



Ovation Release Notes

Installation

Please consult the Installation Guide located on the Ovation Installation Media (USB Memory card) for details on the hardware and software installation procedure and Authorization Key registration process.

RAVENNA users will have to install the NET-MSC-GBEX1 PCIe Ethernet card provided by Merging Technologies. TURN YOUR COMPUTER OFF (shut down then switch the power off). Next plug the NET-MSC-GBEX1 card into one of the PCI-Express bus slots on your computer and turn the power back on. The NET-MSC-GBEX1 card will only be operational once the MassCore runtime is installed. Refer to the Pyramix Installation Guide for more details.

- To install the Ovation software insert the Ovation Installation Media - the installation program should auto-start.
- To install MassCore launch the MT Security Settings, go to the MassCore page and install the MassCore RunTime (a MassCore base key is required along with MassCore 64bit and a RTX64 key). Refer to installation guide for more details.

Updates

Please check our Web site <http://www.merging.com> periodically for information, patches and updates.

* The Mykerinos board is not supported under 64 OS

Ovation v6 is only supported under 64 bit OS

Ovation Version 6.0

Installation:

- As of V6 RC1 users will need to use the new v6/v10 keys (previous v5 are no longer valid)
- Follow installation Ovation v6 Guide for all details

Ovation keyboard users should update the Keyboard driver and "changeme" software in order to prevent a potential freeze under 64bit of Ovation/Pyramix. Please follow instructions for the Ovation keyboard use. Make sure you uninstall the old version of the "changeme" software before installing the new one.

http://merging.com/uploads/assets/Installers/Ovation&ADR_Keyboard_installation5150u.zip

MassCore:

- New MassCore Update version must be installed. Please follow installation guide for all details.
- Be aware that new MassCore Key is required as of the Ovation v6 Beta4

New VS3 Plugin:

- New Flux VS3 Reverb (requires the proper Ircam Tools Verb Merging Key)
 - Flux *IRCAM tools Verb Session*: Supports 2 channels and up to 384 kHz
 - Flux *IRCAM tools Verb*: Supports 24 channels and up to 384 kHz

The Ircam Verb v3 is an algorithmic room acoustics and reverberation processor. It has a modular construction, employing a recursive filtering reverb engine, reproducing and synthesizing the specific acoustical characteristics of any spatial sound environment.

Important: As of Pyramix v10 Beta4 > a new Flux VS3 plugin version is required. Find the first v10 version here.

[http://file.flux.to/VS3_beta/Flux_VS3_\(Pyramix_v10_Ovation_v6\)_64-bit_Installer_\(3.4.7.37504\).exe](http://file.flux.to/VS3_beta/Flux_VS3_(Pyramix_v10_Ovation_v6)_64-bit_Installer_(3.4.7.37504).exe)

New Features

New General Mixing Bus:

- A New type of Mixing/Aux busses has been added: the General Mixing Bus
- It replaces all other busses that are now legacy but still supported
- The General Mixing Bus can have 4 flavours:
 - Mix Bus
 - Mix Group
 - Aux Bus
 - Aux Group
- Bus have outputs that can be connected to external live outputs
- Groups can only be rerouted into another General Mixing Bus
- General Mixing Bus can have a virtually unlimited number of channels
- Each channels can be typed, out of the new extended Channel Types listed below, including 3D types
- When creating a new General Mixing Bus, (Right-click menu > Bus > Add > New General Mixing Bus) the choice is given for one of the 4 flavours, the number of channels and a choice of predefined channel types (or speaker arrangements)
- General Mixing Busses can also be given an optional Room Size. In this case the panning algorithm changes to a distance based algorithm. (see below)
- An existing General Mixing Bus topology can be modified after its creation by using the Room Editor, available by clicking on the top control of the I/O & VCA section on the bottom of the Mixer.
- General Mixing Busses (each flavour) has the same controls in the Mixer user interface:
 - A send peak meter. Clicking on it collapses/expands the bus
 - An On/Off button

