XIO 8

User Manual

Important Safety Information

1. READ THESE INSTRUCTIONS
All the safety and operating instructions should be read before the product is operated.

2. KEEP THESE INSTRUCTIONS
The safety and operating instructions should be retained for future reference.

3. HEED ALL WARNINGS
All warnings on the product and in the operating instructions should be adhered to.

4. FOLLOW ALL INSTRUCTIONS
All operating and use of instructions should be followed.

5. DO NOT USE THIS APPARATUS IN WATER.
Do not use the product near water. For example, near a bathtub, wash bowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool, and the like.

6. CLEAN ONLY WITH DRY CLOTH.
Unplug the unit from the wall outlet before cleaning.

7. DO NOT BLOCK ANY VENTILATION OPENINGS
Slots and openings in the cabinet back or bottom are provided for ventilation, to ensure reliable operation of the limit and to protect it from overheating. These openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug, or similar surface. This product should never be placed near or over a radiator or heat source. This product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to.

8. DO NOT INSTALL NEAR ANY HEAT SOURCES
This product should be situated away from heat sources such as radiators, stoves or other products (including amplifiers) that produces heat.

9. DO NOT DEFEAT THE SAFETY PURPOSE OF THE POLARIZED OR GROUNDING-TYPE PLUG
A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prongs are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

10. PROTECT THE POWER CORD FROM BEING WALKED ON OR PINCHED PARTICULARLY AT PLUGS, CONVENIENCE RECEPTACLES, AND THE POINT WHERE THEY EXIT FROM THE APPARATUS.

11. ONLY USE ATTACHMENTS/ACCESSORIES SPECIFIED BY THE MANUFACTURER.

12. USE ONLY WITH CART, STAND, TRIPOD, BRACKET, OR TABLE SPECIFIED BY THE MANUFACTURER, OR SOLD WITH THE APPARATUS. WHEN A CART IS USED, USE WITH CAUTION WHEN MOVING THE CART/APPARATUS TO AVOID INJURY FROM TIP-OVER.
Do not place this unit on an unstable cart, stand, tripod, bracket, or table. The unit may fall, causing serious injury to someone, and serious damage to the appliance. A unit and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the product and cart combination to overturn.

13. UNPLUG THIS APPARATUS DURING LIGHTNING STORMS OR WHEN UNUSED FOR LONG PERIODS OF TIME.
For added protection for this unit during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the unit due to lightning and power surges.

14. REFER ALL SERVICING TO QUALIFIED PERSONNEL. SERVICING IS REQUIRED WHEN THE APPARATUS HAS BEEN DAMAGED IN ANY WAY. SUCH AS, WHEN THE POWER SUPPLY CORD OR PLUG IS DAMAGED, LIQUID HAS BEEN SPILLED, OR OBJECTS HAVE FALLEN INTO THE APPARATUS, THE APPARATUS HAS BEEN EXPOSED TO RAIN OR MOISTURE, DOES NOT OPERATE NORMALLY, OR HAS BEEN DROPPED.

15. WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPARATUS TO RAIN OR MOISTURE.

16. APPARATUS SHALL NOT BE EXPOSED TO DRIPPING OR SPLASHING AND NO OBJECTS FILLED WITH LIQUIDS, SUCH AS VASES, SHALL BE PLACED ON THE APPARATUS.

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER - SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk to persons.

The exclamation point within an equilateral triangle, is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the applicance.

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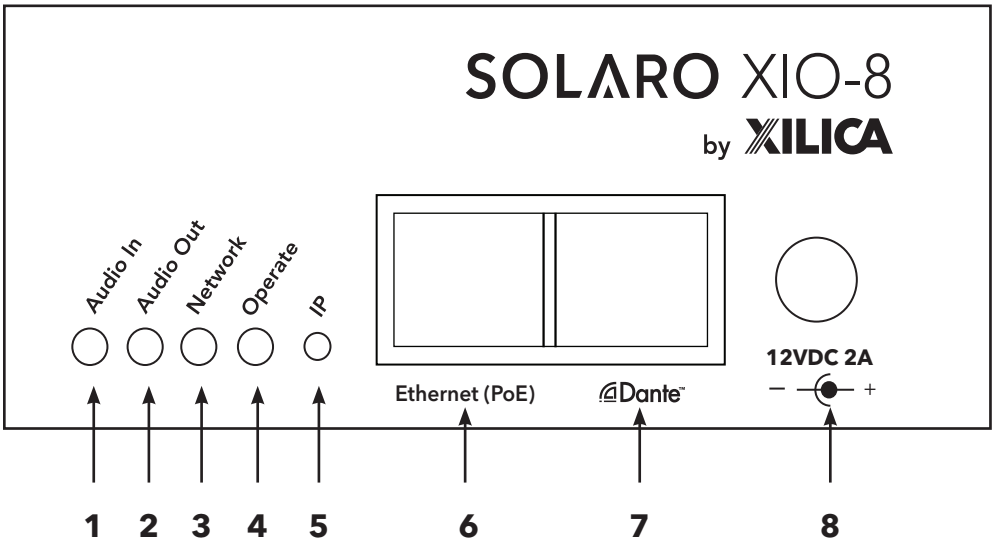
Front Panel



1 **Audio In** A green LED light which indicates that an audio signal is being sent in to the device.

2 **Audio Out** A green LED light which indicates that the audio signal is being sent out from the device.

3 **Network** A yellow LED light which indicates that an RJ45 (Ethernet) cable is connected. If the LED is green in color, this indicates that the device is connected to a network.

4 **Operate** A blue LED light which indicates that the hardware device is powered On. This LED light will flash when powering On the device or when performing a firmware upgrade.

