

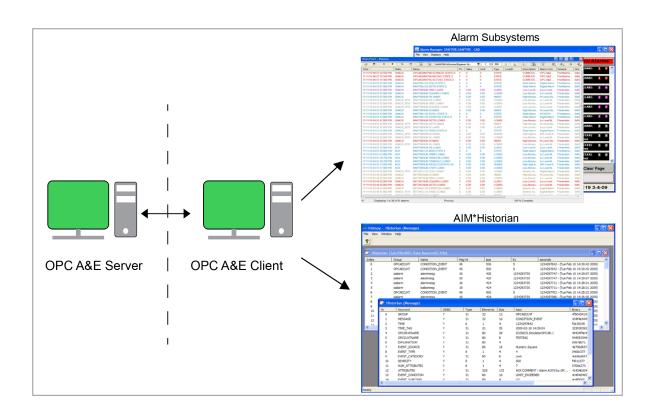
Foxboro™ DCS

OPC® Alarm and Events (A&E) Client Software

PSS 41S-7B5

Product Specification

November 2022





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Overview

The OPC® Alarm and Events (A&E) Client software is a tool used to integrate selected OPC Alarm and Event messages into the EcoStruxure™ Foxboro™ DCS Control Core Services or I/A Series® system.

The OPC Alarm and Event messages generated from an OPC Server may be represented in the system as standard alarm messages. As standard alarms they may be sent to standard alarm destinations. For example, alarm messages may be sent to FoxAlert, Foxboro™ DCS Control Alarm Provider, EcoStruxure™ Foxboro™ DCS AlM* Historian, FoxPage, and printers.

The OPC A&E Client software includes alarm acknowledgement if supported by the OPC A&E Server. The OPC Server Event "tag names" are translated to acceptable control software tag names, and all relevant OPC alarm fields are translated to their control software equivalents.

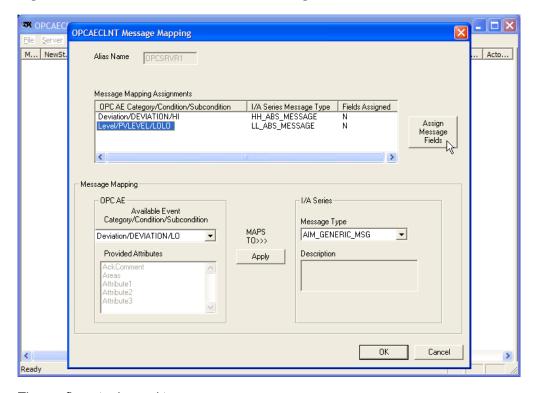
The OPC A&E Client software provides limited support for redundant operation.

For OPC A&E Client equipment and data flow configurations, see Equipment Configurations and Data Flow, page 7.

Features

The OPC A&E Client product consists of a configurator and a runtime message handler instance. The configurator assists with alarm and event message configuration.

Figure 1 - OPC Alarm and Events Client Configurator



The configurator is used to:

- · Identify the OPC Alarm and Events Server.
- Determine the available OPC alarm and event messages.
- Define generic rules regarding the mapping of the OPC Event Category/ Conditions/Subconditions to the control software messages.
- Install/Remove an OPC A&E Client runtime instance.
- Optionally create Application: Objects which serve as the control software targets of OPC Server tag names.
- Modify Registry variables which support runtime operation.

The OPC A&E Client runtime instance communicates with a single OPC Alarm and Events Server and handles the configured Alarm Events, received from that server.

The Current Alarm Display and the Alarm Provider illustrate configured OPC Alarm Events represented as standard alarms.

Figure 2 - Current Alarm Display

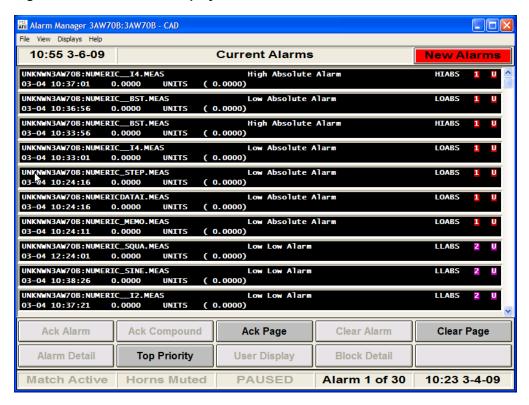
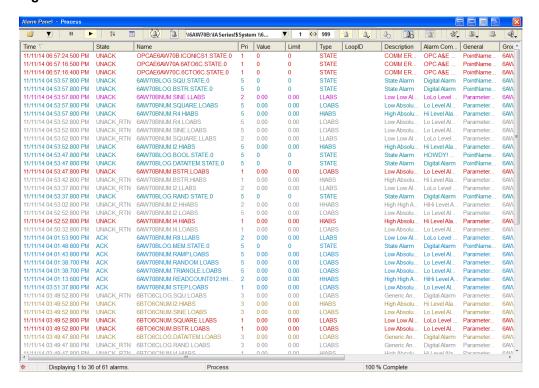