- A Gain value box to enter a precise value manually
- An horizontal Gain display and control box
- A Pre-Fader option button
- A Routing/Panning option box
 - When Channel Router is selected, a little grid appears below it allowing to open an extended grid router
 - When Panner is selected (or Panner 1, Panner 2, etc...) the bus will follow the selected Panning bus to pan/mix the signal in its channels. (see below for details on the Panning Bus)
- Expected Limitation with the New General Bus and old Legacy Bus combinations:
Due to the different architecture used in the new buses, it is not recommended that you operate a mixer containing both if at all possible. There are a number of limitations surrounding this outlined below.
 - Legacy SubGroup buses will not feed into New General Buses
Please convert the SubGroup to the new Aux Group
- Former legacy busses can be converted to new General Mixing Busses. Right click on the legacy bus and select "Bus > Convert 'Bus XXX' to the General Mixing Bus model"
 - A new General Mixing Bus will be created for legacy Surround Busses, Stereo Busses and Mono Busses
 - A new General Aux Bus will be created for legacy Aux busses
 - A new General Aux Group will be created for legacy SubGroup busses
 - In any case a new Panning Bus is created (see below New Panning Bus) and associated with the New General Mixing Bus and all automation related to the legacy bus is transferred to the new Panning Bus.
 - For Surround Busses:
 - For Multi-Stems Surround groups, multiple General Mixing Busses will be created, one per stem. This is the new paradigm for multi-stem. Each new Bus/Stem can be modified later with the room editor (see above) to reduce (or extend) the number of channels independently for a more optimized use of busses channels and I/Os.
 - The new Panning Control Bus Panner Type is set to Surround Panner for all input strips, but can be changed later to 3D Panner or Pan/Balance strip per strip.
 - The new Panning Control Bus is set to Dual Source Mode Dual Panner for each Stereo input strips.
 - The Channel Router option is selected for any GPS input strips and the grid set as per the legacy bus. However it's recommended to switch back to the Panning Bus for a full new re-panning mode.
 - For Stereo Busses:
 - The new Panning Control Bus Panner Type is set to Pan/Balance for all input strips, but can be changed later to 3D Panner or Pan/Balance strip per strip.
 - The legacy mode is converted to the new Panning Bus modes Balance, Single Pan, Dual Pan (see below)

New Panning Control Bus:

- A new Panning Control Bus has been added
- This bus allows for controlling panning information in 1D (Left/Right), 2D (Surround) or 3D (Full Space)
- This bus doesn't process any audio and has no channels, no associated output strip and no I/O
- Any New General Mixing/Aux Bus/Groups will use the Panning Control Bus for panning sound in their channels.
- The same Panning Control Bus can pan sound for any channel mapping of any General Mixing Bus, i.e. the same panning information of the same input strip can control a 9.1 Mixing Bus, a 5.1 Mixing Group and a Stereo Aux Group at the same time, for instance.
- Generally one single Panning Control Bus is required for all Mixing Busses, however Multiple Panning Control Busses can be created if needed if different panning information is required for

the same input strip on different Mixing Busses. (Right-click menu > Bus > Add > New Panning Control Bus)

- The in-strip User Interface for the Panning Control Bus can be switched to 3 different Panner Types (Right-click menu on the Panning Bus > Set Panner Type):
 - 3D Panner, giving access to the standard 2D surround control plus the Height/Z axis, the divergence and the LFE gain.
 - 2D Panner, giving access to the standard 2D surround, the divergence and the LFE gain.
 - Pan/Balance (1D Panner), giving access to three flavors of panning (below) plus divergence and LFE gain:
 - When on a Mono Strip, the control is always a Pan
 - When on a Stereo Strip, the following choice is offered as Dual Source Mode (Right-click menu on the Panning Bus > Dual Source Mode):
 - Single Pan
 - Dual Pan
 - Balance
- Divergence has been given a Type: Divergence Type are:
 - 1D (Left/Right) : the divergence only spreads Left/Right
 - 2D (L/R - F/R) : the divergence spreads on the traditional surround space, like per legacy surround busses
 - 3D (L/R - F/R - T/B) ; the divergence spreads on the whole 3D space
 - The Divergence Type can be changed per Strip
 - The Divergence Type can be changed by right clicking on any strip in the console
 - The Divergence Type can be changed in the 3D Panning Control Bus window
 - The selected Divergence Type is displayed in the 3 views of 3D Panning Control Bus window
- The 3D Panning Control Bus window controls and buttons have changed their look to accommodate with the Left/Right Pan/Dual Pan and Balance mode and to the Top/Bottom Color Coding
- The Automation for the panning information is associated with the Panning Control Bus and the same for any General Mixing Bus sharing the Panning Control Bus (obviously). Automation for the Send On/Off, Send Gain, Pre/Post Fader is associated with each General Mixing Bus, independently
- New MS (Middle Side) Decoding in New Bus Architecture
 - The new General Mixing Bus now decodes the MS directly and without the addition of any additional user interface. Users can feed an MS strip with Middle and Side information as before, and now the panner itself will decode the Left and Right information and feed it directly to the connected Buses.
 - If you switch the Bus connection to use the Channel Router instead of the Panner, you will be able to then route the raw C and W signal through the bus instead.
 - There is a temporary loss of the additional Middle and Side "Mixing" controls which existed in the old-style bussing connection. So, when using the new General Mixing Buses, users will need to mix between the Middle and Side levels by using Clip Gains & Clip Envelopes. This functionality will return in a subsequent release of the Pyramix software.

