



Axia® xNode™ Software Package v2.2.2 Update Instructions & Release Notes

5 Feb 2019, Cleveland, Ohio USA

V2.2.2 patch provides Session Advertisement Protocol (SAP) support. SAP is used by other manufactures as the advertisement protocol of their AoIP solution. Introducing SAP into the xNodes is part of Telos Alliance’s commitment to the industry in real solutions. v2.2.2 also introduces a separate control for AES67 link offsets. This is important in the performance of an AES67 network.

v2.0 represents a significant upgrade for the Axia xNode product line. It includes a fully configurable mixing matrix, some user-interface improvements, and some AES67 compatibility enhancements. Instructions on enabling and using these features are documented in the updated Manual, as well as in the Release Notes found in this document. Please take time to familiarize yourself with these features and their operation. **It’s very important to understand the release notes, as some of your settings may be affected by this update.**

Preparation for Update – *Important!*

An Axia xNode has two internal memory “banks.” Each bank contains room for a complete version of operating software. This approach allows a software update download to be completed and checked without danger of making the unit inoperable if the download were to be incomplete or corrupted. It also provides an easy way to try a new software version and still return to the old version.

The software version in each bank is displayed from the System web page. The lower half of this screen, pictured below, shows the firmware versions present and allows you to select what bank will be used at startup. To change banks simply click the radio button for the desired bank and then click on *Apply*.

IMPORTANT! The xNode will reboot after you click ‘Apply’ if you change the software version. This will result in loss of audio locally, and at any unit using the local sources.

Firmware version:

Hardware revision: Axia Node

Bank 0 ver. 1.6.4e (build Wed Oct 1 13:14:04 EDT 2014)

Bank 1 empty update: No file chosen

Warning: System will reboot after changing current bank.



A new software version can be uploaded into Bank 1 as follows:

1. Visit <http://www.telosalliance.com/Axia/xNodes> and click the V2.2.2 link under the **Software** tab on the right to download the update to your computer (this should be the computer that you will use to access the xNode's web page).

Your computer's operating system will permit you to choose where you wish to save the downloaded file. Choose any convenient location; just be sure to note the drive and location where the file is to be saved.

2. Open a web browser and connect to the xNode to be updated. Select the *System* link. From the System page, select the *Browse* button to locate the file. Once the proper file is selected, the path and filename will be displayed in the text field associated with Bank 1. Click on *Apply* to upload the file.
3. A successful upload will be indicated by the new version being displayed in the Bank 1 field.
4. Click the radio button for Bank 1 and click *Apply* to reboot and make Bank 1 active.

If Bank 1 already has software present and xNode is currently running from Bank 1:

In some cases the device may already have software in Bank 0 and Bank 1. If the xNode has Bank 1 currently selected, there will not be a *Browse* button allowing you to select a file for upload. In such cases, you will need to select box "commit this version to Bank 0" and press the *Apply* button. Doing so will move the software to Bank 0 and clear Bank 1 so that a new version can be uploaded. Committing from Bank 1 to Bank 0 does not require a reboot.

Axia xNode v2.2.2 Release Notes

Version 2.2.2 improvements

- Add support for Session Advertisement Protocol (SAP)
- Add link offset option for AES67 stream reception
- Add rx buffer information to `lwr -stat`
- Improvements to the SDP content

Axia xNode v2.1.2d Release Notes

Version 2.1.2d improvements

- Updated library for better SDP creation
 - includesptime
 - a=reconly and not a=sendonly
- STAT SYNC will identify PTP grandmaster clock ID
- Change system packet processing deadline preventing the IGMP packet drop
- Removed an undesired logic check for IGMP packets

Axia xNode v2.0 Release Notes

Version 2.0 xNode software represents a significant change in how the xNode can operate. For this reason some things may change on existing units when upgrading to this version.

Meter Presentation

The meter page has always represented network sources that the xNode produces. The meters were previously organized to represent the physical inputs. With changes in 2.0, these meters have been reorganized to represent the sequential order of the produced network sources. Because of this, the meter organization may have changed for you.

Custom Configuration of Mono & Stereo I/O

The xNode with 2.0 software has three modes of operation, 4x4 Stereo, 8x8 Mono, and Custom. When upgrading, if any I/O is in Stereo mode, the device will boot to 4x4 Stereo; otherwise it will be 8x8 Mono. If the unit being upgraded has a configuration that is a mix of Mono and Stereo, it will need reconfiguration after the update. To do this, you will need to select the Mixer control from the homepage. At the top of the new view you will see a link for *Enable Custom Mode*. Select this. This permits the editing of the matrix and the reconstruction of the Mono sources. Call support if you need assistance for this configuration.

