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You've made a great choice. We expect you will be very happy with your purchase of Ross Technology. Our mission is to:

1. Provide a Superior Customer Experience  
   • offer the best product quality and support
2. Make Cool Practical Technology  
   • develop great products that customers love

Ross has become well known for the Ross Video Code of Ethics. It guides our interactions and empowers our employees. I hope you enjoy reading it below.

If anything at all with your Ross experience does not live up to your expectations be sure to reach out to us at solutions@rossvideo.com.

David Ross  
CEO, Ross Video  
dross@rossvideo.com

Ross Video Code of Ethics

Any company is the sum total of the people that make things happen. At Ross, our employees are a special group. Our employees truly care about doing a great job and delivering a high quality customer experience every day. This code of ethics hangs on the wall of all Ross Video locations to guide our behavior:

1. We will always act in our customers’ best interest.
2. We will do our best to understand our customers’ requirements.
3. We will not ship crap.
4. We will be great to work with.
5. We will do something extra for our customers, as an apology, when something big goes wrong and it's our fault.
6. We will keep our promises.
7. We will treat the competition with respect.
8. We will cooperate with and help other friendly companies.
9. We will go above and beyond in times of crisis. *If there's no one to authorize the required action in times of company or customer crisis - do what you know in your heart is right. (You may rent helicopters if necessary.)*
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Patents


Notice

The material in this manual is furnished for informational use only. It is subject to change without notice and should not be construed as commitment by Ross Video Limited. Ross Video Limited assumes no responsibility or liability for errors or inaccuracies that may appear in this manual.

Safety Notices

Refer to the “Important Regulatory and Safety Notices” document that accompanied your product.

Statement of Compliance

This product has been determined to be compliant with the applicable standards, regulations, and directives for the countries where the product is marketed.

Compliance documentation, such as certification or Declaration of Compliance for the product is available upon request by contacting techsupport@rossvideo.com. Please include the product; model number identifiers and serial number and country that compliance information is needed in the request.

EMC Notices

United States of America - FCC Part 15

This equipment has been tested and found to comply with the limits for a class A Digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a Commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Notice — Changes or modifications to this equipment not expressly approved by Ross Video Ltd. could void the user's authority to operate this equipment.

Canada

This Class A device complies with Canadian ICES-003 and part 15 of the FCC Rules.

Cet appareil numerique de la classe “A” est conforme a la norme NMB-003 du Canada.
European Union

This equipment is in compliance with the essential requirements and other relevant provisions established under regulation (EC) No 765/2008 and Decision No 768/2008/EC referred to as the “New Legislative Framework”.

**Warning** — This equipment is compliant with Class A of CISPR 32. In a residential environment this equipment may cause radio interference.

Australia/New Zealand

This equipment is in compliance with the provisions established under the Radiocommunications Act 1992 and Radiocommunications Labelling (Electromagnetic Compatibility) Notice 2008.

Korea

Class A equipment (Broadcasting and communications service for business use).

This device is a business-use (Class A) EMC-compliant device. The seller and user are advised to be aware of this fact. This device is intended for use in areas outside home.

<table>
<thead>
<tr>
<th>사용자 안내문</th>
</tr>
</thead>
<tbody>
<tr>
<td>이 기기는 업무용 환경에서 사용할 목적으로 적합성평가를 받은 기기로서 가정용 환경에서 사용하는 경우 전파간섭의 우려가 있습니다.</td>
</tr>
</tbody>
</table>

International

This equipment has been tested under the requirements of CISPR 22:2008 or CISPR 32:2015 and found to comply with the limits for a Class A Digital device.

**Notice** — This is a Class A product. In domestic environments, this product may cause radio interference, in which case the user may have to take adequate measures.

Maintenance/User Serviceable Parts

Routine maintenance to this Ross product is not required. This product contains no user serviceable parts. If the module does not appear to be working properly, please contact Technical Support using the numbers listed under the section “Contacting Technical Support” on page 12. This product is covered by a generous 1-year warranty and will be repaired without charge for materials or labor within this period. See the section “Warranty and Repair Policy” on page 89 for details.

Environmental Information

The equipment may contain hazardous substances that could impact health and the environment.

To avoid the potential release of those substances into the environment and to diminish the need for the extraction of natural resources, Ross Video encourages you to use the appropriate take-back systems. These systems will reuse or recycle most of the materials from your end-of-life equipment in an environmentally friendly and health conscious manner.

The crossed-out wheeled bin symbol invites you to use these systems.

If you need more information on the collection, reuse, and recycling systems, please contact your local or regional waste administration. You can also contact Ross Video for more information on the environmental performances of our products.
<table>
<thead>
<tr>
<th><strong>Ross Video Limited</strong></th>
<th><strong>Ross Video Incorporated</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>8 John Street</td>
<td>P.O. Box 880</td>
</tr>
<tr>
<td>Iroquois, Ontario</td>
<td>Ogdensburg, New York</td>
</tr>
<tr>
<td>Canada, K0E 1K0</td>
<td>USA 13669-0880</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>General Business Office:</th>
<th>(+1) 613 • 652 • 4886</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fax:</td>
<td>(+1) 613 • 652 • 4425</td>
</tr>
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<thead>
<tr>
<th>Technical Support:</th>
<th>(+1) 613 • 652 • 4886</th>
</tr>
</thead>
<tbody>
<tr>
<td>After Hours Emergency:</td>
<td>(+1) 613 • 349 • 0006</td>
</tr>
</tbody>
</table>

E-mail (Technical Support): techsupport@rossvideo.com  
E-mail (General Information): solutions@rossvideo.com  
Website: http://www.rossvideo.com
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Introduction

This guide covers the installation, configuration, and use of the IGGY-AES16.16. The following chapters are included:

- **“Introduction”** summarizes the guide and provides important terms, and conventions.
- **“Before You Begin”** provides a brief product overview and installation requirements for the IGGY-AES16.16.
- **“Hardware Overview”** describes the IGGY-AES16.16 hardware features and physical connections.
- **“Physical Installation”** provides information when installing the IGGY-AES16.16 in your system.
- **“Cabling”** provides an overview of connecting external devices to the IGGY-AES16.16.
- **“Getting Started”** outlines how to display the IGGY-AES16.16 interfaces in DashBoard.
- **“Configuring the Ethernet Settings”** provides instructions for configuring the IGGY-AES16.16 settings for basic network communications.
- **“Protocol Setup”** provides information for setting up media distribution via the IGGY-AES16.16 using third-party protocols.
- **“Configuring the Timing Settings”** provides instructions for configuring the IGGY-AES16.16 to use Precision Time Protocol, and specifying a reference source.
- **“Configuring the Destinations”** provides instructions for configuring the destination channels on the IGGY-AES16.16.
- **“Configuring the Senders”** provides instructions for configuring the sender channels on the IGGY-AES16.16.
- **“Configuring Presets”** outlines how to define the network streams that the IGGY-AES16.16 can access.
- **“Operation”** provides general information for operating the IGGY-AES16.16.
- **“Monitoring the Receivers”** provides a summary of monitoring a receiver channel for audio streaming.
- **“Upgrading the Software”** provides instructions for upgrading the software via DashBoard.
- **“DashBoard Interface Overview”** summarizes the functions, menus, and parameters of the IGGY-AES16.16 in DashBoard.
- **“Technical Specifications”** provides the specifications for the IGGY-AES16.16.
- **“Service Information”** provides information on the warranty and repair policy for your IGGY-AES16.16.
- **“Software Licenses”** provides third-party software license information for your IGGY-AES16.16.
- **“Glossary”** provides a list of terms used throughout this guide.

Related Publications

It is recommended to consult the following Ross documentation before installing and configuring your IGGY-AES16.16:

- **DashBoard User Manual**, Ross Part Number: 8351DR-004
- **IGGY-AES16.16 Quick Start Guide**, Ross Part Number: 1000DR-821

Documentation Conventions

Special text formats are used in this guide to identify parts of the user interface, text that a user must enter, or a sequence of menus and sub-menus that must be followed to reach a particular command.
Interface Elements

Bold text is used to identify a user interface element such as a dialog box, or menu. Bold text set in Arial font is used to identify a button. For example:

In the Edit dialog, click Apply.

User Entered Text

Courier text is used to identify text that a user must enter. For example:

In the Language box, enter English.

Referenced Guides

Italic text is used to identify the titles of referenced guides, manuals, or documents. For example:

For more information, refer to the DashBoard User Manual.

Menu Sequences

Menu arrows are used in procedures to identify a sequence of menu items that you must follow. For example, if a step reads “Advanced > Timing,” you would select the Advanced tab and then select the Timing sub-tab.

Important Instructions

Star icons are used to identify important instructions or features. For example:

★ Contact your IT department before connecting to your facility network to ensure that there are no conflicts. They will provide you with an appropriate value for the IP Address, Subnet Mask, and Gateway for your IGGY-AES16.16.

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.

• Technical Support: (+1) 613-652-4886
• After Hours Emergency: (+1) 613-349-0006
• E-mail: techsupport@rossvideo.com
• Website: http://www.rossvideo.com
Before You Begin

If you have questions pertaining to the operation of the IGGY-AES16.16, contact us at the numbers listed in the section “Contacting Technical Support” on page 12. Our technical staff is always available for consultation, training, or service.

Features

Some features of the IGGY-AES16.16 include:

• Dual redundant Gigabit Ethernet audio interfaces, and optional GE control interface
• 16 audio receivers, 16 audio senders
  › SMPTE ST 2022-7 hitless 1+1 redundancy per sender and receiver
  › Packet times: 125μs, 250μs, and 1ms
  › Samples/packet: 6, 12, and 48
  › Sample rates: 48kHz with ASRC available and 44.1kHz with ASRC available
  › Receive up to a 64 channel stream
  › Supports the L24 and L16 audio formats; configurable per audio stream
  › WAN-capable buffering: 30ms per receiver stream
• SMPTE ST 2110-30, including all conformance levels: A, B, and C
• Supports discovery and registration via:
  › RAVENNA
  › Dante/SAP (only in AES67 mode)
• Connection control via:
  › Ember+
  › JSON API
• Configuration via JSON API, Ember+, and DashBoard
• Flexible mounting options
• Full DashBoard control
Work Flow Diagram

*Figure 2.1* provides an example work flow of the IGGY-AES16.16.

**Figure 2.1** IGGY-AES16.16 Work Flow Diagram

What are Receivers, Senders, and Streams?

The following terms are used throughout this user guide:

**Device**
A physical, virtual, or software application that may include multiple sources, destinations, senders, or receivers.

**Essence**
A single elementary logical media signal. For example, a video essence is one video channel. An audio essence is a single audio (mono) channel.

**Flow**
The continuous raw media content. It can contain more than one essence (e.g. an audio flow can contain multiple channels).

A flow is independent of the transport protocol. For example, 48kHz LPCM audio is a flow; AES67 is one type of stream which can carry the flow.

Flows cannot generally be passed around natively, and need to be encapsulated in a stream. Flows from the same source are considered “editorially equivalent”, but may be encoded differently.

**Receiver**
An element within a device that receives exactly one stream, which contains one flow from a network.
Sender
An element within a device which presents exactly one flow, packaged as a stream onto a network.

Stream
One flow, encapsulated within a transport protocol. Examples include SMPTE ST 2022-6, SMPTE ST 2110-20 Video, or SMPTE ST 2110-30 Audio (AES67).

Installation and Setup Overview
The generalized work flow of installing and configuring your IGGY-AES16.16 is:
1. Download and install the latest version of the DashBoard client software.
2. Contact your IT department for the required IP addresses for your IGGY-AES16.16.
3. Physically install and cable the IGGY-AES16.16.
4. Use DashBoard to access the IGGY-AES16.16.
5. Use the IGGY Setup Wizard to configure the basic settings for your module.
6. Define the Network Stream Sources.
7. Make your connections.
Audio Mapping Examples

This chapter provides three examples of possible audio map scenarios and a brief summary of how to configure each example in DashBoard. Your requirements may differ from what is presented here.

Direct Audio Mapping

This example assumes the IGGY-AES16.16 automatically detects the available network streams, and the streams have the same number of audio channels as the destinations. (Figure 3.1)

To apply direct audio mapping

1. Configure the Destinations on the IGGY-AES16.16. Refer to “Configuring the Destinations” on page 47.
2. On the Connections tab, select the Advertised Streams option from the Stream area.
3. Use the Connections tab to map the Destinations to the IGGY-AES16.16 outputs. Refer to “Routing the Signals” on page 58.
One-to-Many Direct Audio Mapping

This example assumes the IGGY-AES16.16 automatically detects a specified network stream, and the streams match the number of audio channels of the destinations. (Figure 3.2)

In this example, the user maps the same stream to multiple destinations.

To apply one-to-many direct audio mapping

1. Configure the Destinations on the IGGY-AES16.16. Refer to “Configuring the Destinations” on page 47.
2. On the Connections tab, select the Advertised Streams option from the Stream area.
3. Map the same Destination to each of the IGGY-AES16.16 Outputs. Refer to “Routing the Signals” on page 58.

In Figure 3.2, the user mapped raptorEdge74.Sender.33_aud to Destinations A-E.
Custom Network Streams

This example assumes the user must manually define the available network streams and the number of audio channels in each stream differs from the destinations. The user must map the audio channels differently for each network stream preset. (Figure 3.3)

To customize the network stream presets and audio mapping

1. Manually define the network stream presets for the IGGY-AES16.16. Refer to “Manually Assigning a Stream” on page 54.
2. Map the Audio Channels to each network stream preset. Refer to “Mapping the Audio Channels” on page 55.
3. Configure the Destinations on the IGGY-AES16.16. Refer to “Configuring the Destinations” on page 47.
4. Map the Destinations to the IGGY-AES16.16 outputs. Refer to “Routing the Signals” on page 58.

Figure 3.3 Setup Example — Custom Network Streams
Hardware Overview

This chapter presents information on the IGGY-AES16.16 hardware components and features.

Chassis Faceplate Overview

The chassis faceplate of the IGGY-AES16.16 provides a silk-screen map of the available connections and LEDs. Figure 4.1 illustrates the IGGY-AES16.16 faceplate top. From the top you can see that the chassis has two areas:

- the POWER connection, NET ports, CONTROL port, and Ref/Clock BNCs are located on the left side
- the status LEDs, TALLY/GPIO connector, and AES3 I/O ports are located on the right side

PSU Connection and PWR Status LED

The left-side of the IGGY-AES16.16 chassis provides one PSU port. (Figure 4.2)
PWR 15V 4A Connection

The IGGY-AES16.16 can be powered from an external 15V PSU. This port is a standard miniature power jack (center pin positive). Refer to the section “Connecting to a 15V PSU” on page 29 for details.

POWER/STATUS LED

A POWER/STATUS LED is located on the right side of the IGGY-AES16.16 chassis and reports on general communication and status conditions. (Figure 4.3)

![POWER/STATUS LED](image)

Figure 4.3  IGGY-AES16.16 — POWER/STATUS LED

Table 4.1 describes the possible status information the POWER/STATUS LED will report.

