ENGINEERED EFFICIENCY

DocumentAdapter

Manual

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1 Introduction

DocumentAdapter captures 2D graphics and attributes from Intergraph SmartPlant SmartSketch and stores it in a file (*.upvd). This file is used as input for CAXperts **UniversalPlantViewer Builder** to add 2D drawings to 3D sessions.

1.1 General conventions

This document contains many visual cues to help you understand the meaning of certain words or phrases. The use of different fonts for different types of information allows you to scan the document for key concepts or commands. Symbols help abbreviate and identify commonly used words, phrases, or groups of related information

Typefaces

Italic	Indicates a system response, which is an explanation of what the software is doing. For example, *The text is placed in the viewing plane.*
Bold	Indicates a command name, parameter name, or dialog box title. Command paths are shown using an arrow between command names. For example, Choose **File** → **Open** to load a new file.
`Normal typewriter`	Indicates an actual file or directory name. For example, The ASCII report is stored in the layout.rpt file.
`Bold typewriter`	Indicates what you literally type in. For example, Key in **`original.dat`** to load the ASCII file.

Symbols

This document uses the following symbols to identify special information:

Note – important supplemental information.

Map or path – shows you how to get to a specific command or form.

More information – indicates there is additional or related information.

2 Installation

Requirements:

- Hardware (minimum):
  CPU: double-core, 2.5 GHz
  RAM: 3 GB
- Hardware (recommended):
  CPU: quad-core, >=3.4 GHz
  RAM: >=8GB
  OS on SSD and SSD for TEMP, input and output folder
  Full HD resolution
- Supported operating systems:
  Microsoft Windows 7 or later
  Microsoft Windows 2008-2012R2
- Intergraph SmartSketch 2014 R1 or later
- Microsoft .NET Framework 4.0

Administrator rights are required on each computer to install CAXperts **DocumentAdapter**. “Run as” is not supported.

Uninstall

To uninstall the software, select **Control panel** from the start menu. Then on large or small icon view, click **Programs and features**. If you are using category view, under **Programs**, click **Uninstall a program**.

Select the program you want to remove, and click Uninstall/Remove. Alternatively, right-click the program and select **Uninstall**.

Setup command line (for administrators)

The following command line options are supported by the installer:

/S:<<optional ini file>>

Allow an install to be run in silent mode. As a result, no screens or dialogs will be shown.

This command line option also has an optional INI file that can be passed containing session variable values. For example:

```
"C:\output\setup.exe" "/S:C:\setupvars.ini"
```

This will cause the session variables in the INI file to be used for the setup. The INI file should be in the format:

```
[SetupValues]

%AppFolder%=C:\Program Files\MyProduct
```

/U:<<XML config file>>

This command line option must be used when calling the uninstall program from the command line. This command also has an optional XML file that can be passed containing session variable values. For example:

```
"C:\Program Files\MyProduct\uninstall.exe" "/U:C:\Program Files\MyProduct\irunin.xml"
```

2.1 Licence

CAXperts software supports two types of licences:

Site licence (local)

Domain based licences are restricted to machines within a 5 miles (8 kilometres) radius at a specific geographic location (building) for which the licence key file was issued for. There is no limitation regarding the number of users or machines.

CAXperts will need your **Current domain name** to issue a licence file (.lic).

The licence file has to be stored on a local or network location accessible by the machine running the CAXperts product; a licence server is not required.

The location of the licence file should be defined on every machine with the CAXperts product installed, which can be done

- Either by setting the environment variable
  `CAXPERTS_LICENSE_FILE=C:\Program Files (x86)\CAXperts\Licensing\`
- Or by setting the registry key
  `HKEY_CURRENT_USER\Software\FLEXlm License Manager\CAXPERTS_LICENSE_FILE=C:\Program Files (x86)\CAXperts\Licensing\`

Multiple licence key file locations should be separated by semicolons (";").

Note: If the licence key file location is not defined, "C:\Program Files (x86)\CAXperts\Licensing\" is used

Note: The licence key file may be renamed (including the extension). The CAXperts product will check the content of all files in the licence folder(s) for valid keys.