Advanced Panning Control Bus Window:

- When Control + Clicking on a Panning Control Bus panner, the Advanced Panning Control Bus Window opens.
- It gives access to 3 views for 3D panning, Top View (from Top), Back View (from Back) and Side View (from Left).
- All speakers/channels of all General Mixing Busses connected to that Panning Control are displayed in grey
- The level of audio/gain actually sent to these speakers are indicated in the layer color code proportionally of the sound level.
- The speakers color code is Red for the standard layer, Green for the Top Layer, Blue for the Bottom Layer and Yellow for the LFEs.
- Panning can be done directly by moving the panner in any of the three views
- Sliders for the X, Y Z axis are available below the three views
- When on a Stereo Strip, the choice for the Re-Panner or the Dual Source sliders are available depending on the selected Dual Source Mode (see above)

- When on a Multi-Channel Strip or on a Stereo Strip with Dual Source Mode set to Single Pan, the Re-Panner controls are available:
 - A Source Size slider allows for spreading the input Sources
 - Three Rotation Sliders allows for rotating the input Sources in the X, Y, Z axis
- A new Objects Bus has been created:
 - The Objects Bus allows for sending any Strip input into a specialized Object Bus for new 3D/Immersive while excluding it from any other (Bed) busses during so
 - An Objects Bus is created by selected the right mouse button menu > Bus > Add > General Mixing Bus, then selecting the "Object Bus" option in the dialog box, then choosing Channels Mapping to Custom and entering the desired number of Object Channels for the bus
 - The Objects Bus shows a Grid for every Strips allowing the display the Objects Router. The Objects Router allows for selecting one or more Objects Channels to send all input channels of the given Strip to that Object Channel. When input is routed to the Object bus, all other busses for that strip input are muted, like for a Solo.
 - Objects Bus Routing is automated. Input sound can be sent for a limited time to any Objects Channel.
 - Objects Busses can be Enabled and Disabled through the right side [+] popup menu. This allows temporarily disabling any Object sending in the Object Bus and keep all input audio in its Bed for editing and monitoring.

3D Room Editor:

- All General Mixing Busses can have their channel configuration edited at all time with the 3D Room Editor
- All channels of the Mixing Bus can be seen as a Speaker in that Room
- The 3D Room Editor is available by clicking on the top control of the I/O & VCA section on the bottom of the Mixer
- Double clicking on a speaker in the 3D Panning Control Bus window sets the panner exactly to that speakers, in every X/Y/Z axis. This ensures sounds only outputs to that very speaker.
- The channel configuration or 3D Room can have two types:
 - Virtual:
 - Virtual Room do use a Stereo Panning based algorithm using either a Square Root or Sin/Cos panning law, extended to all 3 dimensions
 - The only parameter in the Square Root - Sin/Cos choice available either in the Mixer Settings > All Settings > Mixer Settings page
 - This parameter called "Virtual Pan Law" has been added in the 3D Panner Window as well
 - In this mode the Channels or Speakers can only be of the 32 predefined types listed below
 - The Channel Type directly defines the position of the Speaker in the Room
 - The Room has no real size, the panning algorithm only uses amplitude for computing levels based on the position of each Speakers/Channels, that is defined by its Channel Type
 - The algorithm makes sure that the levels are very focused near the closest speaker to the Panner
 - This mode is designed for Film, Post-production or Music where no real room definition is needed or known in advance and precision is needed to focus on a given Speaker
 - Sized:
 - Sized Rooms do use a Sound in Air propagation/attenuation based algorithm
 - By default the sound attenuation depends on the distance from the panning source to each speakers by $1/d$
 - A parameter called "Sized Pan Attenuation" has been added in the 3D Panner Window to allow exaggerating or reducing the effect of distance on the attenuation by a factor of 5 times in either exaggerating or reducing.
 - Central position means default attenuation is $1/d$, moving the parameter to the right exaggerates the effect of distance, moving the parameter to the left reduces the effect of distance.
 - In this mode the Room has a size and the Speakers have a editable position, independently of their Type, that is only informative in this model

