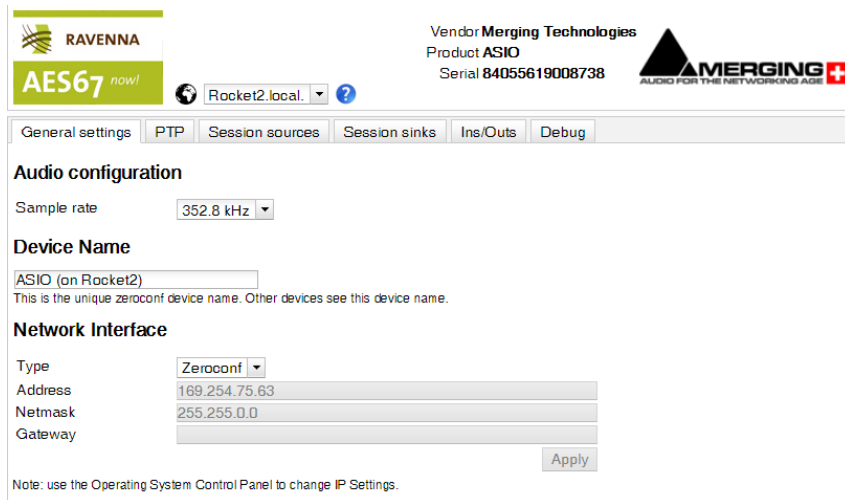


Merging RAVENNA Advanced Pages User Guide.



RAVENNA
AES67 now!

Vendor Merging Technologies
Product ASIO
Serial 84055619008738

Rocket2.local

General settings | PTP | Session sources | Session sinks | Ins/Outs | Debug

Audio configuration

Sample rate: 352.8 kHz

Device Name

ASIO (on Rocket2)

This is the unique zeroconf device name. Other devices see this device name.

Network Interface

Type: Zeroconf

Address: 169.254.75.63

Netmask: 255.255.0.0

Gateway:

Apply

Note: use the Operating System Control Panel to change IP Settings.

Version 3.9.7.41156

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How to access the Advanced pages

1. With the device IP address :
 - a. Horus/Hapi/NADAC/Anubis
In your browser, enter the device IP address followed by **/advanced/index.html**
E.g: 169.254.80.179/advanced/index.html
 - b. VAD (ASIO, CoreAudio, ALSA)
In your browser, enter the device IP address followed by **:9090**
E.g: 169.254.80.179:9090
2. Through [MT Discovery](#) :
Right click on your device and select **Open Advanced** (Hardware devices : Horus, Hapi,...) or **Open** (Software devices : MassCore, ASIO, Alsa,...)
3. Through [ANEMAN](#) :
Right click on your device and select **Web Services : Advanced** (or **RAVENNA** if Advanced is not available)

GENERAL SETTINGS

Audio Configuration

Sample rate

Frame size (@1FS)

Session Sinks Global

Safety Playout Delay (@1FS)

SSM (requires IGMP v3)

Device Name

This is the unique zeroconf device name. Other devices see this device name.

Network Interface

Type

Address

Netmask

Gateway

Note: changing the network settings require a reboot of the device.

Audio Configuration

- **Sample Rate** : current sample rate (44100-48000- 88200-96000-176400-192000-352800-384000)
- **Frame size (@1Fs)** :current frame size (64 - AES67/48 - 32 -16 - 12 -6).
Note that available frame size values may differ according to the device and/or firmware.
- **Safety Playout Delay (@1Fs)** : additional playout delay. The value is described at 1Fs (44.1-48 kHz) in samples.
For example, if the value is 10, the additional playout delay will be 20 at 2Fs (88.2-96 kHz), 40 at 4FS (176.4-192 kHz),...
- **SSM (requires IGMP v3)** : Source-Specific Multicast.
If you activate this option, make sure your network switch supports IGMP v3 and is configured for IGMP V3.

Device Name

- This is the unique zeroconf device name. Other devices see this device name.
Reboot is not required for the change to apply. Equivalent to device Setup menu > Network > Device Name (Horus/Hapi)

Network Interface

- **Type** : defines the kind of IP V4 address used (Zeroconf - DHCP - Static)
- **Adress - NetMask - Gateway** : only available if Type is set to Static.
Reboot is required for changes to apply.

