



## Axia IP-Audio Driver Update v2.6.1.5

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The Axia IP-Audio driver Version 2.6.1.5 is compatible with 32-bit and 64-bit versions of Windows 7 and Vista, as well as earlier 32-bit versions of the Windows OS..

### Installation Procedure:

1. Install all service packs and critical updates for your Windows operating system
2. If you are upgrading from a previous version of the Windows IP-Audio driver, it is recommended that you uninstall the previous version before installing the 2.6.1.5 update. **Be sure to locate your License Number and License Key before uninstalling your existing version.**
3. At the end of the uninstall process, you may be prompted to restart your PC. Please do so before continuing with the installation.
4. Download and unzip the `AxiaDriver2.6.1.5.zip` file from the Axia website, and double-click the `setup.exe` file to begin the installation – setup will detect the proper version (32- or 64-bit) and install it automatically. Follow the step-by-step procedure and enter your License Number and License Key when prompted. **Note: License numbers and Keys are all upper case and are case sensitive.**
5. At the end of the installation, you may be prompted to restart your PC. Once Windows has restarted, the installation is complete and you should be ready to use your updated IP-Audio driver.
6. Check your IP-Audio settings in the Windows Control Panel and make sure you have the correct number of devices and that the Livewire channel settings are correct.

For additional information, please consult the manual for the IP-Audio driver that is found in the Support section of our web site at [www.AxiaAudio.com/manuals](http://www.AxiaAudio.com/manuals) .

Questions? Contact Axia Support at [support@AxiaAudio.com](mailto:support@AxiaAudio.com) or phone +1-216-241-7225.

### Release Notes for v2.6.1.5

#### **Version 2.6.1.5 - New and Updated Features:**

- Compatible with Windows Vista / Windows 7 x64 version
- Statistics window now includes Buffered Data display for each receiver, in milliseconds.
- Dynamic allocation of Livewire receive buffers for better resource management/
- Livewire Rx buffer size now configurable via Windows Registry setting:

```
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\axiawow\Parameters  
RxBufSize DWORD <value in milliseconds>
```

Default value is 160ms. The value must be a multiple of 5ms. Minimum is 20ms., maximum is limited by memory size. Computer must be rebooted for the driver to be reloaded and read the configuration.



- Additional Livewire receive buffer space beyond RxBufSize can now be specified, to help provide extra buffering (at the cost of a little more latency) for jittery, problem streams.

```
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\axiawow\Parameters  
RxBufOverflow DWORD <value in milliseconds>
```

Default value is 160ms. The value must be a multiple of 5ms. Minimum is 20ms., maximum is limited by memory size. Computer must be rebooted for the driver to be reloaded and read the configuration.

- “Register” application allows changing license information after installation. Driver also allows installation without license key so that it may be bundled with other Axia products which can activate the Driver.

### **Version 2.5.2.8 - Bug Fixes:**

- New buffering routines fix a condition that some users experienced as “ticks” in receive audio after switching between Live and Standard stream types.

## **Previous Versions**

### **Release Notes for v2.5.2.8**

#### **Version 2.5.2.8 - New and Updated Features:**

- Increased maximum number of ASIO clients from 2 to 10, allowing more connections to the Driver from software that supports the ASIO interface.
- WDM audio interface format changed from 32-bit integer to 16-bit integer. DirectSound applications on Windows Vista/Win7 were either unable to play audio, or played dual left rather than stereo. The 16-bit format is the most common one and fixes the issue.

#### **Version 2.5.2.8 - Bug Fixes:**

- Driver set to receive a single channel on multiple destinations now works properly.
- Corrected issues resulting from addition of ASIO support.
- Fixed stuttering on playback pause/stop.

### **Release Notes for v2.5.2.3**

#### **Version 2.5.2.3 - New and Updated Features:**

- Supports unique audio device names on Windows Vista and Windows 7 (Microsoft Windows major version 6).
- Introduces a new way of managing sound devices. Friendly sub-device names are no longer provided as in Windows 2000 and XP, so this version of the Driver creates unique topology filter pin names which are presented by Windows Vista and Windows 7. For Windows XP and older, the older naming scheme is preserved as well.
- Implements ASIO (Steinberg Audio Streaming Input Output Specification) interface. Specifically:
  - ASIO audio Input
  - ASIO audio Output
  - Input and Output latency reporting. Audio editing applications use those numbers to compensate for the delays and to place recorded waveform precisely on the time line.