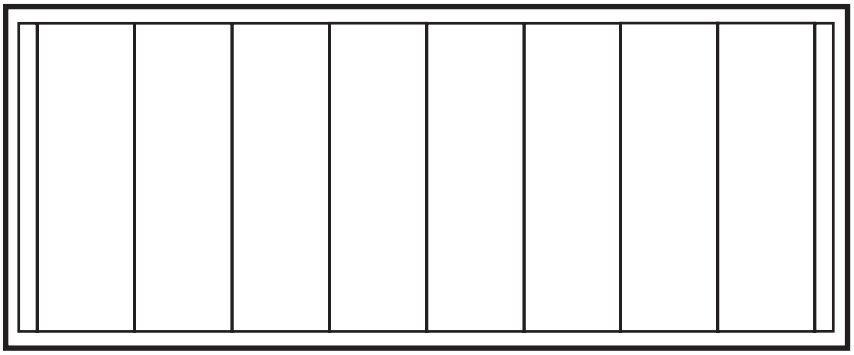
5 **IP** A button used to reset the IP Address.

6 **Ethernet (PoE)** Connect the device to the network using a standard RJ45 (Ethernet) cable. To send Power over Ethernet, a PoE switch is needed. If you are sending Power over Ethernet (PoE), the external power supply is not needed.

7 **Dante™** Digitally transport 4x4 I/O of Dante network audio bi-directionally over a standard RJ45 (Ethernet) cable.

8 **External power supply** Insert the 12VDC/2A plug connector into the socket. Connect the AC end of the cord into a 90-240 VAC 50-60Hz power source.

Rear Panel



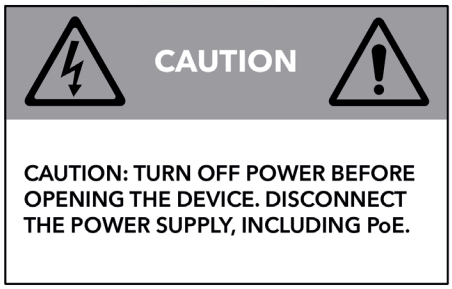
XIO-8 provides eight user-configured, field swappable card slots allow customized I/O configurations without limitation.

Technical Specifications

Card slots	8 (8 blank cards mounted in the frame)
Processor	40-bit floating point
Sampling rate	48kHz
Propagation delay	4.5ms
Connectors	RJ45 with PoE capability, RJ45 with Dante connectivity, DC Jack (when PoE is not used)
Power	+12VDC/2A External power supply 90-240VAC 50-60Hz (included), or Power over Ethernet (PoE)
Mounting	Optional 19" 1RU rack mount kit fits one or two QR1 frame side-by-side. Single mount blank included
Dimensions	4.25"x1.75"x6" (108x44x152mm)
Weight	2.2lbs / 1kg (Mainframe only, without power supply)
Warranty	3 years, parts and labor

Configuring Cards

WARNING!
Power down the unit before opening the device!
Disconnect the device's power supply, including PoE.



Opening the Device

Power down the unit before opening the device! Disconnect the power supply, including PoE.

To open the device cover, locate the four (4) screws located on the sides of the device.
Using a Philips screwdriver, remove each screw located on the sides of the device. (4 screws)
Place loose screws in a safe and dry place.

Lift the top plate of the device and slide the plate out.

Once you are done configuring your device, line up the top plate with the device and slide the plate back onto the device.
Secure the four (4) screws back into place. The screws should fit easily.
Do not apply excessive force to secure screws. If you are having trouble securing the top plate, check the alignment of your modular cards.

Remove Plug-in Cards

When handling modular cards, please handle with care. The connectors are fragile. Do not apply excessive force. Never pull straight up or push straight down.

To remove plug-in cards, place your fingers on the front and back of the modular card. Using a rocking motion, gently lift each side of the modular card until the card is removed.

Keep loose modular cards protected in a safe and dry place.

Insert Plug-in Cards

When handling modular cards, please handle with care. The connectors are fragile. Do not apply excessive force. Never pull straight up or push straight down.

To insert plug-in cards, hold the front and back of the modular card. With the connectors pointing downwards, line up the card connectors with the pinholes in the empty card slot.

Using a rocking motion, push gently on each side of the modular card until the card is secured in place.

Device Connectivity

Xilica processors and control devices run on a network based infrastructure and are set up and controlled by a host computer using the Xilica Designer software.

What's in the Box

- XIO hardware device
- 12VDC/2A external power supply 90-240 VAC 50-60Hz

What you need to Provide

- Computer
- Network interface (Router, PoE switch)

  A router is used for IP assignment and easy connectivity to computer and control devices.

  A PoE switch is used for the XIO-8 and controllers if local power is not used.
- Ethernet cables

  All wired connections use a standard RJ45 Cat 5/6 (Ethernet) connection.

Connecting Devices

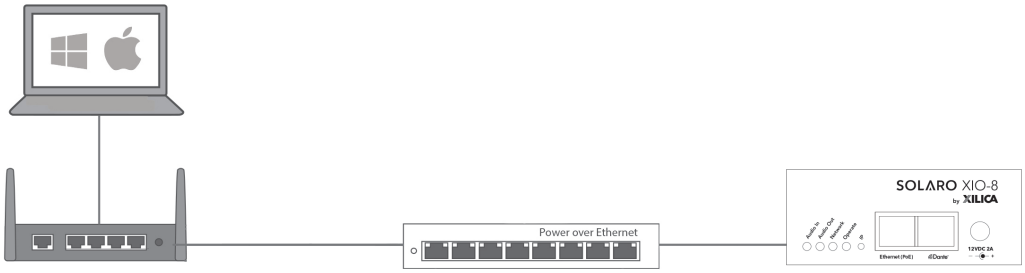
A network connection can be made between the computer and processor using:

A) DHCP enabled Router or Server/Router combination (Recommended)
With DHCP enabled routers and servers, the processor will automatically obtain the IP address upon power up and connection. When other Xilica wall controls will also be used, it is recommended to use a router and PoE switch. This combo provides DHCP as well as power to the wall controls. Linksys routers and Netgear switches are recommended.

