

## **AlazarDSO Release Notes**

Version 1.1.25

August 9, 2010

### 1. Introduction

AlazarDSO is a program that allows you acquire, view, and save data from AlazarTech PCI / PCIe digitizer boards.

See the release history below for changes in this version. Please send bugs reports, comments, or requests for changes to AlazarTech

### 2. Installation

The program runs under recent versions of Microsoft Windows including: Windows 2000 Professional, Windows 2000 Server, Windows XP Home, Windows XP Professional, Windows Server 2003, and Windows XP Professional x64 Edition.

The minimum system requirements for AlazarDSO are the same as the minimum system requirements for your version of Windows. For best performance, your computer should have the recommended amount of memory for your operating system, plus at least two times the sum of the memory on all of your AlazarTech PCI / PCIe digitizer boards.

To install AlazarDSO, double click on the Setup.exe file and follow the instructions. The installer copies the application files to “%ProgramFiles%\AlazarTech\AlazarDSO”, and creates a desktop icon and “Start” menu item that you can use to run the program.

Use the “Add and Remove Programs” Control Panel applet to uninstall the software.

Note that the AlazarTech drivers for your board should be installed on your computer in order to run this program. If the AlazarTech drivers are not installed, the program will warn you that “ATSApi.dll” was not found, and ask you if you wish to continue in simulation mode.

### 3. Feedback

If you find a bug in the software, please include the following with a bug report:

- The error number and description displayed, if any.
- A brief description of the steps that led to the problem.
- The AlazarDSO.log and AlazarDSO.ini files in the “%My Documents%\AlazarTech” folder.

4. Release History

2010/08/09	1.1.25	<p>New Features</p> <ul style="list-style-type: none"> <li>• Add an option to the “Advanced Options” dialog box to allow selecting the temporary files directory.</li> <li>• If the program can not start because the temporary files directory does not have sufficient disk space, move the temporary files directory if possible to a local fixed disk with sufficient space. If there are no suitable disks, display a dialog box warning that there is insufficient disk space.</li> </ul> <p>Bug fixes</p> <ul style="list-style-type: none"> <li>• Fix a bug that resulted in the graticule not being drawn correctly when accumulate view mode was enabled and the main window was first drawn or resized.</li> <li>• Fix a bug in the “Stream To Disk” wizard “Set Multiple Record Options” page where the number of samples per buffer was validated for PCIe boards, rather than the number of samples per record.</li> <li>• Fix a bug where AlazarDSO might not open an AT9350-2G under some 32-bit Windows systems. The bug caused error [734] in the log file.</li> </ul>
2010/07/14	1.1.24	<p>New Features</p> <ul style="list-style-type: none"> <li>• Add “dummy clock” option to the “Configure Horizontal” dialog. A “dummy clock” is a signal generated internally by the digitizer that can be used to replace an external clock signal for a short time after the end of each record. It may be useful in scanning applications where external clock signals are unusable during horizontal retrace intervals.</li> <li>• Remove external clock level in volts from “Configure Horizontal” dialog.</li> <li>• Add “Disable ECC” to “Advanced Options” dialog. Use this option to control error correction on digitizers ADCs that require it to operate at their highest sample rates.</li> <li>• Add bandwidth results tables and frequency response charts to the “Board Calibration” wizard’s frequency response html reports.</li> <li>• Add option to board calibration wizard’s “Calibration Options” dialog box to use either a square wave or DC voltage levels to calibration an input channel. DC levels may be used if the calibrator device does not supply an</li> </ul>

		<p>external trigger signal, or the digitizer cannot use the trigger signal.</p> <ul style="list-style-type: none"> <li>• Change the character encoding in calibration report files to utf-8 so that Far-Eastern characters are displayed correctly.</li> </ul> <p>Bug fixes</p> <ul style="list-style-type: none"> <li>• Fix a bug where only one trigger marker was drawn for an input channel when a binary trigger engine operation was selected, and the trigger source selected for both trigger engines was the same input channel.</li> <li>• Change SFDR in “Spectrum Information” dialog box to include harmonics. Previously, only non-harmonic frequencies were used to calculate SFDR.</li> </ul>
2010/06/21	1.1.23	<p>New Features</p> <ul style="list-style-type: none"> <li>• Add support for resizing and maximizing the main window.</li> <li>• Change the “Configure Acquire” dialog and “Stream to Disk” wizard “Set multiple record options” page so that if the number of samples per record does not satisfy alignment requirements, the program suggests values that do satisfy alignment requirements.</li> <li>• Change the “Configure Trigger” dialog so that when the “Enable trigger enable” button is checked and “Output” direction is selected, the trigger output signal (rather than trigger enable output signal) is output on the AUX I/O connector.</li> <li>• Change the graticule font so that it has a fixed size, rather than a size proportional to the system font. This should result in better looking text with Far Eastern fonts.</li> <li>• Update the program to pass AutoDMA parameters to plugin modules, and better handle AutoDMA transfers.</li> </ul> <p>Bug fixes</p> <ul style="list-style-type: none"> <li>• Fix a bug that made it impossible for the Santec plugin to configure a board to generate logarithmic data.</li> <li>• Fix a bug where switching from normal to full-screen mode while an acquisition was active resulted in waveforms being drawn with a noticeable staircase pattern until either the horizontal scale was changed, or the acquisition restarted.</li> <li>• Fix a bug in the “Configure Horizontal” dialog external clock decimation factor for the ATS660, ATS860, or</li> </ul>

