

Klinkmann Omron Ethernet Direct DAServer

2.04 ReadMe

Last revision: 20/06/2013

The Klinkmann Omron Ethernet Direct DAServer is a Microsoft Windows application program that acts as a communications protocol server and allows other Windows application programs to access the data directly from OMRON Programmable Controllers (PLCs) over the OMRON Ethernet network, no additional Omron software needed. The Omron Ethernet Direct DAServer requires an Ethernet card and TCP/IP protocol installed on the computer to communicate with the Ethernet network. The Omron Ethernet Direct DAServer can access the data from Controllers connected to the Ethernet System directly (with Ethernet Unit installed) or from Controllers interconnected to Ethernet System through SYSMAC NET network or SYSMAC LINK network (through PLC Gateway - an OMRON Controller which has multiple Communications Units mounted (which includes the Ethernet Unit) and therefore that belongs to two networks and can thus function as an interface between them).

While Omron Ethernet Direct DAServer is primarily intended for use with Wonderware FactorySuite 2000 and FactorySuite A², it may be used with any Microsoft Windows program capable of acting as a DDE, FastDDE, SuiteLink, or OPC DA client.

This document contains important information about the Klinkmann Omron Ethernet Direct DAServer 1.18. Please carefully review this document for known issues in this version and changes, if any, to the Omron Ethernet Direct DAServer documentation included on this installation package.

Installation Information

Detailed installation instructions are included in the *Klinkmann DAServer Installation Guide*. It is recommended that you read the *Klinkmann DAServer Installation Guide* prior to beginning the installation process. In addition to the procedures described in the *Klinkmann DAServer Installation Guide*, the following installation requirements and other requirements pertaining to the installation and uninstall orders have to be followed.

Installation Requirements

- The minimum supported operating system for this product is Windows XP Professional SP1. For Windows XP Professional SP2, you have to use the Wonderware OS

Configuration Utility, which modifies the security settings of XP SP2 to allow Wonderware products to operate as designed.

- Internet Explorer version 6 or higher is recommended on the computer where this product is installed.
- Local administrator privileges are required to install a DAServer.
- During installation, the UI states that the feature will be installed on the local disk drive. This is not forced, and you can install on a network drive. However, installing on a network drive is not a valid configuration option. Local installation is a requirement.
- Installation Order Requirements

The installation for the DAServers and other Wonderware FactorySuite products on the same computer must follow the order as outlined. A DAServer must always be installed last:

- (If required) - InTouch 7.11 followed by application of the latest available InTouch patch
- (If required) - Legacy I/O Servers
- DAServer(s)

This installation order will ensure that any differences, which may exist in the common components included with individual product releases, will install and run without version conflicts. In case of any future patch on the installed Wonderware FactorySuite products, follow the particular installation instructions from the patch.

Note!

To use OMRON Ethernet Direct DAServer in unlimited mode, the **HASP** key or **Software License Key** is needed. The **HASP key** is the USB or parallel key (dongle) to be installed into PC USB or parallel port and needs the HASP Device Driver to be installed on same computer. The **Software License Key** is 16-character alphanumeric "computer-dependent" string, provided after purchasing the OMRON Ethernet Direct DAServer. Without HASP key installed or Software License Key entered, the OMRON Ethernet Direct DAServer will run 1-hour in demo mode with all features supported.

Uninstall Order Requirements

After installing a DAServer on a computer with other Wonderware FactorySuite products, the following applies:

- If any Wonderware FactorySuite product is uninstalled from the computer, all other Wonderware FactorySuite products must be uninstalled and reinstalled.

Note: ArcestrA products, such as InTouch 8.0 or greater, do not require any installation/uninstall order with the DAServers.

Known Issues of Omron Ethernet Direct DAServer

DAServer Compatibility with Other FactorySuite Products on the Same Computer

At the time of this release, InTouch, Version 7.11 with Patch 05a or greater, and Wonderware FactorySuite 2000 I/O Servers, previously released with support for Windows 2000 or greater, are the supported Wonderware product combinations on the same computer with the DAServers. Please check the FactorySuite Product version-compatibility matrix at www.wonderware.com/support/mmi to determine if the product-version combination associated with this install is supported.

DCOM connection time-out

Although DAServers can communicate with multiple client protocols at the same time, you should be aware of the advantages and disadvantages of the technologies used for any particular protocol. For example, the OPC Data Access protocol is based on Microsoft COM/DCOM technology. The DCOM technology has an inherent pinging mechanism that requires six (6) minutes before a DCOM connection is declared as timed-out. As a result, there may be a chance that when the DAServer is connected remotely with an OPC client and the network is interrupted, a delay of six (6) minutes may be experienced in the OPC client program before declaring the connection to the DAServer a failure.

Please note that this is expected; the DAServer remains active and continues to provide data connectivity to other clients that have good network connections. More information on the DCOM pinging mechanism can be found in Sections 2.5 and 2.5.1 of the specifications *Distributed Component Object Model Protocol ... DCOM/1.0* from Microsoft.