<table>
<thead>
<tr>
<th>Status</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green</td>
<td>The IGGY-AES16.16 is receiving +15VDC on the PSU (DC) port of its chassis.</td>
</tr>
<tr>
<td></td>
<td>No errors are detected in the communication activity between the IGGY-AES16.16 and external devices.</td>
</tr>
<tr>
<td>Yellow/Green</td>
<td>The IGGY-AES16.16 is initializing.</td>
</tr>
<tr>
<td>Red</td>
<td>A communication error is detected or the IGGY-AES16.16 is currently in reboot mode.</td>
</tr>
<tr>
<td></td>
<td>Monitor the IGGY-AES16.16 status before taking action.</td>
</tr>
<tr>
<td>Off</td>
<td>When this LED is unlit, a valid power connection is not connected to the POWER port.</td>
</tr>
</tbody>
</table>
CONTROL Port

The CONTROL port is a GigE XLR RJ45 port that connects to your facility network. This connection is used to communicate with a DashBoard client for configuration and monitoring purposes.

Connect IGGY-AES16.16 to the same network as your DashBoard client computer or to a network that has a route to the network your DashBoard client computer is on.

NET 1, NET 2 Ports

Each NET port is a GigE XLR RJ45 port. There are options provided for configuring the NET ports as a receiver and/or transmitter.

The NET 1 port is PoE Type 1, Class 3 (802.3af) connector that provides up to 13W of power. The NET 1 port is also the primary audio transport link.
NET 1 ACT LED

The status of the NET 1 signal is reported in DashBoard and via the NET 1 ACT LED. (Figure 4.6)

Table 4.2 describes the possible status information the NET 1 ACT LED reports.

<table>
<thead>
<tr>
<th>Status</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blue</td>
<td>No errors are detected in the communication activity between the IGGY-AES16.16 and external devices.</td>
</tr>
<tr>
<td>Off</td>
<td>The IGGY-AES16.16 is not powered on or there is no activity on this port.</td>
</tr>
</tbody>
</table>

AES3 I/O Connections

Each AES3 I/O port is a DB-25 multi-way female connector with 4-40 jack-screws for locking the connector (Figure 4.7)
For More Information on...
• the pin-outs, refer to “Cabling the AES3 Inputs and Outputs” on page 31.

Reference Connections
The right-side of the IGGY-AES16.16 chassis also provides two 75ohm BNC connectors (Figure 4.8):
• one BNC for a word clock reference input
• one BNC for a work clock reference output on a 5V TTL signal

PTP LEDs Overview
On the left-side of the IGGY-AES16.16 chassis there are two PTP status LEDs enable you to monitor the PTP communication traffic on the IGGY-AES16.16.
PTP SLAVE/MASTER LED

Table 4.3 describes the possible status information the PTP SLAVE/MASTER LED reports.

<table>
<thead>
<tr>
<th>Status</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green</td>
<td>The IGGY-AES16.16 is communicating with the PTP Grandmaster and PTP is slaving to a Grandmaster</td>
</tr>
<tr>
<td>Blue</td>
<td>The IGGY-AES16.16 is acting as the Master on the network</td>
</tr>
<tr>
<td>Red</td>
<td>The IGGY-AES16.16 is initializing. The IGGY-AES16.16 is not configured correctly (is not a PTP slave or master on the network). Verify the network connection and PTP settings.</td>
</tr>
<tr>
<td>Off</td>
<td>The IGGY-AES16.16 is not powered on</td>
</tr>
</tbody>
</table>

PTP LOCK LED

Table 4.4 describes the possible status information the PTP LOCK LED reports.

<table>
<thead>
<tr>
<th>Status</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green</td>
<td>The IGGY-AES16.16 is locked to a valid PTP connection</td>
</tr>
<tr>
<td>Red</td>
<td>The IGGY-AES16.16 cannot establish a PTP connection and is not locked to a timing reference</td>
</tr>
<tr>
<td>Off</td>
<td>The IGGY-AES16.16 is not powered on</td>
</tr>
</tbody>
</table>

Other Features

The IGGY-AES16.16 chassis also provides a TALLY/GPIO port, a reset button and a USB port.

TALLY/GPIO Port

This port is a DB-25 multi-way female connector with 4-40 jack-screws for locking the connector.

* The TALLY/GPIO port is reserved for future use.

Reset Button

Press and hold this button for 5 seconds to reset the microprocessor and re-initialize the IGGY-AES16.16. This is a hard reset of the module settings, including the IP Address, to the factory default values.

USB Port

A serial USB port is provided on the right side of the IGGY-AES16.16 chassis.

* The USB port is reserved for future use.

Micro SD Card

* This slot is reserved for future use.
Physical Installation

If you have questions pertaining to the installation of IGGY-AES16.16, contact us at the numbers listed in the section “Contacting Technical Support”. Our technical staff is always available for consultation, training, or service.

For More Information on...
• the technical specifications for the IGGY-AES16.16, refer to the chapter “Technical Specifications” on page 87.

Static Discharge

Throughout this guide, please heed the following cautionary note:

ESD Susceptibility — Static discharge can cause serious damage to sensitive semiconductor devices. Avoid handling circuit boards in high static environments such as carpeted areas and when synthetic fiber clothing is worn. Always exercise proper grounding precautions when working on circuit boards and related equipment.

Unpacking

Unpack each IGGY-AES16.16 you received from the shipping container and ensure that all items are included. If any items are missing or damaged, contact your sales representative or Ross Video directly.

Mounting and Installing the IGGY-AES16.16

IGGY-AES16.16 can be mounted in any convenient location. However, to ensure long life for this product, observe the following precautions and operating requirements:

• Maintain a temperature of 0°C to 40°C (32°F to 104°F).
• Allow for air circulation around the chassis for convectional cooling.

Many different mounting positions are possible. Some installation options are permanent and require careful consideration of the final positioning before installation.

★ In some mounting locations, the power adapter must be affixed in a similar manner as the chassis.

Cable ties may be necessary in some applications to relieve strain on the mounting hardware and the connectors.

For More Information on...
• installation and mounting your IGGY-AES16.16, refer to the IGGY-AES16.16 Quick Start Guide.
• how to install the IGGY-AES16.16 with an optional mounting kit, refer to the install guide that shipped with your kit.
Cabling

If you have questions pertaining to the setup of IGGY-AES16.16, contact us at the numbers listed in the section “Contacting Technical Support”. Our technical staff is always available for consultation, training, or service.

For More Information on...

- the technical specifications for the IGGY-AES16.16, refer to the chapter “Technical Specifications” on page 87.
- notices to service personnel, refer to the document IGGY Important Regulatory and Safety Notices that shipped with your IGGY-AES16.16.

Before You Begin

Keep the following in mind before cabling the IGGY-AES16.16:

- Contact your IT department before connecting to your facility network to ensure that there are no conflicts. They will provide you with an appropriate value for the IP Address, Subnet Mask, and Gateway for your device.
- If difficulties or problems are experienced when connecting the IGGY-AES16.16 to a network hub, contact your network administrator.

Connecting to a 15V PSU

The IGGY-AES16.16 is shipped with an external power supply. The DC Power cord has a locking connector that securely fastens into the PWR DC jack on the IGGY-AES16.16 chassis. Refer to the IGGY-AES16.16 Quick Start Guide for details.

Warning — The power supply connector of the IGGY-AES16.16 power supply module must be fully inserted into the IGGY-AES16.16 PWR port and the locking collar fully secured before use. Failure to do so may damage the PWR port on the IGGY-AES16.16 chassis.

Caution — Ensure to connect the DC Power cord of the power supply to the PWR jack on the IGGY-AES16.16 before connecting the power supply to the power source.

Caution — Use of improper adapters may damage the IGGY-AES16.16 and will void the warranty.

Cabling the NET Ports

The primary function of each NET port is to provide a network interface that can be configured as a Receiver and/or a Sender in DashBoard. Use the NET 1 port if you choose to power the IGGY-AES16.16 with an optional PoE connection to your network.

Cabling NET 1 as a PoE Connection

If you wish to power the IGGY-AES16.16 via a PoE connection to your facility network, you will need an RJ45 PoE connector. You may also wish to use a cable with a push-pull locking connector for connection to the NET 1 port on the IGGY-AES16.16 chassis.

* Ross Video does not supply this cable.
Connecting the NET Ports to a Network

You will need an Ethernet cable with a standard RJ45 connector for each NET port.

Cabling the CONTROL Port

The IGGY-AES16.16 is connected directly to your network so that it can interface with the devices and the computer running the DashBoard client. After a physical connection is established via the CONTROL port, DashBoard is used to configure the network settings for the IGGY-AES16.16.

The exact steps for connecting your IGGY-AES16.16 to your facility via an Ethernet network depend on the network requirements of your facility.

Cabling the Reference Ports

The IGGY-AES16.16 provides two reference BNCs: a REF IN and a REF OUT.

Connecting a Reference Source to the IGGY-AES16.16

Use the REF IN BNC if you wish to use a local SDI reference input signal for the IGGY-AES16.16 timing. This signal must be a 48kHz word clock signal.
To connect the IGGY-AES16.16 to an SDI reference source

1. Connect one end of a Belden 1694A cable with a female BNC to the REF IN BNC on the IGGY-AES16.16 chassis.

2. Connect the other end of the same Belden 1694A to the reference source for the IGGY-AES16.16.

Cabling the Reference Output

Use the REF OUT BNC if you wish the IGGY-AES16.16 to output either a 44.1kHz, or 48kHz work clock signal synchronized to PTP. This reference can be used by external devices.

For More Information on...

- specifying the Audio Sampling Frequency, refer to “Configuring the Device Settings” on page 36.

Cabling the AES3 Inputs and Outputs

Each AES3 I/O CH connector has locations for the hot (+), cold (-), and ground wires for a balanced AES audio cable. Each connector provides up to 8 channels of AES-3id inputs or AES3 outputs (1-8, 9-16 respectively).
AES3 I/O CH1-8 Pin Designations

Table 6.1 outlines the pin assignment for the AES3 I/O CH1-8 connector.

Table 6.1 Pins — AES3 I/O CH1-8

<table>
<thead>
<tr>
<th>AES3</th>
<th>Hot (+)</th>
<th>Pins Cold (-)</th>
<th>Ground</th>
</tr>
</thead>
<tbody>
<tr>
<td>IN 1-2</td>
<td>24</td>
<td>12</td>
<td>25</td>
</tr>
<tr>
<td>IN 3-4</td>
<td>10</td>
<td>23</td>
<td>11</td>
</tr>
<tr>
<td>IN 5-6</td>
<td>21</td>
<td>9</td>
<td>22</td>
</tr>
<tr>
<td>IN 7-8</td>
<td>7</td>
<td>20</td>
<td>8</td>
</tr>
<tr>
<td>OUT 1-2</td>
<td>18</td>
<td>6</td>
<td>19</td>
</tr>
<tr>
<td>OUT 3-4</td>
<td>4</td>
<td>17</td>
<td>5</td>
</tr>
<tr>
<td>OUT 5-6</td>
<td>15</td>
<td>3</td>
<td>16</td>
</tr>
<tr>
<td>OUT 7-8</td>
<td>1</td>
<td>14</td>
<td>2</td>
</tr>
</tbody>
</table>

AES3 I/O CH9-16 Pin Designations

Table 6.2 outlines the pin assignment for the AES3 I/O CH9-16 connector.

Table 6.2 Pins — AES3 I/O CH9-16

<table>
<thead>
<tr>
<th>AES3</th>
<th>Hot (+)</th>
<th>Pins Cold (-)</th>
<th>Ground</th>
</tr>
</thead>
<tbody>
<tr>
<td>IN 9-10</td>
<td>24</td>
<td>12</td>
<td>25</td>
</tr>
<tr>
<td>IN 11-12</td>
<td>10</td>
<td>23</td>
<td>11</td>
</tr>
<tr>
<td>IN 13-14</td>
<td>21</td>
<td>9</td>
<td>22</td>
</tr>
<tr>
<td>IN 15-16</td>
<td>7</td>
<td>20</td>
<td>8</td>
</tr>
<tr>
<td>OUT 9-10</td>
<td>18</td>
<td>6</td>
<td>19</td>
</tr>
<tr>
<td>OUT 11-12</td>
<td>4</td>
<td>17</td>
<td>5</td>
</tr>
<tr>
<td>OUT 13-14</td>
<td>15</td>
<td>3</td>
<td>16</td>
</tr>
<tr>
<td>OUT 15-16</td>
<td>1</td>
<td>14</td>
<td>2</td>
</tr>
</tbody>
</table>
Getting Started

This chapter provides instructions for launching DashBoard, assigning an initial IP address to the IGGY-AES16.16, and accessing the tabs and menus in DashBoard.

Before You Begin

These installation guidelines assume the following:

- a valid IPV4 address is available for the IGGY-AES16.16
- a PTP Grandmaster is configured and accessible for the IGGY-AES16.16
- a network switch is configured in Boundary Clock mode and available for communicating with the IGGY-AES16.16

* Ensure that your facility IT Department provided the required network settings to be assigned to the IGGY-AES16.16 and each NET port you plan to enable.

Configuration Overview

Figure 7.1 summarizes the generalized work flow of configuring your IGGY-AES16.16.

Launching DashBoard

* DashBoard must run on a computer that has a physical wired Ethernet connection directly to the IGGY-AES16.16 and configured with an IP address in the same range as the default address of the IGGY-AES16.16 (192.168.0.100).

For More Information on...

- downloading and installing the DashBoard client software, refer to the DashBoard User Manual.
- the IGGY-AES16.16 interfaces in DashBoard, refer to the chapter “DashBoard Interface Overview” on page 63.

To launch DashBoard

1. Ensure that you are running DashBoard software version 8.8.0 or higher.
2. Launch DashBoard by double-clicking its icon on your computer desktop.

Using Walkabout to Assign the Initial IP Address to IGGY-AES16.16

Once the IGGY-AES16.16 is physically installed and cabled to your facility network, you will need to assign it an initial static IP Address to enable DashBoard to locate it on your network. Establishing an initial IP Address enables DashBoard to communicate with IGGY-AES16.16.

To use Walkabout to assign the initial static IP address to the IGGY-AES16.16

1. Launch DashBoard.
2. From the DashBoard client main toolbar, select File > Show Walkabout.
The DashBoard window displays the Walkabout table.

3. Click Refresh, located at the bottom of the Walkabout tab, to ensure the list in the Walkabout interface is current.

4. In the Walkabout table, find the entries for the IGGY-AES16.16 you want to configure.

* Each IGGY-AES16.16 has three entries in the table: CTRL, NET 1, and NET 2. These are the physical ports on the IGGY-AES16.16 chassis. You need only assign an IP Address to the CTRL port for initial setup of the IGGY-AES16.16.

5. Use the Name field to assign a unique identifier to the IGGY-AES16.16. This will be the name displayed in the Tree View of DashBoard.