- The Room Size definition is the Radius of the cubic Room, i.e. half its boundary size
 - The position of each Speakers is editable in the Room Editor. The selected Speaker displays in Orange and its coordinates can be changed in the editor
 - The Editing Tools allow for editing the Speakers position either relative to the center of the room, or to a given reference Speaker
 - The panning algorithm uses real distances to compute levels. In this mode basically all Speakers output some level, even is very low, wherever the Panner is positioned
- An Output Gain Trim is available for each Speakers/Channels
 - The physical routing of each Speakers/Channel can be changed in the Room Editor

Mixer:

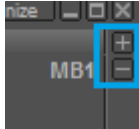
- Configure Page removal
The Mixer Configure Page has been removed, most function can now be found in either in the Mouse+Right click contextual menu or at the bottom Strip contextual menu.

Some tips on Mixer workflow without Configure page:

- Move Strip position selecting the strip numbering and using CTRL+SHIFT+ALT
- Select Multiple Strip by selecting the strip numbering range (first and last) with SHIFT
- Remove or add Strips from the Mouse+Right click contextual menu: Strip>Add or Remove
- Use CTRL + SHIFT to add Effects on all selected Strip
- Change a Strip channel Type from the bottom of the strip (contextual menu)

- Bus, Auxes and Routing collapsing

- New: +- Button option added to the Mixer side context menu. Option to hide or show the desired Buses or Auxes (available by Bus or Aux Types)



- New: +_ Button option in the Routing section. To Hide or Show All Bus routing sections. When all Busses (Mix or Aux) are hidden, a routing summary on one single line is displayed. This is typically useful when working on multi-stems busses to see a summary of all busses connections on one line. Click to change the routing per bus.



Miscellaneous:

- GPS strips have been renamed Multi-Channel Strips

New Channel Types:

L"Left",
 L"Center",
 L"Right",
 L"Surround Left",
 L"Surround Right",
 L"LFE",
 L"Center Left",
 L"Center Right",
 L"Surround Center",
 L"Side Left",
 L"Side Right",
 L"Center Surround Left",
 L"Center Surround Right",
 L"Voice of God",
 L"Top left",
 L"Top Center",
 L"Top Right",
 L"Top Surround Left",
 L"Top Surround Center",
 L"Top Surround Right",
 L"Top Side Left",
 L"Top Side Right",
 L"Bottom left",
 L"Bottom Center",
 L"Bottom Right",
 L"Bottom Surround Left",
 L"Bottom Surround Center",
 L"Bottom Surround Right",

L"Bottom Side Left",
L"Bottom Side Right",
L"Voice of Devil",
L"LFE2",

Predefined Speaker Arrangements:

L"Mono",
L"Stereo",

L"3.0 Front",
L"3.1 Front",
L"3.0 Surround",
L"3.1 Surround",

L"4.0 Quadro",
L"4.1 Quadro",
L"4.0 Surround",
L"4.1 Surround",

L"5.0 Side (THX)",
L"5.1 Side (THX)",
L"5.0 Surround (SACD)",
L"5.1 Surround (SACD)",

L"6.0 Side",
L"6.1 Side",
L"6.0 Surround",
L"6.1 Surround",

L"7.0 Side",
L"7.1 Side",
L"7.0 Surround (SDDS)",
L"7.1 Surround (SDDS)",
L"7.0 Surround (THX)",
L"7.1 Surround (THX)",

L"8.0 Surround",
L"8.1 Surround",

L"9.0 Surround",
L"9.1 Surround",

L"11.0 Surround",
L"11.1 Surround",

L"5.0 Dolby",
L"5.1 Dolby",
L"7.0 Dolby",
L"7.1 Dolby",
L"9.0 Dolby",
L"9.1 Dolby (Atmos)",

