RIO R22 & R44

Quick Start Guide for all variants

XILICA

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 NEAR WATER

Do not use the product near water. For example, near a bathtub, washbowl, 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 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.
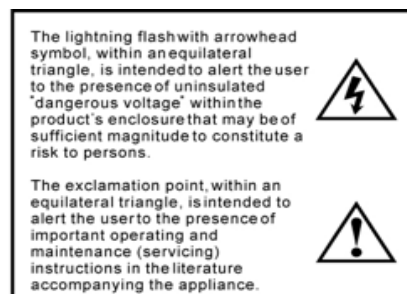
13. UNPLUG THIS APPARATUS DURING LIGHTNING STORMS OR WHEN UNUSED FOR LONG PERIODS OF TIME.

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 line surges.

14. REFER ALL SERVICING TO QUALIFIED SERVICE PERSONNEL. SERVICING IS REQUIRED WHEN THE APPARATUS HAS BEEN DAMAGED IN ANYWAY, 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 appliance.

1. What's in the Box

- The Rio Series R22-P, or R44-P, or R22-WP-X, or R22-WP-M, Dante interface device hardware
- This hard copy of the Quick Start Guide
- USB drive with the Dante Controller software & this Quick Start Guide
- External power supply (can also be PoE powered)
- Detachable 3.81mm Euro terminal block connectors
- A pair of surface mount brackets (R22-P & R44-P models only- as shown attached above)

2. What you need to provide

- A Windows PC for our processors software use. A Windows or Mac OSX computer for Dante Controller software use.
- See minimum system requirements in both software's Help File.
- Network (Ethernet) interface
- Ethernet cable (Cat5, Cat6 or better)

3. Hardware / Connections:

R22-P and R44-P Models (Front of R44-P Example Shown)
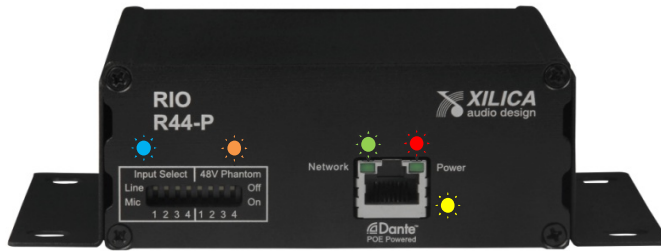
1. 🔵 **Input Select Dip Switches**
   Select Mic or Line input status on a per input basis using the Dip switches.

2. 🟠 **48V Phantom Power Dip Switches**
   Select and activate 48v phantom power on a per input basis using the Dip switches.

3. 🟢 **Network Status LED**
   - When the interface device has a Dante network cable connected the Network status LED on the front will light. If there is no network cable attached it remains off.
   - When the interface device is properly connected to the Dante network and communicating the Network status light on the RJ45 network audio connector will flash.

4. 🔴 **Power Status LED**
   Power Status LED will light to notify you that the interface device is connected to a power source.

5. 🟡 **Dante Network Audio RJ-45 Connector**
   Use a Cat5, Cat6 or better network cable to connect the Rio R22-P and R44-P device to your Dante network.

R22-P and R44-P Models (Rear of R44-P Example Shown)
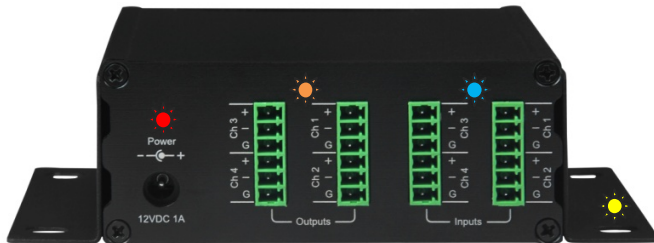
6. 🔴 **External Power Supply Connector**
   An external 12VDC – 1 Amp power supply is included with each R22-P and R44-P interface model. Or power using PoE via the network cable and a PoE switch or router.

7. 🟠 **Analog Audio - Output Connectors**
   Two dual output - 6 pin 3.81mm Euro terminal block connectors for analog audio output on the R44-P (one dual output connector for the R22-P model).

8. 🔵 **Analog Audio - Input Connectors**
   Two dual input - 6 pin 3.81mm Euro terminal block connectors for analog audio input on the R44-P (one dual input connector for the R22-P model).