B) A non-DHCP direct connection or indirect connection via an Ethernet switch
When the processor is connected directly to a computer or indirectly via a switch/hub and DHCP is not available, the connection process is not automatic.

A) Connecting using a DHCP enabled router/server

Note: DHCP enabled Router/switch gear should be turned on first, with all Ethernet cables connected to the hardware prior to Powering ON the hardware. This will allow for proper IP address distribution to the Hardware.



First, Power ON the router and PoE switch.
Then connect an Ethernet cable from the host computer to the DHCP enabled router.

If using a PoE switch, connect an Ethernet cable from the router to the PoE switch.
Then connect another Ethernet cable from the PoE switch to the XIO-8 device. When using PoE, the external power supply is not needed.

If not using a PoE switch, connect an Ethernet cable from the router to the XIO device.
Then connect the external power supply to the XIO device.

B) Non-DHCP direct connection or indirect connection

Non-DHCP connections are not automatic. Non-DHCP connections must be manually configured. Please refer to Xilica Designer help file or Xilica FAQ for further assistance.

Install Xilica Designer

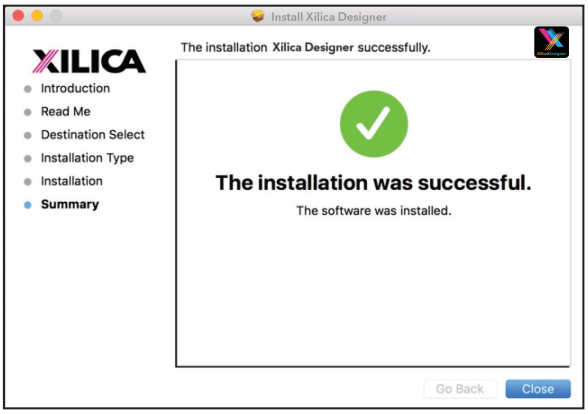
The Xilica Designer software provides optimum configuration of X2, Solaro and Neutrino Series processors and it also configures Xilica's programmable remote controls, configures and manages any networked Dante device, and provides universal third-party device control integration.

Mac OS X Installation

System Requirements
Mac OS X 10.8 or later
Processor 1GHz or higher
500MB of available space
1GB graphics card
4GB RAM

1. Download the latest version of Xilica Designer from the Xilica website (www.xilica.com).
2. Open the downloaded .zip file.
3. Then open the **XilicaDesigner.mpkg** file.
4. An installation window will appear. Read and follow each step to proceed.

5. Once completed, the installation window will display: The installation was successful.

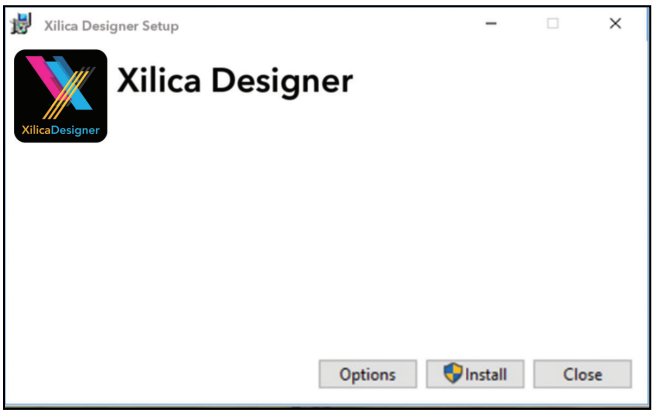


6. The Xilica Designer software is now installed.

Windows Installation

System Requirements
Windows 7 or higher
Processor 1GHz or higher
500MB of available space
1GB graphics card
4GB RAM

1. Download the latest version of Xilica Designer from the Xilica website (www.xilica.com).
2. Open the downloaded .zip file.
3. Then open the **XilicaDesigner.exe** file.
4. An installation window will appear. Click **Install** to continue.

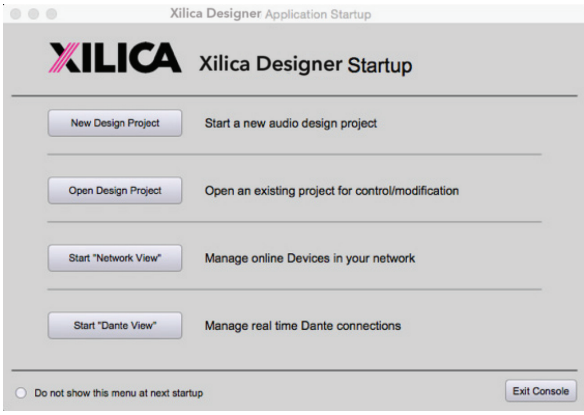


5. Allow the program to complete the installation process. This may take a several minutes.
6. When complete, Windows will ask for permission to allow firewall access. The suggested setting is to allow Xilica Designer to communicate in Private networks, such as home or work. Allow access to public networks at your own discretion. Check the appropriate boxes, then click **Allow Access** to finish.

7. The Xilica Designer software is now installed.

Launch Xilica Designer

Locate the Xilica Designer application on your Desktop or Applications folder.
Double click the application to launch the software.



You can create a **New Design Project, Open Design Project, Start Network View,** or **Start Dante View.**

Network View

Network View displays all processors and control devices on the network. Network View displays device information including, the device connection status, computer IP address, device IP address, device name, manufacturer and the firmware version.