6. Use the Address field to specify the IP Address supplied by your IT Department for this device.

* After you edit a cell in the Walkabout table, it is recommended to wait approximately 1 minute, then click Refresh to apply the new settings.

7. Ensure the Netmask field is set to match your network requirements.

8. Use the Gateway field to specify the IP Address for connection outside of the local area network (LAN).

9. Click Reboot in the row of the Walkabout table for the IGGY-AES16.16.

Manually Adding the IGGY-AES16.16 to the Tree View

The IGGY-AES16.16 does not automatically display the DashBoard Tree View. You must manually add it to the Tree View.

To manually add the IGGY-AES16.16 to the Tree View in DashBoard

1. From the main toolbar in DashBoard, select File > New > TCP/IP DashBoard Connect or openGear Device.

   The New TCP openGear Frame Connection dialog opens.

2. In the IP Address field, enter the IP Address that you specified in the procedure “To use Walkabout to assign the initial static IP address to the IGGY-AES16.16” on page 33.

3. Enter a unique identifier for the IGGY-AES16.16 in the Display Name field or click Detect Frame Information.

   * This is the name displayed in the DashBoard Tree View.

4. Click Finish to close the dialog.

5. Verify that the IGGY-AES16.16 node displays in the DashBoard Tree View.
6. Right-click the **IGGY** node (with the name assigned in step 3) in the Tree View. A dialog opens.

7. Select **Open** from the dialog.

The IGGY-AES16.16 interface displays in DashBoard with the **Welcome** tab automatically selected.

Using the IGGY Setup Wizard

The **IGGY Setup Wizard** is displayed when the **Initial Setup** tab is selected in DashBoard.

Use the **IGGY Setup Wizard** to configure the following settings (further described in the proceeding chapters):

- Specifying the device name
- IP Address for the CONTROL port and each NET port
- PTP Timing System
• Audio Packet Time
• Default number of audio channels per stream
• Destination channel mapping
• Default Audio Codec
• Sender Sources

Accessing the IGGY-AES16.16 in DashBoard

The IGGY-AES16.16 groups the configuration, monitoring, and operating features as a series of tabs in the DashBoard client window. Each tab provides access to specific options for your IGGY-AES16.16.

The tabs are accessed by double-clicking the IGGY-AES16.16 node in the DashBoard Tree View. This procedure assumes that you have launched DashBoard on your computer and a valid IP Address assigned to it.

To access the IGGY-AES16.16 in DashBoard
1. In the Basic Tree View of DashBoard, expand the top IGGY node.
2. Expand the IGGY sub-node.
3. Double-click the second IGGY sub-node to display the IGGY-AES16.16 interface in the right pane of the DashBoard window.

When first accessing the IGGY-AES16.16, the Welcome tab is automatically displayed in DashBoard.

* Once the initial settings are configured and applied to the IGGY-AES16.16, you can hide the Welcome and Initial Setup tabs by selecting Advanced > Device Setup > Hide Welcome Tab and/or Hide Initial Setup Wizard Tab.

Configuring the Device Settings

It is recommended to edit the global device settings such as setting the audio packet time, the number of audio channels that each menu defaults to.

To update the global device settings for the IGGY-AES16.16
1. Display the IGGY-AES16.16 in DashBoard as outlined in “To access the IGGY-AES16.16 in DashBoard” on page 36.
2. Select the Advanced > Device Setup tab.
3. Use the **Device Name** field to assign a unique identifier to your IGGY-AES16.16.

   - This is the name used to identify the streams the IGGY-AES16.16 is managing within your system.

4. Use the **Audio Packet Time** field to specify the amount of digital audio that is buffered and encapsulated into a single Ethernet packetized frame on a Sender. Note that a longer packet time increases the latency of the audio stream.

   - When setting up a receiver stream on the IGGY-AES16.16, ensure that you configure a receiver to match the audio packet time of the sender.

   - This impacts all connected audio streams. Applying a new Audio Packet Time automatically disconnects all audio streams. It is recommended to set the Audio Packet Time before configuring your audio streams.

5. Use the **Audio Sampling Frequency** to specify the number of samples of audio carried per second.

6. Use the **SMPTE ST 2210-30 Payload Type** field to specify the RTP payload format to be used for transporting audio via SMPTE ST 2110-30.

7. Use the **Default Codec Type** menu to specify the audio compression format.

8. Enable the **Auto Generate Sender Multicast** feature to avoid having to manually set a multicast IP address when creating IGGY-AES16.16 senders.

   - If the **Auto Generate Sender Multicast** box is not selected, you will need to manually set the multicast IP addresses for senders created in the Senders tab.

9. Click **Apply** to save the new settings.

   - You may need to reboot the IGGY-AES16.16 to apply your changes.

---

### Setting the Audio Channel Count Mode

The Audio Channel Count feature is useful when all the audio network streams in your network have the same channel count. You select from a preset number (1, 2, 8, or 16) that matches your network configuration. This number is then used to determine the appropriate defaults to apply when setting up your streams and essences.

- Select Mixed mode if your audio network streams do not have a consistent channel count.

**To set the audio channel count mode**

1. Display the IGGY-AES16.16 interfaces in DashBoard as outlined in the procedure “**To access the IGGY-AES16.16 in DashBoard**” on page 36.

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

3. Use the **Audio Channel Count Mode** field to specify the maximum number of audio channels available for each stream.

   - This field assumes that all audio streams in your network contain the specified number of channels. This automatically determines the maximum channel count of each network stream for the Receivers, and Senders tabs. Note that the size of the Destination stream is specified independently via the options on the **Advanced > Destinations** tab.
Configuring the Ethernet Settings

The IGGY-AES16.16 provides two NET ports that are populated with Ethernet RJ45 connectors. The module also provides a third Ethernet RJ45 (CONTROL) port that is used to connect to your facility network for DashBoard communication. This chapter outlines how to configure each of these ports.

✴ Contact your network administrator if difficulties or problems are experienced when assigning IP addresses.

For More Information on...
- the location of the NET ports, refer to the section “NET 1, NET 2 Ports” on page 23.
- the location of the CONTROL port, refer to the section “CONTROL Port” on page 23.

Configuring the CONTROL Port

The CONTROL port is located on the right side of the IGGY-AES16.16. Once the IGGY-AES16.16 is communicating via DashBoard, you may wish to assign a different static IP Address from the factory default value (which was used to initially establish a connection point to the IGGY-AES16.16).

✴ The IGGY-AES16.16 ships with the default IP Address of 192.168.0.100. You may wish to change the IP Address from the factory default after you establish this initial connection.

To update the static network settings for the CONTROL port

1. Display the IGGY-AES16.16 interfaces in DashBoard as outlined in “To access the IGGY-AES16.16 in DashBoard” on page 36.
2. Select the Initial Setup tab.
✴ You can also change these settings via the Advanced > Ethernet I/O tab.
3. Locate step 3 on the tab.
4. Use the Mode menu to select Static.
✴ If you want the network settings for the CONTROL port to be automatically obtained, and DHCP service is available on your control network, select DHCP from the Mode menu.
5. Use the Static IP Address field to assign a unique IP Address to the IGGY-AES16.16.
6. Use the Subnet Mask field to assign the subnet mask for the IGGY-AES16.16.
7. Use the **Gateway** field to specify the gateway for communications outside of the local area network (LAN) the IGGY-AES16.16 will use.

8. Click **Apply**.

9. Click **Reboot** to apply the new settings. This button is located at the bottom of the interface.

    The IGGY-AES16.16 is temporarily taken off-line during the reboot.

10. Verify the new network settings reported on the **Advanced > Ethernet I/O** tab.

11. Add the IGGY-AES16.16 to the DashBoard Tree View using the new settings. Refer to the section “**Manually Adding the IGGY-AES16.16 to the Tree View**” on page 34.

### Configuring the NET Ports

By assigning an IP Address to each NET port (NET 1, NET 2), you are able to uniquely identify it on the network and control it via DashBoard. Each NET port can be configured for media traffic for the IGGY-AES16.16.

This section outlines how to configure the network settings for the NET ports on the chassis.

**To update the network settings for a NET port**

1. Display the IGGY-AES16.16 interfaces in DashBoard as outlined in the procedure “**To access the IGGY-AES16.16 in DashBoard**” on page 36.

2. Select the **Initial Setup** tab.

    You can also change these settings via the **Advanced > Ethernet I/O** tab.

3. Locate the options for the NET port you wish to configure (step 4 on the **Initial Setup** tab).

4. If you are manually configuring the Ethernet settings:
   a. Use the **Mode** menu to select **Static**.
   b. Use the **Static IP Address** field to specify the new static IP Address for the IGGY-AES16.16. This is the IP Address that is used to control and communicate with the specific NET port.
   c. Use the **Subnet Mask** field to specify the subnet mask for the NET port.
   d. Use the **Gateway** field to specify the gateway for communications outside of the local area network (LAN) the IGGY-AES16.16 will use.

5. If you want the network settings for the NET port to be automatically obtained, and DHCP service is available on your control network, select **DHCP** from the **Mode** menu.

6. Click **Apply** to save the new settings.

7. Repeat this procedure for the second NET port you wish to configure.

8. Click **Reboot** to apply the new settings. This button is located at the bottom of the interface.

    The IGGY-AES16.16 is temporarily taken off-line during the reboot.

9. Verify the new settings reported on the **Advanced > Ethernet I/O** tab.
Protocol Setup

This chapter outlines how to specify which outputs to enable on the IGGY-AES16.16, and configure the IGGY-AES16.16 for a specific media distribution protocol.

Registration and Discovery

The IGGY-AES16.16 supports media distribution based on RA VENNA, RTSP, and Ember+. This section outlines how to configure the IGGY-AES16.16 for each protocol.

RTSP Support

This section outlines the required settings when establishing communications between IGGY-AES16.16 and an external device via the Real Time Streaming Protocol (RTSP).

To configure the IGGY-AES16.16 as a RTSP device

1. Display the IGGY-AES16.16 interfaces outlined in “To access the IGGY-AES16.16 in DashBoard” on page 36.
2. Select Advanced > Discovery tab.
3. Locate the RTSP area in the tab.
4. Use the Interface menu to specify what physical port the IGGY-AES16.16 uses for RTSP communications.
5. Use the Port field to specify the TCP port the protocol uses to send and receive messages.
6. Click Apply to save the new settings.

Ember+ Support

* IGGY-AES16.16 implements BESS v1.1 for Ember+ support to communicate with third-party controllers.

Keep the following in mind when setting up an Ember+ connection with IGGY-AES16.16:

- Ensure that all network streams have a consistent channel count.
- Audio shuffling is not supported in Ember+ setups.
- IGGY-AES16.16 supports one-to-many connection (where one source can be routed to multiple targets).

Channel Mapping for Ember+

Channels in the network stream are mapped to the corresponding AES3 channels in the Ember+ client in a 1-to-1 mapping.

In each channel count mode, the Sender configuration must first be created in DashBoard to show up in the Ember+ tree. If a Sender has not been set up through DashBoard for one of these sets of channels then these Audio sub-groups will contain no SDP file. If a Sender is created without following the channel mapping configuration above, the Ember+ tree contents will not be correct.

16-channel Count Mode

If the channel count mode is set to 16, there is 1 audio sub-group (Audio 1) for receivers and transmitters with 16 channels. (Figure 9.1)
In Figure 9.1, the Receivers > Group 1 > Audio 1 represents the receiver that maps to AES3 channels 1 to 16. When connecting a 16-channel network stream to one of these targets, the 16 channels from the network stream will be mapped to the corresponding AES3 channels in a 1-to-1 mapping.

In Figure 9.1, the Transmitters > Group 1 > Audio 1 represents the sender that maps to AES3 channels 1 to 16.

8-channel Count Mode

If channel count mode is set to 8, there are 2 audio sub-groups (Audio 1-2) for receivers and transmitters with 8 channels each. (Figure 9.2)

In Figure 9.2, the Receivers > Group 1 > Audio 1 represents the receiver that maps to AES3 channels 1 to 8; Receivers > Group 1 > Audio 2 represents the receiver that maps to AES3 channels 9 to 16. When connecting an 8-channel network stream to one of these targets, the 8 channels from the network stream will be mapped to the corresponding AES3 channels in a 1-to-1 mapping.

In Figure 9.2, the Transmitters > Group 1 > Audio 1 represents the sender that maps to AES3 channels 1 to 8; Audio 2 maps to the sender that maps to AES3 channels 9 to 16.

2-channel Count Mode

If channel count mode is set to 2, there are 8 audio sub-groups (Audio 1-8) for receivers and transmitters with 2 channels each. (Figure 9.3)

In Figure 9.3, the Receivers > Group 1 > Audio 1 represents the receiver that maps to AES3 channels 1 and 2; Receivers > Group 1 > Audio 2 represents the receiver that maps to AES3 channels 3 and 4; etc. When connecting
an 2-channel network stream to one of these targets, the 2 channels from the network stream will be mapped to the corresponding AES3 channels in a 1-to-1 mapping.

In Figure 9.3, the Transmitters > Group 1 > Audio 1 represents the sender that maps to AES3 channels 1 and 2; Audio 2 maps to the sender that maps to AES3 channels 3 and 4; etc.

1-channel Count Mode

If channel count mode is set to 1, there are 16 audio sub-groups (Audio 1-16) for receivers and transmitters with 1 channel each. (Figure 9.4)

![Device Tree](image)

**Figure 9.4 Ember+ Tree Example — Channel Count Mode set to 1**

In Figure 9.4, the Receivers > Group 1 > Audio 1 represents the receiver that maps to AES3 channel 1; Receivers > Group 1 > Audio 2 represents the receiver that maps to AES3 channel 2; etc. When connecting a 1-channel network stream to one of these targets, the channel from the network stream will be mapped to the corresponding AES3 channel in a 1-to-1 mapping.

In Figure 9.4, the Transmitters > Group 1 > Audio 1 represents the sender that maps to AES3 channel 1; Audio 2 maps to the sender that maps to AES3 channel 2; etc.

Establishing a Connection

Before proceeding, ensure that SDP patching is enabled with the Ember+ client to establish audio receivers on the IGGY-AES16.16.

To establish a connection between the Ember+ client and the IGGY-AES16.16

1. Add the IGGY-AES16.16 in the Ember+ client interface using the IP Address assigned to the IGGY-AES16.16.
2. In DashBoard:
   a. Navigate to IGGY-AES16.16 Advanced > Discovery tab.
   b. Locate the Ember+ area in the tab.
   c. Set the Port field to 9095.
3. In the Ember+ client, set the TCP port to 9095 for the IGGY-AES16.16.

Specifying the Audio Channel Count Mode on the IGGY-AES16.16

By default, the Channel Count mode is set to 8 but this value can be edited in DashBoard.

You will need to reboot the IGGY-AES16.16 before the Ember+ tree is updated with the new Channel Count mode.
To set the Audio Channel Count mode on the IGGY-AES16.16

1. In DashBoard, navigate to the Advanced > Device Setup tab.
2. Use the Audio Channel Count Mode menu to specify the number of channels in each group.
3. Click Apply.

