

Basic KVM Setup

The N2135 Encoders and N2235 Decoders are KVM-capable. By default, USB connections are enabled and configured to follow video switching. Follow these steps for basic KVM setup. To learn about some of the more advanced KVM capabilities, see the section *Advanced KVM Setup (with added security features)*.

- On the N2135 Encoder, connect the USB Mini-B port (designated by a laptop icon) to the computer to be controlled.
- Connect the computer's video output to the Encoder's **HDMI IN** port.
- On the N2235 Decoder, connect the **HDMI OUT** to the display.
- Connect a USB keyboard and mouse to the Decoder's USB Standard-A ports (they can be plugged into either port).
NOTE: For wireless devices, simply plug the wireless signal receivers into these ports. For keyboard and mouse combos (with a single connection) use the keyboard port.
- Using N-Able, click the **Unit Management** tab.
- Click the **Auto Discover** button to discover your new devices (if you have not already done so).
- Once discovery is complete (and you see the new units listed in N-Able), click the **Video Matrix** tab.
- On the matrix, click the common cell for the desired Encoder/Decoder streaming combination. See the screen shot below for an example.
- Click the **Take** button to make the change to your matrix. The radio button turns green to indicate the connection was successful.

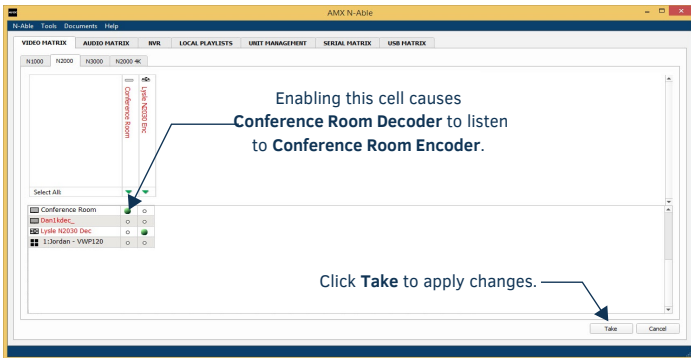


FIG. 2 CREATING STREAMING COMBINATIONS

Video/USB Switching Options

USB Follows Video: By default, units can be switched using N-Able without modifying the configuration. When you switch video streams (using the matrix as shown above) the USB functionality will follow the video.

Independent USB Switching: Use N-Able's **USB Matrix** tab to switch USB control (without affecting video).

Independent Video Switching: To switch video streams *without* affecting USB control, first select **N-Able > Settings** from N-Able's main menu. When the **N-Able Settings** dialog box is displayed, disable the **USB follows Video switching for KVM units**. Now you can use the **Video Matrix** to switch video streams only.

Advanced KVM Functionality: To have the ability to use KVM hotkeys for switching, **KVM Advanced Settings** must be enabled on the individual unit (select **KVM** from the top of the unit's web interface). The next section discusses these settings in more detail.

Advanced KVM Setup (with added security features)

You can configure devices for more advanced KVM operation on the Encoder and Decoder **KVM** pages. To access these pages, double-click the unit's name in the matrix and click **KVM** at the top of the **Settings** page (see below).

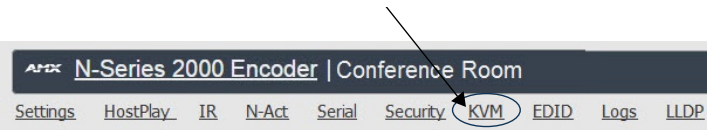


FIG. 3 SELECTING THE KVM PAGE

NOTE: Many of these options are easier to manage in N-Able's KVM Wizard (especially in large configurations). Select Tools > KVM Wizard from the N-Able main menu to access the wizard.

The following table describes some of the more advanced functionality. It is important to note that many of these options only appear on the **KVM** page when **USB** is enabled as well as **KVM Advanced Settings**.

| Options | Descriptions |
|---------------------------------|---|
| Permission Levels | Determines which Decoders can communicate with which Encoders. A Decoder must have a permission level that is <i>equal to or greater than</i> the Encoder in order for communication to be successful. |
| KVM Encoders table | Use the KVM Encoders table (on the Decoder's KVM page) to: <ul style="list-style-type: none"> Let the Decoder know the Encoder passwords it needs to establish communication. Assign Encoder hotkeys. Add/remove Encoders from the Decoder's list. |
| Passwords | By default, KVM streams are encrypted with a common password. You can change the password on the Settings page of the Encoder. If you change Encoder passwords, you will need to supply the new information to the Decoders to allow communication to continue. A Decoder only receives password information for the Encoders on the network that have been associated with that Decoder as mentioned previously. |
| Hotkeys | To use hotkeys for easy switching, enable KVM Directory Screen Enable on the Decoder's KVM page. You can now access the KVM Directory Screen at any time by pressing the <Scr Lk> button twice on the keyboard connected to the Decoder. This screen displays all Encoders associated with that Decoder (and their corresponding hotkey). |
| Import and export KVM CSV files | Multiple Encoders and Decoders can be configured from a single CSV file (which is generated using the KVM Wizard in N-Able). Once all changes are made, upload the file to each unit using its KVM page. Click the Choose File button, browse to the CSV file you exported from the wizard, and click the Upload button. |

Warning! You must assign KVM passwords to your Encoders and Decoders (as well as change the default login password from admin/password) in order for your system to be secure.

Troubleshooting Guidelines

| Problem | Possible Solution |
|--|---|
| Video is not transmitting. | <ul style="list-style-type: none"> Verify that the Encoder TX Enable setting is turned on. (Encoders ship from the factory with their video output turned off by default.) |
| Local Play graphic is displayed. | <ul style="list-style-type: none"> Verify Decoder is assigned to view a valid stream in the N-Able matrix. Verify Decoder is currently in live play mode (black text on matrix view). Verify network is properly configured and set up. If needed, connect Encoder directly to Decoder to verify network issues. |
| Host Play graphic is displayed. | <ul style="list-style-type: none"> Verify Encoder is in live play mode (black text in matrix). Verify source is attached and is outputting a valid signal (HDMI LED on Encoder is on). |
| Unsupported Resolution graphic is displayed. | <ul style="list-style-type: none"> Change source resolution to a valid resolution (try 720p60). Verify cabling is correct. |
| Copy Protected Content screen is displayed. | <ul style="list-style-type: none"> Contact technical support. |
| Black screen/no graphic is displayed. | <ul style="list-style-type: none"> Set Decoder to local play. If the local play graphic does not appear, check the display input settings and cabling. If local play appears, set Decoder to live play and verify network is configured properly. |
| No audio is detected. | <ul style="list-style-type: none"> If there is no audio on all Decoders, verify audio settings are correct on Encoder. If there is no audio on a single Decoder, verify audio settings are correct on Decoder. |

Please contact SVSI technical support at svsisupport@harman.com or 256.461.7143 (x9900) for assistance with any installation issues.



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