In Network View, you should see your processor(s) listed. At the top left of each device block is a **device connection indicator**.

Green: The device is connected and operational.

Yellow: The device is connected and online, but not operational. Hovering over the network indicator will display a pop-up message of identified problems. (Normally this would indicate that no device design is loaded).

Red: The device is not connected and offline. There is no communication between Xilica Designer software and the device. Please check all cables, connections and power. If the processor is performing a firmware upgrade or is in the process of rebooting, this may be a temporary offline interruption.

At times you may just see an exclamation mark (!). This indicates that a firmware upgrade is available. Normally this is not an issue unless there are updated modules in the project file that the outdated firmware does not support.

Firmware Upgrade

Please note that using an older version of software with a newer firmware or newer software with an older firmware will work but some of the features may not be available and bugs could exist. **We recommend upgrading the software and firmware to the latest versions.**

Before you begin, **check your software and firmware versions.**

To check the current device firmware version, make sure that your device is connected and online. In Network View, devices that have a Firmware Upgrade available will display a yellow triangle with an exclamation mark. The device Firmware version is also listed in the device block.

To view the current software version, click on the **About** tab at the top of the software.

Matching the Firmware

To assist you in determining which firmware file is appropriate for your device, refer to the chart below. Note: The file structure may be different from the date that this list was created. Always check the Xilica website (www.xilica.com) to keep updated.

#_#_# Represents the 3 digit version code of the firmware update.

(SOLARO_#_#_#.img)	Solaro QR, FR
(X2_#_#_#.img)	X2
(XIO_#_#_#.img)	XIO8, XIO16
(XTOUCH_#_#_#.img)	XTouch50, XTouch80
(NEUTRINO_#_#_#.img)	Neutrino A, A-D (AES), A-N (Dante), A-ND (Dante, AES)
(UNO_#_#_#.img)	Uno-U, U-D (AES), U-N (Dante), U-ND (Dante, AES)
(NEUTRINO-AEC_#_#_#.img)	Neutrino AEC
(UNO-AEC_#_#_#.img)	Uno AEC
(RIO_#_#_#.img)	Rio-N, NX
(NEUPANEL MINI_#_#_#.img)	NeuPanel Mini K1, K4, S4, S8, S4K1

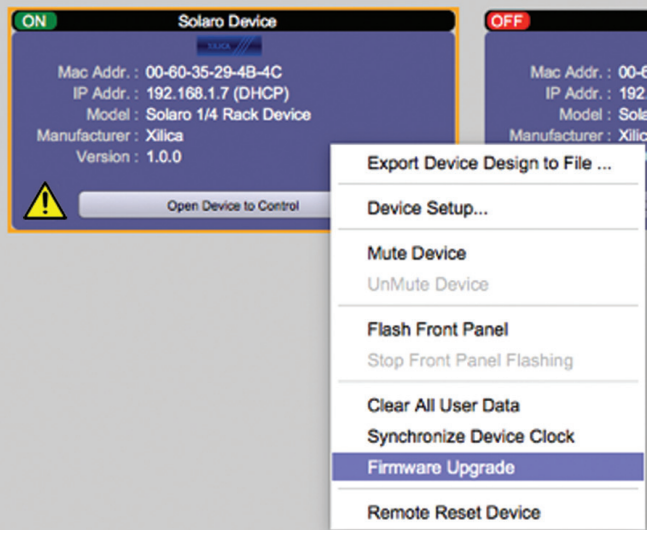
Firmware Upgrade Procedure:

Save any design files from the device onto your computer as all programmed data on the device will be erased during the upgrade process. After the firmware upgrade is completed, the design file can be loaded back into your device.

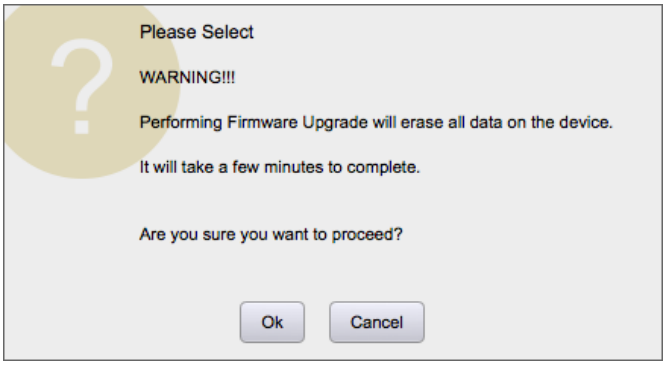
1. The device must be online and operational (green ON indicator) to perform a firmware upgrade.

2. Download the latest firmware version for your device from the Xilica website (www.xilica.com).

3. In Network View, right click the device block and select **Firmware Upgrade**.



4. A pop-up warning will appear stating that the Firmware Upgrade process will erase all data from your device. Click **OK** to proceed.



5. Navigate to the file in which you downloaded the new Firmware file. Click **Open.**

6. A status bar in the device window will monitor the Firmware upgrade progress.

Once the Firmware file has been loaded to the device, the device will automatically restart and update its internal data. This may take several minutes. During this period, the device network indicator will turn RED and appear offline.

DO NOT POWER OFF THE DEVICE. Powering off the device during a Firmware Upgrade can result in a complete corruption of the processor. If this happens, a **USB Recovery** must be completed. (Please refer to Xilica Designer help file or Xilica FAQ for further assistance).

Once the firmware upgrade is completed, the device will display a green ON indicator.