Configuring the IGGY-AES16.16 for Ember+

For most setups (as seen in “Direct Audio Mapping” on page 17), you will only need to create the Senders in DashBoard for the IGGY-AES16.16. Refer to the section “Configuring the Senders” on page 49 for details.

For other setup types, (as seen in “One-to-Many Direct Audio Mapping” on page 18 and “Custom Network Streams” on page 19), you will need to configure the Senders, and then use the Ember+ controller interface (e.g. Lawo VSM) to map the sources to the targets. Refer to the documentation that came with your controller for details.
Configuring the Timing Settings

The IGGY-AES16.16 supports the Precision Time Protocol (PTP) and AES67 media as defined in the IEEE 1588-2008 standard and the SMPTE ST 2059 specification.

Configuring the PTP Settings

From the Timing tab in DashBoard, you can synchronize the IGGY-AES16.16 to real-time clocks of other devices in the same network.

There are several criteria that PTP clocks compare to determine who will be master and who will be slave (called the Best Master Clock Algorithm, or BMCA), and they are evaluated in order: Priority1, clock class, accuracy, scaled log variance, Priority2, clock ID (similar to the MAC address). Practically, Priority1 is the only setting configured on all clocks to control the outcome of the Grandmaster election. If Priority1s are equal, the next criterion is evaluated (clock class) and the criteria are evaluated in succession until a Grandmaster is determined.

To update the PTP settings for the IGGY-AES16.16

1. Display the IGGY-AES16.16 interfaces in DashBoard as outlined in the procedure “To access the IGGY-AES16.16 in DashBoard” on page 36.
2. Select the Initial Setup tab.
3. Select the Slave Only box to define the IGGY-AES16.16 as only a slave and never a Boundary Clock or Grandmaster device. (You may need to scroll down the tab to locate this box on the tab.)
4. Use the Profile menu to specify the standard/specification used for PTP.
5. Use the Domain field to specify the sub-domain the PTP clock is assigned to.

There can be multiple PTP domains operating concurrently within a network. The domain is a field in all PTP message headers. Messaging between entities are segregated by domain (e.g. The IGGY-AES16.16 is an endpoint configured for domain 128 and ignores messages from a neighboring clock configured for domain 127).

6. If you did not select the Slave Only box and the IGGY-AES16.16 matches the primary Grandmaster election criterion for your network:
   a. Use the Priority 1 field to define the first 8bit clock field.
   b. Use the Priority 2 field to define the backup 8bit clock field.

To configure the PTP settings for a specific NET port

1. Select the Advanced > Timing > PTP
2. Select the Custom PTP Profile box.
   - The Domain, Priority1, Priority2, Sync Interval, Announce Interval and Announce Receipt Timeout fields are now editable.
3. Use the Sync Interval field to specify the number of seconds at which synchronization messages are sent from the master clock to the specified NET port on the IGGY-AES16.16.
4. Use the Announce Interval field to specify the rate of announce messages that the specified NET port on the IGGY-AES16.16 requests from the master clock during a Unicast session.
5. Use the Announce Receipt Timeout field to specify the number of seconds the specified NET port on the IGGY-AES16.16 waits for an announce interval message before timing out.
6. Click Apply to save the new settings.
Configuring the Audio Offset for Outputs

An output is timed relative to the input stream, and the source will be delayed a fixed offset from the sender’s RTP timestamps. This allows for non-PTP aligned sources to be passed through with fixed latency.

Use this procedure if you need to adjust the timing of each output independently. Otherwise it is recommended to keep these settings at the default values.

To adjust the timing for an output

1. Display the IGGY-AES16.16 interfaces in DashBoard as outlined in the procedure “To access the IGGY-AES16.16 in DashBoard” on page 36.
2. Select the Advanced > Timing tab.
3. Click Outputs.
   The Timing tab updates to display the timing options for each output.
4. Locate the options for the output you want to adjust the timing for.
5. To automatically apply the default delay value of 2000us, select the Default Delay box for the output.
6. To manually configure the delay and offset values for an output:
   a. Verify that the Default Delay box is cleared.
   b. Use the Audio Offset slider to adjust the relative position of the audio start position as an offset to the reference.
   Audio delay is specified relative to the reference source.
7. Click Apply to save the new settings.
8. Refresh the connection as follows:
   a. Select the Receivers tab.
   b. Locate the row for the output you need to refresh the connection for.
   c. Click Disconnect.
      The applicable Output Status field reports “Not in Use” and the Destination reads “Disconnected” for the Audio field.
   d. Click Connect.

Setting the Audio Packet Time

You can add an offset to the audio streams if you wish to define the rate the IGGY-AES16.16 sends packets. Keep in mind that a smaller packet time results in more Ethernet packet overhead (more packets are sent) but less network delay.

This impacts all connected audio streams. It is recommended to set the Audio Packet Time before configuring your audio streams.

To set the audio packet time

1. Display the IGGY-AES16.16 interfaces in DashBoard as outlined in the procedure “To access the IGGY-AES16.16 in DashBoard” on page 36.
2. Select the Advanced > Device Setup tab.
3. Use the Audio Packet Time menu to specify the amount of time that IGGY-AES16.16 will add as an offset to the audio streams.
4. Click Apply.
5. Re-connect the audio streams as outlined in the section “Routing the Signals” on page 58.
Configuring the Destinations

You can choose to use the default destination values or customize the number of destinations and audio channels assigned to each. This chapter outlines both methods.

Using the Default Destination Settings

The default Destination settings are as follows:

- Two AES outputs with assigned Destination Names (using the nomenclature AES # where # is an auto-generated character)
- Each AES output is pre-configured with 8 channels
- Each AES output is enabled (the corresponding box is selected)
- The Default Mapping box in the Channel Mapping area is automatically selected.
- The Output Ports are automatically assigned in a 1:1 map

The default number of channels per Destination can be defined via the Initial Setup tab.

Customizing a Destination

You can customize the destination labels, and the number of audio channels assigned to each destination. This feature enables you to assign channels for specific work flow and to divide a large AES source into more intuitive parts. For example you may need AES channels 1-8 to go to Speaker 1, channels 9-16 to Speaker 2, channels 1-8 to Monitor 1 etc. You would then connect the network streams to these specific destinations directly.

To customize the destination list

1. Display the IGGY-AES16.16 interfaces in DashBoard as outlined in the procedure “To access the IGGY-AES16.16 in DashBoard” on page 36.
2. Select the Advanced > Destinations tab.
3. Use the Number of Channels per Destinations field, located in the top left corner of the tab, to specify the number of channels for all destinations.
   The Destinations tab updates to display the specified number of channels.
4. Use the Destination Name field to specify a unique identifier for each destination.
   This is used to help identify the output within your system and in the DashBoard Connections tab.
5. Select the Enable box for the destination to display it in the Connections tab.
6. Click Apply.
Configuring the Senders

You need to specify the IP encapsulation properties for the active audio for each AES3 input signal.

Configuring an Audio Sender

Before you begin, make a note of the NET Bandwidth Allocation for the NET ports to determine the available capacity on each port. This information is displayed in the Active Senders tab.

To create a new audio essence

1. Display the IGGY-AES16.16 interfaces in DashBoard as outlined in “To access the IGGY-AES16.16 in DashBoard” on page 36.
2. Select the Advanced > Senders tab.
   The Setup Streams sub-tab is automatically selected.
3. Click Add Stream.
   The Stream list and Source Name field updates to include a new entry “Sender. #” where # is an auto-generated number.
4. Use the Source Name field to override the auto-detected name of the data stream with a unique identifier for the stream.
   The Source Name is used to help identify the sender within your system and in the Connections interface.
5. If the Audio Channel Count mode is set to Mixed, use the Channel Count field to select the number of channels.
6. Use the Codec field to specify the transmission standard the network stream will use.
7. If the Allow Random IP feature is enabled (via the Initial Setup tab), proceed to “Mapping the Audio Channels to a Sender Stream”.
8. Edit the Transport IP and UDP Port fields for the Primary Stream you wish to assign the sender to.
9. If required, edit the Transport IP and UDP Port fields for the Protection Switching stream the sender will use.

Mapping the Audio Channels to a Sender Stream

You can choose to apply the default audio channel map or assign the channels as required by your system. Both methods are described below.

To map the audio channels to a sender stream using the default channel map

1. Click Set Default Audio.
   The AES Channels map updates to display the default channel map. You may need to scroll to the bottom of the tab to display the map.
2. Click Apply to save the new settings.

To customize the audio channel mapping for a sender stream

A channel can only be assigned to one sender.

1. In the AES Channels map, select the channels to include in the audio stream.
2. In the Target map, select the sender channel(s) to assign the AES channel to.
3. Click .
4. Click Apply to save the new settings.
Configuring the Receivers

The audio receiver options on the IGGY-AES16.16 enable you to adjust the gain in 0.5dB increments for each channel independently. You can also choose to mute a single channel or all channels in a receiver.

**To adjust the audio gain for a receiver channel**

1. Display the IGGY-AES16.16 interfaces in DashBoard as outlined in the procedure “To access the IGGY-AES16.16 in DashBoard” on page 36.
2. Select the Audio Gain tab.
3. Locate the audio channel in the AES3 destination area you wish to adjust the gain for.
4. Use the Gain slider to set a gain value between +20dB and -75dB.

**To mute a channel**

1. Locate the audio channel in the AES3 destination area you wish to mute.
2. Click Mute.

**To mute all channels for a receiver**

- Click Mute All in the AES Settings area for the receiver.

**To unmute all channels for a receiver**

- Click Unmute All in the AES Settings area for the receiver.

**To reset the gain and mute settings of all channels for a receiver**

- Click Reset All in the AES Settings area for the receiver.
Configuring Presets

Once you have the timing, destinations, and senders configured on the IGGY-AES16.16, you must specify the available IP streams as presets for the IGGY-AES16.16.

Overview

You can configure a preset for the IGGY-AES16.16 by assigning an advertised stream or adding a stream by manually specifying the IP stream credentials. A preset advertised by a node flows to multiple devices.

What is a Preset?

A preset allows you to create a grouping of streams on the network into a unit that can be mapped to a destination.

Presets are required if:

• the destination has more channels than a stream on the network and the user wants to drive all channels;
• the user wants to perform complicated audio shuffling.

Presets are not required if:

• the user has destinations and network streams that are the same size (i.e. channel count);
• wants to perform a 1-to-1 mapping.

Work Flow

From DashBoard you create presets, map the audio channels, and assign the group to a destination.

You create presets, combine them into audio mappings with different assignments to create network stream sources. Then the preset is mapped to a specific destination, which corresponds to a specific set of AES channels.

Adding a Preset

A preset is identified in the Receivers and Connections tabs using the parameters specified in the Presets tab. Ensure to give each group a unique name for easy identification in the DashBoard.

Using an Advertised Stream

The Presets tab automatically provides a list of advertised RAVENNA streams available to the IGGY-AES16.16. This enables you to quickly create network stream sources using only the (detected) advertised streams.

To add a new preset using an advertised stream

1. Display the IGGY-AES16.16 interfaces in DashBoard as outlined in the procedure “To access the IGGY-AES16.16 in DashBoard” on page 36.
2. Select the Presets tab.
3. Click Add Preset.

   The fields in the Presets tab clear and the Preset Name field displays “NewGroup#” where # is an auto-generated character.
4. Use the **Preset Name** field to specify a unique identifier for the preset.

5. Verify that the **Assign Manually** box is unselected (cleared).

6. Use the **# Audio Streams** menu to specify the total number of audio streams for this preset.

   This number determines the Audio Map options and the number of streams you can configure.

7. Use the **Advertised Network Streams** menus to specify the stream for the audio signals for the network stream.

   The **Transport IP**, **Port**, and **DSCP** fields are read-only and automatically populated when a new selection is made in the **Advertised Stream** menu.

8. Use the options in the **Preset Category** area to assign the network stream to a Connections category.

   Assigning network streams to a specific Category enables you to later filter the sources on the Connections tab.

9. Click **Save** to update the list in the **Presets** tab.

### Manually Assigning a Stream

An IP stream can also be manually assigned as a preset for the IGGY-AES16.16. You will need the Transport IP Address, Port number, and DSCP value for the IP stream you want to add. This is useful if you wish to access a network stream that is not a RAVENNA device.

**To manually define a new preset**

1. Display the IGGY-AES16.16 interfaces in DashBoard as outlined in the procedure “To access the IGGY-AES16.16 in DashBoard” on page 36.

2. Select the **Presets** tab.

3. Click **Add Group**.

   The fields in the **Presets tab** clear and the **Preset Name** field displays “**NewGroup#**” where # is an auto-generated character.

4. Use the **Preset Name** field to specify a unique identifier for the network stream.

5. Select the **Assign Manually** box.

   The **Transport IP**, **UDP Port**, and **# Ch** fields are now editable.

6. Use the **# Audio Streams** menu to specify the total number of audio streams for this group.
This number determines the Audio Map options and the number of audio streams you can configure for this group.

7. Use the **Transport IP** field to specify the multicast IP Address for the network stream.

**IGGY-AES16.16** supports multicast IP Addresses ranges from 225.x.x.x to 239.x.x.x. Contact Ross Technical Support if you need additional IP ranges.

8. Use the **UDP Port** field to specify the RTP port for the network stream.

9. Use the **# Ch** field to assign the total number of audio channels for the network stream.

10. Use the options in the **Preset Category** area to assign an icon to the button on the Connections tab.

11. If required, use the **Protection Switching** fields to assign the redundant audio streams to the **IGGY-AES16.16**.

**The Protection Switching** options display as two separate rows below the manually added stream fields.

12. To specify the data transmission standard that the **IGGY-AES16.16** will use for this preset:
   a. Click  
   b. Use the **Codec** menu to specify the audio over IP technical standard that the preset will use.

13. Click **Save** to update the list in the **Presets** tab.

**Mapping the Audio Channels**

Audio shuffling enables you to take any channels from the network streams within a preset and re-map them in any order before assigning to a destination. You can choose to apply the default audio channel map (1:1 mapping) or assign the channels as required by your system. Both methods are described below.

**When you create a new preset, the audio Target map displays the number of available channels for mapping (as defined in the Destinations tab). A single network stream can be used to drive all AES channels, but you do not need to assign all 16 channels. For example, if you are connecting to an 8-channel destination, you would assign the first 8 channels.**

**To assign audio channels to a preset using the default map**

1. Locate the **Audio Map** area of the **Presets** tab.
2. Select the **Default Mapping** box to map the channels to audio streams as 1:1
3. Click **Save** to update the list in the **Presets** tab.

**You may need to scroll down the tab to locate this button.**

**To customize the audio channel mapping for the preset**

1. Locate the **Audio Map** area of the **Presets** tab.

   **You may need to scroll down the tab to fully display the Audio Map.**

2. Clear the **Default Mapping** box.

   The Channel Mapping area updates to display the mapping options based on the number of destinations and audio channels you specified using the fields on this tab.

   The **Edit** button now displays.

