I/A Series® Software

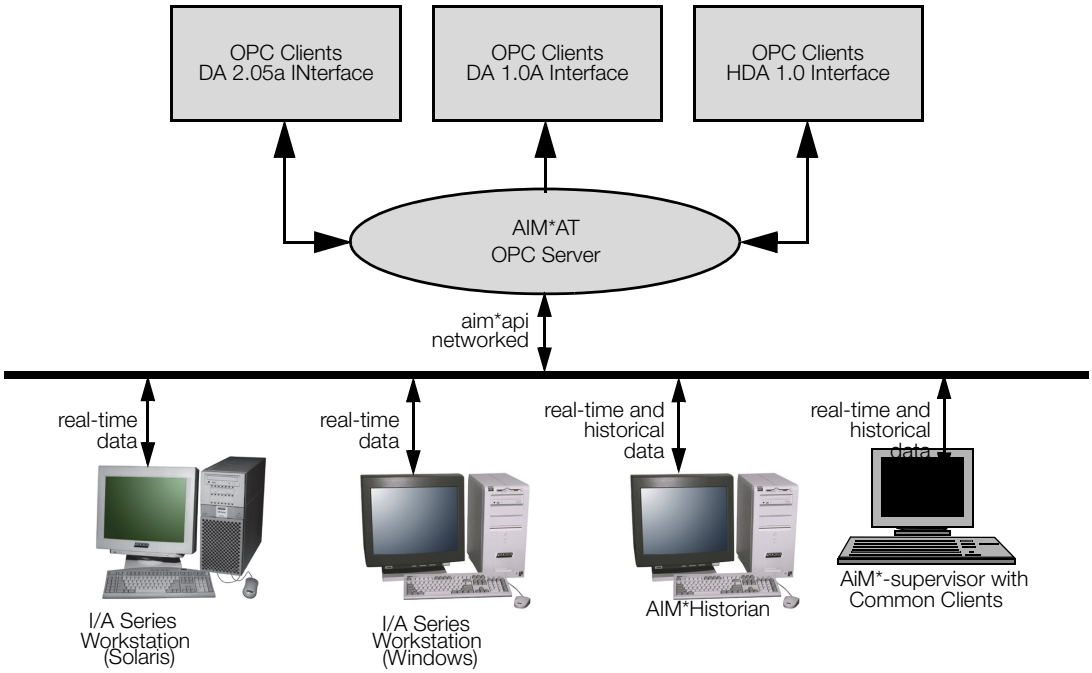
Product Specifications

Foxboro®

by Schneider Electric

PSS 21S-6AIMOPC

AIM*AT Implementation of OPC™ Server



*AIM*AT OPC Server software enables OPC client applications to access real-time data from I/A Series® systems and to access historical data collected by the AIM*Historian. The software includes a convenient configuration utility for modifying the configuration parameters of the server.*

OVERVIEW

OLE for Process Control (OPC) enables cost-effective distribution of production information over the enterprise intranet to stations with supported Windows operating systems (see “SYSTEMS REQUIREMENTS” on page 4). This standard has made possible a wide range of applications that provide managers the real-time and historical process data they need for decision-making.

With AIM*AT OPC Server software, any OPC client application can access information from the following data servers:

- Real-time data from I/A Series workstations
- Real-time and historical data from AIM*Historian instances
- Real-time data and process history from AIM-Supervisor historian.

This fully compliant server offers all the functions and benefits of the OPC Foundation standards for data access (DA 2.05a) and historical data access (HDA 1.0). The server also supports the interfaces defined

by the OPC Foundation in its earlier data access specification (DA 1.0a).

The server communicates with data servers over TCP/IP using the network facilities of AIM*API software, which are included with the server software. The AIM*AT OPC Server runs on either the same workstation as the data server or remotely on a workstation with a supported Windows operating system.

FEATURES

AIM*AT OPC Server software includes the following features:

- Full compliance with *OPC Data Access Custom Interface Specification,* Versions 2.05a and V 1.0a and listed as compliant on the OPC Foundation Website
- Full compliance with *OPC Historical Data Access Custom Interface Specification,* Version 1.0
- Independent configuration of the change delta (deadband) settings for all OPC tags
- OPC Automation Components that provide a programmatic interface (VBA, VBscripts)
- Support for many of the optional interfaces including browsing for server address space and asynchronous data retrieval
- Automatic detection of available data servers and OPC item IDs without server database configuration
- Access to data from multiple servers simultaneously
- Pre-configuration of OPC Server linkages, using a convenient graphical configuration utility
- Configurable security access for read and write data
- Matrikon® OPC Explorer, a general-purpose OPC client for browsing and accessing real-time data
- Extensive logging and error tracking capabilities.

Full OPC Compliance

The OPC server's full compliance with the OPC data access standards means that any OPC client, whether developed according to DA 2.05a or DA 1.0a, has assured access to real-time process information from the I/A Series system or AIM-Supervisor system.

