

Alacritech Release 7.3.0.1 Rev. 2 Release Notes

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## Introduction

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This is the official release of the 7.3.0.1 Rev. 2 driver package for Alacritech Accelerators on Windows platforms.

This release contains no changes to the network driver software from 7.3.0.1.

The release adds PXI/UNDI flash capability to enable iSCSI boot for Alacritech SEN2000 and SES2000 family products, and includes a trial copy of emBoot netBoot/i iSCSI boot software. Only customers desiring iSCSI boot functionality need upgrade from 7.3.0.1 to 7.3.0.1 Rev. 2.

This release only supports Alacritech Gigabit products. 100 Mbit products continue to be supported through the 6.x.x.x drivers.

This file provides details on known outstanding bugs, support issues and feedback mechanisms for this release.

## Content List

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This release contains the following file and directories:

### autorun.inf

Launches the installation process on a Windows system if it is located on CD media.

### bin

Contains tools for reading documentation in PDF format. a.k.a Adobe Acroread [TM].

### doc

Files and documentation associated to Alacritech's hardware and software products. This includes the Alacritech Server and Storage Accelerator Users Guide.

FlashImage

Flash image files to provide a PXE UNDI interface to Alacritech Accelerators based on the STA2000 ASIC.

netbooti

Files and documentation associated to emBoot netBoot/i iSCSI boot software.

setup.exe

The Alacritech Accelerator Setup application, which allows the Alacritech drivers and libraries to be installed properly on your system.

readme.html

Front end introduction to the driver.

readme\_files

Folder containing files referenced by readme.html.

RelNotes.txt

This file.

w2k

The software drivers, libraries, and utilities for Windows 2000, Windows XP and Windows Server 2003.

File Versions:

File	Version	Description
slic100.sys	7.3.0.0	Network Miniport Driver
atcp.sys	7.3.0.1	TCP Offload Driver
slicteam.sys	7.3.0.0	Link Aggregation (Teaming) Driver

PXE/UNDI File Versions:

File	Version*	Build Date	Description
oasis0.bin	1.0.0.1	11/22/2005 10:24 AM	iSCSI boot firmware
oasis1.bin	1.0.0.1	11/22/2005 10:24 AM	iSCSI boot firmware
oasis2.bin	1.0.0.1	11/22/2005 10:24 AM	iSCSI boot firmware
stub_m.nic	1.0.0.1	11/22/2005 10:24 AM	iSCSI boot firmware
stub_mf.nic	1.0.0.1	11/22/2005 10:24 AM	iSCSI boot firmware

\*At this time there is no actual version stamp in the PXI/UNDI files.

Caveats

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Supports only gigabit products.

Features

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## Supported Hardware

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This release supports the following products:

Part Number	Product Description
SEN2001XT	PCI-X Gigabit Copper 1-port Network Accelerator
SEN2001XF	PCI-X Gigabit Fiber 1-port Network Accelerator
SES2001XT	PCI-X Gigabit Copper 1-port iSCSI Accelerator
SES2001XF	PCI-X Gigabit Fiber 1-port iSCSI Accelerator
SEN2002XT	PCI-X Gigabit Copper 2-port Network Accelerator
SEN2002XF	PCI-X Gigabit Fiber 2-port Network Accelerator
SES2002XT	PCI-X Gigabit Copper 2-port iSCSI Accelerator
SES2002XF	PCI-X Gigabit Fiber 2-port iSCSI Accelerator
SEN2102ET	PCI-Express Gigabit Copper 2-port Network Accelerator
SEN2102EF	PCI-Express Gigabit Fiber 2-port Network Accelerator
SEN2104ET	PCI-Express Gigabit Copper 4-port Network Accelerator
SEN2104EF	PCI-Express Gigabit Fiber 4-port Network Accelerator
2000-100007*	PCI Gigabit Copper 1-port Network Accelerator
2000-100009*	PCI Gigabit Fiber 1-port Network Accelerator
SES1001T*	PCI Gigabit Copper 1-port iSCSI Accelerator
SES1001F*	PCI Gigabit Fiber 1-port iSCSI Accelerator

\* iSCSI boot is not supported on these cards.

## Supported Platforms

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This release is supported only for IA32 compatible architecture running selected Microsoft Windows operating system versions:

### Supported Windows Versions

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Windows 2000 (all versions)  
 Windows XP (Service Pack 1 or later, 32bit only)  
 Windows Server 2003 (32bit only)

This driver is not compatible with Virtual PC 2004.