3. Click **Edit**.

   The Audio Map area updates to provide two maps.
4. Select the network stream channel(s) on the leftmost map.
5. On the rightmost map, select the output channel(s).
6. Click to assign the channel.
7. Repeat steps 4 to 6 to map all the channels to target channels.
8. Click **Save**.
Operation

You can route the IGGY-AES16.16 destinations and stream sources using the options in the Connections tab.

Connections Tab Overview

The Connections tab is organized into two areas: Destinations and Stream Sources.

Figure 15.1 Example of a Populated Connections Tab

1. Destinations Area

This area displays the available outputs in a series of rows as configured in “Configuring the Destinations” on page 47. Each output is represented as a button which is clicked to include it in the routing switch. The Audio read-only fields report the Network Streams assigned to the output.

A Status read-only field reports overall communication status and whether any error conditions are occurring on the output.

2. Stream Sources Area

This area displays the available inputs as selectable buttons. Use the Filter field to narrow down the options displayed in the area.

3. Show Stream

Use the options in the Show Stream area to filter the type of network streams displayed. Choose from the following:

- **Preset**s — Select this option to display all the presets that were created in “Configuring Presets” on page 53.
- **Advertised Sessions** — Select this option to display only the raw advertised streams. Using this selection, you can select a destination, select an advertisement with the same number of audio channels, and connect.

4. Refresh Button

Click this button to update the list of available Stream Sources. It is recommended to refresh the list before making connections (but not between connections).
Routing the Signals

To route the audio signals you must first select an AES output, then a network stream. Keep in mind that routing occurs automatically after a Stream button is selected.

To select an output

1. Display the IGGY-AES16.16 interfaces in DashBoard as outlined in the procedure “To access the IGGY-AES16.16 in DashBoard” on page 36.
2. Select the Connections tab.
3. In the Output Name row of the Destinations area, locate the button for the output you wish to route.
4. Click the required Output button.

To perform the switch

1. In the Stream Sources area, locate the button for the Network Stream you wish to route.
2. If required, filter the options in the Stream Sources area using the following:
   - Filter field — type text in the field to filter the items displayed in Stream Sources area to those with names containing the specified text.
   - Show options — select a type of stream to display. Choose from Network Streams (manually defined streams), Advertised Streams (streams the IGGY-AES16.16 automatically detects), or Both.
3. Click the required Network Stream button to perform the switch.

Using IGGY-AES16.16 with Ultritouch

Ultritouch uses the open SLP protocol to locate devices on the same network as it is connected to. This section outlines how to manually add the IGGY-AES16.16 to the list of connected devices to Ultritouch by specifying its IP address. You must first set up communications between IGGY-AES16.16 and the Ultritouch panel before you access the IGGY-AES16.16 interfaces, including the Connections window.

Ensure the SLP Enable box is selected on the Advanced > Discovery tab for the IGGY-AES16.16 you are connecting.

To set up a connection point between IGGY-AES16.16 and Ultrix/Ultricore

1. On the Ultritouch panel, tap .
2. Tap Connected Devices.
3. Tap Add.
4. Tap Manually Add a Connection Point.
5. Use the Device IP/Hostname field to specify the IP Address for the IGGY-AES16.16.
6. Tap Add Device.
   The device is now listed in the Connected Devices table.
7. Select the device from the Connected Devices table.
8. Tap Connect.

To display the IGGY-AES16.16 on the Ultritouch panel

1. On the Ultritouch panel, tap .
   The All Connections interface displays.
2. Tap the icon for the IGGY-AES16.16 you want to control via Ultritouch.

3. Tap the icon for the menu you wish to display on the Ultritouch panel.

   The Connections window for the selected IGGY-AES16.16 automatically displays on the Ultritouch panel.

**Accessing the IGGY-AES16.16 Interfaces**

It is recommended to use the DashBoard client software to setup and configure the IGGY-AES16.16 and then use Ultritouch for control via the Connections interface. Keep the following in mind when using Ultritouch to control the IGGY-AES16.16:

- The Welcome and Initial Setup interfaces are not available on the Ultritouch panel.
- The Connections window automatically displays each time the IGGY-AES16.16 interface is loaded onto the Ultritouch panel.
- The Connections window is re-organized when displayed on an Ultritouch with the Destination buttons in the left most window, and the Sources on the right.

**To perform the switch**

1. In the **Connections** window, locate the button for the output you wish to route.
2. Tap the required **Output** button.
3. Tap the required **Network Stream** button.
4. Tap **TAKE** to perform the switch.
Upgrading the Software

The IGGY-AES16.16 software can be upgraded in the field using the **CONTROL** port and the options available in DashBoard.

To upgrade the software on the IGGY-AES16.16

2. Display the IGGY-AES16.16 interfaces in DashBoard as outlined in the procedure “To access the IGGY-AES16.16 in DashBoard” on page 36.
3. Select **Upload**, located near the bottom of the DashBoard interface, to display the **Select file Upload** dialog.
4. Navigate to the file you want to upload.
5. Click **Open**.
6. If you are upgrading a single module:
   a. Click **Finish**.
   b. Proceed to step 8.
7. If you are upgrading multiple modules:
   a. Click **Next >** to display the **Select Destination** menu. This menu provides a list of the compatible cards.
   b. Specify the card(s) to upload the file to by selecting the check box(es) for the cards you want to upload the file to.
   c. Verify the card(s) you want to upload the file to. The **Error/Warning** fields indicate any errors, such as incompatible software or card type mismatch.
   d. Click **Finish**.
8. Monitor the upgrade.

   ✡ Clicking **Cancel** returns you to the **Select file Upload** dialog without rebooting the device(s).
   - Each IGGY-AES16.16 is temporarily taken off-line during the reboot process.
   - The process is complete once the status indicators for the **Card state** and **Connection** fields in the **Status** tab return to their previous status.

   ✡ If the IGGY-AES16.16 fails to upgrade correctly, contact Ross Technical Support for assistance.
DashBoard Interface Overview

The DashBoard client software enables you to monitor, configure, and operate your IGGY-AES16.16. The IGGY-AES16.16 groups the configuration, monitoring, and operating features as a series of tabs in DashBoard.

Welcome Tab

The Welcome tab displays on initial start-up of the IGGY-AES16.16 in DashBoard. You can hide this tab by selecting Initial Setup > Hide Welcome tab.

![Welcome Tab Example](image)

Initial Setup Tab

The Initial Setup tab helps you to quickly set up your IGGY-AES16.16 and proceed to configure your Presets (Network Streams) and Connections. The same controls are available in the Advanced tabs.

![Initial Setup Tab Example](image)
Connections Tab

The Connections tab is a patch-panel style interface that enables the IGGY-AES16.16 to connect to the available senders on the network.

Routing Selection Area

The Routing Selection area is located at the top of the Connections tab and provides options for routing the AES3 audio signals to the outputs on the IGGY-AES16.16. From this area you can quickly select outputs and monitor the status of the output signals.

<table>
<thead>
<tr>
<th>Item</th>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interface</td>
<td>AES #</td>
<td>Indicates the physical AES3 I/O port on the IGGY-AES16.16</td>
</tr>
<tr>
<td>Output Name</td>
<td>#</td>
<td>Each button represents an output that is configured and available for switching</td>
</tr>
<tr>
<td>Audio (read-only)</td>
<td>#</td>
<td>Indicates the network stream currently used by the specified output</td>
</tr>
<tr>
<td>Status (read-only)</td>
<td>OK (Green)</td>
<td>No errors are detected on this output</td>
</tr>
<tr>
<td></td>
<td>Alarm Suppressed (Green)</td>
<td>An alarm condition is present, but the alarm is disabled on the Advanced &gt; Alarms tab</td>
</tr>
<tr>
<td></td>
<td>Network Delay Not Compatible (Yellow)</td>
<td>The link offset selected by the user is smaller than the propagation delay of the network</td>
</tr>
<tr>
<td></td>
<td>Advertisement no longer available (Yellow)</td>
<td>The IGGY-AES16.16 cannot detect the advertised stream assigned to the destination</td>
</tr>
<tr>
<td></td>
<td>No packets received (Yellow)</td>
<td>The configured destination IP stream(s) is not receiving any packets; stream might not be on the network or experiencing other issues</td>
</tr>
<tr>
<td></td>
<td>System clock is in failure (Red)</td>
<td>The IGGY-AES16.16 is unable to re-obtain a stable clock source. Sessions cannot be created until this condition is fixed. It is recommended to navigate to the Advanced &gt; Timing &gt; PTP tab to check the status of the PTP and update the Configuration settings. Once PTP is locked again, the message clears.</td>
</tr>
<tr>
<td></td>
<td>Param Out of Range (Red)</td>
<td>A Destination was configured with an invalid setting</td>
</tr>
<tr>
<td></td>
<td>Not in Use (Gray)</td>
<td>This output is disabled</td>
</tr>
</tbody>
</table>
Stream Sources Area

The Stream Sources area is located on the bottom half of the Connections tab. From this area you can route any source signal to an output, monitor its status, and filter the stream available based on type.

Each button displayed here represents a configured network stream. You can filter what network streams are displayed using the Filter field (filtering according to the text entered in the field) or by selecting one of the Category buttons next to the Filter field.

![Figure 17.4 Connections Tab — Example of a Stream Sources Area](image)

* Once an output is selected, clicking a Stream Source button performs an immediate switch (a hot-punch).

Presets Tab

The options in the Presets tab enable you to create and manage the IP streams in your system. Advertised streams are those that the IGGY-AES16.16 automatically detects as defined by the RAVENNA protocol. You can also define a stream by manually populating the Transport IP, UDP Port, and #Ch fields for the audio signals.

Once a preset is defined, it is made available for use in the Connections tab.

<table>
<thead>
<tr>
<th>Item</th>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection (read-only)</td>
<td>Connection was successful</td>
<td>Indicates the connection status between the selected input and output</td>
</tr>
<tr>
<td></td>
<td>No connection information</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Error during connect</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Disconnected</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&lt;blank&gt;</td>
<td></td>
</tr>
<tr>
<td>Details</td>
<td>Open the Details dialog that provides more information about the state of the connection</td>
<td></td>
</tr>
</tbody>
</table>
Table 17.2 outlines the options displayed in the Presets tab starting from the left-most area of the tab.

**Table 17.2 Presets Tab**

<table>
<thead>
<tr>
<th>Item</th>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Configure Receiver Network Stream Presets</td>
<td></td>
<td></td>
</tr>
<tr>
<td>List</td>
<td>&lt;name&gt;</td>
<td>Reports the configured network stream presets for this IGGY-AES16.16</td>
</tr>
<tr>
<td>Add Preset</td>
<td></td>
<td>Enables you to configure a new stream preset</td>
</tr>
<tr>
<td>Remove Preset</td>
<td></td>
<td>Deletes the selected preset</td>
</tr>
<tr>
<td>Preset Category</td>
<td></td>
<td>Assigns the stream to a type of essence. This is useful when filtering the</td>
</tr>
<tr>
<td></td>
<td></td>
<td>streams on the Connections tab. The default is Audio.</td>
</tr>
<tr>
<td>Preset Name</td>
<td>&lt;text&gt;</td>
<td>Specifies a unique identifier for the group</td>
</tr>
<tr>
<td># Audio Streams</td>
<td>#</td>
<td>Specifies the maximum number of audio streams available in the selected</td>
</tr>
<tr>
<td></td>
<td></td>
<td>group. The default is 2.</td>
</tr>
<tr>
<td>Assign Manually</td>
<td>Selected</td>
<td>Enables you to manually enter the Transport IP, Port, and DSCP fields for</td>
</tr>
<tr>
<td></td>
<td></td>
<td>a specific session</td>
</tr>
<tr>
<td></td>
<td>Cleared</td>
<td>The Transport IP, Port, and DSCP fields are determined by the assigned</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Advertised Stream. This is the default.</td>
</tr>
<tr>
<td>Advertised Network Streams</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Audio #</td>
<td>None</td>
<td>Lists the discovered RAVENNA audio sessions. Select a session to auto-fill</td>
</tr>
<tr>
<td></td>
<td>#</td>
<td>the Audio fields.</td>
</tr>
<tr>
<td>Manually Configured Streams - Audio #</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stream Name</td>
<td>&lt;name&gt;</td>
<td>Assigns a unique identifier for the stream</td>
</tr>
</tbody>
</table>
Table 17.13 summarizes the fields that display when the button is selected at the end of a stream row.

<table>
<thead>
<tr>
<th>Item</th>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transport IP</td>
<td>#.#.#.#</td>
<td>Specifies the network socket for the video/audio data for the session. This value is auto-populated when you select an Advertised Stream.</td>
</tr>
<tr>
<td>UDP Port</td>
<td>#</td>
<td>Specifies the source port to connect to the advertised stream. This must match the source you are attempting to connect to. The default is 5004.</td>
</tr>
<tr>
<td>Protection Switching - Audio #</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stream Name</td>
<td>&lt;name&gt;</td>
<td>Assigns a unique identifier for the stream</td>
</tr>
<tr>
<td>Transport IP</td>
<td>#.#.#.#</td>
<td>Specifies the network socket for the video/audio data for the session. This value is auto-populated when you select an Advertised Stream.</td>
</tr>
<tr>
<td>UDP Port</td>
<td>#</td>
<td>Specifies the source port to connect to the advertised stream. This must match the source you are attempting to connect to.</td>
</tr>
<tr>
<td># Ch</td>
<td>#</td>
<td>Specifies the maximum number of audio channels in the audio stream</td>
</tr>
</tbody>
</table>

Audio Map

<table>
<thead>
<tr>
<th>Item</th>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Default Mapping</td>
<td>Selected</td>
<td>The channels in the target preset are populated in the order that the selected presets are listed</td>
</tr>
<tr>
<td></td>
<td>Cleared</td>
<td>Enables you to customize the audio map for the preset</td>
</tr>
<tr>
<td>Edit</td>
<td></td>
<td>Displays when the Default Mapping box is not selected. Click this button to update the Audio Map options and to customize the audio channel mapping for the preset. Refer to &quot;Mapping the Audio Channels to a Sender Stream&quot; on page 49 for more information.</td>
</tr>
</tbody>
</table>

Table 17.3 Presets Tab — Additional Options

<table>
<thead>
<tr>
<th>Item</th>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Codec</td>
<td>None</td>
<td>Specifies the audio over IP technical standard that the preset will use</td>
</tr>
<tr>
<td></td>
<td>AES67 (L16)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>AES67 (L24)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Audio and Control (AM824)</td>
<td></td>
</tr>
<tr>
<td>Media Clock Offset</td>
<td>#</td>
<td>Specifies an offset (in milliseconds) from the detected media clock timestamp</td>
</tr>
</tbody>
</table>

Audio Gain Tab

The Audio Gain tab provides options for adjusting the gain for individual channels or all channels. You can also choose to mute single channels or all channels.
Table 17.4 summarizes the options displayed in the Audio Gain tab.

