Types SW2035 OpenVMS VAX and SW2036 OpenVMS AXP Process Data Server (PDS) Software

The Types SW2035 and SW2036 Process Data Server (PDS OpenVMS VAX and PDS OpenVMS AXP, respectively) software bring real-time and historical process data to the process engineer’s and manager’s desktop.

Product Description

The PDS software works with @aGlance/IT and familiar desktop software such as Lotus 1-2-3 and Microsoft Excel.

A server is a source of data for data users called clients. As a data server, the PDS software connects the real-time data in a Type DH6215 or Type DH6219 CHIP database and the historical data in the Type SW2011 or Type SW2012 Data Historian (DH) to @aGlance/IT. Add-in software enables certain desktop software including spreadsheets and statistical analysis tools to work as clients for CHIP and DH data.

The desktop can be a personal computer running MS-Windows, a Macintosh, or a workstation running OpenVMS VAX or AXP, HP-UX, or other platforms supported by @aGlance/IT. The specifications table and Software License Worksheet further define the computing requirements.

The @aGlance/IT package is available in two versions for MS-Windows PC applications. The @aGlance/IT Standard Edition client software includes access to:

- Lotus 1-2-3 and Excel spreadsheet functions
- The @aGlance/IT DDE Bridge, which allows all @aGlance/IT applications to link in real-time to process applications
- @aGlance/IT client applications developed using NetOLE

The @aGlance/IT Professional Edition client software includes all of the functionality of the Standard Edition, plus features that enable users to create client applications using both Visual Basic and C programs.
PDS includes:

- CHIP server software
- DH server software
- On-line Help

On-line help includes OpenVMS help for system managers and definitions of the data available from the servers. The PDS software also includes example client setups (sample spreadsheets).

**Client Applications**

The integration of desktop software and process data provides a wide variety of possibilities for data analysis and presentation, process modeling, and historical data query. You can use the PDS software and desktop applications to monitor the efficiency of a related group of process equipment, build graphs and charts of process data for presentation, and develop product and process reports.

If you are already using an @aGlance/IT-compliant application to develop process models, the PDS software eliminates the need to re-enter process data.

The PDS software is designed for ad hoc analysis. Process engineers and operators can use the PDS software to compliment their current monitoring and controlling systems.

The @aGlance/IT Standard Edition enables user-developed applications to work as clients for the PDS software. The Standard Edition includes access to Lotus 1-2-3 for Windows and Microsoft Excel for Windows, and client applications developed using NetOLE.

The @aGlance/IT Professional Edition for Windows includes all Standard Edition features, plus functionality that enables users to write custom applications in Visual Basic or in C.

The @aGlance/IT System Development Kit enables users to write their own client application programs that work with @aGlance/IT on OpenVMS VAX, OpenVMS AXP, HP-UX, and other platforms.

**Data Access**

The following definitions provide a basis for understanding the scope of the PDS software's data access:

- A **point** is a set of process-control parameters and data that performs a specific task in the control system. The makeup and structure of each point depends on its role in collecting and reporting data. For example, a loop point maintains a process variable at a user-specified setpoint.

- A **tag** is a unique identifying mnemonic or label for a point or a device.

- An **operating parameter** provides basic process information that operators and engineers monitor or adjust frequently. Examples include process variable, setpoint, valve output (percent IVP), mode, and alarms.

- A **tuning parameter** is a parameter adjustable without reconfiguration. Common examples are gain, rate, reset, and alarm trip points. Tuning parameters are often called **Detail Display Parameters (DDPs)** because the operator accesses them through a console detail display.

- **History information** includes arrays of data for specific operating parameters.

- A **history identifier (ID)** is a text string that identifies an array of history data for a data file member.

- **SP72 Attributes** are components of the ISA SP72 data model. In the model, data is organized into blocks. Each block in a control system is identified by a unique name or tag and each item within a block is identified by an attribute.

PDS software provides these read/write permissions which can be enabled or disabled for each user:

- read operating parameters
- read history information
- read DDPs
- write operating parameters
- write DDPs

PDS software enables you to create selection criteria for your data queries. For example, you can retrieve history IDs for all historic records for a specific tag, or get a tag list of all tags that start with the letters LAC.
Here are some specific capabilities of PDS software:
- get a list of tags from the CHIP database
- get a list of operating parameter attribute mnemonics for a specified tag
- get operating parameter values (SP72 attributes are also available)
- get history IDs from DH
- get lists of DH configuration parameters
- get historic values
- get historic value statistics (MINIMUM, MAXIMUM, AVERAGE, and STANDARD DEVIATION)
- get historic events (only values that have changed by the user-specified deadband or more)
- get DDP values
- write operating parameters values
- write DDP values
- access to real-time process data is available using the DDE Bridge included with the @aGlance/IT Standard Edition

Example
In a typical Lotus example, the contents of the cells define the arguments for a Get macro. Starting with the following spreadsheet:

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>SP</td>
<td>PV</td>
<td>EU</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>PIC-101</td>
<td>30</td>
<td>28.6</td>
<td>GPM</td>
</tr>
<tr>
<td>3</td>
<td>PIC-102</td>
<td>45</td>
<td>47.8</td>
<td>GPM</td>
</tr>
<tr>
<td>4</td>
<td>LIC-101</td>
<td>24</td>
<td>23.8</td>
<td>INCHES</td>
</tr>
<tr>
<td>5</td>
<td>LIC-102</td>
<td>60</td>
<td>62.6</td>
<td>INCHES</td>
</tr>
</tbody>
</table>

The macro populates the empty cells (following the form \(\text{[AAG Get, ServerName, TagRange, [AttributeRange], OutputRange]}\)):

\[
\{\text{AAG Get,CHIP_SERVER, A2..A5, B1..D1, B2..D5}\}
\]

Computing Environment
PDS software works in network environments that include any combination of DEC OpenVMS VAX or AXP computers and IBM PC or compatible computers using Microsoft Windows. Multiple desktop applications can access the same PDS server.