## Existing Features

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- Basic NIC Functionality
- TCP Offload
- TCP Checksum Offload (Only when TCP Offload is enabled)
- Large Memory Support (/PAE)
- Limited support for TCP performance tuning.
- Link Aggregation (Teaming)
  - + 802.3ad/(Fast/Gigabit) EtherChannel compatible mode
  - + Hot Standby Failover mode
- Jumbo Frames
- Membership in a single tagged vlan
- Checksum offload in dumb NIC mode.
- Segmentation offload in dumb NIC mode.

## New Features

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- PXE UNDI flash ROM support (To enable iSCSI boot)

## Discontinued Features

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No features have been removed by this release.

## Windows Logo (Designed for Microsoft Windows)

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These drivers are digitally signed and the Alacritech Accelerator hardware meets the Designed for Microsoft Windows Server 2003 and Designed for Microsoft Windows 2000 Server logo requirements. The Designed for Windows logo associated with Alacritech's products applies to the base level networking functionality supported by the SLIC100 driver as well as the link aggregation functionality supported by the SLICTEAM driver.

## Known Issues

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This section contains a list of currently understood issues. Both open bugs and known integration issues are documented based on this specific release. Please review the current open bugs and known issues before filing a bug report. See the Support and Feedback section below for details on reporting bugs.

## Open Bugs

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### Bug 00678 [All]

Alacritech behavior does not match Microsoft for network tunables

Some tunables for Windows are not evaluated and interpreted by the Alacritech drivers, particularly TcpMaxDataRetransmissions.

Workaround - Please see the Alacritech Server Accelerator FAQ for more details.

### Bug 00807 [XP]

Uninstall leaves trash in registry

After uninstalling Alacritech cards errant entries left in registry will cause any subsequent installation of any NICs to start Local Area Connection numbers to skip, as if the Alacritech cards were still installed.

Workaround - If you encounter this problem, use the 'remove' program (run in a cmd window) included in the w2k directory of the Alacritech distribution to clean up the errant registry entries.

### Bug 00979 [ALL]

slc reports incorrect data to Network Object

Network Performance Object Total Bytes/Sec shows spurious peaks during data transfer through Alacritech interfaces.

Workaround: Use the fastpath total bytes/sec and slowpath total bytes/sec components of the SLIC object to measure performance for Alacritech cards.

### Bug 00989 [ALL]

ATCP will not enforce "Require Kerberos Trust" policy

When windows IP Security Policy "Require Kerberos Trust" is in place, connections via Alacritech interfaces bypass this policy, allowing connections to un-trusted hosts.

Workaround - Disable "Alacritech TCP fastpath driver" on interfaces that require this policy.

Bug 01018 [all]

ATCP will not hand out in half closed state

Half closed connections will not get the benefit of TCP offload.

Workaround - No customer workaround. Developers don't send large amounts of data while in half close. This is a fairly rare condition in real world, and Alacritech has no plans to fix this bug.

Bug 01208 [all]

atcp.sys fails to complete receive

When a client server application closes a connection with an abortive disconnect on the data receiving side, the Alacritech card can send a reset with an incorrect sequence number, causing the connection to fail to close.

Workaround - None. Fix is available for next release.

Bug 01213 [2k3sp1]

Backup exec fails with 'data inconsistent' message.

On Windows 2003 with SP1 only, Backup Exec version 10.0 and 10.1 can fail with message: "V-79-57344-33994 - The data being read from the media is inconsistent."

Workaround - Disable "Alacritech TCP fastpath driver" on Backup Exec Media Server.

Bug 01224 [all]

PXE/UNDI: Can't flash/enable port B on SEN2102ET

On Alacritech 2100 Series Accelerators, only port A can be selected for update during the PXI/UNDI flash process.

Workaround - Only use port A for iSCSI boot.

Bug 01225 [all]

PXE/UNDI: Port selection problem with SLICUSER

The Flash Update doesn't always select the correct port on which to enable iSCSI boot.

Workaround - Before selecting the Flash Update tab, go to the General and ensure that port A of the device you wish to flash is selected. As long as port A is selected on the General tab, the Flash Update will proceed correctly.

Bug 01226 [all]

Fiber cards can lose link during iSCSI boot process.

When performing iSCSI boot using a fiber card, link may be lost when transitioning from preboot to post boot, causing the system to stall at the Windows screen.

Workaround - Disconnect and reconnect the port, or use a different switch.

Resolved Issues

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Resolved since 7.1.2.2

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Bug 01196 [all]

TCP timestamps don't work w/ Jumbo frames enabled

With Jumbo frames enabled, TCP timestamps can be negotiated when connection is established, but subsequent data frames have no time stamp information, causing constant flushing to slowpath and resultant horrible performance.