Mic Input on Mixed-Signal xNode

The Mixed-Signal xNode will change so that the first four sources will be associated with the four Stereo RJ45 inputs. The fifth source will be the XLR microphone input. If you have the XLR input enabled, you will need to reconfigure the channel assignments or reconfigured source profiles on consoles to have access to this XLR input.

Mic Input on Mic xNode

Due to the changes after this update, the microphone xNode will need to be reconfigured. The gain settings will need to be adjusted. Apply preamp gain values at the Simple Setup page and reset the gain values on the source page to 0.

Pathfinder Integration

Pathfinder does not provide direct control of the matrix mixer at this release. Support in Pathfinder is pending. Please inquire with support if you have questions. Note that under some use cases with 2.0, Pathfinder will no

longer be able to detect audio levels or meter data from the xNode. Again, inquire with support for assistance. In some cases it is advised not to upgrade the xNode unless Pathfinder is also upgraded to a supporting version.

FIXES:

Bug #4922: In some cases the xNode may indicate MASTER but does not send sync data.

Bug #5671: xNode continues to spam SIP INVITES if source is not valid.

Bug #5797: FP inconsistency with Ravenna sources. UI issues.

Bug #6057: Empty SIP packet causes LWRD to crash. (Also resolved in 1.6.4f.)

NEW FEATURE:

Feature #2483: Matrix Mixing

Matrix Mixer (Audio xNodes Only)

Introduced in software version 2.0 is Matrix Mixer functionality. The most typical configuration of xNode would be in the Stereo 4x4 mode. In this mode the functionality of the mixer is locked, and the viewer is not able to make any changes. To unlock the functionality, press the “Enable Custom Mode” button found at the top right. Now the viewer can left click a cross point and a pop-up appears for setting the cross point at 0dB (unity gain), setting with a specific gain, or clearing the cross point.

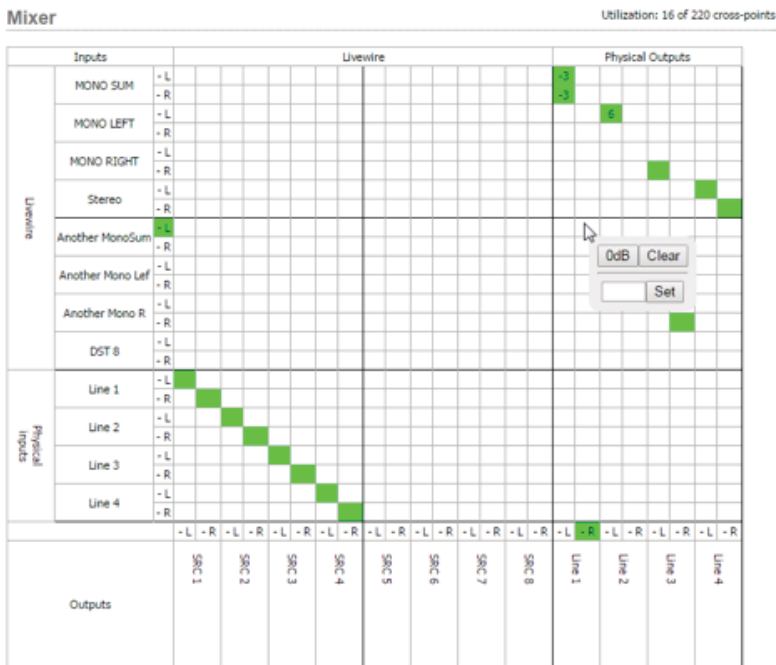


Figure 3-13

The mixer view is organized with inputs into the xNode as rows and outputs from the xNode as columns. Inputs and outputs are composed of physical connections and network streams. In the case of an AES/EBU input on port 1 of the AES/EBU xNode turning into the first network stream source of the xNode, the mixer will show the following view (without the arrows, which are added for clarity).

Figure 3-14

Another example with the AES/EBU xNode is all four physical inputs are turned into the first four network stream sources and a fifth network stream source is the sum of three AES/EBU inputs as shown in figure 3-15.

Figure 3-15

Notice that the name of the fifth output is changed; this is accomplished by entering text into the Source Name field of the Sources page.

The possibilities of what you can achieve with the matrix mixer are quite broad, just keep an eye on the utilization counter present to the top right of the mixer.