L"7.0 DTS (Neo:X)",
L"7.1 DTS (Neo:X)",
L"9.0 DTS (Neo:X)",
L"9.1 DTS (Neo:X)",
L"11.0 DTS (Neo:X)",
L"11.1 DTS (Neo:X)",

L"10.2 TMH",
L"12.2 TMH",

L"8.0 Auro",
L"9.1 Auro",
L"10.1 Auro",

L"11.1 (7+4) Auro",
L"11.1 Auro",
L"13.1 Auro",

L"22.2 Hamasaki/NHK",

L"30.2 La Totale",

Bugs fixed in Ovation v6.0

- GAIA-734: Fixed. Ovation random crash due to automation snapshot (Gatwick project)
- GAIA-735: Fixed. Ovation Playback Engine Stopping (deadlock - timecode engine)
- GAIA-734: Fixed. Ovation. Playback Engine Stopping, Requires Application restart
- GAIA-519: Fixed. Cannot Communicate with VCube wrong error message.
- GAIA-529: Fixed. Ovation playback drops
- RAV-454: Potential BSOD/GSOD when disconnecting/reconnecting Horus to the MassCore NIC card

Bugs fixed in Ovation v6.0 RC1

- GAIA-719: Fixed. File Location not updated when transferring from server to local drive
- GAIA-718: Fixed. File location not updated on some files after a consolidate
- GAIA-717: Fixed. Issue of random crashes
- GAIA-710: Fixed. Ovation Snapshots accumulate rather than work on their own
- GAIA-505: Fixed. Mixer: Moving VCA causing strip VCA assignments confusion
- GAIA-493: Fixed. VCA Groups not functioning in Ovation properly
- GAIA-486: Fixed. Ovation crash when playing a MTC Cue
- GAIA-477: Fixed. Mixer: Some project can Crash when moving Strips
- GAIA-457: Fixed. Mixer: Un-Mute option will reset the solo ones
- GAIA-433: Fixed. Mixer VCA reset bus will raise strips to maximum level
- GAIA-413: Fixed. Ovation installer doesn't allow Pyramix to install correctly when performing an update
- GAIA-399: Fixed. Ovation: Fire Child Cue Randomly cannot fire same cue twice in a row
- GAIA-271: Fixed. Ovation: Snapshot in Panner not applying if Panning window is open
- RAV-390: Fixed. Horus/Hapi Losing banks of channels on some RAVENNA set up
- NAD-241: Fixed. MassCore no longer installs RTX64 TCP/IP stack nor "Windows Virtual RTX64 Ethernet" adapter

Bugs fixed in Ovation v6.0 Beta 4

- MT6538: Fixed. Ovation Crash: When going from specific project to another

Bugs fixed in Ovation v6.0 Beta 3

- MT6246: Fixed. Ovation: Snapshots will not allow a second Snapshot to run so long as the first cue remains in a fired state.
- MT6409: Fixed. Ovation: Automation on cue not always applied
- MT6442: Fixed. Automation Snapshot changes crashes Ovation
- MT6506: Fixed. Ovation: Snapshot Glide stops working

Technical Notes & Known Issues

OVATION v6

General

- Ovation keyboard users should update the Keyboard driver and "changeme" software in order to prevent a potential freeze under 64bit of Ovation/Pyramix. Please follow instructions for the Ovation keyboard use.

Refer to the public known issues.

<https://confluence.merging.com/display/PUBLICDOC/Known+Issues>

- Cue not starting up at times. Please make sure that your Media files are at the same sampling rate as your project. We recommend user to have their media files at the same sampling rate as their show.