Note: Changes to the key path (in the environment variable or registry key) are read during the next start of the CAXperts product.

Floating (server) licence

Floating licences require a FlexNET server (lmadmin or lmgrd) accessible by the machine running the CAXperts product. The licence key file is typically located on the FlexNET server machine. The licence key file defines the maximum number of seats which can be used at the same time.

Note: Every running instance of the CAXperts software product will require one seat, no matter if the application is running multiple times on the same or different machine(s).

New instances can only be started as long as seats are available and the FlexNET server is accessible.

The location of the licence server must be defined on every machine with the CAXperts product installed, which can be done

- Either by setting the environment variable
  `CAXPERTS_LICENSE_FILE=@YourServerName`
- Or by setting the registry key
  `HKEY_CURRENT_USER\Software\FLEXlm License Manager\CAXPERTS_LICENSE_FILE=@YourServerName`

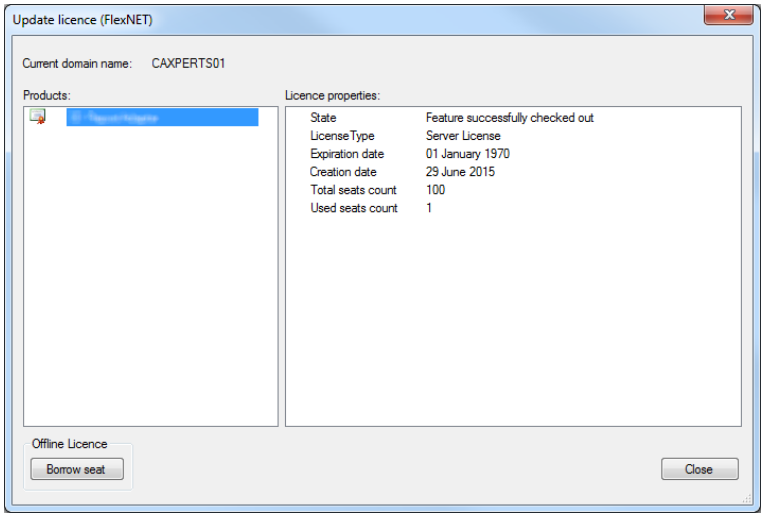
Every computer name must be preceded by the `@` symbol. Multiple licence server locations should be separated by semicolons (";").

`YourServerName` is the Windows computer name of the machine running lmadmin (FlexNET server). If lmadmin is running on a non-default port, the port number should be defined like this: `port@ YourServerName`.

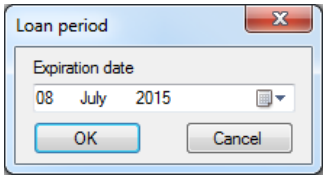
Note: Changes to the server path (in the environment variable or registry key) are read during the next start of the CAXperts product.

Borrowed licences

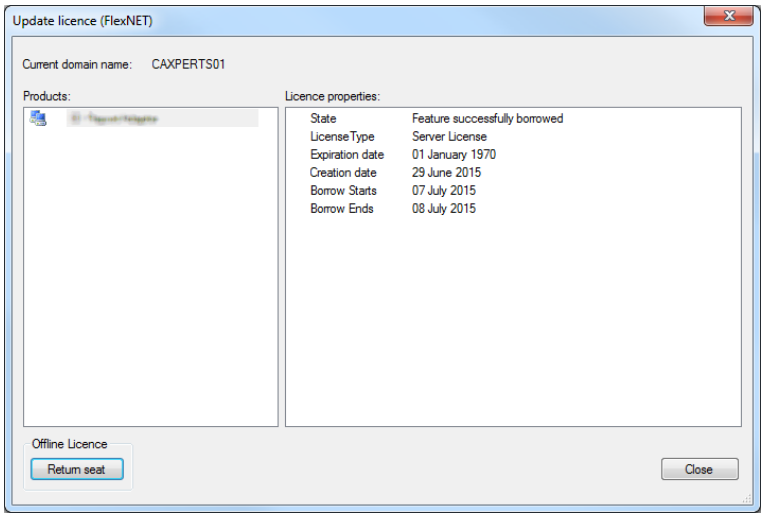
Licence seats can be borrowed for a period of time from the server and saved to the local machine. Once the seat has been borrowed the CAXperts application can be used without any connection to the FlexNET server.



