This document explains the steps to configure your Dante® AES67 device for interoperability with Ross Video's IGGY line of products. Note that these steps will likely apply to any Dante product that is licensed with AES67 mode. In this application note, we will use a Yamaha® TF-RACK Digital Mixer with a NY64-D I/O card installed.

Before You Begin

Figure 1 shows a simplified network configuration with IGGY and a PTP Master that supports AES67. In addition, there is a computer connected to the primary subnet for management/control of the devices. The instructions in this document follow the configuration in **Figure 1**.
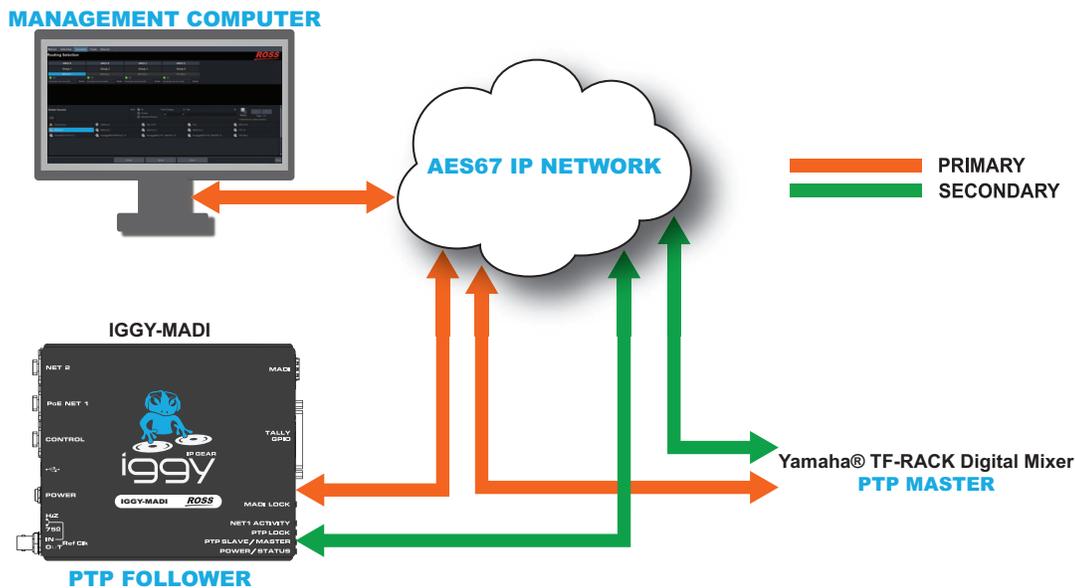

Figure 1 Simplified Network Configuration

Keep the following in mind:

• Each device has two data RJ-45 ethernet ports which are simultaneously the data and the control access to the card. In this application, the IGGY RJ-45 port used for management/control is not connected.

• There is a separate RJ-45 port on the Yamaha TF-Rack Digital Mixer which is not connected to the Dante card and is only for controlling the console remotely. This port is not connected as well.

• The Dante Controller software is used to access and configure the NY64-D I/O card on the Yamaha TF-Rack Digital Mixer.

• DashBoard is used to configure and control the IGGY product.

Network Configuration

This document assumes the user installed the DashBoard client and the Dante Controller software packages on the management computer, and all devices are connected to their respective software controllers.

To configure the IGGY

1. Set two VLANs on the switch or use two switches for the primary and the secondary subnets.

2. Launch DashBoard on your computer.

3. Navigate to the IGGY interface in DashBoard.

4. Select **Advanced** > **Ethernet I/O**.

5. Set **NET1** to DHCP or static IP.

6. Repeat for **NET2**.

7. Ignore the **CONTROL** port settings.

✦ Ensure that the **NET1**, **NET2**, and **CONTROL** ports are set to different subnets.

To configure the Yamaha

1. On the Dante Controller, select **Device Info**.

2. Double-click the Yamaha TF-Rack Digital Mixer.

3. From the **AES67 Config** options, enable the **AES67 mode**.

✦ By default, the TX multicast address range is 239.69.X.X.

4. From the **Network Config** options, select **Redundancy Mode**.

5. Set the IP addresses and Netmask for the primary and the secondary ports.

✦ Ensure the primary and secondary values match those set on the IGGY.

To configure your management computer

1. Configure the network port of your computer to the same subnet as the primary network.

2. Connect the management computer to one of the switch primary ports.

PTP Configuration

In this application, IGGY is set to PTP Follower and the Yamaha TF-Rack Digital Mixer to PTP Master. However, IGGY can be configured as the PTP Master of the network. Keep in mind that the native Dante devices do not support PTPv2, therefore be careful when choosing the PTP Master.