		<p>ATS9462. If the requested decimation value was greater than one, the actual decimation was one greater than requested.</p>
2010/05/27	1.1.22	<p>New Features</p> <ul style="list-style-type: none"> <li>• Add support for displaying waveforms with a vertical offset between the channel marker position and waveform zero level. Press the shift key and drag an input, math, or reference channel marker with left-mouse button to set the offset.</li> <li>• Change “Board Calibration” wizard to save a backup copy of calibration data to file after calibration values are changed. This file can be used to restore calibration data, if necessary.</li> <li>• Change the “Configure Horizontal” dialog to allow changing the ATS9350 external clock level. This option was disabled in version 1.1.20.</li> </ul> <p>Bug fixes</p> <ul style="list-style-type: none"> <li>• Fix a bug that caused the display of license error [391] in log file.</li> <li>• Fix a bug that displayed incorrect ToolTip text when the mouse cursor was hovered over input or math vertical cursor.</li> </ul>
2010/05/14	1.1.21	<p>New Features</p> <ul style="list-style-type: none"> <li>• Change “Configure Trigger” dialog to enable configuring the AUX I/O connector as a trigger enable input or output, and add a button to allow generating software trigger enable events.</li> <li>• Remove “Enable FPGA debug” check box from “Advanced Options” dialog.</li> <li>• Display transfer rate on “Busy” page of Disk Benchmark and Bus Benchmark wizards.</li> </ul> <p>Bug fixes</p> <ul style="list-style-type: none"> <li>• Fix a bug introduced in version 1.1.19 where AlazarDSO could not open an ATS9350-2G or ATS9870-4G under 64-bit Windows. The bug caused it to report error [234] in the log file.</li> </ul>
2010/03/09	1.1.20	<p>New Features</p> <ul style="list-style-type: none"> <li>• Change “Configure Horizontal” dialog to disable changes to the default external clock level value with the ATS9350.</li> </ul>

		<p>The ATS9350 has an AC coupled, self-biasing external clock input, so manual changes to the comparator level should be unnecessary.</p> <ul style="list-style-type: none"> <li>• Change “Configure Plugins” dialog box to add support for more than one active plugin.</li> </ul>
2010/03/01	1.1.19	<p>New Features</p> <ul style="list-style-type: none"> <li>• Draw horizontal lines to mark the input range and vertical position of an input channel whenever either value is changed.</li> <li>• Add tracking horizontal and vertical cursors. If the control key (Ctrl) is pressed while dragging a horizontal or vertical cursor, both cursors will move together.</li> <li>• Add “/o &lt;file&gt;” command line switch to allow opening “ATB” files from the command line.</li> </ul> <p>Bug fixes</p> <ul style="list-style-type: none"> <li>• Fix a bug in the “Stream To Disk” and “Bus Benchmark” wizards that might lock-up the application if DMA transfers from each board in a master-slave system do not complete in board ID sequence.</li> <li>• Change default input impedance to 50 <math>\Omega</math> in “Configure Input” dialog box.</li> <li>• Change the “Configure   View   Spectrum” dialog to reduce the maximum number of FFT entries in order to prevent requesting more memory that is available under 32-bit Windows.</li> <li>• Change the “Calibration Options” dialog box to disable the “Override full scale input” checkbox if a board does not support amplifier bypass mode.</li> <li>• Change the “Configure Acquire” dialog box to enable HyperDisp for PCIe boards only if supported by the firmware. The ATS9462 requires version 33.1 or later, the ATS9870 requires firmware 34.13, and the ATS9350 requires firmware 13.6 or later.</li> </ul>
2009/12/10	1.1.18	<p>New Features</p> <ul style="list-style-type: none"> <li>• Add “Remote Support” to the “Help” menu. This command runs AlazarRemoteConnect.exe, which allows you to share your desktop so that AlazarTech can provide remote support.</li> <li>• Add support to detect ATS9462 LVTTTL External Clock option. This option removes support for 160 and 180 MS/s</li> </ul>