<table>
<thead>
<tr>
<th>Item</th>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Channel # - AES # : Destination #</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gain (dB)</td>
<td>#</td>
<td>Adjusts the gain of the specified audio channel. The default is 0.</td>
</tr>
<tr>
<td>Mute</td>
<td></td>
<td>Mutes the specified channel</td>
</tr>
<tr>
<td>Control All</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reset All</td>
<td></td>
<td>Resets all audio channels to their default Gain value of 0.</td>
</tr>
<tr>
<td>Mute All</td>
<td></td>
<td>Mutes all channels</td>
</tr>
<tr>
<td>Unmute All</td>
<td></td>
<td>All channels are unmuted</td>
</tr>
</tbody>
</table>

Advanced Tabs

The Advanced sub-tabs expand the controls available in the Initial Setup tab.

Status Tab

The Status tab is organized into two sub-tabs: Device Status and AES3 Input Status.

Device Status Tab

The Device Status tab provides read-only hardware information, signal status, and general product information for your IGGY-AES16.16. The tab is organized into three distinct areas in the DashBoard window: Alarms Summary, Unsaved Changes, and Product.
Table 17.5 summarizes the read-only information displayed in the Alarms Summary area.

<table>
<thead>
<tr>
<th>Item</th>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AES3 Input Status</td>
<td></td>
<td>Reports the same information as the Advanced &gt; Status &gt; AES3 Inputs status fields</td>
</tr>
<tr>
<td>Ethernet I/O -&gt; Control RJ-45 Status</td>
<td></td>
<td>Reports the same information as the Advanced &gt; Ethernet I/O &gt; Control RJ-45 &gt; Link Status field</td>
</tr>
<tr>
<td>Ethernet I/O -&gt; NET Status</td>
<td></td>
<td>Reports the same information as the Advanced &gt; Senders &gt; Active Streams fields</td>
</tr>
<tr>
<td>Receivers -&gt; Status</td>
<td></td>
<td>Reports the same information as the individual alarms in the Receivers tab</td>
</tr>
<tr>
<td>Senders -&gt; Active Stream</td>
<td></td>
<td>Reports the same information as the Advanced &gt; Senders &gt; Active Streams fields</td>
</tr>
<tr>
<td>Timing -&gt; System Clock</td>
<td></td>
<td>Reports the status of the PTP Clock connection</td>
</tr>
</tbody>
</table>

Table 17.6 summarizes the read-only information displayed in the Unsaved Changes area.

<table>
<thead>
<tr>
<th>Item</th>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Device Setup Tab Changes</td>
<td></td>
<td>Reports if there are unsaved changes made to the Advanced &gt; Device Setup tab</td>
</tr>
<tr>
<td>Destinations Tab Changes</td>
<td></td>
<td>Reports if there are unsaved changes made to the Advanced &gt; Destinations tab</td>
</tr>
<tr>
<td>Senders -&gt; Setup Tab Changes</td>
<td></td>
<td>Reports if there are unsaved changes made to the Advanced &gt; Senders &gt; Setup Streams tab</td>
</tr>
<tr>
<td>Discovery Tab Changes</td>
<td></td>
<td>Reports if there are unsaved changes made to the Advanced &gt; Discovery tab</td>
</tr>
</tbody>
</table>
Table 17.6 Status Tab — Unsaved Changes

<table>
<thead>
<tr>
<th>Item</th>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Timing -&gt; PTP Tab</td>
<td></td>
<td>Reports if there are unsaved changes made to the Advanced &gt; Timing &gt; PTP tab</td>
</tr>
<tr>
<td>Changes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Timing -&gt; Outputs Tab</td>
<td></td>
<td>Reports if there are unsaved changes made to the Advanced &gt; Timing &gt; Outputs tab</td>
</tr>
<tr>
<td>Changes</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 17.7 summarizes the read-only information displayed in the Product area.

Table 17.7 Status Tab — Product

<table>
<thead>
<tr>
<th>Item</th>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product</td>
<td>IGGY-AES16.16</td>
<td>Indicates the product name of the hardware</td>
</tr>
<tr>
<td>Variant</td>
<td></td>
<td>Indicates the software marketing code</td>
</tr>
<tr>
<td>Supplier</td>
<td></td>
<td>Indicates the supplier/manufacturer of the module</td>
</tr>
<tr>
<td>Firmware Version</td>
<td>#</td>
<td>Indicates the firmware version running on the module</td>
</tr>
<tr>
<td>Firmware Date</td>
<td>#</td>
<td>Indicates the date the current firmware was loaded on to the module</td>
</tr>
<tr>
<td>FPGA Name</td>
<td>#.#</td>
<td>Indicates the FPGA build running on the module</td>
</tr>
<tr>
<td>FPGA Version</td>
<td>#</td>
<td>Indicates the FPGA version running on the module</td>
</tr>
<tr>
<td>Serial Number</td>
<td>#</td>
<td>Indicates the assigned serial number of the motherboard of the module</td>
</tr>
</tbody>
</table>

AES3 Input Status Tab

The AES3 Input Status tab reports read-only information on the status of the input signal detected on the AES3 I/O ports.

Figure 17.8 Example of the Advanced > Status > AES3 Input Status Tab
Table 17.8 summarizes the read-only information displayed in the AES3 Input Status tab.

**Table 17.8 AES3 Input Tab**

<table>
<thead>
<tr>
<th>Item</th>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AES3 Input Status - AES3 # - Channels #</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Input Locked</td>
<td>Green</td>
<td>A valid AES3 signal is detected and clocking is locked</td>
</tr>
<tr>
<td></td>
<td>Red</td>
<td>No AES3 signal is detected</td>
</tr>
<tr>
<td>Parity Error</td>
<td>Red</td>
<td>A parity error was detected. There are errors in the data transmission.</td>
</tr>
<tr>
<td></td>
<td>Gray</td>
<td>No parity errors are detected or no input signal is detected</td>
</tr>
<tr>
<td>Non-LPCM Detect</td>
<td>Red</td>
<td>Non-linear PCM audio or other non-audio bit stream is detected</td>
</tr>
<tr>
<td></td>
<td>Gray</td>
<td>A valid linear PCM audio signal is detected</td>
</tr>
<tr>
<td>Sampling Frequency</td>
<td># kHz</td>
<td>Detected sampling rate of the AES3 input</td>
</tr>
</tbody>
</table>

**Device Setup Tab**

The **Device Setup** tab provides settings such as Device Name, and DashBoard display settings.

**Table 17.9 Device Setup Tab**

<table>
<thead>
<tr>
<th>Item</th>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Device Settings</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Device Name</td>
<td>&lt;text&gt;</td>
<td>Specifies a unique identifier for this IGGY-AES16.16. This name is used to identify the streams the IGGY-AES16.16 is managing.</td>
</tr>
</tbody>
</table>
# Audio Packet Time

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 ms</td>
<td>Defines the amount of time that an IGGY-AES16.16 sender will buffer audio samples before it is packeted into an Ethernet frame. The default is 1ms. This impacts all connected audio streams. Applying a new Audio Packet Time automatically disconnects all audio streams. It is recommended to set the Audio Packet Time before configuring your audio streams.</td>
</tr>
</tbody>
</table>

> # μs

## Audio Sampling Frequency

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>44.1 kHz</td>
<td>Specifies the number of samples of audio carried per second. The default is 48 kHz.</td>
</tr>
<tr>
<td>48 kHz</td>
<td></td>
</tr>
</tbody>
</table>

## Audio Channel Count Mode

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>#</td>
<td>Specifies the number of audio channels to be configured within an IP-based stream. The default is 8.</td>
</tr>
</tbody>
</table>

## Default Codec Type

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AES67 (L16)</td>
<td>Specifies the AES67 standard that the IGGY-AES16.16 will default to for all IP-based streams. The default is AES67 (L24).</td>
</tr>
<tr>
<td>AES67 (L24)</td>
<td></td>
</tr>
</tbody>
</table>

## AES3 Sync Reference

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
</table>
| PTP, ASRC Bypassed | • ASRC is bypassed  
• Assumes AES3 input clock is already PTP locked |
| AES3 RX, ASRC Enabled | • ASRC is enabled  
• Select this for AES3 input signals that are not PTP locked |

## SMPTE ST 2110-30 Sender Payload Type

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>#</td>
<td>Specifies the 7-bit numeric value that identifies the RTP payload format the IGGY-AES16.16 supports. The default is 97.</td>
</tr>
</tbody>
</table>

## Auto Generate Sender Multicast

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Selected</td>
<td>Enables the IGGY-AES16.16 to automatically generate an IP Address for any stream when its IP Address field is set to 0.0.0.0. This is the default.</td>
</tr>
<tr>
<td>Cleared</td>
<td>An IP Address must be specified for each stream</td>
</tr>
</tbody>
</table>

## Identify LEDs

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Selected</td>
<td>The NET1 ACT, PTP LOCK, PTP Slv/Mst, and POWER LEDs will flash in two second intervals from red, to green, to blue, then remain purple until this box is cleared.</td>
</tr>
<tr>
<td>Cleared</td>
<td></td>
</tr>
</tbody>
</table>

### DashBoard Settings

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Selected</td>
<td>The Welcome tab does not display in the DashBoard window</td>
</tr>
<tr>
<td>Cleared</td>
<td>The Welcome tab displays in the DashBoard window</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Selected</td>
<td>The Initial Setup tab does not display in the DashBoard window</td>
</tr>
<tr>
<td>Cleared</td>
<td>The Initial Setup tab displays in the DashBoard window</td>
</tr>
</tbody>
</table>
Ethernet I/O Tab

Use the Ethernet I/O tab to configure the network settings for the NET 1, NET 2, and CONTROL ports on the IGGY-AES16.16.

**Table 17.9 Device Setup Tab**

<table>
<thead>
<tr>
<th>Item</th>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enable Beta Features</td>
<td>Selected</td>
<td>Contact Ross Technical Support for more information on enabling this option</td>
</tr>
<tr>
<td></td>
<td>Cleared</td>
<td></td>
</tr>
<tr>
<td>Transport Options</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SMPTE ST 2022-7 / Seamless Protection Switching</td>
<td>Selected</td>
<td>• Allows the user to turn on/off the Redundant Streams feature (both sending and receiving).</td>
</tr>
<tr>
<td></td>
<td>Cleared</td>
<td>• When off, the user specifies the NET port to output the stream.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• When receiving with this option off, the IGGY-AES16.16 will receive a stream that is redundant on NET 1 only. If the stream is not redundant, it will receive the stream on the network that the stream is on (NET 1 or NET 2).</td>
</tr>
</tbody>
</table>

**Network Setup Area**

*Table 17.10* summarizes the fields and menus displayed for configuring the network settings of the CONTROL and NET ports.

* Each port is configured independently.
Status Area

Table 17.10 summarizes the read-only fields displayed for each NET port.

<table>
<thead>
<tr>
<th>Item</th>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Link Status (read-only)</td>
<td>OK (Green)</td>
<td>The link for the specified port is valid</td>
</tr>
<tr>
<td>Alarm suppressed (Green)</td>
<td></td>
<td>The Link Status alarm is disabled in the Device Status tab.</td>
</tr>
<tr>
<td>Link Down (Red)</td>
<td></td>
<td>The link for the specified port is invalid (fails)</td>
</tr>
<tr>
<td>Current IP (read-only)</td>
<td>#</td>
<td>Indicates the IP Address currently assigned to the IGGY-AES16.16 for the specified port</td>
</tr>
<tr>
<td>MAC Address (read-only)</td>
<td>#</td>
<td>Indicates the MAC Address currently assigned to the IGGY-AES16.16 for the specified port</td>
</tr>
<tr>
<td>Mode</td>
<td>Static</td>
<td>The user manually supplies the network settings for the specified port</td>
</tr>
<tr>
<td></td>
<td>DHCP</td>
<td>Automates the assignment of the network settings for the specified port</td>
</tr>
<tr>
<td>Static IP Address</td>
<td>#</td>
<td>Specifies the static IP Address for the IGGY-AES16.16 when the user wants to manually assign to the specified port</td>
</tr>
<tr>
<td>Subnet Mask</td>
<td>#</td>
<td>The subnet mask for the specified port</td>
</tr>
<tr>
<td>Gateway</td>
<td>#</td>
<td>The gateway for communications outside of the local area network (LAN)</td>
</tr>
</tbody>
</table>

Table 17.10 Ethernet I/O — Network Setup

Receivers Tab

The Receivers tab provides details on each of the IP receivers (NET ports) of the IGGY-AES16.16. There are two sub-tabs: Status, and X-Connect.

Status

At the top of the Status interface there is a read-only field for each configured NET port on the IGGY-AES16.16. These fields report the expected bandwidth allocated by the Receiver NET port.

Table 17.11 summarizes the read-only fields displayed for each NET port.

<table>
<thead>
<tr>
<th>Item</th>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rx Bandwidth Used</td>
<td>#</td>
<td>Reports the amount of data the IGGY-AES16.16 is currently receiving on the specified NET port</td>
</tr>
<tr>
<td>Tx Bandwidth Used</td>
<td>#</td>
<td>Reports the amount of data the IGGY-AES16.16 is currently transmitting on the specified NET port</td>
</tr>
</tbody>
</table>

Figure 17.11 Receivers Tab — Example of the NET Bandwidth Bars

If the bandwidth bar is green, the expected allocated bandwidth is below 100%.
The bottom half of the Status interface displays a row for each AES3 Receiver stream.

**Table 17.12** outlines the read-only fields and menus available to configure the receiver settings for the AES3 signals.

<table>
<thead>
<tr>
<th>Item</th>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Status (read-only)</td>
<td>OK (Green)</td>
<td>No errors are detected on this AES3 connection</td>
</tr>
<tr>
<td>Apply Changes (Yellow)</td>
<td></td>
<td>This receiver has unsaved settings. Click <strong>Apply</strong> at the bottom of the tab to save your settings.</td>
</tr>
<tr>
<td>Network Delay Not Compatible (Yellow)</td>
<td></td>
<td>The link offset selected by the user is smaller than the propagation delay of the network</td>
</tr>
<tr>
<td>No packets received (Yellow)</td>
<td></td>
<td>The configured receiver IP stream(s) is not receiving any packets; stream might not be on the network or experiencing other issues</td>
</tr>
<tr>
<td>Param Out of Range (Red)</td>
<td></td>
<td>Two receivers with the same network stream were created. IGGY-AES16.16 can only subscribe to a stream once.</td>
</tr>
<tr>
<td>System clock is in failure (Red)</td>
<td></td>
<td>The IGGY-AES16.16 is unable to re-obtain a stable clock source. Sessions cannot be created until this condition is fixed. It is recommended to navigate to the Timing &gt; PTP tab to check the status of the PTP and update the Configuration settings. Once PTP is locked again, the Network Groups will need to be disconnected and then re-connected to clear the alarm.</td>
</tr>
<tr>
<td>Not In Use (Gray)</td>
<td></td>
<td>The receiver is not configured</td>
</tr>
<tr>
<td>Name</td>
<td>&lt;text&gt;</td>
<td>Assigns an unique identifier to the receiver stream</td>
</tr>
<tr>
<td>Disconnect</td>
<td></td>
<td>Stops that session and the Receiver outputs silence</td>
</tr>
</tbody>
</table>

**Table 17.13** summarizes the read-only information that displays when the ✓ button is selected at the end of a row.

<table>
<thead>
<tr>
<th>Item</th>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audio #</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Status</td>
<td>OK (Green)</td>
<td>No errors are detected on the audio signal</td>
</tr>
<tr>
<td>No Active Sessions</td>
<td></td>
<td>The AES3 output is not configured and a network stream is not assigned to it</td>
</tr>
<tr>
<td>Source Name</td>
<td>xx.yy.audio#</td>
<td>The source name is determined by the stream that is connected</td>
</tr>
<tr>
<td>Transport IP</td>
<td>#.#.#.#</td>
<td>Specifies the IP Address for the audio stream</td>
</tr>
<tr>
<td>Port</td>
<td>#</td>
<td>Indicates the port associated with the IP address</td>
</tr>
</tbody>
</table>

Table 17.12 Receivers Tab — Configuration Area

Table 17.13 Receivers Tab — Additional Status
Destinations Tab

The Destinations tab is organized into two areas: Destinations Setup and Channel Mapping. Table 17.14 outlines the options in the Destinations tab.