9. 🟡 **Surface Mount Brackets**
   A pair of removable surface mount brackets are included (shown attached to the R44-P above) that allow mounting the R22-P and R44-P models to rear rack rails, rack shelves, or to any surface.
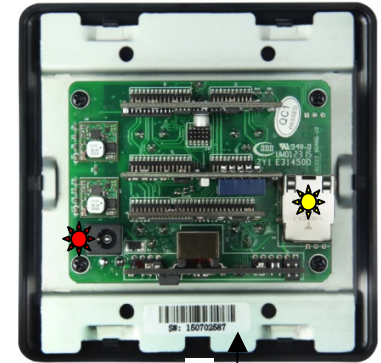
R22-WP-X and R22-WP-M Models (Front of Each Model and the Rear for Both Shown Below)

R22-WP-X   **R22-WP-M**   Snap On Cover ⬆ ⬆ | Main Body Panel

10. 🔴 **Power Status LED**

A front panel power status LED will light to indicate that the interface device is connected to a power source.

11. 🔵 **XLR Inputs – Front Panel Mic/Line and Phantom Power Selection & Status LED's**

Select Mic or Line input for both models on a per input basis using a sharp object to access the recessed on/off switches on the front panel. Select 48v phantom power on/off for each XLR input in the same manner. Individual status LEDs light when Mic input is selected and when Phantom power is engaged.

12. 🟠 **XLR Outputs**

Two (2) XLR line level outputs are provided on the R22-WP-X and a single XLR line output on the R22-WP-M model.

13. 🟢 **3.5mm & RCA Inputs /** 🟣 **3.5mm Output on the R22-WP-M Model**

The R22-WP-M model provides 3.5mm and dual RCA line inputs (both L+R summed) and a L+R summed 3.5mm line output.

14. 🔴 **External Power Supply Connector /** ⬆ **Front Cover Screwdriver Slot – Front Cover Removal**

An external 12VDC power supply is included with each R22-WP-X and R22-WP-M model. We recommend powering all our R22 and R44 interface models and in particular these R22-WP wall mount models using PoE power via the network cable and a PoE switch or router. ⬆ Locate front cover slot & use a screwdriver to assist removal of snap on outer front cover.

15. 🟡 **Rear panel - Dante Network Audio RJ-45 Connector**

Use Cat5, Cat6 or better network cable to connect the Rio R22-WPX and R22-WP-M devices to your Dante network.

4. Operation:

• **Dante Network**

All Dante enabled devices in a system are connected to form a Dante network. A typical Dante Network is shown below.
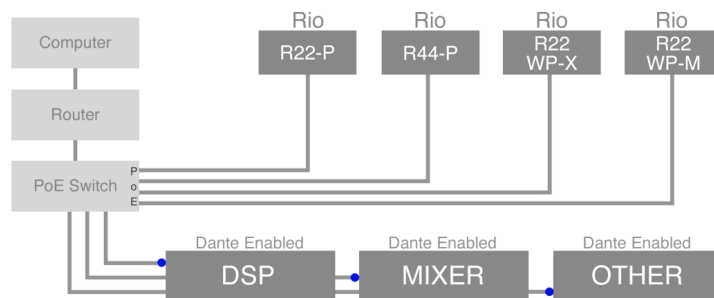
• **Device Configuration / Audio Routing Software**

Xilica's R22 and R44 Dante interface devices might be used in conjunction with our own Neutrino-N and Uno-N series of Dante enabled processors or utilized as standalone interface devices in conjunction with other Dante enabled product brands (for R22 & R44 standalone use skip to #8 on page 8). In both cases the user needs to use the **Dante Controller** software from manufacturer Audinate to complete the configuration, audio routing, and management of Dante devices.

• **Dante Controller Software**

The USB drive included with each R22 & R44 Dante interface model includes the Dante Controller software, and a copy of this Quick Start Guide. Or download the Dante Controller software from "Dante by Audinate" at www.audinate.com.

5. Using the Rio R22 & R44 Interfaces (and other brands) w our Dante Enabled Processors

- See Neutrino and Uno processor Quick Start Guides, Help Files, and Video Tutorials for detailed processor software and hardware operation and configuration.
- Neutrino-N and Uno-N Series DSP users use our software to configure our processors (and control devices).
  When users need to add Rio Series R22 and R44 Dante interface devices into their system design they will follow two procedures – **(a)** Configure Xilica Dante enabled DSP with our processor software and **(b)** Use the Dante Controller software to complete the configuration and audio routing for the connected Rio R22 & R44 Dante interface devices. Same procedures apply when connecting other Dante enabled product brands to our Dante enabled processors.