Project View

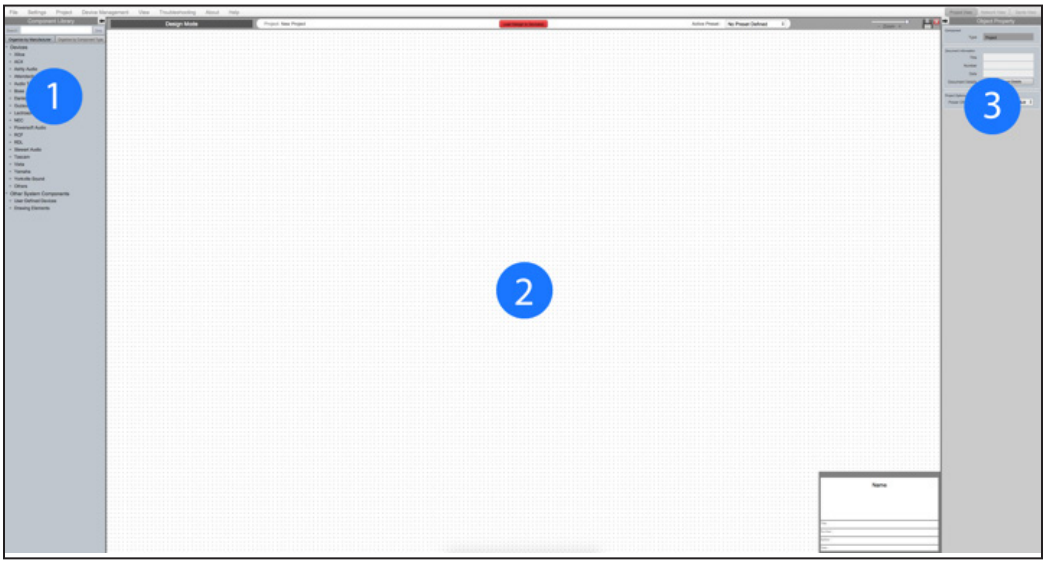
You can create a new project in one of two ways:

Auto-configuration

If your device is listed in network view, select your device and click **Create New Project with Selected Device(s)** at the top right of the software. If the device is connected and operational (Green ON indicator), the XIO device will automatically be configured according to the hardware card configuration.

Blank project

Alternatively, click **File > New Project.**
When creating a blank project, Xilica Designer will ask you which DSP series you are using. Select the appropriate option.



1. **Component Library Menu**
   This menu displays a list of devices and design modules that you can use in your project.

2. **Work Area**
   The work area provides a space to design and configure devices.

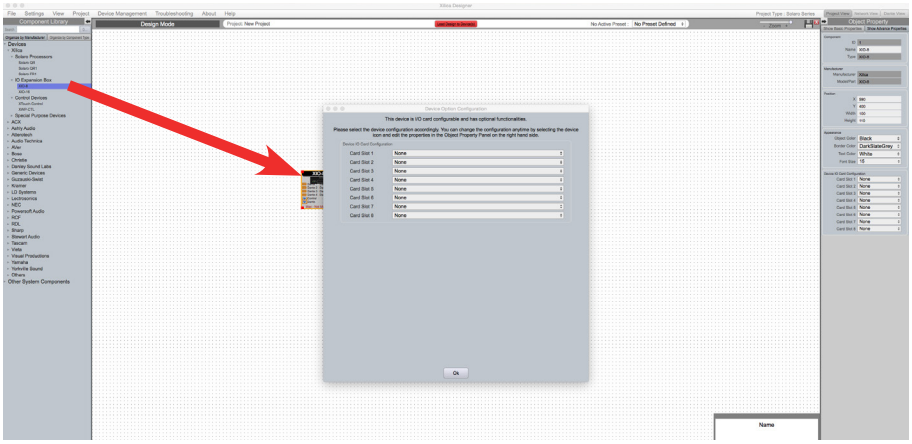
3. **Object Property Menu**
   This menu allows you to customize the object properties in the design.

Create a Design

For the example, a single hardware block will be used, but a design can be done with multiple hardware items.

Projects can be designed Offline (no devices connected) and the design can be loaded to your devices at a later time.

1. From the Component Library, drag & drop the device module onto the work area.

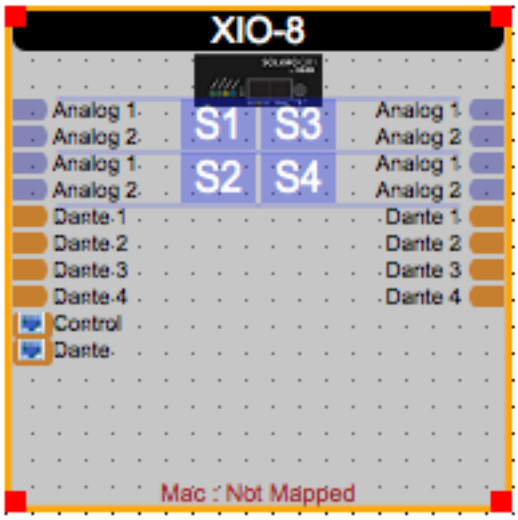


2. An Option Card Configuration box will appear. Use the drop down menus to customize your XIO device and click **OK** when complete.

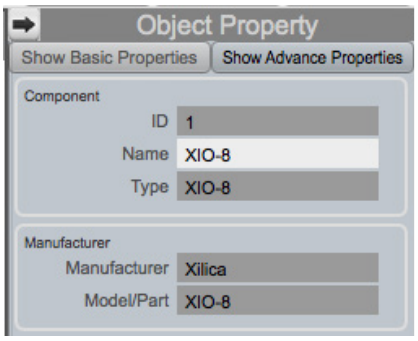
XIO-8 provides a maximum of 2 analog input cards and 2 analog output cards.

Note: The device card configuration must match the hardware card configuration. Mismatched cards will not have any functionality. I/O cards can be reconfigured using the Object Property Menu.