Additionally, multiple PDS servers can support one or more client applications, as shown in the PDS Computing Environment figure.

Licensing
The base PDS license supports two concurrent users. A single user can connect to both a CHIP and a DH server. Potentially, any number of people could use a single user account as long as only one person uses it at a time.

Concurrent access to a server from more than one client application requires additional PDS user licenses. The following figure illustrates a single concurrent user.
Ordering Information

When ordering, specify:
- Type SW2035 PDS OpenVMS VAX
- Type SW2036 PDS OpenVMS AXP

User requirements:
- For two users, select base license
- For three to 14 users, select base license and the appropriate number of additional users licenses
- For 15 users, select max user

Process Data Server components:
- base license (supports two concurrent users)
- single additional user
- max user (15) concurrent users

Desktop Application

Single Concurrent User
Use the following worksheet to determine the software and license requirements for your computing environment.

### Environment:  

<table>
<thead>
<tr>
<th>Environment:</th>
<th>Quantity:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PC Software and License Requirements:</strong></td>
<td></td>
</tr>
</tbody>
</table>

- @aGlance/IT compatible PC network software(1)
- @aGlance/IT Standard Edition  
  (includes Lotus 1-2-3 and Excel add-ins, and DDE Bridge and NetOLE support)  
  ___
- @aGlance/IT Professional Edition  
  (includes Standard Edition features plus Visual Basic and C development tools)  
  ___

**Workstation Software and License Requirements:**
- @aGlance/IT Client Runtime  
  (OpenVMS, HP-UX, and others)(1)  
  ___
- Client enabling software  
  ___

**Server Software and License Requirements**(2):
- PDS user licenses(3)  
  ___
- @aGlance/IT Full-Function Runtime Option  
  ___

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1. If you are not sure your system network software is @aGlance/IT-compatible, or if you need network software for this application, contact the @aGlance/IT sales department at (508) 481-3992 (x 306).
2. The server must have CHIP OpenVMS software and optionally, Data Historian software to support a DH server.
3. Each PDS user account can establish one DH connection and one CHIP connection.

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*Software License Worksheet*
## Specifications

<table>
<thead>
<tr>
<th>Computer Compatibility:</th>
<th>Server: Any OpenVMS VAX or AXP series computer or computer workstation running Type DH6215 or Type DH6219 CHIP DEC OpenVMS VAX or AXP, respectively</th>
</tr>
</thead>
<tbody>
<tr>
<td>Client: Computer or computer workstation running MS-Windows, or OpenVMS</td>
<td></td>
</tr>
<tr>
<td>Hard Disk Requirements:</td>
<td>Process Data Server: 1 Mbyte @aGlance/IT: 5 Mbytes</td>
</tr>
<tr>
<td>Server Software Requirements:</td>
<td>OpenVMS 6.1 and later DEGnet or TCP/IP(1) @aGlance/IT V2.1 or later for OpenVMS Server Runtime Option(2) Type DH6215 CHIP OpenVMS VAX or Type DH6219 CHIP OpenVMS AXP version P4.2 and later</td>
</tr>
<tr>
<td>Compatible Software:</td>
<td>Type SW2011 Data Historian OpenVMS VAX or Type SW2012 Data Historian OpenVMS AXP version P3.1 and later</td>
</tr>
<tr>
<td>Client Software Requirements:</td>
<td>MS-Windows 3.0 PATHWORKS for DOS V4.1 or Novell Netware(1) @aGlance/IT Standard Edition(2) @aGlance/IT Professional Edition(3) Other software(1)</td>
</tr>
<tr>
<td>PC Clients:</td>
<td>OpenVMS Clients: OpenVMS 6.1 and later DEGnet or TCP/IP(1) @aGlance/IT V2.1 or later for OpenVMS Client Runtime Option Add-in client software, for example, for Applied Information Systems' Xess</td>
</tr>
<tr>
<td>Supported @aGlance/IT Calls:</td>
<td>AAG GetTags, AAG Get, AAG Put, AAG GetAttributes, AAG GetHistory, AAG GetHistEvent, AAG GetHistStats</td>
</tr>
<tr>
<td></td>
<td>1. To learn the latest about @aGlance/IT-supported operating systems, clients, network and transfer software, contact the @aGlance/IT sales department at (508) 481-3992 (x 306).</td>
</tr>
<tr>
<td></td>
<td>2. Includes Lotus 1-2-3 and Excel add-ins, and DDE Bridge and NetOLE support.</td>
</tr>
</tbody>
</table>

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