		<p>internal sample rates.</p> <ul style="list-style-type: none"> <li>• Display board option names in the F4 “Board Properties” dialog box.</li> </ul>
2009/11/25	1.1.17	<p>New Features</p> <ul style="list-style-type: none"> <li>• Add F9 keyboard shortcut to display the “Spectrum Information” dialog box.</li> <li>• Change the “Tools   Spectrum Information” menu command so that it remains enabled while acquisitions are running.</li> <li>• Add sample value in LSBs to channel tool tip when “Display extended waveform ToolTips” is selected in the “Configure View” dialog box.</li> <li>• Add board serial number(s) to program title bar.</li> </ul> <p>Bug Fixes</p> <ul style="list-style-type: none"> <li>• Fix the ATS9350 “Configure Horizontal” dialog box external clock options. An ATS9350 with a “10 MHz PLL” external clock supports only a 500 MHz sample clock with decimation factors of 1, 2, 4, or values that are evenly divisible by 5.</li> <li>• Fix a bug in the “Import File” dialog that limited the sample rate to 250 MS/s.</li> <li>• Fix a bug in the “Spectrum Information” dialog “full scale input power” and SNRFS calculations.</li> <li>• Fix a bug where changing the FFT size and then pressing the “OK” button (rather than “Apply” or “Cancel”) in the “Configure View” dialog might cause a program crash with an access violation error.</li> <li>• Fix a bug where exiting AlazarDSO, changing the board type, and then restarting AlazarDSO might result in an error when starting an acquisition if the “samples per record” value is invalid for the new board type.</li> <li>• Fix “Tools   Acquire to File” dialog “Update screen during acquisition” option, and improve throughput.</li> </ul>
2009/10/26	1.1.16	<p>New Features</p> <ul style="list-style-type: none"> <li>• Add “range from horizontal cursors” radio button to “File   Save As” dialog. Use this button to select a range of samples to export with the horizontal cursors.</li> <li>• Add FPGA version to “Board Information” F4 dialog.</li> </ul>

		<ul style="list-style-type: none"> <li>• Add support for 125 MS/s sample rate to the ATS9350.</li> </ul> <p>Bug Fixes</p> <ul style="list-style-type: none"> <li>• Fix the ATS9870 “Configure Trigger” dialog box to disable AC-coupled external trigger inputs. The ATS9870 supports only DC-coupled external trigger inputs.</li> <li>• Fix the ATS9870 “Configure Horizontal” dialog external clock options. An ATS9870 configured with a “10 MHz PLL” external clock supports only a 1 GHz sample clock with decimation factors of 1, 2, 4, or values that are evenly divisible by 10.</li> <li>• Fix “Board Calibration” wizard position calibration to prevent oscillation between low and high out-of-range position values.</li> <li>• Fix “Board Calibration” wizard so that test results on the progress page are displayed in red rather than green if a test fails.</li> <li>• Fix a bug in “Configure Plugins” dialog that resulted in the incorrect display of plugin description information.</li> </ul>
2009/09/30	1.1.15	<p>New Features</p> <ul style="list-style-type: none"> <li>• Add support for digitizer boards with up to 4G samples per channel of on-board memory.</li> <li>• Enable the “Tools   Calibration   Spectrum Information” menu command in all view modes.</li> <li>• Change the “Configure Vertical” dialog box to save the state of the “Apply All” button.</li> <li>• Add “External trigger level” to “Board Calibration” wizard “Calibration Options” dialog box.</li> <li>• Change the “Stream To Disk” wizard progress window to show progress in bytes rather than transfers.</li> </ul> <p>Bug Fixes</p> <ul style="list-style-type: none"> <li>• Fix a bug where exiting AlazarDSO, changing the board type, re-launching AlazarDSO, and starting an acquisition might result in an ApiInvalidParameter error because the input range selected for the old board was invalid for the new board.</li> <li>• Change title bar to display maximum samples per channel in giga- rather than mega-samples when necessary.</li> <li>• Fix a bug in “Configure Plugins” dialog introduced in version 1.1.6 that resulted in the incorrect display of the</li> </ul>