To configure the PTP settings on the IGGY

1. Ensure the IGGY interface displays in the DashBoard window on your computer.

2. Select **Advanced** > **Timing**.

3. Set the **Profile** to **AES67 Media**.

4. Ensure that all other settings are set to the default values.

5. Click **Apply**.

   The IGGY listens to the network until it finds the PTP Master, then locks to it.

To configure the PTP settings on the Yamaha TF-Rack Digital Mixer

1. On the Dante Controller, locate the **Clock Status** options.

2. Select **Preferred Master**.

3. Verify that the **Sync Status** is green.

4. Verify that the status for primary, secondary and AES67 report Master.

✦ If you plan to use IGGY in a network that has native Dante devices, it is highly recommended to refer to the Yamaha TF-Rack Digital Mixer user documentation for details on clocking notices.

Configuring the Sources

✦ Do not proceed until you verify that both the IGGY and the Yamaha TF-Rack Digital Mixer are PTP locked.

To configure the IGGY

1. Ensure the IGGY interface displays in the DashBoard window on your computer.

2. Select **Advanced** > **Device Setup**.

3. Set the **Audio Packet Time** to **1ms**.

✦ Most of the Dante devices running the AES67 mode do not support 125us packet time. Therefore you need to set the IGGY to 1ms packet time.

To configure a new source on the IGGY

1. Select the **Sender** tab.

2. Click **Add Stream**.

3. Assign a name.

4. Set the **Codec** to **AES67 (L24)**.

5. Enter the **Transport IP** (must be in the range 239.69.x.x).

6. Enter the **UDP Port** for the Primary Stream.

7. Click **Set Default Audio**.

8. Click **Apply**.

   The secondary parameters will be set automatically.

9. Verify that the secondary source has a Multicast IP in the range 239.69.x.x. Edit the source if necessary.

10. Verify that the status reports Active with a green indicator.

To configure the Yamaha TF-Rack Digital Mixer

1. On the Dante Controller, locate the **Device Info** area.

2. Double-click the Yamaha TF-Rack Digital Mixer.

3. Create a source enabling AES67 Flow.

4. Select the channels.

5. Click **Create**.

6. Select the **Transmit** tab to verify the sources.

Making Connections

Since IGGY does not support the native Dante API, you are not able to see the IGGY destinations (receivers) in the Dante Controller. Therefore, you connect the IGGY receivers to the Yamaha TF-Rack Digital Mixer sources via DashBoard. The IGGY sources are available on the Dante Controller and you can patch them to any Dante receiver.

To configure the connection point for the IGGY

1. In DashBoard, select **Advanced** > **Connections**.

2. Select the desired output interface.

3. Click the desired Yamaha TF-Rack Digital Mixer source icon.

4. Verify that the:

   - **Status** indicator is green
   - **Connection** field reports "Connection was Successful".

5. Verify that the audio from the Yamaha TF-Rack Digital Mixer is available on the IGGY Receiver output interface.

To configure the connections on the Yamaha TF-Rack Digital Mixer

1. On the Dante Controller, select the **Routing** tab.

2. Verify that the IGGY sources are reported in blue as the transmitters.

3. Patch the channels to the Yamaha Receive interfaces.

   A green icon indicates a valid connection.

Troubleshooting

In this section, we outline how to troubleshoot some common problems.

PTP not locking

1. Confirm the following PTP parameters are set correctly:

   - PTP master device
   - profile
   - domain
   - sync interval
   - announce interval

2. Verify that network the switch is set to Boundary clock.

3. Verify that the network switch is not blocking the PTP packets.

Cannot see the sources

1. Confirm that the subnets are correctly set and you are able to ping each port.

2. If applicable, confirm your VLANs are correctly configured.

3. Confirm that SAP is enabled on the IGGY (in DashBoard, select Discovery > Advanced).

4. Confirm that the Multicast address is in the same range on both devices.

Connections are not successful or reporting "no packets received"

1. Confirm that the Packet Time is set to 1ms on the IGGY.

2. Verify that both devices are still PTP locked.

3. Confirm that the Multicast address and UDP ports at the receivers are the same as the sources.

Connections are successful but there are audio glitches

1. Verify that both devices are still PTP locked.

2. Confirm that both devices are set to the same Codec type (L24).

Contacting Technical Support

At Ross Video, we take pride in the quality of our products, but if problems occur, help is as close as the nearest telephone.

Our 24-hour Hot Line service ensures you have access to technical expertise around the clock. After-sales service and technical support is provided directly by Ross Video personnel. During business hours (Eastern Time), technical support personnel are available by telephone. After hours and on weekends, a direct emergency technical support phone line is available. If the technical support person who is on call does not answer this line immediately, a voice message can be left and the call will be returned shortly. This team of highly trained staff is available to react to any problem and to do whatever is necessary to ensure customer satisfaction.

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