

# AX Supervisor®

## Overview



Tridium's suite of Niagara-based products integrate diverse smart devices into unified, Internet-enabled, web-based systems. These solutions integrate LonWorks™, BACnet™, oBIX, Internet and web services protocols in a software platform that can be used in embedded controllers and server applications. The products include integrated network management tools to support the design, configuration, installation, and maintenance of interoperable networks.

The AX Supervisor is a flexible network server used in applications where multiple Niagara<sup>AX</sup>-based JACE® controllers can be networked together. The AX Supervisor serves real-time graphical

information to standard web-browser clients and also provides server-level functions such as: centralized data logging, archiving, alarming, trending, master scheduling, system-wide database management, and integration with enterprise software applications. In addition, the AX Supervisor provides a comprehensive, graphical engineering toolset for application development.

In addition to the 32 bit AX Supervisor, a 64 bit version for Windows based PCs is available for monitoring systems intended to monitor in excess of 150 and up to 500 JACEs. It supports the same feature set as the standard version.

With Niagara<sup>AX</sup> release 3.4 or greater, Tridium offers a platform for the AX Supervisor which runs on Red Hat Linux. Niagara<sup>AX</sup> 3.4 and later versions provide AX Supervisor software that is targeted for a specific Linux-based platform: an Intel-based PC platform running the operating system of Red Hat Enterprise Linux 5.

For smaller installations, the Small Building Supervisor offers the full functions of the Niagara Framework, but limits the number of Niagara-based connections. The Small Building Supervisor can run on a 32 and 64-bit Windows based PCs as well as Red Hat Enterprise Linux 5 based PCs. Also, the Small Building Supervisor can be upgraded to a full AX Supervisor if the job outgrows the limit of three Niagara-based connections.

oBIX is now included in all AX Supervisors as a means of integrating Niagara-based Release 2 (R2) JACEs. With release 2.3.522 or greater, the oBIX driver can be added to expose all data points, schedules, trends and alarms to an AX system. This oBIX driver is both a client and a server.

## Features

- Java-enabled user interface (UI) as well as a non-Java UI for browsers
- Supports an unlimited number of users over the Internet / Intranet with a standard web browser, depending on the host PC resources
- Optional enterprise-level data archival using SQL, MySQL, CSV, Oracle or DB2 database, and HTTP/HTML/XML text formats
- "Audit Trail" of database changes, database storage and backup, global time functions, calendar, central scheduling, control, and energy management routines
- Sophisticated alarm processing and routing, including e-mail alarm acknowledging
- Access to alarms, logs, graphics, schedules, and configuration data with a standard web browser

- Password protection and security using standard Java (on Windows platforms only) authentication and encryption techniques with optional security supported via an external LDAP connection
- HTML-based help system that includes comprehensive on-line system documentation
- Supports multiple Niagara-based stations connected to a local Ethernet network, or the Internet
- Provides online/offline use of the Niagara Framework Workbench AX® graphical configuration tool and a comprehensive Java Object Library
- Optional direct Ethernet based driver support for BACnet I/P, OPC (Client), Modbus TCP, Lon IP and SNMP; additional point blocks for each driver may be purchased in blocks of 500 for each protocol
- A "Small Building System" version for both Windows and Linux platforms is available for support of a system with up to three JACEs
- A 64-bit compliant version of the AX Supervisor for Windows is available for large systems monitoring in excess of 200 Niagara based controllers. All features of the standard AX Supervisor are included with this platform.

## Platform Requirements

### Processor

- Intel Pentium® IV, 2 GHz or higher, Core 2 Duo also acceptable

### Operating System

- 32-bit Windows AX Supervisors, Microsoft Windows XP Professional, Windows 2003 or 2008 Server (if Microsoft IIS is disabled), Vista Business, or Windows 7, with Mozilla Firefox™ or Internet Explorer™ 5.0 or later is the required OS
- 64-bit Windows AX Supervisor, Win64 version of Windows XP Professional or Win64 version of Windows 7 is the required OS
- Linux AX Supervisors (32-bit), Red Hat Enterprise Linux 5 is the required OS

### Memory

- 1 GB minimum, 2GB or more recommended for large systems, 8 GB or more recommended for the Windows 64-bit version

### Hard Drive

- 1 GB minimum, 5 GB for applications that need more archiving capacity

### Display

- Video card and monitor capable of displaying 1024 x 768 pixel resolution or greater

### Network Support

- Ethernet adapter (10/100 Mb with RJ-45 connector)

### Connectivity

- Full time high speed ISP connection recommended for remote site access (i.e. T1, ADSL, cable modem)