		<p>plugin description.</p> <ul style="list-style-type: none"> <li>• Fix a bug in the “Trigger Sweep” dialog where the external trigger level in volts was not displayed correctly on boards without the <math>\pm 1V</math> external trigger input range.</li> <li>• Fix a bug that caused an access violation from the “Tools   Acquire to File” command.</li> </ul>
2009/09/01	1.1.14	<p>Bug Fixes</p> <ul style="list-style-type: none"> <li>• Fix a bug in the “Board Calibration” wizard that resulted in incorrect DAC offset calibration with ATS310, ATS330, and ATS850 digitizer boards.</li> <li>• Update the code that reads configuration files to allow forward and backward compatibility between versions.</li> <li>• Fix a bug in the board simulator that generated incorrect CH B data in “traditional” AutoDMA mode when CH A was disabled.</li> </ul>
2009/08/13	1.1.13	<p>Bug Fixes</p> <ul style="list-style-type: none"> <li>• Fix a bug where the “pre-trigger samples” edit control was disabled in the “Configure Horizontal” dialog box when “single-ported” transfers were enabled in the “Configure Acquire” dialog box, and “FIFO” data source was selected for “dual-ported” transfers.</li> </ul>
2009/08/11	1.1.12	<p>New Features</p> <ul style="list-style-type: none"> <li>• Add “Measure input offset” and “Null input offset” modes to the “Board calibration” wizard. Use the “Measure input offset” option to measure input offsets error with DC or AC coupled input ranges. And use the “Null input offset” option to calibrate out DC or AC coupled offset errors.</li> <li>• Remove the “Calibrate gain” check box from the “Board calibration” wizard “Calibration options” dialog box.</li> <li>• Change the calibration report files to split the detailed results table into one table per channel, rather than one table for all channels.</li> </ul> <p>Bug Fixes</p> <ul style="list-style-type: none"> <li>• Fix a bug opening files saved with the ATS format.</li> <li>• Fix a bug where the external clock decimation value written to the board when an internal or external clock source was selected.</li> </ul>
2009/07/30	1.1.11	<p>New Features</p>

		<ul style="list-style-type: none"> <li>• Add an option to the “Board calibration” wizard “Calibration options” dialog box to disable gain calibration. Use this option to correct for DC offset errors without affecting DC gain.</li> <li>• Add support for API_SET_FILENAME plugin message to allow plugins to set the name of acquisition files created by the “Stream to Disk” wizard.</li> <li>• Change “Stream to disk” wizard progress dialog to show current transfer rate in bytes per second.</li> <li>• Change the “Save As” dialog to remove the “Alazar Acquisition File (ATS)” file format. It has been replaced by the “Alazar Binary Acquisition File (ATB)” format.</li> <li>• Add support for ATS9350.</li> </ul>
2009/07/13	1.1.10	<p>New Features</p> <ul style="list-style-type: none"> <li>• Add the “Board Calibration Wizard” to the Tools menu. This wizard allows you to verify the calibration of your ATS digitizer boards, and recalibrate them if desired.</li> </ul> <p>Note that this feature requires optional calibrator plugin modules, and a function generator capable of supplying the voltage levels and waveforms needed to perform the calibration.</p> <ul style="list-style-type: none"> <li>• Add the “/autorun” command line option to automatically start acquisitions on program startup.</li> </ul> <p>Bug Fixes</p> <ul style="list-style-type: none"> <li>• Fix a bug introduced in version 1.1.6 that resulted in a warning not being displayed on program startup when physical boards were detected with the board simulator was enabled.</li> <li>• Change “File   Save As” command to export all transfer buffers from an acquisition file, rather than the currently displayed transfer buffer.</li> <li>• Change 64-bit Windows build to use virtual memory rather than record segment files by default. This should allow better performance under 64-bit Windows.</li> </ul>
2009/05/05	1.1.9	<p>New Features</p> <ul style="list-style-type: none"> <li>• Add “/s” command line option to specify the default system ID, and the “/f &lt;ini-file&gt;” options to specify the default configuration file.</li> </ul>