To borrow a licence seat press the **Borrow seat** button, define the loan period (up to 7 days) and press OK. When the borrowed seat expires it gets automatically returned back to the FlexNET server.



The seat can be returned earlier by pressing the **Return borrowed seat** button.



Note: Without a valid licence file the software will run in demo mode.

3 Using DocumentAdapter

3.1 General Notes

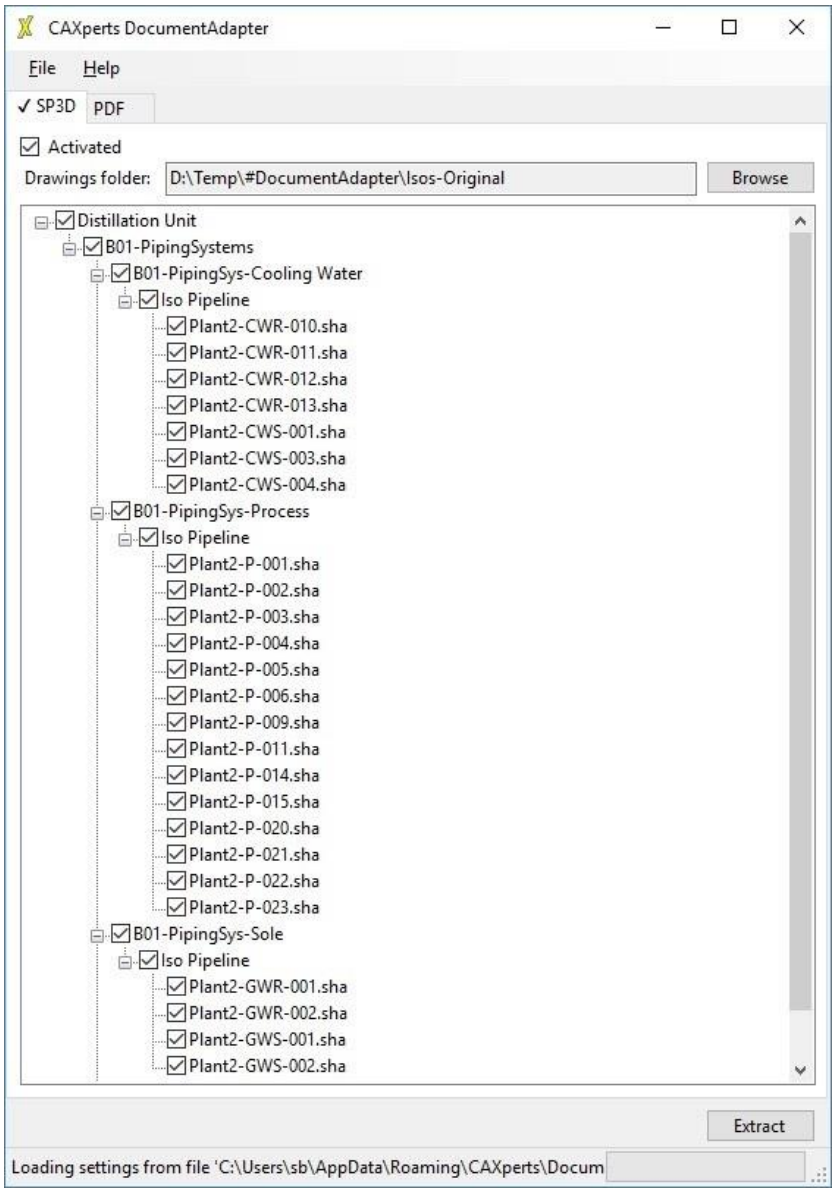
DocumentAdapter (DA) is a converter for Smart 3D isometric drawings and PDF files in general. The resulting conversion format can be joined together with the Universal-PlantViewer 3D format.