### (7-a) Configure Xilica DSP in Preparation of Connecting R22 & R44 Dante Interface Devices

In conjunction with our Neutrino-N or Uno-N processors configuration and in preparation for adding Rio R22 & R44 Dante interface devices into the design, users will add and connect Dante **Virtual Transmitter** or **Receiver** modules to the processor module in our software plus configure and wire the processors DSP modules and I/O to accommodate external Dante inputs or outputs from and to Rio R22 & R44 interface devices. The same applies when connecting other Dante enabled product brands to Xilica Dante enabled processors.

- **Dante Virtual Transmitters and Receivers**

Our Dante Virtual Transmitter & Receiver modules are inserted into our software configuration in order to make sure that all externally connected Dante devices – be it our R22 and R44 interfaces or any other connected Dante enabled product brands – stay connected to our Dante processor and continue to recognize and rediscover each other when they are powered down and back up again.

As shown below in our processor software's Project View work area, the project design example is using an 8x8 I/O Neutrino A0808-N Dante enabled processor (but it could be an Uno-N Dante enabled DSP as well). The user will drag the appropriate quantity of Dante Virtual Transmitters or Receivers required (one per externally connected Dante device) and drop them onto the Project View work area's input and/or output side. Transmitter modules on the input side and Receivers modules on the output side.

Since we are preparing to add one 2x2 I/O - Rio R22 Dante interface to the Network inputs and one 4x4 I/O – Rio R44 Dante interface to the Network outputs of our system design, we have dropped/placed one Dante Virtual Transmitter module on the input side and used the right side Properties Menu to size it to two (2) inputs and placed one Dante Virtual Receiver module on the output side - sized to four (4) outputs to accommodate the R44 Dante interface that will connect to the Network audio output channels of choice on our processor.
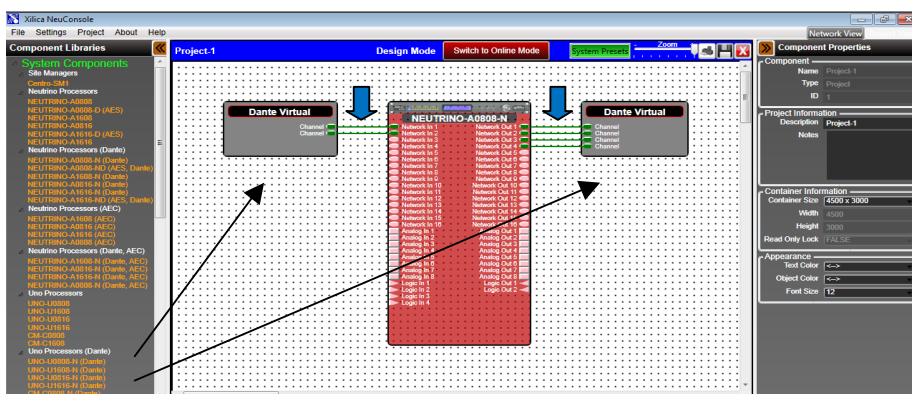
Next, as indicated by the blue arrows above, you wire them to the processor modules applicable Network Inputs and Network Outputs and to complete the procedure, we need to provide **Source Labels** for the *Virtual Transmitter* on the input side and **Destination Labels** for the *Virtual Receiver* on the output side.