2009/04/20	1.1.8	<p>New Features</p> <ul style="list-style-type: none"> <li>• Add “Enable sample interleave” to the “AutoDMA Options” dialog box and “Stream to Disk” wizard. Check this option to enable the ATS9870 to maximize its transfer rate from on-board to host memory.</li> <li>• Display “ADMA-NPT” when no-pre-trigger (NPT) AutoDMA transfers are enabled. This allows you to identify when NPT transfers are enabled.</li> <li>• Add F8 short-cut key to launch the “Stream to Disk” wizard.</li> <li>• Change the “Configure Vertical” dialog to add a plus or minus sign to input ranges.</li> <li>• Change the “Configure System” dialog to display the board or system properties dialog when a tree control node is double clicked.</li> </ul> <p>Bug Fixes</p> <ul style="list-style-type: none"> <li>• Fix a bug that resulted in the display of incorrect waveforms when waveform averaging was enabled in the “Configure Acquire” dialog, and “FIFO” data source was selected in the “AutoDMA Options” dialog box.</li> <li>• Fix a bug that resulted in the creation of ATB files with incorrect headers when waveform averaging was enabled in the “Configure Acquire” dialog.</li> <li>• Fix a bug that resulted in an “invalid handle” error from the “Stream To Disk” wizard if the “ADMA buffer size” value was increased in the “Advanced Options”, but the program was not restarted.</li> <li>• Fix a bug that resulted in an error from “Stream To Disk” wizard if the sum of transfer rates from all enabled channels in a multi-board system was greater than the maximum transfer rate of one PCI Express card.</li> <li>• Fix an error in the “AlazarDSO User Guide” code fragment demonstrating how to convert timestamp values from counts to seconds.</li> <li>• Change the “Bus Benchmark” wizard and the ATS9462 5.6.12 drivers to prevent intermittent buffer overflow errors when performing ATS9462 bus benchmarks.</li> <li>• Change the ATS9462 bytes per transfer requirement from 64 bytes in NPT mode, or 32 bytes in non-NPT mode, to 8 bytes.</li> </ul>
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		<ul style="list-style-type: none"> <li>• Update Simplified Chinese (CHS) resources.</li> </ul>
2009/03/13	1.1.7	<p>Bug Fixes</p> <ul style="list-style-type: none"> <li>• Fix a bug that intermittently resulted in the incorrect display of ATB files created using the “Stream to Disk” wizard if record headers were enabled.</li> <li>• Fix a bug that resulted the creation of invalid ATB files from the “File   Save As” dialog.</li> <li>• Fix a bug that resulted in the display of incorrectly scaled record timestamps with ATS850 and ATS860 digitizer boards. The actual timestamp value was twice the displayed value.</li> <li>• Update section 4.10.3 “ATB File Format Sample Data”, and add a license agreement to the “AlazarDSO User Guide”.</li> <li>• Update German resources.</li> </ul>
2009/03/09	1.1.6	<p>New Features</p> <ul style="list-style-type: none"> <li>• Add PCI / PCIe bus benchmark to tools menu. This tool allows you to measure the transfer rate from AlazarTech digitizer boards to host memory. It may be useful to verify that your PC is capable of the sustained transfer rates required for streaming.</li> </ul> <p>Note that this tool can be used with the following boards: ATS460, ATS660, ATS860, or ATS9462 with FPGA version 23 or above. Other boards lack firmware required for its operation.</p> <ul style="list-style-type: none"> <li>• Add a splash screen on program startup. The splash screen is displayed during board initialization, which may take many seconds depending on the number and type of boards in your board system.</li> </ul> <p>Bug Fixes</p> <ul style="list-style-type: none"> <li>• Fix a bug in the “Configure Acquire” dialog that allowed users to request AutoDMA transfers exceeding the 4MB per transfer limit of PCI digitizer boards.</li> <li>• Fix a bug where waveform tooltips were not always displayed as expected when the “Interpolate trigger position” option was enabled.</li> <li>• Fix a bug in the “Configure Horizontal” dialog that set an incorrect limit on the decimation factor value.</li> </ul>

2009/02/17	1.1.5	<p>Bug Fixes</p> <ul style="list-style-type: none"> <li>• Fix a bug where buffer overflow errors were not correctly detected while streaming data. This resulted in error 513 in the log file.</li> <li>• Fix a bug introduced in version 1.1.2 where the AUX I/O connector was always reconfigured as an input.</li> </ul>
2009/02/13	1.1.4	<p>New Features</p> <ul style="list-style-type: none"> <li>• Add code for testing ATS9870.</li> </ul> <p>Bug Fixes</p> <ul style="list-style-type: none"> <li>• Change “Configure Horizontal” dialog to disable external clock level controls when “10 MHz PLL” external clock is selected.</li> <li>• Update to VC++ 9 SP1 runtime libraries.</li> </ul>
2009/02/03	1.1.3	<p>New Features</p> <ul style="list-style-type: none"> <li>• Add text describing the highlighted measurement in voltmeter mode.</li> <li>• Remember channel vertical positions in each display mode, rather than using the same vertical position in all display modes.</li> <li>• Add 1, 2, and 5 ns per division to horizontal scales.</li> </ul> <p>Bug Fixes</p> <ul style="list-style-type: none"> <li>• Fix a bug that resulted in error 345 in the log file when streaming multiple record acquisitions to file with the “Create ATB file in stream format” option disabled.</li> <li>• Fix an error in section 4.10.3 of the “AlazarDSO User Guide” that incorrectly stated that CAPTURE_BUFFER structures were written to an ATB file when CFHF_STREAM flag is set in the file header. Only the sample data stored in CAPTURE_BUFFER structures are written to file.</li> </ul>
2009/01/29	1.1.2	<p>New Features</p> <ul style="list-style-type: none"> <li>• Add "Interpolate trigger position" to the "Configure Oscilloscope View" dialog. This feature helps improve the display of repetitive signals at horizontal scales that allow you to resolve sample points.</li> </ul> <p>The trigger position normally has a jitter of one-sample since trigger events may occur at any time between sample points. This jitter causes the trigger position in a repetitive</p>