> Note: Hints for the conversion with SmartSketch:
>
> SmartSketch is usually not running very stable during the conversion process and so you might end up with a lot of licence seats that are not properly returned to the license server due to “killed” SmartSketch sessions.
>
> To avoid this, we recommend to check out a SmartSketch seat locally before you run DocumentAdapter. Please refer to the Intergraph documentation on how to do that.

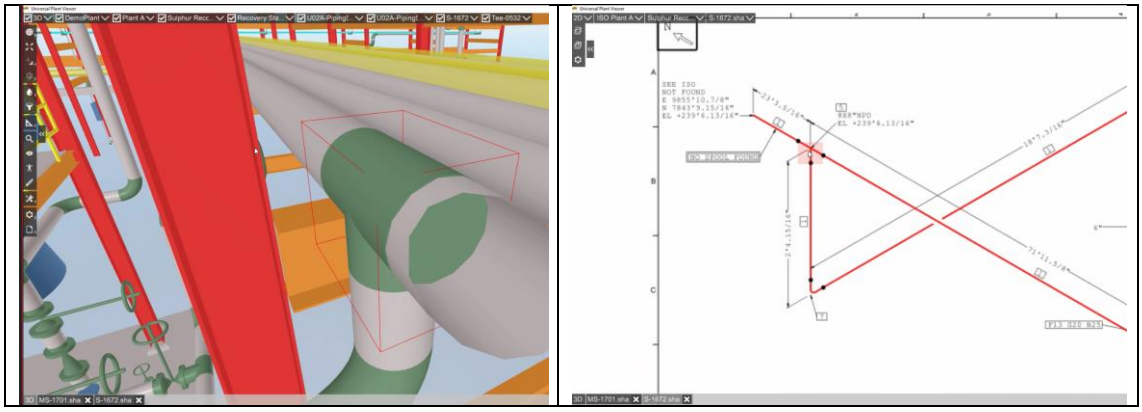
All Intergraph SmartSketch files are supported.
DocumentAdapter is working with SmartSketch version 2014R1 or later.

3.2 Conversion of Smart 3D isometrics

The first tab (**SP3D**) is for the processing of Smart 3D isometrics and layout drawings. As for all different tabs, the dedicated section is “activated” for processing only when the option is ticked on.



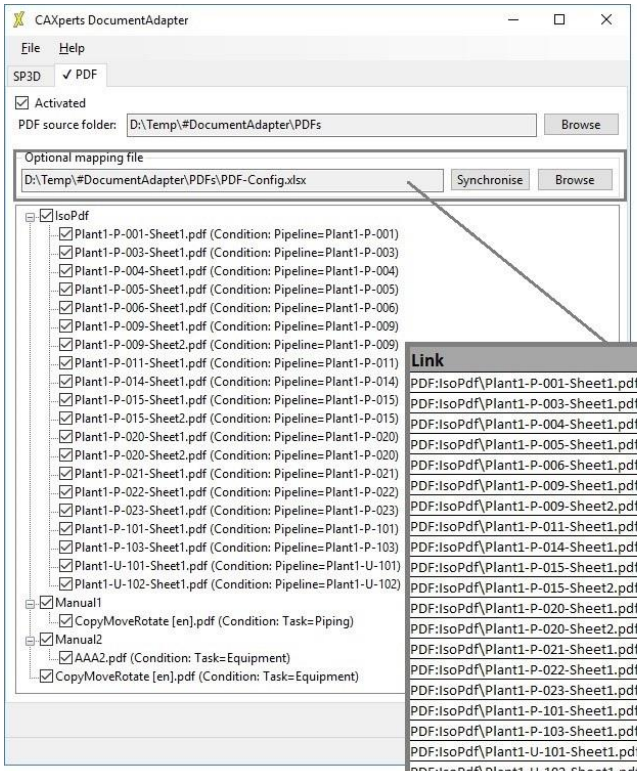
The button enables the processing of the isometric drawing into a resulting UPVD file. **DocumentAdapter** starts **SmartSketch** and extracts the drawings to a UPVD file. When you combine the UPVD file in **UniversalPlantViewer Builder with the 3D model**, the resulting UPV session contains 3D objects that are linked to 2D isometric drawings and vice versa:



3.3 Conversion of PDF files

DocumentAdapter can integrate all kind of PDF files into a UniversalPlantViewer model. By activating this section, the user just needs to browse to a folder on the filesystem and the complete folder structure beneath is read out and processed.