- **Source and Destination labels**

  Below we show the Dante Virtual Transmitter and Receiver modules with their **Source** and **Destination** labeling inserted. You label each source and destination label by clicking on the green connecting wire and typing in the label in the right menu under Source Label and Destination Label. The label can be anything you desire in relationship to what brand of external Dante device you have connected to our processors inputs and outputs. Below I have labeled the Virtual Transmitter as **R22 Output 1 & 2** and the output Virtual Receiver as **R44 Inputs 1 thru 4** with the arrows below pointing to the Source Label and Destination Label location and labeling result.
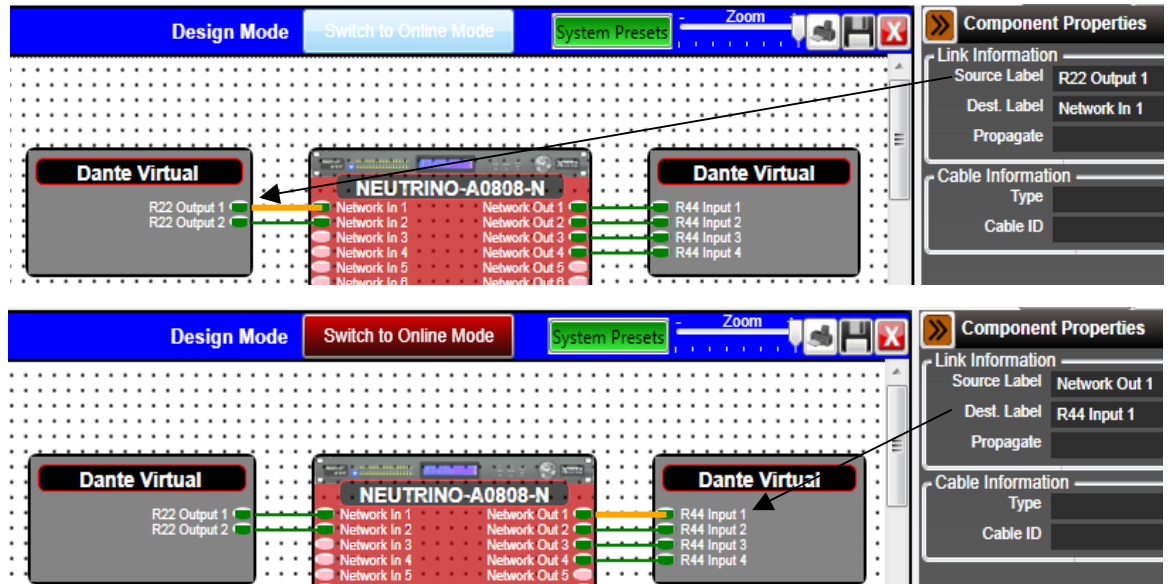
- **Configure and Wire the Xilica Processors DSP Modules**

Next, the user will click to open up the Neutrino-N processor module and as shown below – the processors schematic configuration is displayed. To keep things simple here we show a simplistic DSP design using Analog Input, Network Input, EQ, Matrix, Analog Output, and Network Output modules.
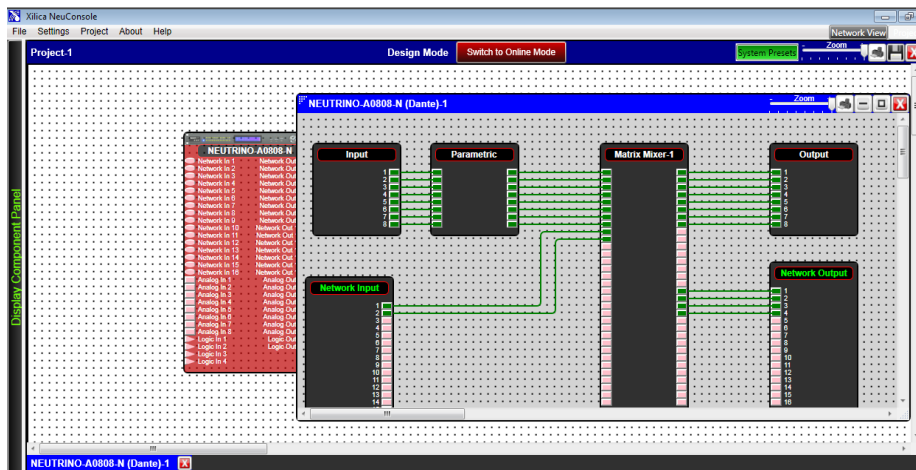
Besides all the parameter, preset, and control programming work that would normally be done, our focus here is the preparation for adding a 2x2 I/O - Rio R22 Dante interface to the input side of our processor and a 4x4 I/O - Rio R44 Dante interface to the output side of our Neutrino-N processor.

Above we have wired/connected 8 analog inputs to the Matrix (just to complete the analog side of things) and **2 network audio inputs** to the Matrix (which will tie our Rio R22 Dante interface audio to the Matrix). We could add processing modules to those 2 network audio input channels if desired - but here we have not. All inputs are matrix routed to the analog output module as shown. **Plus we have routed 4 channels from the Matrix to the Network Output module** in order to send those 4 audio channels to a destination point via Ethernet cable using Dante

network audio. <u>There the Dante network audio will be connected to our Rio R44-P interface which will break out and network audio into analog audio at the destination location.</u>

Once the procedures in (7-a) above are complete the user moves on to (7-b) below on page 8 - The Dante Controller Software - to complete the Rio R22 & R44 Dante interface configuration, audio routing, and device management.