		<p>signal to appear to shift horizontally by up to one sample point.</p> <p>When the “Interpolate trigger position” option is enabled, AlazarDSO calculates the trigger position in between sample points, and displays this sub-sample trigger position at the trigger marker on screen. This results in the stable display of repetitive signals by removing the one-sample jitter.</p> <ul style="list-style-type: none"> <li>• Add "Enable AUX I/O trigger enable" to the "Configure Trigger" dialog. This option allows you to configure a board to wait for an external enable event before enabling its trigger engines. This may be useful, for example, in scanning applications where you wish to capture scan lines only after a “start of frame” event.</li> <li>• Remove “number of acquisitions” from the “Set multiple record options” page of the “Stream to Disk” wizard. This simplifies the configuration of multiple-record streaming acquisitions. It also prevents the common error of specifying multiple acquisitions when multiple “transfers per acquisition” was really desired.</li> <li>• Add page numbers to “Stream to Disk” wizard property sheet pages. This change should make it easier to identify pages in the wizard.</li> <li>• Add the “Markers” line style to “Configure Input”, “Configure Math”, and “Configure Reference” dialog boxes. This option may be useful if you wish to view sample points without line segments between them.</li> <li>• Change the simulator to add slew to square waves, and trigger phase error to all waveforms. This change allows the simulator to generate signals that have one-sample trigger jitter</li> </ul> <p>Bug Fixes</p> <ul style="list-style-type: none"> <li>• Fix a bug in the simulator that resulted in incorrect simulated non-interleaved AutoDMA records with pre-trigger samples when multiple records per transfer were requested.</li> </ul>
2009/01/15	1.1.1	<p>New Features</p> <ul style="list-style-type: none"> <li>• Change default action on double-clicking the “Plugin” text in the graticule to show the configuration dialog of the currently selected plugin.</li> </ul>

		<ul style="list-style-type: none"> <li>• Add an option to disable checking for signal out of range.</li> </ul> <p>Bug Fixes</p> <ul style="list-style-type: none"> <li>• Fix a bug where the number of samples per channel was incorrectly calculated on loading ATB files in multi-board systems. This resulted in error 653 in the log file, and partial data displayed using the “Browse Records” dialog.</li> </ul>
2009/01/06	1.1.0	<p>New Features</p> <ul style="list-style-type: none"> <li>• Add the “limit memory allocated per channel” option to improve program functionality under 32-bit Windows with board systems that have 128 MS or more of on-board memory per channel. Previous versions required 64-bit Windows to work with such systems.</li> <li>• Add a “Signal out of range” warning if a signal is greater than a channel’s input range.</li> <li>• Add UP ARROW, DOWN ARROW, CTRL+UP ARROW, and CTRL+DOWN ARROW keyboard shortcuts to navigate between records in a multiple record capture.</li> <li>• Add LEFT ARROW, RIGHT ARROW, HOME, PAGE UP, PAGE DOWN, CTRL+LEFT ARROW, and CTRL+RIGHT ARROW keyboard shortcuts to navigate within a record of a capture.</li> </ul> <p>Bug Fixes</p> <ul style="list-style-type: none"> <li>• Change the “Configure” menu “Load...” and “Load Recent” commands to copy settings from the selected file to a working configuration file rather than using the selected file as the working configuration file.</li> <li>• Fix a bug that might cause an invalid memory access error if a plugin was active while switching between board systems.</li> <li>• Fix a bug where “automatically set memory options” claims to disable “capture during display” but the program continues to use “capture during display” anyway.</li> </ul>
2008/12/14	1.0.22	<p>Bug Fixes</p> <ul style="list-style-type: none"> <li>• Fix a bug in the “Stream To Disk” wizard where selecting “multiple record” type acquisitions would result in buffer overflow errors when saving to disk.</li> <li>• Fix a bug in the “Configure Horizontal” dialog where the trigger delay could not be modified if “no pre-trigger</li> </ul>