Figure 3 - Alarm Provider

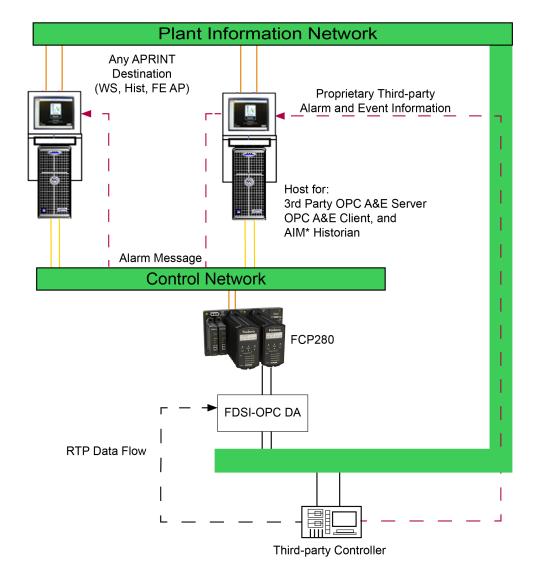


Assumptions and Limitations

- The OPC A&E Client product can send messages to any APRINT destination, for example, Historians, FoxPage, and Alarm Provider in APRINT mode.
- The OPC A&E Client software does not emulate the Message Delivery Service used by the Message Manager and the Alarm Provider in Message Manager mode.
- The messages that the OPC A&E Client software passes to the Alarm System
 are not limited to equivalent destinations. For example, an I/A Series v6.x/v7.x
 station could display and acknowledge alarms received from an OPC A&E Client
 running I/A Series software v8.8.
- The OPC A&E Client product requires an AIM*Historian instance configured on the same station for diagnostic messages and native format OPC Alarm and Event messages storage. The FCS Alarm Repository cannot be used to replace AIM* Historian for this service.
- The OPC A&E Client software supports a limited form of redundancy. Two
 instances may be run; each associated with different Object Manager (OM)
 variable tag names. Each instance will send its alarms and messages to the
 same destinations. Current Alarm Display (CAD) alarm filters must be used so
 that only one alarm is shown. Operator intervention is required to switch to the
 other set.
- Because of Microsoft Windows operating system updates, OPC A&E Client connections to an OPC A&E Server across a network will stop working when security hardening is enabled. The Distributed Component Object Model (DCOM) connections used by OPC Servers might stop working after applying a Microsoft Windows security update. For more information, search for Schneider Electric Priority Customer Alert CCA000233228 on Global Customer Support at https://pasupport.schneider-electric.com (registration required).

Equipment Configurations and Data Flow

Figure 4 - OPC A&E Server and Client on the Same Control Station



Plant Information Network OPC A&E Any APRINT Message | Destination (WS, Hist, FE AP) Third-party OPC A&E Server OPC A&E Client and AIM* Historian Alarm Message **Control Network** Third-party Alarm and Event FCP280 Information FDSI-OPC DA RTP Data Flow **Customer Supplied Network** Third-party Controller

Figure 5 - OPC A&E Server and Client on Different Machines

Plant Information Network Any APRINT Destination (WS, Hist, FE AP) **OPC A&E Messages** Host for: OPC A&E Client and AIM* Historian **Control Network** Alarm Message FCP280 FDSI-OPC DA RTP Data Flow Third-party Controller

Figure 6 - OPC A&E Third-party Device with Embedded Server

Requirements

- EcoStruxure™ Foxboro™ DCS Control Core Services v9.0 or later or I/A Series software v8.8.
- Earlier versions of the I/A Series software cannot host the OPC A&E Client.
 However, the OPC A&E Client can send messages to alarm destinations that are Nodebus based.
- EcoStruxure[™] Foxboro[™] DCS AIM*API software installed, configured and running.
- AIM*AT™ v3.2.4 or later, installed and configured with an instance running on the
 workstation where the OPC A&E Client software will be installed. AIM* Historian
 is licensed by real-time points recorded. Therefore, if AIM* Historian is already
 licensed for use on the system, the OPC A&E Client required AIM* Historian
 instance does not require a new AIM* Historian license because it records
 messages and not real-time points. If AIM* Historian is not already licensed,
 purchase the smallest AIM* license available.
- The station may require resource resizing.
- The DCOM settings may require adjustments to the authentication level.
- OPC A&E specification v1.1 is supported.

Ordering Information

The OPC A&E Client software is licensed per workstation. The OPC A&E Client license permits the use of as many instances on the workstation as the machine will support.

- Q0303AR OPC A&E Client Software
- Q0303AS OPC A&E Client Software Upgrade



WARNING: This product can expose you to chemicals including lead and lead compounds, which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information, go to www.p65warnings.ca.gov/.

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