Installation

Long Computer Name:

The computer name used by NetBIOS is limited in length to MAX_COMPUTERNAME_LENGTH (for instance, the limitation is 16 characters for Windows NT 4.0). That is why, when installing a DAServer on a computer with a long name (that is, "My_Very_Long_Computer_Name"), you may have issues accessing the DAServer diagnostics.

WWLogger:

After installing this DAServer, the pre-existing WWLogger output will be redirected to the new Log Viewer.

First Activation:

When installed on a Windows 2000 operating system, the first time the DAServer is activated, a "server busy" message may appear. Subsequent activation of the DAServer will not produce this message.

The DAServer Manager

CPU Utilization:

The DAServer performance may be impaired if the CPU utilization reaches and remains at 100%; the DAServer may then become user-unresponsive.

Hot Configuration:

Modifying the Default Update Interval, while the DAServer is communicating with a PLC, will not take effect until the current update interval has completed.

Device Groups:

Attempting to rename a Device Group with the same name but different case (upper or lower) will fail. Device Groups are case insensitive and, therefore, treat upper and lower cases of a character as the same character.

L00003667:

System items do not show in the DAServer Manager Diagnostics, unless a client subscribes to them.

L00004239:

The DAServer Manager does not automatically refresh when the DAServer on a remote node is uninstalled or has gone off-line/online.

DAServer-Generic

L0004314:

The DAServers allow both out-of-proc (remote) and in-proc (local) connections to exist simultaneously. Only one instance, either in-proc or out-proc, should be allowed to run at any given time for one DAServer.

L00012809:

The \$\$SYS\$WriteComplete system tag does not display the correct value following an InTouch reinitialize I/O during a recipe download.

L00020512:

Transaction status (completed/error) was not passed to the OPC Plug-in during a node tear-down and rebuilt, resulting in the OPC Plug-in timing out 10 minutes later. After the node was rebuilt, a Read transaction was completed successfully with 0 (zero) items according to the server diagnostics. However, the OPC client did not get any acknowledgement until 10 minutes later when the OPC Plug-in timed out.

L00021206:

The Hot Configuration operations do not leave their corresponding messages in the Log Viewer.

L00021483:

Significant performance degradation in accessing the configuration view of a device node under the DAServer Manager SMC will occur with more than 1,000 Device Items defined.

DAServer global parameters and configuration file:

If DAServer configuration file does not exist and DAServer global parameters are not configured, then after configuration of DAServer the new configuration file is created. This new configuration file doesn't include DAServer global parameters configuration and actual used DAServer global parameters may be different between which are shown in configuration dialog.

OPC connection types:

DAServer supports inproc and outproc OPC connections. If OPC Client does not specify the connection type then inproc connection will be used. If some OPC Client will connect as inproc server then other OPC, DDE and SuiteLink connections will fail.

DAServer activated by OPC Client and deactivation from DAServer Manager:

If DAServer is activated as inproc server or handler then deactivation from DAServer Manager is not allowed. If DAServer is activated as outproc server then deactivation from DAServer Manager will (may) not work.

DAServer not configured as a Service and DDE Clients:

If DAServer is not configured as a Service and activated, then DDE Clients cannot connect to DAServer. SuiteLink and outproc OPC Clients are able to connect.

Device Groups and OPC Clients:

Configured Device Groups cannot be used by OPC Clients. OPC Clients can use only the <Default> Device Group.

Device Group Read Mode and Write Mode properties:

Device Group properties Read Mode and Write Mode are not hot configurable.

Bad quality received by OPC Client when new item activated:

If OPC Client activates a new item, then all already active items for a short time may receive a bad quality. The good quality and value are next time received by OPC Client when item value is updated from device.

Maximum number of pending write messages:

If there are more than 10 pending write messages then poke is refused and warning is logged to Log Viewer. The limit of pending write messages is not configurable.

Uninstallation of DAServer:

Uninstallation of DAServer does not ensure deleting of all created registry keys.

Omron Ethernet Direct DAServer-Specific

Hot Configuration restrictions:

Controller Series and Controller Type configuration items are not Hot configurable.

OPC Browsing:

When browsing Omron Ethernet Direct DAServer OPC items, the OPC Client will see only the first and last addresses of PLC data areas.

Length of string values for write:

String value to be written to PLC must have the exact length. Otherwise the item value is rejected. For example, for string item D10-D12C the write value "AAA" will be rejected, but the value "BBBBBB" - not rejected, so when writing the new value for item D10-D12C the length of string must be 6 characters.

Simulation mode:

Simulation mode is not implemented.

Release Summary

The Klinkmann Omron Ethernet Direct DAServer is a Microsoft Windows application program that acts as a communications protocol server and allows other Windows application programs to access the data directly from OMRON Programmable Controllers (PLCs) over the OMRON Ethernet network, no additional Omron software needed. The Omron Ethernet Direct DAServer requires an Ethernet card and TPC/IP protocol installed on the computer to communicate with the Ethernet network. The Omron Ethernet Direct DAServer can access the data from Controllers connected to the Ethernet System directly (with Ethernet Unit installed) or from Controllers interconnected to Ethernet System through SYSMAC NET network or SYSMAC LINK network (through PLC Gateway - an OMRON Controller which has multiple Communications Units mounted (which includes the Ethernet Unit) and therefore that belongs to two networks and can thus function as an interface between them).