		mode” was enabled.
2008/12/12	1.0.21	<p>Bug Fixes</p> <ul style="list-style-type: none"> <li>• Fix a bug in the “Stream To Disk” wizard “multiple records with pre-trigger samples” or “multiple records without pre-trigger samples” modes where the number of transfers per acquisition was not correctly set.</li> </ul>
2008/12/05	1.0.20	<p>New Features</p> <ul style="list-style-type: none"> <li>• Add code for internal testing of ATS9870</li> </ul>
2008/12/03	1.0.19	<p>New Features</p> <ul style="list-style-type: none"> <li>• Add Disk Benchmark Wizard to allow users to verify that their drives are capable of the sustained write speeds required for disk streaming.</li> <li>• Add support for FPGA FFT plugin.</li> <li>• Add support for detecting a buffer overflow during asynchronous transfers.</li> </ul> <p>Bug Fixes</p> <ul style="list-style-type: none"> <li>• Update DEU and JPN resources.</li> <li>• Fix a bug that made it impossible to display the data recorder plugin configuration dialog after installing the Santec plugin.</li> <li>• Fix a bug in the “Stream To Disk” module that might result in the display of an incorrect transfer time and rate.</li> <li>• Fix a bug in the “Stream To Disk” module that might result in starting a DMA transfer after streaming is aborted. This would result in an ApiDmaInProgress error message on the start of the next acquisition.</li> </ul>
2008/10/31	1.0.18	<p>New Features</p> <ul style="list-style-type: none"> <li>• Add support for exporting FlexPro and MATLAB files in the “Create one file per channel” file export option.</li> </ul> <p>Bug Fixes</p> <ul style="list-style-type: none"> <li>• Fix bug in “Save As” dialog exporting math channel data spanning multiple transfers.</li> <li>• Fix bug where replacing one board with another of a different type would result in AlazarDSO using settings from the old board on the new one.</li> <li>• Update Japanese resources</li> </ul>

2008/10/28	1.0.17	<p>New Features</p> <ul style="list-style-type: none"> <li>• Added support for Master/Slave ATS9462 boards. Data streaming to host PC memory was proven at 100 MS/s for four simultaneous channels (total of 800 MB/s) on Dell T7400 machine running Vista 64 bit.</li> <li>• Added support for pre-trigger samples to ATS9462 with FPGA version 21 or above. Up to 2048 points of pre-trigger data can now be specified</li> <li>• Added “Single” mode to trigger modes combo box. This allows users to do a single-shot acquisition.</li> <li>• Added “Create one file per channel” option to “Stream To Disk” wizard and “Save As” dialog box. This allows users to select between exporting one file per record, or one file per channel.</li> <li>• Added vertical line at trigger position when dragging the trigger level.</li> <li>• Added bookmarks to “AlazarDSO User Guide” PDF file.</li> <li>• Added file format section to “AlazarDSO User Guide”.</li> </ul> <p>Bug Fixes</p> <ul style="list-style-type: none"> <li>• Fix bug where AlazarBeginCapture was called on all boards rather than just the master.</li> <li>• Fix bug where disabling both channels on one board in a system with multiple boards generates an error.</li> <li>• Fix “Configure Horizontal” dialog to allow trigger delay when FIFO streaming enabled.</li> </ul>
2008/10/20	1.0.16	<p>Bug Fixes</p> <ul style="list-style-type: none"> <li>• Fix a bug that caused the program to start as un-restorable icon on the taskbar after the program was closed while minimized.</li> <li>• Fix data recorder plugin to hide chart when plugin is disabled.</li> </ul>
2008/10/10	1.0.15	<p>New Features</p> <ul style="list-style-type: none"> <li>• Add preliminary support for ATS9870</li> </ul> <p>Bug Fixes</p> <ul style="list-style-type: none"> <li>• Change “Configure Horizontal” dialog to disable external clock level when the board does not support it.</li> </ul>
2008/10/09	1.0.14	<p>New Features</p>

		<ul style="list-style-type: none"> <li>• Add external clock level to “Configure Horizontal” dialog.</li> <li>• Change external clock types for ATS9462 and ATS860</li> </ul> <p>Bug Fixes</p> <ul style="list-style-type: none"> <li>• Update CHS resources</li> </ul>
2008/10/07	1.0.13	<p>Bug Fixes</p> <ul style="list-style-type: none"> <li>• Update CHS resources</li> </ul>
2008/10/06	1.0.12	<p>New Features</p> <ul style="list-style-type: none"> <li>• Change “Stream To Disk” wizard to warn if file is too big for FAT32 partition</li> <li>• Change “Stream To Disk” wizard to allow formatting removable disks.</li> <li>• Change “Board Properties” dialog box to display board options as a hex rather than decimal value.</li> </ul> <p>Bug Fixes</p> <ul style="list-style-type: none"> <li>• Fix minimum value of ATS9462 “fast” external clock range in the “Configure Horizontal” dialog.</li> <li>• Fix a bug in “Stream To Disk” wizard where changing the trigger source in the “Configure Trigger” dialog caused an access violation error.</li> <li>• Fix a bug in “Stream To Disk” wizard where disk space updates stopped after formatting a disk.</li> <li>• Fix a bug which caused an access violation when displaying the “create directory failed” error message.</li> </ul>
2008/09/11	1.0.11	<p>Bug Fixes</p> <ul style="list-style-type: none"> <li>• Change “Fix” button in “Stream to Disk” wizard to suggest changing records per transfer before changing samples per record.</li> <li>• Update French, German, Spanish, Japanese, Simplified Chinese, and Traditional Chinese language resource DLL’s.</li> </ul>
2008/08/27	1.0.10	<p>Bug Fixes</p> <ul style="list-style-type: none"> <li>• Update CHS and CHT resource DLL’s</li> </ul>
2008/08/27	1.0.9	<p>New Features</p> <ul style="list-style-type: none"> <li>• Add “Stream To Disk” specific records per transfer, transfers per acquisition, and enable record header parameters.</li> </ul>