PTP

Global

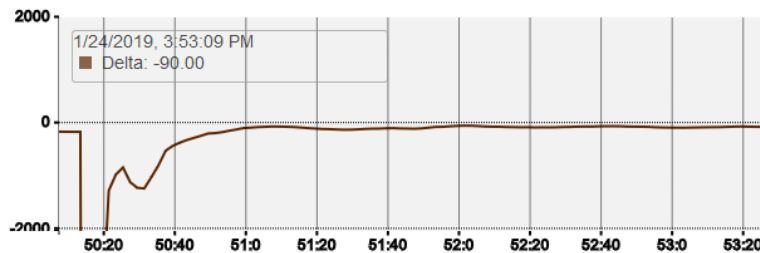
Type: PTPv2
 Domain: 0
 DSCP: 46 (EF)

Master

Manual
 Priority1: 127
 Class: 134
 Accuracy: 32
 Priority2: 128
 GMID: 00-0B-2F-FF-FE-01-38-83
 Slave only:
 Delay mech.: E2E
 Announce: 2 sec.
 Sync: 0.5 sec.

Status

Lock: Locked
 Master: false
 GMID: 00-0B-2F-FF-FE-01-38-83
 Delta (ns): -82



Global

- **PTP Domain** : allow to define a specific PTP domain, usually when several PTP masters are required in the same network (default value for Merging devices and programs is 0).

MassCore : Pyramix v11.1.5 / Ovation v7.1.5
 Ravenna ASIO : v12.0
 ALSA : v1.0
 CoreAudio / Virtual Audio Device : v2.0.37746
 Horus - Hapi - NADAC : firmware v3.9.2
 Anubis : firmware v1.0

- **DSCP** : PTP DSCP (46 : PTP AES67 / 48 : PTP RAVENNA)

Master

To modify the PTP setting, you must first tick the "**Manual**" checkbox.

- **Priority 1** is the main priority value.
- **Class** : Device class. This value should not be modified.
- **Accuracy** : cant be modified.
- **Priority 2** is only used if the other parameters do not allow to elect a PTP master.
- **GMID** : Current GrandMasterID (PTP Master)
- **Slave only** : forces the Merging device to always be PTP slave.
- **Delay Mech.**: PTP Profile related - E2E or P2P
- **Announce** : PTP Profile related - PTP announcement interval (1 - 2 - 4 - 8 -16 seconds)
- **Sync** : PTP Profile related (0.0625 - 0.125 - 0.25 - 0.5 seconds)

Status

- **Lock** : shows if the device is locked to PTP (Locked -Locking - Unlocked)
- **Master** : true / false for the current device.
- **GMID** : Current GrandMasterID (PTP Master)
- **Delta (ns)** : delta between the device and the PTP master.

- **Graph** (since firmware 3.9.3)
The graph is only active for slave devices.
The graph shows the device delta against Master PTP clock.



PTP Priority value :
1 is the highest priority, 255 the lowest one.
Merging devices are by default using Priority 127 when set as PTP Master and 255 when PTP slave

SESSION SOURCES

Configuration


- **Create session** button : create a new session source
- **Enabled** : enables the selected source (active by default)
- **IO** : select the physical input (when applicable)
- **Name** : Source name
- **Advertise** : enable source advertising on the network
- **Auto-unicast - retrieve unicast address+port from sink (RTSP)** : automatically retrieve the sink (listener) IP address for unicast connection. This feature only applies to Merging Technologies devices. [See this page for further details](#)

Horus - Hapi : firmware v3.9.2
Anubis : firmware v1.0
MassCore : Pyramix v12.0 / Ovation v8.0
Ravenna ASIO : v12.0
ALSA : v1.0
CoreAudio / Virtual Audio Device : v2.0.40016

- **Address** : stream multicast address
Note : *user defined* checkbox is activated automatically when entering a multicast address manually
- **TTL** : Time to Live (also called Hop Limit) - this value should not be modified
- **Payload type** : RTP Payload type - this value should not be modified
- **Codec** : L24 - L16 - DSD64 - DSD64_32 - DSD128 - DSD128_32 - DSD256 (bit rate). Note that those values are sampling rate dependent.
- **Frame size (samples)** : frame size of the current source.
- **DSCP** : audio DSCP (34: RTP AES67 / 46: RTP Ravenna)
- **RefClk PTP traceable**: This feature is useful when you want to connect a stream through Internet (e.g. with two PTP Masters (GPS) at each locations), it allows to make connections with devices locked to different traceable PTP Masters.
See also *Ignore refclk GMID - accept source locked to any PTP master* on the Session Sinks page.
- **Channels** :
Channel count : number of channels in the stream. The drop down menu allows to select specific channels if the number of channels is smaller than the selected module channel capability (limitation : channels must be contiguous)
The URL of the SDP of this session is : allows to save the Session Description into a file (useful for specific third party devices if manual SDP has to be provided).