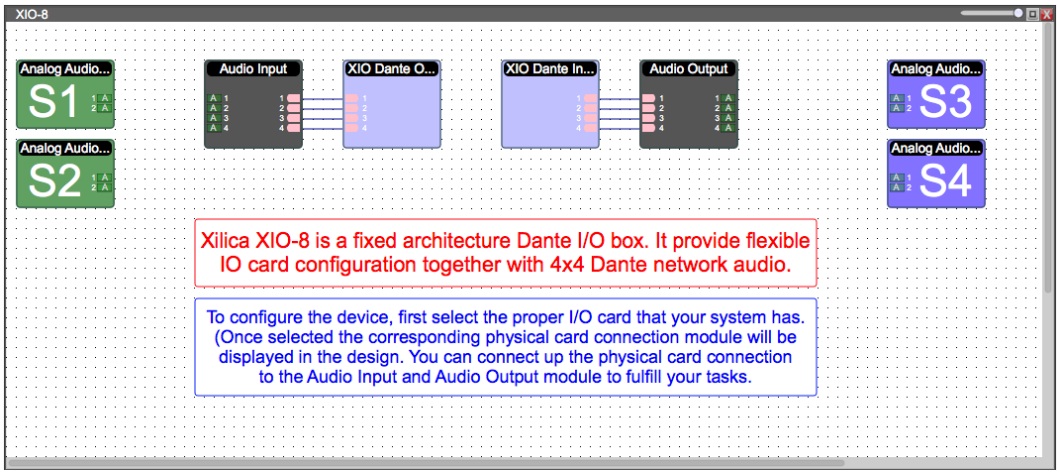
3. The XIO device will be configured accordingly.



4. Select the device module to highlight it. In the **Object Property menu**, the device properties can be customized. Note: Object Properties vary depending on the object selected.



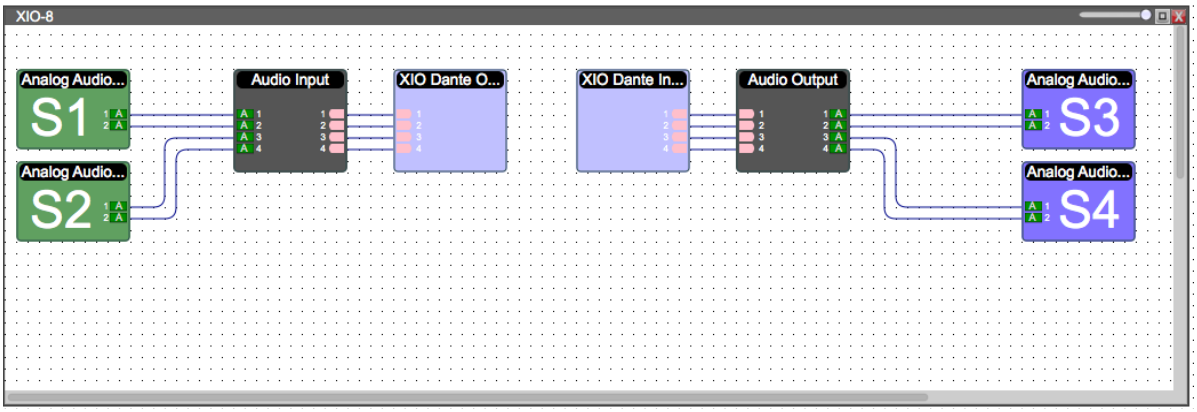
5. Double click the device module to open the design schematic. Resize the window by dragging the corner of the window.



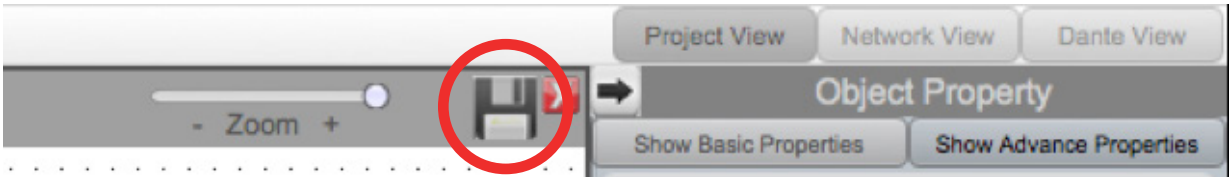
XIO is a fixed-architecture Dante I/O interface without design capabilities. If you would like to design a DSP, please view our open-architecture Solaro or X2 Series processors.

With XIO, you can connect the physical card connections to the audio input/output modules.

6. From the input card, click & drag a wire to the audio input module. Wire the cards accordingly.



To save your project, click **File > Save As.** Save the file to a memorable location.
If a project file is already created, click **File > Save.** You can also save using the save icon at the top right of the work area.

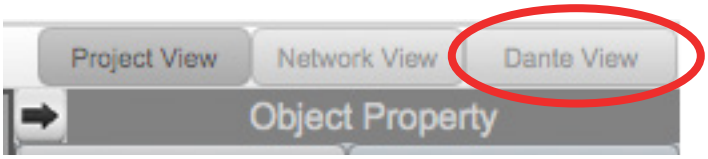


It is recommended to back up project files to an external location.