## Ordering Information

Model Number	Description
T-S-AX	AX Supervisor for a 32-bit Windows Platform; Includes Niagara Historical Database and Workbench AX. Includes OBIX client/server driver for connecting to Niagara-based controllers only
T-S-AX-SBS	Small Building System version of the AX Supervisor for a 32-bit Windows Platform; Limited to 3 JACE controllers; Includes Niagara Historical Database and Workbench AX. Includes OBIX client/server driver for connecting to Niagara-based controllers only.
T-S-AX-64	AX Supervisor for a 64-bit Windows Platforms; Includes Niagara Historical Database and Workbench AX. Includes OBIX client/server driver for connecting to Niagara-based controllers only.
T-S-AX-64-SBS	Small Building System version of the AX Supervisor for a 64-bit Windows Platform; Limited to 3 JACE controllers; Includes Niagara Historical Database and Workbench AX. Includes OBIX client/server driver for connecting to Niagara-based controllers only
T-S-AX-LNX	AX Supervisor for a 32-bit Red Hat Enterprise Linux 5 Platform; Includes Niagara Historical Database and Workbench AX. Includes OBIX client/server driver for connecting to Niagara-based controllers only.
T-S-AX-LNX-SBS	Small Building System version of the AX Supervisor for a 32-bit Red Hat Linux 5 Platform; Limited to 3 JACE controllers; Includes Niagara Historical Database and Workbench AX. Includes oBIX client/server driver for connecting to Niagara-based controllers only
S-AX-SBS-EXUP	Small Building System Upgrade (remove Niagara device limit of 3 for any Platform) <i>Note: Upgrades a 32-bit SBS to a 32-bit Supervisor or a 64-bit SBS to a 64-bit Supervisor</i>
S-AX-64-UP	Upgrade from a 32-bit to a 64 bit Platform (for Windows only) <i>Note: Upgrades a 32-bit Supervisor to a 64-bit Supervisor or a 32-bit SBS to a 64-bit SBS</i>
<b>Optional Database Drivers for External Database applications</b>	
S-DB-SQL	Microsoft SQL Database Driver
S-DB-DB2	IBM DB2 Database Driver
S-DB-ORCL	Oracle Database Driver
S-DB-MYSQL	MySQL Database Driver
S-DB-CSV	Allows Excel and CSV file data to be imported into Niagara <sup>AX</sup>
<b>Open System Drivers for AX Supervisor (not available for Small Building Systems or Linux Supervisors)</b>	
DR-S-BACNET	AX Supervisor BACnet IP Client and Server Driver; Includes license for 500 BACnet points (Available for Linux Supervisor)
DR-S-BAC-CL	AX Supervisor BACnet IP Client Driver; Includes License for 500 BACnet points (Available for Linux Supervisor)
DR-S-BAC-SRV	AX Supervisor BACnet IP Server Driver; allows for BACnet export function
DR-S-BAC-SRV-UP	Add BACnet export functions to a BACnet IP Client Driver for the AX Supervisor
DR-S-BAC-CL-UP	Add BACnet IP client functions to a BACnet IP Server for the AX Supervisor; Includes license for 500 BACnet points
DR-S-BAC-500	Additional 500 point block for BACnet IP Client Driver (Available for Linux Supervisor)
DR-S-BAC-OWS	Add BACnet Operator Workstation (OWS) to the AX Supervisor. Requires the BACnet IP Client Driver
DR-S-BAC-AWS	Add BACnet Advanced Workstation (AWS) to the AX Supervisor. Requires the BACnet IP Client Driver
DR-S-BAC-AWS-UP	Upgrade from an Operator Workstation (OWS) to an Advanced Workstation (AWS)
DR-S-MDB-500	Additional 500 point block for AX Supervisor Modbus TCP Driver
DR-S-MDB-SL-AX	AX Supervisor Modbus TCP Slave Driver; Includes 500 Modbus TCP Slave points
DR-S-MDB-SL-500	Additional 500 point block for AX Supervisor Modbus TCP Slave Driver
DR-S-SNMP-AX	AX Supervisor SNMP Driver; Includes license for 500 SNMP points
DR-S-SNMP-500	Additional 500 point block for AX Supervisor SNMP Driver

DR-S-OPC-AX	AX Supervisor OPC Client Driver; Includes license for 500 OPC points
DR-S-OPC-500	Additional 500 point block for AX Supervisor OPC Driver
DR-S-OBIX-AX	AX Supervisor OBIX Driver for connecting to devices not powered by Niagara; Includes license for 500 OBIX points (Available for Linux Supervisor)
DR-S-OBIX-500	Additional 500 point block for AX Supervisor OBIX Driver
DR-S-ILON-AX	AX Supervisor ILOM Driver; includes license for 500 ILOM points (Available for Linux Supervisor)
DR-S-ILON-500	Additional 500 point block for AX Supervisor ILOM Driver
DR-S-SimpleADR-AX	AX Supervisor Simple OpenADR Driver; Allows for communication to the Akuacom DRAS or any other Tridium approved OpenADR compliant DRAS. Limits one DRAS client connection to the DRAS
DR-S-ADRClient-AX	License for one additional DRAS client server connection.
<b>Video Drivers for AX Supervisor (not available for Small Building Systems or Linux Supervisors)</b>	
DR-S-AXS-AX	AX Supervisor AXIS IP Camera Driver; Includes license for 16 cameras
DR-S-AXS-4	Additional 4 camera block for AX Supervisor AXIS IP Camera Driver
DR-S-DED-AX	AX Supervisor Dedicated Micros Video Driver; Includes license for 16 cameras (Dedicated Micros DVR must be purchased separately)
DR-S-DED-4	Additional 4 camera block for AX Supervisor Dedicated Micros Video Driver
DR-S-MLS-AX	AX Supervisor Milestone Systems Driver; Includes license for 16 cameras
DR-S-MLS-4	Additional 4 camera block for AX Supervisor Milestone Driver
DR-S-RPD-AX	AX Supervisor Honeywell Rapid Eye DVR Driver; Includes license for 16 cameras
DR-S-RPD-4	Additional 4 camera block for AX Supervisor Honeywell Rapid Eye DVR Driver

## Architecture