SESSION SINKS

Configuration

- **Create session** button :  create a new session sink
- **IO** : select the physical output (when applicable)
- **Label** : Sink name
- **Source** : drop down menu to select a source (both sap and bonjour advertised sources are listed).
Manual : allow to manually enter a SDP
- **Delay (samples)** : playback delay.
0 is automatic delay (automatic delay works for Merging Technologies devices).
For non-Merging devices, if set to 0, the playout delay is calculated based on the SDP a=framecount value.
In any case, the frames must be time aligned; all devices must run an integer number frames from time zero (epoch).
- **Ignore refclk GMID - accept source locked to any PTP master** : This feature is useful when you want to connect a stream through Internet (e.g. with two PTP Masters (GPS) at each locations), it allows to make connections with devices locked to different traceable PTP Masters.
See also *RefCik PTP traceable* on the Session Sources page.
- **Channels** : **Channel count** : number of channels in the stream. The drop down menu allows to select specific channels if the number of channels is smaller than the selected module channel capability (limitation : channels must contiguous)

Session Info

- **RTP Status** : connection status
 0x10: receiving RTP packets
 0x01: wrong RTP sequence id
 0x02: wrong RTP SSRC
 0x04: wrong RTP payload type
 0x08: wrong RTP SAC
 0x20 stream has been muted
 0x40: Horus implementation - an incoming stream is muted
 Important note : this field is incremental, meaning the error numbers will sum.
 E.g. : Stream muted (20) and Wrong payload (4) will be displayed as 0x24.
- **Playout Delay** : current playout delay on the selected sink in samples (and ms).
- **RTSP Host** : connected source IP
Session name : defined in SDP (usually the same as the source name)
Clock domain : PTP clock type and domain
Payload : Payload / Codec / Sampling Rate / Number of channels
SDP : display detailed SDP information on the current stream.

INS/OUTS

Allows to change the name of module's specific Inputs and / or Outputs. (when applicable)
 Depending of the sampling rate, some modules may not be available.

General settings | PTP | Session sources | Session sinks | **Ins/Outs**

AES 1

Inputs

Index	Name
1	Reverb Return L
2	Reverb Return R
3	3
4	4
5	5
6	6
7	7
8	8

Outputs

Index	Name
1	PeakMeter L
2	PeakMeter R
3	3
4	4
5	5
6	6
7	7
8	8

The screenshot shows the 'INS/OUTS' configuration for 'AES 1'. On the left, under 'INPUTS / STREAMERS', the first two slots are filled with 'Reverb Return L' and 'Reverb Return R'. On the right, under 'RECEIVERS / OUTPUTS', the first two slots are filled with 'PeakMeter L' and 'PeakMeter R'. The interface also shows a 'Horus_80003' device icon and a clock icon.

Note : The module has to be set to RAVENNA mode (Module page Output Source : Ravenna), otherwise it will not be displayed in that page.

I/O ROUTER

ZMAN-based devices only.

Allows to connect physical I/O and Internal device router.

STATISTICS

ZMAN-based devices only - Under Construction

General settings | PTP | Session sources | Session sinks | Ins/Outs | **I/O Router** | Statistics | Debug

Sink(2) From ASIO

Min: 0 [us]
 Max: 5187 [us]

Sink(3) From MSC

Min: 0 [us]
 Max: 1291 [us]

DEBUG

Build Number

3.9.2b38118

Commands

- Reboot
- Reset to Factory
- Save

Debug

- Get Report
- Get Device Status

Build Number

Current firmware version

Commands

- **Shutdown** : shutdown the device
- **Reboot** : restart the device
- **Reset to Factory** : restore all settings to factory default, and restart the device
- **Save** : save the current configuration.

Debug

- **Get Report** : generates a debug report, and saves it on the local computer.
If the report is not saved automatically, make sure your web browser did not block the download.
- **Get Device Status** : displays the device status (SysLog)
- **Get Device Engine Status** : displays the device engine - ZMAN-based devices only
- **Toggle Transparency check** : (Merging RAVENNA ASIO driver only) : send a transparency check signal on the first output channel (Channel0)

External Links

- https://en.wikipedia.org/wiki/Session_Description_Protocol
- <https://standards.ieee.org/standard/1588-2008.html>
- https://en.wikipedia.org/wiki/Precision_Time_Protocol