MassCore

- MassCore not supported on Core2Duo with Ovation v6. Minimum requirement is a QuadCore.
- MassCore is supported under Windows 7 (64bit)
- Ovation v6 comes with a new MassCore version

Mykerinos:

- The Mykerinos are not supported under a 64bit OS

RAVENNA

Technical Notes:

- Windows 7 (64bit) mandatory for MassCore RAVENNA
- Windows 7 (64bit) & Windows 8.1 (64bit) supported for Ovation v6 Native only.
- Ovation v6 system recommendations. <http://www.merging.com/pages/pcconfig>
- The Horus RAVENNA interface is limited to 32 input Banks + 31 output Banks
E.g. 32 banks of 8 inputs channels under Easy Connect equals a 256 inputs limit
- For ultimate performance we recommend that under Easy Connect you enable only the necessary connections, as every extra RAVENNA connection will use some bandwidth (Core or Network)
- The Network must be Layer 3 compliant and must be a Gigabit network
- Merging has certified the Dell PowerConnect 2816 or 2808 Network Switch for use with Horus – Ravenna
find details and configuration file here: <http://www.merging.com/products/horus/downloads>
- RAVENNA user should avoid connecting multiple Horus to any a router/Network not certified by Merging. Refer to the Merging RAVENNA Network Guide for all details on the certified RAVENNA switch and configuration. <http://www.merging.com/products/horus/downloads>
- Only RAVENNA devices can be connected to the Merging PCIe Ethernet Controller Card NET-MS-CBEX1. Avoid mixing up non-RAVENNA device on this network, like Controllers such as Tango/Isis/Euphonix or other network devices. The same will apply if you are connected to the Dell Power Connect 2816 or 2808 certified for RAVENNA network use
- Don't connect a 100MB Ethernet device if the switch is not multicast; otherwise the flow control will reduce drastically the bandwidth.
- When configuring the VS3 Control Panel it will not be possible to choose a mode where both Mykerinos and RAVENNA will function at the same time. User must either work in MassCore Mykerinos or MassCore/RAVENNA or Native
- A RAVENNA ASIO driver is available for Horus users that wish to use their notebook GbE Network RJ-45 system socket. Refer to <http://www.merging.com/products/horus/downloads>

Known issues:

- RAVENNA Easy Connect is known to potentially have ghost connections (inaccurate banks) remaining, especially if the Horus is moved from a system to another. In such case we

- recommend users to perform a CTRL+Clear All Connections to make sure that you get rid all connections (and ghosts' ones). Afterwards reconnect your I/O module banks.
- Horus Ravenna: Switching from MADI Standard (56) to MADI Extended (64) can generate small glitch, avoid doing so during realtime operations
 - Be aware that non-certified Ravenna configurations might not capable of sustaining 384 I/O @ 1FS (44.1/48 kHz). If you experience noise similar to static reduce the Ravenna I/O count enabled in the Ravenna Easy Connect
 - Merging recommends that Ravenna users disable the Windows Firewall, as it can partially block some of the Ravenna I/O connections
 - Peaks might show up under Pyramix Core section if you power OFF or disconnect the Horus. Recommendation: A valid connection an online Horus is always required if the Horus is PTP Master. Reset peaks by Mouse Clicking on the Core section.
 - Avoid changing a network address on your system or disconnecting Ethernet ports on your system when MassCore Ravenna is running
Cannot use the ISIS since running Ravenna with the Merging PCIe Ethernet Controller Card NET- MSC-GBEX1
Recommendation: Refer to the ISIS support document below
http://download.merging.com/beta/SupportTools/Docs/ISIS_Vista_or_7_dedicated_lan.pdf

Connections:

In order to create RAVENNA I/O connections please refer to the RAVENNA Easy Connect guide (installed along with Pyramix)

Each Horus will then appear in your RAVENNA Easy Connect utility where you will see the name of each Horus online. You will be able to dispatch each Horus I/O connections with the RAVENNA Easy Connect utility.

Troubleshooting:

Sudden stoppage of the RAVENNA Easy Connect:

If the RAVENNA Easy Connect utility ends up crashing or stopping you can simply launch it back from the Windows Start menu under Merging Technologies>RAVENNA Easy Connect.

Windows Firewall:

The Windows Firewall can block communication between MassCore and Horus. We recommend users to disable the Public Network Firewall

Procedure:

1. Go in Windows Control Panel > Windows Firewall.
2. Click on "Turn Windows Firewall on or off"
3. Go to the Public Network section and select "Turn Off Windows Firewall"

Windows UAC:

User should disabled the Windows User Account Control

Procedure:

1. Go in Windows Control Panel\All Control Panel Items\User Accounts
2. Open the Change User Account Setting
3. And set it to never notify

Disable Antivirus:

Merging also recommends users to disable their Antivirus, some Antivirus as Avast or Sophos have been known to block the Horus discovery and RAVENNA I/O Connections