### Table 17.14 Destinations Tab

<table>
<thead>
<tr>
<th>Item</th>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Channels Per Destination</td>
<td>#</td>
<td>Assigns the specified number of channels to each Destination</td>
</tr>
<tr>
<td>Number of Destinations</td>
<td>#</td>
<td>Reports the maximum number of AES3 destination streams the IGGY-AES16.16 supports</td>
</tr>
<tr>
<td>AES #</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enable</td>
<td>Selected</td>
<td>The specified AES3 stream is enabled and available for configuration</td>
</tr>
<tr>
<td></td>
<td>Cleared</td>
<td>The specified AES3 stream is disabled and unavailable for use</td>
</tr>
<tr>
<td>Destination Name</td>
<td>&lt;text&gt;</td>
<td>Assigns a unique identifier to the AES3 stream. This name is used on the Connections tab</td>
</tr>
<tr>
<td># of Channels</td>
<td>#</td>
<td>Specifies the maximum number of audio channels for the AES3 stream</td>
</tr>
</tbody>
</table>

Senders Tab

The Senders tab is organized into two sub-tabs: Setup Streams and Active Streams. The Setup Streams tab provides options for configuring the senders for each NET port of the IGGY-AES16.16.

Active Streams Tab

The Active Streams provides monitoring options and read-only status fields for the connected audio streams.
Table 17.15 outlines the read-only fields in the Active Streams tab.

**Table 17.15 Senders Tab — Active Streams**

<table>
<thead>
<tr>
<th>Item</th>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Audio Streams</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Status</td>
<td>OK (Green)</td>
<td>The sender streams are operating correctly without errors</td>
</tr>
<tr>
<td></td>
<td>Paused (Green)</td>
<td>Sender stream is paused and not sending data</td>
</tr>
<tr>
<td></td>
<td>Alarm Suppressed (Green)</td>
<td>An alarm condition is present, but the alarm is disabled on the Alarm Enable tab</td>
</tr>
<tr>
<td></td>
<td>System Clock in Failure (Red)</td>
<td>The IGGY-AES16.16 is unable to obtain a stable clock source. Sessions cannot be created until this condition is fixed. It is recommended to navigate to the Advanced &gt; Timing &gt; PTP tab to check the status of the PTP and update the Configuration settings.</td>
</tr>
<tr>
<td>Transport IP</td>
<td>#.#.#.#</td>
<td>Indicates the IP Address for the audio session</td>
</tr>
<tr>
<td>UDP Port</td>
<td>#</td>
<td>Indicates the port associated with the IP address and the communication protocol for the audio essence</td>
</tr>
<tr>
<td><strong>Protection Switching</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transport IP</td>
<td>#.#.#.#</td>
<td>Indicates the IP Address for the audio session assigned to Protection Switching</td>
</tr>
<tr>
<td>UDP Port</td>
<td>#</td>
<td>Indicates the port associated with the IP address and the communication protocol for the audio essence assigned to Protection Switching</td>
</tr>
</tbody>
</table>

a. Applicable only if SMPTE ST 20200-7 / Seamless Protection Switching is enabled.
Setup Streams Tab

The Setup Sender Stream area provides options for enabling, re-naming, selecting the source, and the communication settings for each NET port.

Table 17.16 outlines the options in the Setup Streams tab.

<table>
<thead>
<tr>
<th>Item</th>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Add Stream</td>
<td></td>
<td>Enables you to configure a new stream</td>
</tr>
<tr>
<td>Remove Stream</td>
<td></td>
<td>Deletes the selected stream</td>
</tr>
<tr>
<td><strong>Setup Sender Streams</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Connection Status</td>
<td>Active (Green)</td>
<td>Sender stream is active</td>
</tr>
<tr>
<td></td>
<td>Error (Red)</td>
<td>Reports a specific error condition that is occurring</td>
</tr>
<tr>
<td></td>
<td>Not Applied (Gray)</td>
<td>Stream was added but not yet assigned</td>
</tr>
<tr>
<td>Source Name</td>
<td>&lt;text&gt;</td>
<td>Provides a unique identifier for the stream. This name is used to identify the data within your network.</td>
</tr>
<tr>
<td>Codec</td>
<td>#</td>
<td>Specifies the transmission standard the network stream will use</td>
</tr>
<tr>
<td><strong>Primary Stream</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transport IP</td>
<td>.#.#.#</td>
<td>Specifies the IP Address for the audio essence</td>
</tr>
<tr>
<td>UDP Port</td>
<td>#</td>
<td>Specifies the port associated with the IP address and the communication protocol for the audio essence</td>
</tr>
<tr>
<td><strong>Protection Switching</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transport IP</td>
<td>#</td>
<td>Specifies the IP Address for the redundant audio essence</td>
</tr>
<tr>
<td>UDP Port</td>
<td>#</td>
<td>Specifies the port associated with the IP address and the communication protocol for the redundant audio essence</td>
</tr>
<tr>
<td><strong>Auto Create Audio Source</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Set Default Audio</td>
<td></td>
<td>Click this button to automatically assign the first available consecutive AES3 channels (based on the Audio Channel Count Mode value) to the target stream</td>
</tr>
<tr>
<td><strong>Channel Map</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AES3 Channels</td>
<td>#</td>
<td>Use this area to select the audio channels available from each configured AES3 stream</td>
</tr>
<tr>
<td>Target</td>
<td>1-#</td>
<td>Use this area to assign the selected AES3 channels to the session you are configuring</td>
</tr>
</tbody>
</table>

*Applicable only if SMPTE ST 20200-7 / Seamless Protection Switching is enabled.*

Discovery Tab

The Discovery tab provides options for configuring communications via the supported transport protocols.
Table 17.17 summarizes the options displayed in the Discovery tab.

<table>
<thead>
<tr>
<th>Item</th>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RAVENNA</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Board Name</td>
<td>&lt;text&gt;</td>
<td>Assigns a unique identifier for the IGGY-AES16.16 when communicating with RAVENNA-based devices. The default name is <code>IGGY_AES16_#</code> where # represents the serial number.</td>
</tr>
<tr>
<td>Use System Device Name</td>
<td></td>
<td>Applies the same identifier as provided by the master RAVENNA device</td>
</tr>
<tr>
<td>Interface</td>
<td>Control RJ-45</td>
<td>The IGGY-AES16.16 uses its CONTROL port for RAVENNA communications</td>
</tr>
<tr>
<td>NET #</td>
<td></td>
<td>The IGGY-AES16.16 uses the specified NET port on the IGGY-AES16.16 for RAVENNA communications</td>
</tr>
<tr>
<td>All</td>
<td></td>
<td>The IGGY-AES16.16 accepts RAVENNA requests via the CONTROL and all NET ports</td>
</tr>
<tr>
<td>Port</td>
<td>#</td>
<td>Specifies the communications port on the network that the IGGY-AES16.16 uses for RAVENNA communications. The default is 80.</td>
</tr>
<tr>
<td><strong>RTSP</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interface</td>
<td>Control RJ-45</td>
<td>The IGGY-AES16.16 uses its CONTROL port for RTSP communications</td>
</tr>
<tr>
<td>NET #</td>
<td></td>
<td>The IGGY-AES16.16 uses the specified physical NET port for RTSP communications</td>
</tr>
<tr>
<td>All</td>
<td></td>
<td>The IGGY-AES16.16 accepts RTSP requests via the CONTROL and all NET ports</td>
</tr>
</tbody>
</table>
Timing Tab

The system timing options for the IGGY-AES16.16 are organized into the following sub-tabs displayed on the left pane of the Timing tab: PTP and Outputs.

<table>
<thead>
<tr>
<th>Item</th>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Port</td>
<td>#</td>
<td>Specifies the TCP port the protocol uses to send and receive messages. The default is 8554.</td>
</tr>
<tr>
<td>Ember+ Port</td>
<td>#</td>
<td>Specifies the communications port on the network that the IGGY-AES16.16 uses for Ember+ communications. The default is 9095.</td>
</tr>
<tr>
<td>SAP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enable</td>
<td>Selected</td>
<td>The IGGY-AES16.16 will use the Session Announcement Protocol (SAP) to broadcast multicast session information.</td>
</tr>
<tr>
<td></td>
<td>Cleared</td>
<td>Disables this feature</td>
</tr>
<tr>
<td>SLP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enable</td>
<td>Selected</td>
<td>Select if the IGGY-AES16.16 will use the open SLP protocol to locate other devices on the same network it is connected to.</td>
</tr>
<tr>
<td></td>
<td>Cleared</td>
<td>Disables this feature</td>
</tr>
<tr>
<td>Walkabout</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enable</td>
<td>Selected</td>
<td>Enables the Walkabout feature of DashBoard to detect the IGGY-AES16.16 on the network</td>
</tr>
<tr>
<td></td>
<td>Cleared</td>
<td>Disables this feature</td>
</tr>
</tbody>
</table>

Figure 17.14 Example of the Advanced > Timing > PTP Tab
PTP Tab

Use the PTP tab to configure the PTP client settings for the IGGY-AES16.16. This is also where the IGGY-AES16.16 displays an active Grandmaster.

Table 17.18 summarizes the options displayed in the PTP tab.

<table>
<thead>
<tr>
<th>Item</th>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Configuration</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Slave Only</td>
<td>Selected</td>
<td>Defines the IGGY-AES16.16 as a slave only device in the system; the module cannot be used as a Grandmaster or Master device</td>
</tr>
<tr>
<td></td>
<td>Cleared</td>
<td>Enables the IGGY-AES16.16 to be used as a Grandmaster or Master device</td>
</tr>
<tr>
<td><strong>Profile</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IEEE 1588 Default</td>
<td></td>
<td>Timing is defined by the IEEE1588 standard</td>
</tr>
<tr>
<td>AES67 Media</td>
<td></td>
<td>Timing is defined by the AES67 Media standard</td>
</tr>
<tr>
<td>SMPTE ST 2059-2</td>
<td></td>
<td>Timing is defined by the SMPTE ST 2059-2 standard. This is the recommended setting.</td>
</tr>
<tr>
<td><strong>Custom PTP Profile</strong></td>
<td>Selected</td>
<td>The Domain, Priority1, Priority2, Role status, Sync Interval, Announce Interval and Announce Receipt Timeout fields can be edited to create a custom PTP profile</td>
</tr>
<tr>
<td></td>
<td>Cleared</td>
<td>The current settings in the Domain, Priority1, Priority2, Role status, Sync Interval, Announce Interval and Announce Receipt Timeout fields are set to read-only and are controlled by the PTP profile selected.</td>
</tr>
<tr>
<td><strong>Domain</strong></td>
<td>#</td>
<td>Specifies that the IGGY-AES16.16 is within the specified group of clocks in your network</td>
</tr>
<tr>
<td><strong>Priority1</strong></td>
<td>#</td>
<td>Assigns the first priority level to the IGGY-AES16.16 during a Grandmaster election where a value of:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• 1 is the highest priority</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• 255 is the lowest priority</td>
</tr>
<tr>
<td></td>
<td></td>
<td>This menu is applicable when the Slave Only box is not selected</td>
</tr>
<tr>
<td><strong>Priority2</strong></td>
<td>#</td>
<td>Assigns the secondary priority level to the IGGY-AES16.16 during a Grandmaster election where a value of:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• 1 is the highest priority</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• 255 is the lowest priority</td>
</tr>
<tr>
<td></td>
<td></td>
<td>This menu is applicable when the Slave Only box is not selected</td>
</tr>
<tr>
<td><strong>NET #</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Role Status</td>
<td>Master</td>
<td>Indicates the role that the specified port is assigned to in the network system</td>
</tr>
<tr>
<td></td>
<td>Listening</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Slave</td>
<td></td>
</tr>
</tbody>
</table>
The Outputs tab automatically displays in the DashBoard window. The Outputs tab enables you to adjust the timing of the AES3 output.

Table 17.19 summarizes the options displayed in the Outputs tab.

<table>
<thead>
<tr>
<th>Item</th>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sync Interval</td>
<td>#</td>
<td>Specifies how often the NET port on the IGGY-AES16.16 sends Sync messages</td>
</tr>
<tr>
<td>Announce Interval</td>
<td>#</td>
<td>Specifies how often the NET port on the IGGY-AES16.16 sends Announce messages</td>
</tr>
<tr>
<td>Announce Receipt Timeout</td>
<td>#</td>
<td>Controls how long the NET port on the IGGY-AES16.16 will wait before declaring the Grandmaster absent and initiating a new election</td>
</tr>
<tr>
<td>Status (read-only)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current Reference</td>
<td>PTP SLAVE</td>
<td>Specifies that the IGGY-AES16.16 is a Slave; using that system clock as the reference</td>
</tr>
<tr>
<td></td>
<td>INTERNAL OSCILLATOR</td>
<td>Specifies that the IGGY-AES16.16 is a Master; using that system clock as the reference</td>
</tr>
<tr>
<td>System Status</td>
<td>Locked</td>
<td>Status of PTP on the system</td>
</tr>
<tr>
<td></td>
<td>Free run</td>
<td></td>
</tr>
<tr>
<td>Interface Status</td>
<td>Locked</td>
<td>Status of PTP on the interface</td>
</tr>
<tr>
<td></td>
<td>Acquiring</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Failed</td>
<td></td>
</tr>
<tr>
<td>Local (read-only)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Local ID</td>
<td>#</td>
<td>Reports the ID number assigned to the IGGY-AES16.16 within the system</td>
</tr>
<tr>
<td>Mean Path Delay (ns)</td>
<td>#</td>
<td>Average time in nanoseconds it takes a packet to traverse end to end from the PTP master</td>
</tr>
<tr>
<td>Offset From Master (ns)</td>
<td>#</td>
<td>Correction time offset from the master in nanoseconds</td>
</tr>
<tr>
<td>Min Delay Request Interval</td>
<td>#</td>
<td>Specifies how long the IGGY-AES16.16 will wait for a delay request</td>
</tr>
<tr>
<td>Grandmaster</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grandmaster ID</td>
<td>#</td>
<td>Reports the ID number assigned to the Grandmaster within the system</td>
</tr>
<tr>
<td>Priority1</td>
<td>#</td>
<td>Standard PTP fields used to determine who wins a PTP election</td>
</tr>
<tr>
<td>Priority2</td>
<td>#</td>
<td></td>
</tr>
<tr>
<td>Clock Accuracy</td>
<td>#</td>
<td>Standard PTP field that states the accuracy of the system clock on the system</td>
</tr>
<tr>
<td>Clock Class</td>
<td>#</td>
<td>Standard PTP field that states the class of the clock used on the system</td>
</tr>
</tbody>
</table>
Alarms Tab

The **Alarms** tab enables you to manage the type of alarms the IGGY-AES16.16 reports.