		<ul style="list-style-type: none"> <li>• Change the ATB file format to add support for saving dual-ported transfers directly to file, make this the default format for “Stream To Disk”, and add a configuration parameter to disable this option.</li> <li>• Add the F4 shortcut key to display the board information dialog in all languages.</li> <li>• Add “/s” command line option to enable simulator</li> <li>• Change board property dialog to display calibration date in locale format</li> <li>• Change contact information in user guide and license error message.</li> </ul> <p>Bug Fixes</p> <ul style="list-style-type: none"> <li>• Fix validation of samples per record in “Configure Acquire” dialog</li> <li>• Fix a bug that might cause the PC to freeze after changing the AlazarDSO user interface language.</li> </ul>
2008/07/21	1.0.8	<p>Bug Fixes</p> <ul style="list-style-type: none"> <li>• Fix bug creating ATB files with non-continuous data</li> <li>• Fix bug displaying intermittent vertical lines around acquisition state text</li> <li>• Change trigger sweep dialog button defaults</li> <li>• Change code to reduce number of calls to ATSApi.dll AlazarGetSystemHandle</li> </ul>
2008/07/07	1.0.7	<p>Bug Fixes</p> <ul style="list-style-type: none"> <li>• Remove short delay in non-continuous acquisitions in “Stream To Disk” mode to improve performance.</li> </ul>
2008/07/03	1.0.6	<p>New Features</p> <ul style="list-style-type: none"> <li>• Change “Alazar Text Records” and MATLAB export file formats to write sample times including record timestamps.</li> </ul> <p>Bug Fixes</p> <ul style="list-style-type: none"> <li>• Fix file cache problem causing slow file writes during non-continuous streaming.</li> <li>• Fix “Stream To Disk” wizard “Export File” page to validate directory only when export enabled</li> <li>• Fix access violation when logging AlazarReadRegister parameters.</li> </ul>

AlazarDSO Release Notes

		<ul style="list-style-type: none"> <li>• Change “Configure Horizontal” dialog enable “Trigger delay” during “Stream To Disk”</li> </ul>
2008/06/30	1.0.5	<p>New Features</p> <ul style="list-style-type: none"> <li>• Add ATSApi.dll trace function</li> </ul>
2008/06/15	1.0.4	<p>New Features</p> <ul style="list-style-type: none"> <li>• Change “Stream To Disk” wizard to add “Alazar Text Records” and “Alazar Binary Records” to “Stream To Disk” to export file formats.</li> </ul>
2008/05/26	1.0.3	<p>Bug Fixes</p> <ul style="list-style-type: none"> <li>• Update Spanish resources</li> </ul>
2008/05/12	1.0.2	<p>New Features</p> <ul style="list-style-type: none"> <li>• Change "Stream To Disk" wizard to allow streaming if not saving to disk.</li> <li>• Change “Stream To Disk” wizard to move “Trigger position (%)” from “Multiple Records” page to “Board Configuration” page.</li> <li>• Change graticule drawing code to display a vertical line while dragging trigger.</li> <li>• Change “Help   Send Feedback” menu to add “.AlazarDSO.ini” file to attachment list.</li> <li>• Change “Board Information” dialog to add peak transfer rate.</li> </ul> <p>Bug Fixes</p> <ul style="list-style-type: none"> <li>• Change "Stream To Disk" wizard to fix display of transfer rate when "Finish" button is pressed from "Select Mode" page.</li> <li>• Change board system to abort master before slaves.</li> </ul>
2008/05/09	1.0.1	<p>New Features</p> <ul style="list-style-type: none"> <li>• Add support for ATS9434.</li> </ul>
2008/04/27	1.0.0	<ul style="list-style-type: none"> <li>• Initial release</li> </ul>