Bug 00984 [w2k]

ATKPERF fills application log with annoying messages

On some systems with the SNMP agent installed, atkperf.dll puts in an eventlog message at critical priority every time it opens or closes the event log.

Bug 00936 [ALL]

Can't connect to Novell server.

Windows Novell client cannot connect to Novell server if Alacritech installed.

Resolved since 7.1.1.0

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Bug 01181 [2k3]

Duplicate ID address message w multiple ports

When multiple Alacritech ports (cards, or multiport boards) are installed, spurious duplicate IP address messages can occur. The message will contain the MAC address of one of the other Alacritech ports on the same system.

Bug 01178 [All]

Install program hangs

Install program sometimes hangs during installation of multi-port 2000 series boards.

Bug 01177 [All]

Cannot connect to iSCSI target

When multi-processor hosts using the MSiSCSI initiator to connect to targets that use iSCSI redirect ( Notably Equal Logic PS200E ) connection may hang in the "reconnecting" state.

Bug 01176 [2k3]  
SLIC Event 5002

Alacritech card resets under heavy load. This bug appears to have been introduced in release 7 due to firmware changes made to support jumbo frames.

Bug 01175 [2k3SP1]  
Stringbean target no longer works

As of SP1 for Windows Server 2003 multiple simultaneous TDI read requests are now allowed but 7.1.1.0 and earlier we're not handling it correctly. This bug affected Stringbean Wintarget, ftp, and many other programs, typically resulting in the program hanging.

Bug 01173 [2k3]  
Bug 1145 fix breaks Osaka (MS iSCSI 2.0) Initiator fix

When running the Osaka MS iSCSI 2.0 Initiator on release 7.1.1.0 with persistent LUNs, system blue screens immediately after initialization. Bug 1145 changed our SLIC initialization time, that changed the internal timing with respect to the MS Initiator attempting to open and close connections.

Bug 01098 [All]  
Asynchronous I/O that polls via TDI\_RECIEVE fails.

Kernel mode applications that use socket polling rather than Windows callbacks for asynchronous I/O will not work with TCP Offload enabled. Hummingbird Maestro NFS and ADIC SNFS fall in to this category.

Resolved since 7.1.0.1  
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Bug 01170 [2k3]  
Can't install on Windows 2003 SP1

The co-installer (atkcoin.dll) fails to load on SP1, causing all installs and upgrades of Alacritech drivers to fail.

Bug 01166 [2k3]  
Crashes with MS iSCSI 2.0 initiator and persistent disks

If the Microsoft iSCSI initiator is used and there are persistent disks, the system will crash after reboot.

Bug 01145 [All]  
File shares on iSCSI disks do not reappear after reboot

The long initialization time of the Alacritech interface may cause services that depend on the iSCSI disks to fail after a reboot. The iSCSI disks themselves will appear, but services that depend on them may not operate as expected.

## Readme

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The readme.html contained with distribution should be used as the starting point for learning about this driver.

## Users Guide

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There is a Users Guide contained in the doc directory provided to customers for use with Alacritech Accelerators. For details on installation, management, teaming, and interoperability issues, please review the Users Guide, as full details have been provided there.

## Support and Feedback Mechanism

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Before Contacting Customer Support, please browse the troubleshooting section of the Users Guide. Should you need to contact customer support, please gather all of the following information requested in the Incident Reports section below before initiating contact.

To contact Alacritech customer support you may use one of the following options:

Email: [support@alacritech.com](mailto:support@alacritech.com)

Phone: 877.341.8267

## Incident Reports

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Please include the following information when sending in an incident request:

### Hardware:

- CPUs
- Amount of memory
- PCI busses
- Number of Alacritech accelerators
- Other network interfaces

### Software:

- Windows Version (2000, XP, 2003)
- Windows Service Pack version
- Version of Alacritech drivers

### Log information:

- Event Viewer details related to Alacritech
- Windows dump files (if there is a crash)

### Testing environment:

- What software is being tested
- What types of tests reproduce the problem
- Where is the failure occurring
- What has been done to try and solve the problem

## Patents

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One or more U.S. and international patents apply to Alacritech products, including without limitation: U.S. Patent Nos. 6,226,680, 6,247,060, 6,334,153, 6,389,479, 6,393,487, 6,427,171, 6,427,173, 6,434,620, 6,470,415, 6,591,302, 6,658,480, 6,687,758, 6,697,868, 6,751,665, 6,757,746, 6,807,581, 6,938,092, 6,941,386 and 6,965,941.

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