The server fully supports the OPC specification for historical data access, giving HDA 1.0 compliant clients access to both real-time data and process history collected by AIM*Historian and AIM-Supervisor.

The software includes the OPC Server Browser, ActiveX Interface Marshalling Library, and all DLLs required by the standard.

Installation

You can install the AIM*AT OPC Server software on any workstation with a supported Windows operating system (see "SYSTEMS REQUIREMENTS" on page 4) with a TCP/IP connection to the data servers. The server can retrieve real-time data from any I/A Series workstation, including Solaris based workstations and Windows based workstations. The OPC server can also access data from AIM*Historian instances. Alternatively, you can install the AIM*AT OPC Server software on a Windows based workstation running the AIM*Historian server for local access to the data server.

A graphical setup program, included on the distribution media, offers you a choice of installing the OPC server to run as a Windows service or as a local executable that can be called by a client application or invoked from the host PC desktop.

When the server starts up, it automatically identifies available data servers on the network and establishes a connection with each. Alternatively, you can configure the server to establish connections only with specified data servers.

Configuration Tool

The AIM*OPC configurator provides the following features:

- Use of the configurator whether or not the OPC Server is running.
- When the OPC Server is running, changes are automatically applied to the OPC Server when the configuration file is saved, eliminating the need to restart the OPC Server.
- Configurable change delta values for individual client tags and select groups of client tags that are independent of the control processor delta values. Configuring larger change delta values enhances the performance of the OPC Server and reduces the load on Control Processors (CPs) in the system.
- A browser on the AIM configuration page allowing the user to browse for database tags among I/A Series stations, AIM* Historian instances, and client applications.
- Configurable OPC Server parameters, such as server timeout values and API scan rates.
- Alias configuration in place of the OPC database item names for:
    - Easy mapping of process data objects to tags used by the client application
    - Restriction of client access to aliases only, and for even greater restriction, read only of the aliases only option.

The configuration window (Figure 1) can be started from the Task Bar, Start menu.

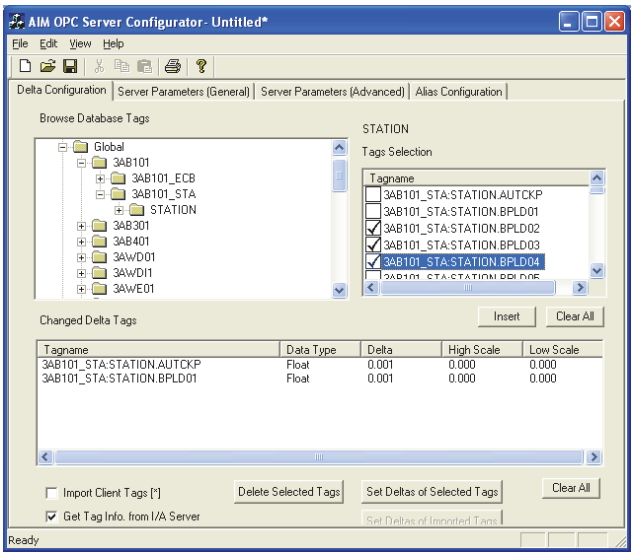


Figure 1. OPC Server Configuration Window

OPC Explorer

The AIM*AT OPC Server software includes Matrikon OPC Explorer, a client application for real-time data browsing. The application includes a complete server browser, Tag Studio wizard for creating OPC objects, and tools for testing reads from and writes to OPC objects via the OPC server (Figure 2).

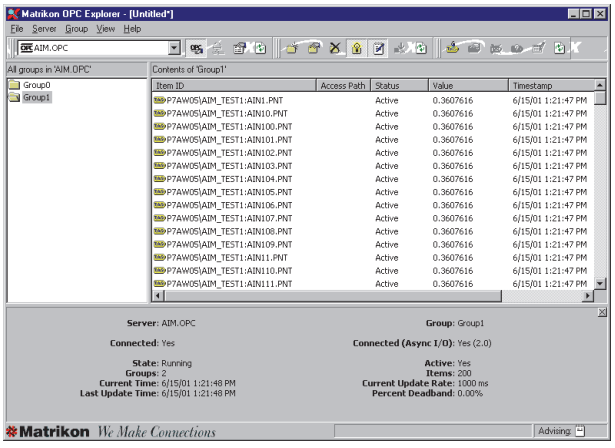


Figure 2. Matrikon OPC Explorer Data Display

Licensing

The OPC server communicates only with individually licensed data servers. The license information is entered into the source data server configuration using the API Admin configuration utility supplied with the OPC Server software.

SYSTEMS REQUIREMENTS

Platform

PC running:

- Windows 7®
- Windows Server® 2008
- Windows Server 2003
- Windows XP with Service Pack 3

Or I/A Series workstation running I/A Series software Version 8.5 or later.

Source Data Servers

- Application Workstations running I/A Series software Version 8.5 or later
- AIM*Historian servers running AIM*AT software Version 3.3 or later

Communication

TCP/IP connections to the data servers and to the OPC Clients

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