While the Omron Ethernet Direct DAServer is primarily intended for use with the Wonderware FactorySuite 2000 and FactorySuite A², it may be used with any Microsoft Windows program capable of acting as a DDE, FastDDE, SuiteLink, or OPC DA client.

Omron Ethernet Direct DAServer Documentation

The Klinkmann Omron Ethernet Direct DAServer documentation set includes the following guides:

1. **Klinkmann DAServer Installation Guide.** This online Help provides information on installing the DAServer, including options for installing all components of the system or just individual ones. These include the DAServer Manager (including configuration components of the DAServer), the DAServer (including OPC protocol capabilities), and the DDE/SuiteLink Plug-In (for communicating with the legacy Wonderware products). This Help file can be accessed from Omron Ethernet Direct DAServer installation package as *Install-KlinkmannDAS.chm*.
2. **Klinkmann Omron Ethernet Direct DAServer User's Guide.** This guide describes the user interface and functions of the Klinkmann Omron Ethernet Direct DAServer. The Omron Ethernet Direct DAServer User's Guide is provided in two different formats: 1) as online Help file, which can be accessed from Omron Ethernet Direct DAServer installation package as *DASOmronEth.chm* and 2) as Adobe's PDF file, which can be accessed from Omron Ethernet Direct DAServer installation package as *17014m10.PDF*.

The following other documents can be obtained from Wonderware and would be necessary to use the Omron Ethernet Direct DAServer (these documents are usually included in installation package of any Wonderware own DAServer and provided in the PDF form (except *Change Network Account Online Help*) and can be printed; they are available in the Wonderware DAServer installation package or CD-ROM directory \UserDocs\English):

3. **Change Network Account Online Help.** This Help documentation describes the tool you can use to manage credentials for node-to-node communications between ArchestrA components. This documentation can be accessed from the application's Help.
4. **Protocols Guide.** This guide provides background information on the main protocols used between components of the Wonderware products. A protocol is the set of rules and standards for enabling computers to connect and exchange data over the network. This guide also includes information on setting up and using some of these protocols. The Protocols Guide filename is *Protocol.pdf*.
5. **DAServer Manager User's Guide.** This documentation describes the runtime Configuration, Diagnostics, and Activation/Deactivation aspects of a Data Access Server (DAServer). These aspects of any DAServer are maintained through the generic component called the DAServer Manager. The DAServer Manager User's Guide filename is *DAServerManager.pdf*

6. **License Utility Guide.** This guide describes the FactorySuite 2000 (Version 7.1) licensing strategy and explains how to use the License Utility to install license files and browse valid license files on the network. The License Utility Guide filename is *LicenseUtility.pdf*
7. **LogFlag Editor User's Guide.** This documentation describes the user interface and functions of the LogFlag Editor utility. This utility can be opened only from the Log Viewer, a part of the System Management Console suite of utilities. The LogFlag Editor User's Guide filename is *LogFlagEditor.pdf*
8. **Log Viewer User's Guide.** This guide provides information about the Logger and the Log Viewer snap-in to the System Management Console. The Log Viewer User's Guide filename is *LogViewer.pdf*

Viewing PDF Documentation

The documentation describing how to use this product is provided in PDF format. Viewing these guides requires the installation of the Adobe's Acrobat Reader. This utility is not included in Klinkmann Omron Ethernet Direct DAServer installation package, but it can be downloaded for free from the Adobe Web site at the following Web address:

www.adobe.com/products/acrobat/readstep2.html

After downloading the file from Adobe, you must run the executable to install it on your computer. Follow the typical installation routine. After installation, you can either open the Acrobat Reader and select a user's guide from the **File** menu, or double-click a user's guide in Windows Explorer.

ORDERING INFORMATION

Description / Order Number

Omron Ethernet Direct DAServer / DR 170 14

KLINKMANN

www.klinkmann.com

Helsinki

tel. +358 9 540 4940
automation@klinkmann.fi

St. Petersburg

tel. +7 812 327 3752
klinkmann@klinkmann.spb.ru

Moscow

tel. +7 495 641 1616
moscow@klinkmann.spb.ru

Yekaterinburg

tel. +7 343 287 19 19
yekaterinburg@klinkmann.spb.ru

Samara

tel. +7 846 273 95 85
samara@klinkmann.spb.ru

Kiev

tel. +38 044 495 33 40
klinkmann@klinkmann.kiev.ua

Riga

tel. +371 6738 1617
klinkmann@klinkmann.lv

Vilnius

tel. +370 5 215 1646
post@klinkmann.lt

Tallinn

tel. +372 668 4500
klinkmann.est@klinkmann.ee

Minsk

tel. +375 17 200 0876
minsk@klinkmann.com