Note:

All Xilica Neutrino and Uno Series processor models use a max 32x32 Matrix as indicated above. Thus you are able to Matrix mix up to 16 analog inputs plus up to 16 Dante network audio input channels to the analog output module. We do not need a 32x32 matrix bus for our design above but we show and use it above to remind users that the 32x32 matrix is the key to realizing how flexible the I/O and matrix routing capabilities are on our Neutrino Series processors and in particular on our less expensive Uno Series processors. Especially where Dante enabled versions of both processors is concerned and in particular - when you are using one of our 16x16 analog I/O / 16x16 Dante network audio I/O Neutrino-N or Uno-N models.

(7-b) The Dante Controller Software

The second part of the procedure for using Rio R22 & R44 Dante interfaces (and other Dante enabled product brands) with our Neutrino-N and Uno-N Dante processors is to use the Dante Controller software to complete the configuration, audio routing, and management of the connected Dante interface devices.

- **See information regarding the Dante Controller software use below in #8.**

- **Note.1:** Procedure **(7-b)** is a temporary requirement. The procedures above are performed using our current NeuConsole processor software. Coming soon from Xilica - our new SolaroConsole software will replace the NeuConsole software. At that time we will provide universal Dante configuration from within our new software so you will no longer need to use the Dante Controller software to complete the configuration when connecting Xilica Dante enabled interface devices or other Dante enabled product brands to our Neutrino-N and Uno-N processors. SolaroConsole's unique universal Dante configuration will simplify and speed Dante implementation and configuration.

- **Note.2:** Where you are using our R22 and R44 models as standalone Dante interface devices with other Dante enabled product brands – you use a combination of that product brands software and/or Dante Controller.

6. Dante Controller Software

Dante Controller is a free software application that enables you to configure, route audio, and manage devices on a Dante network.
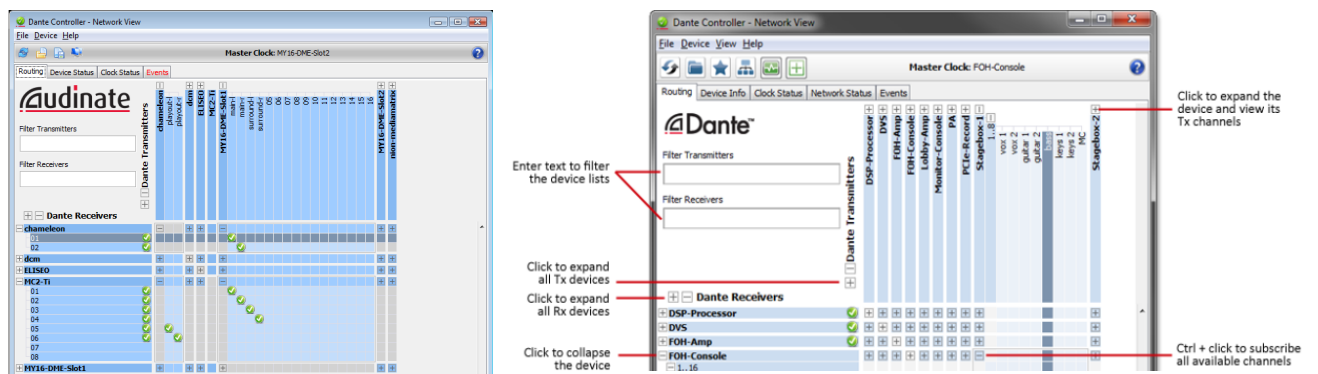
Whether you are using our Rio R22 & R44 Dante interfaces (or other Dante enabled brands) with our Dante processors as described above in **7-a and 7-b** [also see Note1: Procedure (7-b)] or using the R22 and R44 interface models as standalone devices in conjunction with other Dante enabled product brands (no Xilica processors in use) - the Dante Controller software is utilized to complete the Dante configuration, audio routing, and device management.
PC and Mac OSX versions of the Dante Controller software are available at www.audinate.com.
Please see the Help File contained within the software for detailed Dante Controller operational instructions.

7. Additional Operational Guidance

That should get you operational using our Rio Series R22 and R44 Dante enabled interface devices. In conjunction with Xilica Dante enabled processors or as standalone interfaces with other Dante enabled product brands.

XILICA

Customer Support

If you'd like to contact us regarding product support or technical designs, email support@xilica.com and we'll connect you with a solutions engineer. Alternatively, if you'd like to speak to someone, you can call the following numbers for immediate assistance:

North America & Rest of World: +1 905-770-0055

Europe: +31 29940-1100

China & Hong Kong SAR: +852 2604-9382

www.xilica.com

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