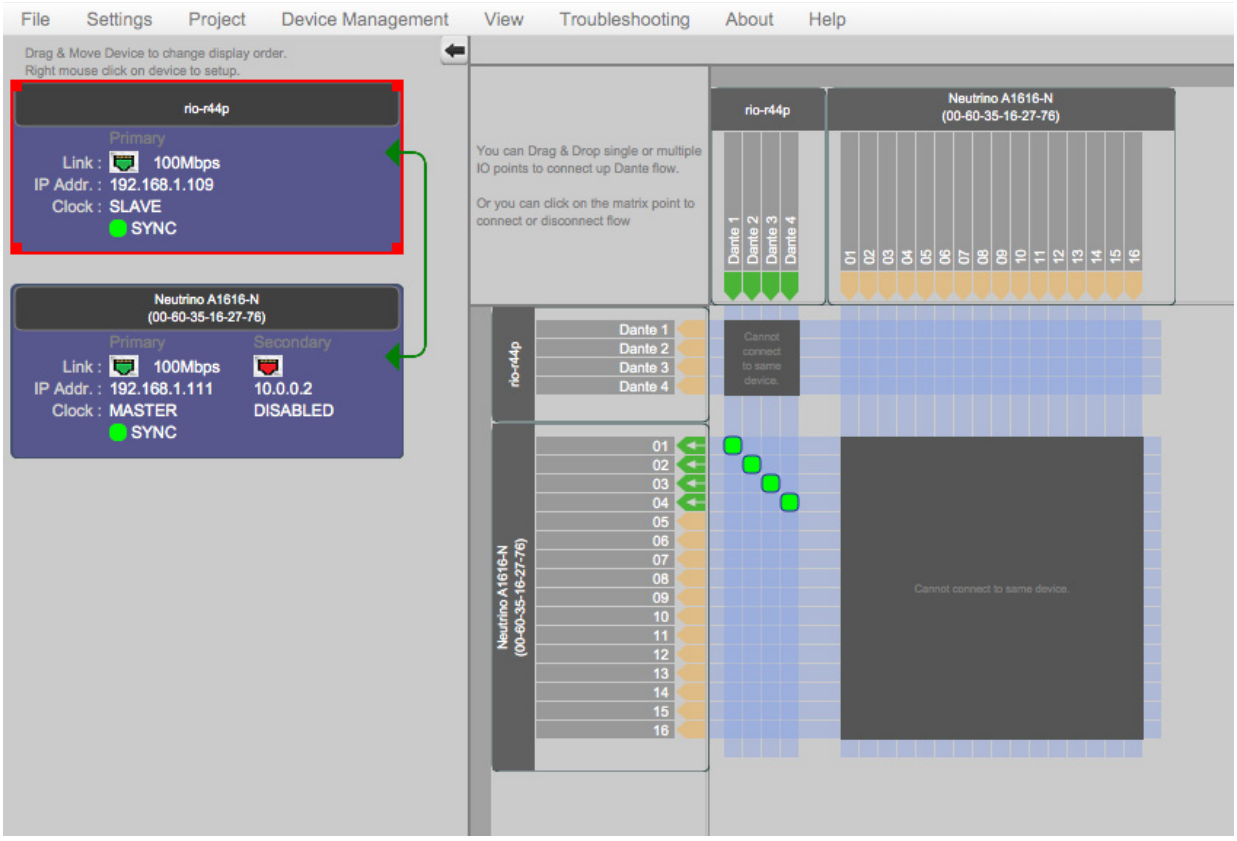
Saved project files will have a **.pjxml** extension at the end of the file name.

Dante® View

At the top right of the software, switch to Dante View.
Please note that your devices must be connected and online (Green ON indicator in Network View) to be seen in Dante View.



Dante connections made between devices in Project view will be automatically wired in Dante view.



Connected Dante devices will display as a list on the left.
Dante routing is configured on the right. To route devices, click on an available input/output space where the devices intersect. Connections are displayed as a green square.

Going Online

Going online loads the design file to the connected device(s) and allows you to make adjustments in real-time.

In order to go online, all devices must be connected and online. (Green ON indicator in Network View)

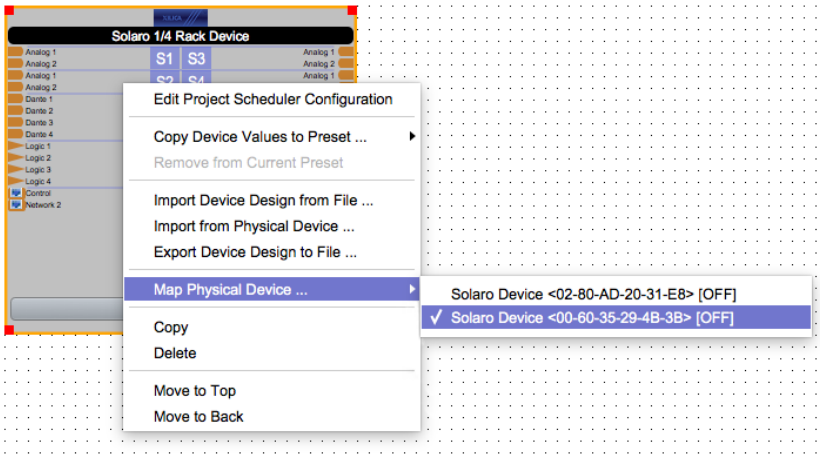
To go online, you must associate the device module with the physical hardware device.

1. In Project View, select the device module you would like to map.

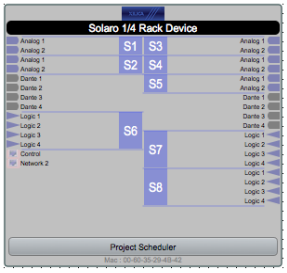
2. Right click the device module and select **Map to Physical Device**.

3. Detected devices with their Mac Address will list.
   If there is more than one of the same devices in the network, the devices can be identified by the Mac Address. The device Mac Address can be found in Network View.