All alarms are enabled by default.

---

**Table 17.19 Timing Tab — Outputs**

<table>
<thead>
<tr>
<th>Item</th>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Default Delay</td>
<td>Selected</td>
<td>The default for audio delay changes based on the audio packet time set on the device:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• If the audio packet time is 1000µs, the default audio delay is 20000µs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• If the audio packet time is 125µs, the default audio delay is 2000µs</td>
</tr>
<tr>
<td></td>
<td>Cleared</td>
<td>IGGY-AES16.16 applies the Default Delay and Audio Offset settings in the Outputs tab for the specified signal. This is the default.</td>
</tr>
<tr>
<td>Audio Offset (µs)</td>
<td>#</td>
<td>Changes the link offset values (in microseconds) used when a receiver is setup</td>
</tr>
<tr>
<td>Audio Delay</td>
<td>#</td>
<td>Reports the audio output delay relative to the selected reference. This is read-only when the Default Delay box is selected.</td>
</tr>
</tbody>
</table>
Table 17.20 summarizes the options displayed in the Alarms tab.

<table>
<thead>
<tr>
<th>Item</th>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AES3 Input Status - #/#</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Input Locked</td>
<td>Selected</td>
<td>Monitors AES input signal and detects if it is locked</td>
</tr>
<tr>
<td></td>
<td>Cleared</td>
<td>Disables monitoring of AES input lock status</td>
</tr>
<tr>
<td>Parity Error</td>
<td>Selected</td>
<td>Monitors the AES input signal for errors in data transmission</td>
</tr>
<tr>
<td></td>
<td>Cleared</td>
<td>Disables monitoring of parity errors</td>
</tr>
<tr>
<td>Non-PCM Detect</td>
<td>Selected</td>
<td>Monitors inputs for non-PCM data such as Dolby® Digital and Dolby® E</td>
</tr>
<tr>
<td></td>
<td>Cleared</td>
<td>Disables monitoring of non-PCM data</td>
</tr>
<tr>
<td><strong>Receiver Streams - AES #</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Audio Stream</td>
<td>Selected</td>
<td>Enables the monitoring of the audio stream. The status is reported in the</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Destinations area of the Connections tab</td>
</tr>
<tr>
<td></td>
<td>Cleared</td>
<td>Disables monitoring of this stream</td>
</tr>
<tr>
<td><strong>Sender Streams — Primary, Protection Switching</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Audio Stream</td>
<td>Selected</td>
<td>The Advanced &gt; Senders &gt; Active Streams tab monitors the configured audio</td>
</tr>
<tr>
<td></td>
<td></td>
<td>streams of the IGGY-AES16.16</td>
</tr>
<tr>
<td></td>
<td>Cleared</td>
<td>Disables monitoring of the sender audio stream(s)</td>
</tr>
<tr>
<td><strong>Sender Setup - Status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Connection</td>
<td>Selected</td>
<td>Changes made to the Advanced &gt; Senders &gt; Setup Streams tab are reported in</td>
</tr>
<tr>
<td></td>
<td></td>
<td>the Advanced &gt; Status &gt; Device tab</td>
</tr>
<tr>
<td></td>
<td>Cleared</td>
<td>Disables monitoring of the menus on the Advanced &gt; Senders tab. The Senders</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Status and Changes field in the Advanced &gt; Device tab does not report any</td>
</tr>
<tr>
<td></td>
<td></td>
<td>issues</td>
</tr>
<tr>
<td><strong>Ethernet I/O - Control RJ-45</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Link Status</td>
<td>Selected</td>
<td>Enables the monitoring of the IGGY-AES16.16 and your facility network.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>If a link is not detected, an error message displays in the Ethernet &gt; Link</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Status</td>
</tr>
<tr>
<td></td>
<td>Cleared</td>
<td>Disables monitoring of the communications between the IGGY-AES16.16 and</td>
</tr>
<tr>
<td></td>
<td></td>
<td>your facility network</td>
</tr>
<tr>
<td><strong>Ethernet I/O - NET #</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Link Status</td>
<td>Selected</td>
<td>The corresponding field in the Advanced &gt; Ethernet I/O tab reports when a</td>
</tr>
<tr>
<td></td>
<td></td>
<td>link is not detected</td>
</tr>
<tr>
<td></td>
<td>Cleared</td>
<td>Disables monitoring of the link status of the specified NET port</td>
</tr>
</tbody>
</table>
Logs Tab
The Logs tab is organized into two sub-tabs: System Log and Captures.

System Log Tab
The System Log tab provides a system log interface that reports tasks, messages, and other operating information in a table format. This is useful when troubleshooting with the help of Ross Technical Support.

Captures Tab
The Captures tab displays a list of log entries that were captured.

Table 17.21 summarizes the options displayed in the Captures tab.

<table>
<thead>
<tr>
<th>Item</th>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PTP Status - System and Interface Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PTP Clock</td>
<td>Selected</td>
<td>The System Clock Status field reports when the connection to the PTP clock is lost</td>
</tr>
<tr>
<td></td>
<td>Cleared</td>
<td>Disables monitoring of the PTP Clock status</td>
</tr>
</tbody>
</table>

Table 17.21 Logs Tab — Captures

<table>
<thead>
<tr>
<th>Item</th>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>&lt;text&gt;</td>
<td>Lists the recent debug, core, and PCAP files currently available for download. Select the Refresh button in the top right corner to update the list.</td>
</tr>
<tr>
<td>Size (bytes)</td>
<td>#</td>
<td>Indicates the size of the file</td>
</tr>
<tr>
<td>Request Debug</td>
<td></td>
<td>Creates a file that captures the log entries and device status information of the IGGY-AES16.16</td>
</tr>
<tr>
<td>Duration [s]</td>
<td>#</td>
<td>Specifies the length of time (in seconds) to perform a packet capture (PCAP)</td>
</tr>
<tr>
<td>Packet Capture</td>
<td></td>
<td>Captures a PCAP file on the port specified in the Interface menu</td>
</tr>
<tr>
<td>Interface</td>
<td>eth0</td>
<td>Captures a PCAP file for the CONTROL port of the IGGY-AES16.16</td>
</tr>
<tr>
<td></td>
<td>eth1</td>
<td>Captures a PCAP file for the NET 1 port of the IGGY-AES16.16</td>
</tr>
<tr>
<td></td>
<td>eth2</td>
<td>Captures a PCAP file for the NET 2 port of the IGGY-AES16.16</td>
</tr>
</tbody>
</table>
Technical Specifications

This chapter provides technical information for IGGY-AES16.16.
* Specifications are subject to change without notice.

**CONTROL Port**

<table>
<thead>
<tr>
<th>Item</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of CONTROL Ports</td>
<td>1</td>
</tr>
<tr>
<td>Standards Accommodated</td>
<td>100/1000BASE-T</td>
</tr>
<tr>
<td>Connector Type</td>
<td>Locking GigE XLR RJ45</td>
</tr>
</tbody>
</table>

**NET 1 and NET 2 Ports**

<table>
<thead>
<tr>
<th>Item</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of NET Ports</td>
<td>2</td>
</tr>
<tr>
<td>Standards Accommodated</td>
<td>100/1000BASE-T</td>
</tr>
<tr>
<td></td>
<td>NET 1 port only: 802.3af (802.3at Type 1) Power Over Ethernet</td>
</tr>
<tr>
<td>Connector Type</td>
<td>Locking GigE XLR RJ45</td>
</tr>
</tbody>
</table>

**Reference Clock**

<table>
<thead>
<tr>
<th>Item</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input</td>
<td></td>
</tr>
<tr>
<td>Termination Options</td>
<td>75ohm or HiZ</td>
</tr>
<tr>
<td>Input Voltage</td>
<td>5V TTL compatible</td>
</tr>
<tr>
<td>Frequency</td>
<td>44.1kHz or 48kHz (selectable)</td>
</tr>
<tr>
<td>Connector Type</td>
<td>DC Coupled</td>
</tr>
<tr>
<td></td>
<td>75ohm BNC</td>
</tr>
<tr>
<td>Output</td>
<td></td>
</tr>
<tr>
<td>Output Voltage</td>
<td>5V TTL compatible output, 3.8V max.</td>
</tr>
<tr>
<td>Frequency</td>
<td>44.1kHz or 48kHz (selectable)</td>
</tr>
<tr>
<td>Connector Type</td>
<td>DC Coupled</td>
</tr>
<tr>
<td></td>
<td>75ohm BNC</td>
</tr>
</tbody>
</table>
Power

Table 18.4 Technical Specifications — Power

<table>
<thead>
<tr>
<th>Item</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>NET 1 Port only</td>
<td>37V to 57V</td>
</tr>
<tr>
<td>PoE 802.3af (802.3at Type)</td>
<td>750mA max.</td>
</tr>
<tr>
<td>Wall Adapter</td>
<td>15V</td>
</tr>
<tr>
<td></td>
<td>560mA max.</td>
</tr>
<tr>
<td>Maximum Power</td>
<td>8.4W</td>
</tr>
</tbody>
</table>

Environment

Table 18.5 Technical Specifications — Environment

<table>
<thead>
<tr>
<th>Item</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Ambient Temperature</td>
<td>40°C (104°F)</td>
</tr>
</tbody>
</table>

Dimensions

Table 18.6 Technical Specifications — Dimensions

<table>
<thead>
<tr>
<th>Item</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Dimensions</td>
<td>5.74” x 6.70” x 1.63”</td>
</tr>
<tr>
<td></td>
<td>(14.60cm x 17.1cm x 4.15cm)</td>
</tr>
<tr>
<td>Weight</td>
<td>2.20lb (998g)</td>
</tr>
</tbody>
</table>
Service Information

This chapter provides information on the warranty and repair policy for your IGGY-AES16.16.

Troubleshooting Checklist

Routine maintenance to this Ross product is not required. In the event of problems with your IGGY-AES16.16, the following basic troubleshooting checklist may help identify the source of the problem. If the IGGY-AES16.16 still does not appear to be working properly after checking all possible causes, please contact your Ross products distributor, or the Technical Support department at the numbers listed under the “Contacting Technical Support” on page 12.

1. Visual Review — Performing a quick visual check may reveal many problems, such as connectors not properly seated or loose cables. Check the IGGY-AES16.16 and any associated peripheral equipment for signs of trouble.

2. Power Check — Verify the PWR LED on the IGGY-AES16.16 for the presence of power. If the PWR LED is not illuminated, verify that the power cable is connected to a power source and that power is available at the power main. If the PWR LED is still not illuminated, replace the power supply with one that is verified to work.

3. Input Signal Status — Verify that source equipment is operating correctly and that a valid signal is supplied.

4. Output Signal Path — Verify that destination equipment is operating correctly and receiving a valid signal.

5. Module Exchange — Exchanging a suspect module with a module that is known to be working correctly is an efficient method for localizing problems to individual modules.

6. Re-load the Factory Defaults — If the module appears to be working and reports no errors, but is not generating the required audio outputs, restoring the default factory configuration may fix the problem.

Warranty and Repair Policy

The IGGY-AES16.16 is warranted to be free of any defect with respect to performance, quality, reliability, and workmanship for a period of ONE (1) year from the date of delivery to the customer. In the event that your IGGY-AES16.16 proves to be defective in any way during this warranty period, Ross Video Limited reserves the right to repair or replace this piece of equipment with a unit of equal or superior performance characteristics.

Should you find that this IGGY-AES16.16 has failed after your warranty period has expired, we will repair your defective product should suitable replacement components be available. You, the owner, will bear any labor and/or part costs incurred in the repair or refurbishment of said equipment beyond the ONE (1) year warranty period.

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This IGGY-AES16.16 User Guide provides all pertinent information for the safe installation and operation of your IGGY-AES16.16. Ross Video policy dictates that all repairs to the IGGY-AES16.16 are to be conducted only by an authorized Ross Video Limited factory representative. Therefore, any unauthorized attempt to repair this product, by anyone other than an authorized Ross Video Limited factory representative, will automatically void the warranty. Please contact Ross Video Technical Support for more information.

In Case of Problems

Should any problem arise with your IGGY-AES16.16, please contact the Ross Video Technical Support Department. (Contact information is supplied at in the section “Contacting Technical Support” on page 12.)

A Return Material Authorization number (RMA) will be issued to you, as well as specific shipping instructions, should you wish our factory to repair your IGGY-AES16.16. If required, a temporary replacement will be made.
available at a nominal charge. Any shipping costs incurred will be the responsibility of you, the customer. All products shipped to you from Ross Video Limited will be shipped collect.

The Ross Video Technical Support Department will continue to provide advice on any product manufactured by Ross Video Limited, beyond the warranty period without charge, for the life of the equipment.
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zlib

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The data format used by the zlib library is described by RFCs (Request for Comments) 1950 to 1952 in the files ftp://ds.internic.net/rfc/rfc1950.txt (zlib format), rfc1951.txt (deflate format) and rfc1952.txt (gzip format).
Glossary

The following terms are used throughout this guide:

**ASRC** — Asynchronous Sample Rate Converter

**BMCA** — Best Master Clock Algorithm

**DashBoard** — DashBoard Control System

**Device** — A physical, virtual, or software application that may include multiple sources, destinations, senders, or receivers.

**Essence** — A single elementary logical media signal. For example, a video essence is one video channel. An audio essence is a single audio (mono) channel.

**Flow** — The continuous raw media content. It can contain more than one essence (e.g. an audio flow can contain multiple channels, and an SDI flow may contain audio and video essences).

**GPIO** — General Purpose Input/Output

**HTTP** — Hypertext Transfer Protocol

**Module** — Refers to the IGGY-AES16.16.

**PTP** — Precision Time Protocol

**Receiver** — An element within a device which that receives exactly one stream, which contains one flow from a network

**Sender** — An element within a device which presents exactly one flow, packaged as a stream onto a network

**Stream** — One flow, encapsulated within a transport protocol

**System** — The mix of interconnected production and terminal equipment in your environment

**TCP** — Transmission Control Protocol

**TTL** — Time To Live

**UDP** — User Datagram Protocol