- Control Panel Axia IP-Audio Driver configuration window. Playback latency control has been added to the configuration interface which allows matching the delay of the actual audio path.
- Implements RTP sequence and stream discontinuity check capable of rejecting duplicate packets.
- WDM interface changed from 24-bit to 32-bit to optimize samples transport.
- Optimized mixer - capture data is no longer produced on unconfigured receive channels.
- IP-Audio driver now includes new iTake-style channel selector window with "Clear" button.
- Code optimizations reduce CPU utilization.
- The actual stream ID is now placed in the SSRC field of RTP header of sent packets. This change allows use of standard RTP analysis tools, like RTP Analyze in Wireshark (Ethereal).

### **Version 2.5.2.3 - Bug Fixes:**

- Fixed pin names for audio devices 17-24.
- Corrected jitter indicator in the Statistics window. Now, properly behaving computers should report numbers within the 0-5ms range (typically). Audio and network I/O might be able to handle up to 25ms of jitter.
- Fixed wrap-around problem for free-run mixer DMAs to address 1-sample glitch every 400ms on WDM recording (introduced in 2.4.9.1).

### **Release Notes for v2.4.8.12**

#### **Version 2.4.8.12 - Bug Fixes:**

- Installer now works properly when Windows Firewall service is disabled. Previous versions of the installer would stop with an error.
- Previously, the "Livewire Selector" window did not take advantage of the full Livewire advertisement request mechanism to allow quick source discovery. This capability is now fully implemented.
- Fixed byte order when displaying IP addresses in debug outputs of Axia Advertisement Daemon.
- Increased LWR command buffer size to cure configuration window crashes.
- Fixed height of device mode selection combo boxes; drop down list would not appear in previous versions.
- UI of GPIOVK module now works with updated Windows MFC functions to accurately communicate with the main window.
- In previous versions, updating the IP-Audio Driver sometimes left outdated GPIO Bridge Service components installed on the computer, causing GPIO performance slowdowns. This issue is fixed.
- Fixed a condition which could result in audio distortion if multiple audio streams starts and stops were executed without closing audio devices.
- Fixed a condition which caused Windows to emit audible stutter on Driver channels after stream playback was stopped if system jitter exceeded 30ms.

#### **Version 2.4.8.12 - New and Updated Features:**

- The OEM version of the IP-Audio Driver now supports up to 24 audio devices (16 was the limit in previous versions). The OEM driver may also be configured during installation to support a specified number of audio devices from 1 to 24.

- New audio metering, clipping and silence detection functions have been implemented through Livewire Routing Protocol.
- Livewire Advertisement Protocol Revision 2. In previous revisions source allocation did not work when Livewire Selection Window was opened, iPlay, iProbe or any other program which listens to advertisements. The new revision fixes source allocation issues when clients (Control Surfaces) also implement Livewire Advertisement Protocol Revision 2.
- Order of mixer lines on the recording side now display “Livewire In” first for compatibility with automation systems which are hard-coded to use the first line and expect it to be the default input for the recording. (Previous versions displayed “Playback Mix” first.)
- New features applied to the Advertisement Daemon (axiadvd):
  - o -df option allows redirecting debug messages to a file rather than using ">" pipe; enhanced performance.
  - o -spyrvcvbuf option allows setting a larger receive buffer for debugging.
  - o Build changed to avoid interleaved records in a log file.
  - o Byte order of 64-bit numbers in cmsg dump has been changed to match other outputs in the log to make analysis easier.
  - o Implemented a log message that informs the user when a console tries to allocate a source already allocated by a different unit.
  - o Formerly, entries in the debug log showed events only in GMT time. Timestamp now reflects local time zone settings.
- New “Source Allocation Status” window. This is a debugging tool for exclusive channel access allocation; Element consoles communicate this information to Axia drivers and nodes. The window can be displayed using the “Allocation” button on the driver's main configuration window, or by typing the following command into Windows’ “Run” box:

```
rundll32 axiawow.cpl,SacStat
```

- “Statistics” window now has a “Clear jitter” button; maximum allowed recommended jitter value is now 30ms (instead of 50ms). Columns resized to eliminate horizontal window scrolling. Packet counting routines now reject packets with duplicate sequence numbers, and a column has been added to count duplicate packets.
- “Livewire Selector” window now shows only stereo and surround forward streams since advertised “backfeeds” for other stream types are not supported by other parts of the driver’s configuration UI.
- Added “Reset Counters“ button to the “Statistics” window.