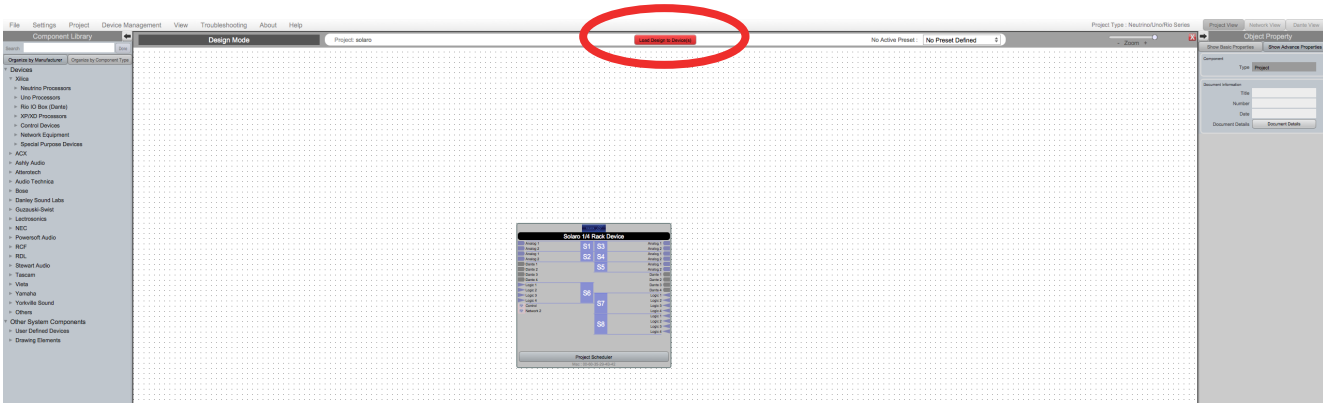
It is very important that the name of the device block in the design file matches exactly to the unit in the Network View, otherwise you will not be able to load the design to the physical device.



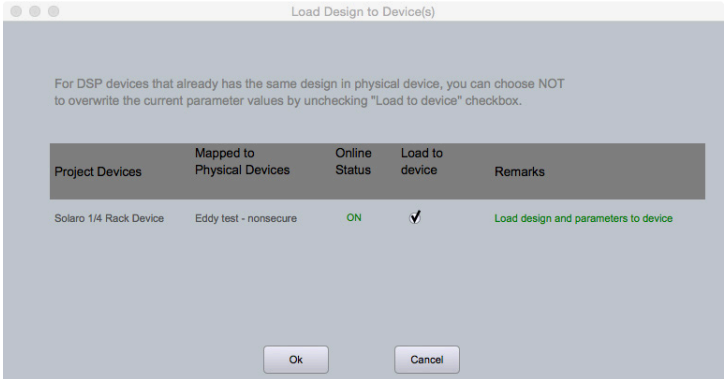
Once mapped, the module will become a solid grey color and the device Mac Address will display at the bottom of the device module.



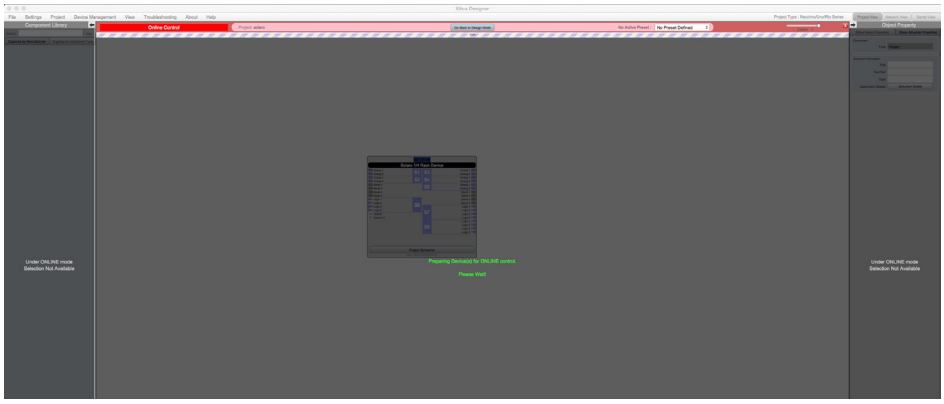
4. Click **Load Design to Device(s)** located at the top of the work area.



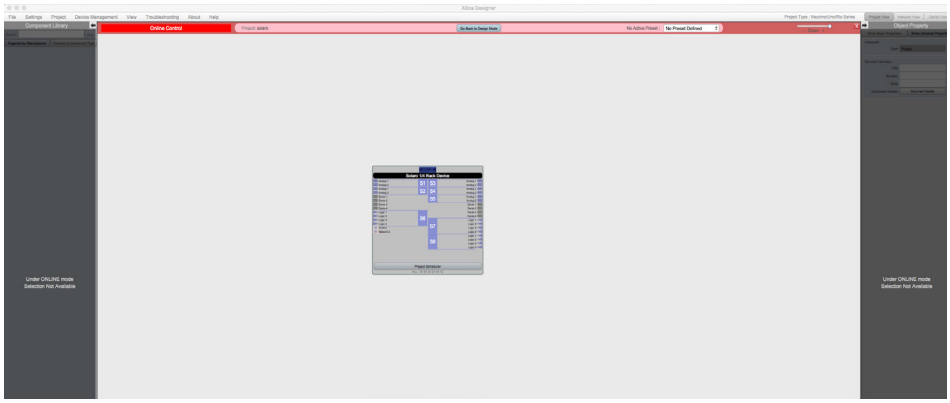
5. A window will pop up. Check the devices that you would like to load your design to. Then click **OK**.



Going online may take up to several minutes. Please do not disrupt the process. The progress bar at the top will display the overall progress percentage.



Once online, notice that the work area has become a solid color and the design menus are no longer available.



Switch back to design mode at any time using the **Go Back to Design Mode** button located at the top of the work area.

Customer Support

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