verify operations.
- **Output Stream**: If desired, modify from the default stream number. N-Able (or your other configuration choice) may also prompt for this to be changed when the unit is first discovered.

In the **Network Setup** section on the **Unit Settings** page:
- **IP address** is required, and will be used as the control IP address.
- Configure the **Netmask** and default **Gateway address** as needed or directed by IT personnel.
- Assign four static IP addresses to the four **U** ports (see screen shot below for more details).

NOTE: If you do need to make changes to the Network Setup section, click Trial Save once changes are made. If the control IP address is different from the default, you will need to log in to the unit using its new IP address. Once re-logged back in, click Confirm to keep the changes. If the unit is power cycled before the changes are confirmed, it will revert to its original IP address.

Assign unique statice IP addresses for each of the U ports. These must be in the same subnet as the rest of the system (i.e., host computer, Windowing Processor, Encoders, etc.).

FIG.8 UNIT SETTINGS PAGE

Specifications

PRODUCT SPECIFICATIONS	
Power Requirements:	**Internal power supply:** 100-240 Volts AC (auto switching) power supply
Dimensions (HWD):	1.75" x 17.25" x 12" (4.5cm x 43.8cm x 30.5cm)
Weight:	7.15 lbs (3.24kg)
Certifications:	FCC, CE, and NRTL
Environmental:	**Temperature:** 32° to 104°F (0° to 40°C) **Humidity:** 10% to 90% RH (non-condensing)

Troubleshooting

Use the following list of possible issues and resolutions when troubleshooting your setup.

The N1512 is routed to a Decoder, but the Decoder is showing local play content.
- Is **Stream Output** enabled on the N1512?
- Does the N1512 have a Control IP address?
- Did you verify that no other devices have the same **Output Stream** number as the N1512?
- Is the Decoder properly assigned to the output of the N1512?
- Is the network configured appropriately for N1000 AV traffic?

The N1512 is routed to a Decoder, but the Decoder only shows four black screens.
- Are the source Encoders enabled?
- Do you have valid sources connected to all four U ports?
- Are the AV sources properly routed to windows of the N1512?
- Is the network configured appropriately for N1000 AV traffic?
- Did you assign unique IP addresses for each of the **U** ports? Guidelines for this setting are outlined in FIG. 8.

You cannot access the unit properties after discovery.
Verify that the host PC has an IP address in the same range as the N1512. Double-click the name of the unit to access its properties or use a web browser and access the unit via its IP address.

The web page is not loading or displaying correctly.
Retry using Firefox or Chrome (some versions of Internet Explorer are not supported).

Contact technical support at svsisupport@harman.com or 256.461.7143 x9900 for any installation issues.