With an optional mapping file all necessary links regarding the pdf and condition in the model is set up accordingly.



Link	Condition	Name	State
PDF:IsoPdf\Plant1-P-001-Sheet1.pdf	Pipeline=Plant1-P-001	Plant1-P-001-Sheet1.pdf	
PDF:IsoPdf\Plant1-P-003-Sheet1.pdf	Pipeline=Plant1-P-003	Plant1-P-003-Sheet1.pdf	
PDF:IsoPdf\Plant1-P-004-Sheet1.pdf	Pipeline=Plant1-P-004	Plant1-P-004-Sheet1.pdf	
PDF:IsoPdf\Plant1-P-005-Sheet1.pdf	Pipeline=Plant1-P-005	Plant1-P-005-Sheet1.pdf	
PDF:IsoPdf\Plant1-P-006-Sheet1.pdf	Pipeline=Plant1-P-006	Plant1-P-006-Sheet1.pdf	
PDF:IsoPdf\Plant1-P-009-Sheet1.pdf	Pipeline=Plant1-P-009	Plant1-P-009-Sheet1.pdf	
PDF:IsoPdf\Plant1-P-009-Sheet2.pdf	Pipeline=Plant1-P-009	Plant1-P-009-Sheet2.pdf	
PDF:IsoPdf\Plant1-P-011-Sheet1.pdf	Pipeline=Plant1-P-011	Plant1-P-011-Sheet1.pdf	
PDF:IsoPdf\Plant1-P-014-Sheet1.pdf	Pipeline=Plant1-P-014	Plant1-P-014-Sheet1.pdf	
PDF:IsoPdf\Plant1-P-015-Sheet1.pdf	Pipeline=Plant1-P-015	Plant1-P-015-Sheet1.pdf	
PDF:IsoPdf\Plant1-P-015-Sheet2.pdf	Pipeline=Plant1-P-015	Plant1-P-015-Sheet2.pdf	
PDF:IsoPdf\Plant1-P-020-Sheet1.pdf	Pipeline=Plant1-P-020	Plant1-P-020-Sheet1.pdf	
PDF:IsoPdf\Plant1-P-020-Sheet2.pdf	Pipeline=Plant1-P-020	Plant1-P-020-Sheet2.pdf	
PDF:IsoPdf\Plant1-P-021-Sheet1.pdf	Pipeline=Plant1-P-021	Plant1-P-021-Sheet1.pdf	
PDF:IsoPdf\Plant1-P-022-Sheet1.pdf	Pipeline=Plant1-P-022	Plant1-P-022-Sheet1.pdf	
PDF:IsoPdf\Plant1-P-023-Sheet1.pdf	Pipeline=Plant1-P-023	Plant1-P-023-Sheet1.pdf	
PDF:IsoPdf\Plant1-P-101-Sheet1.pdf	Pipeline=Plant1-P-101	Plant1-P-101-Sheet1.pdf	
PDF:IsoPdf\Plant1-P-103-Sheet1.pdf	Pipeline=Plant1-P-103	Plant1-P-103-Sheet1.pdf	
PDF:IsoPdf\Plant1-U-101-Sheet1.pdf	Pipeline=Plant1-U-101	Plant1-U-101-Sheet1.pdf	
PDF:IsoPdf\Plant1-U-102-Sheet1.pdf	Pipeline=Plant1-U-102	Plant1-U-102-Sheet1.pdf	
PDF:Manual1\Piping-Manual.pdf	Task=Piping	Piping-Manual.pdf	
PDF:Manual2\Equipment-Manual.pdf	Task=Equipment	Equipment-Manual.pdf	

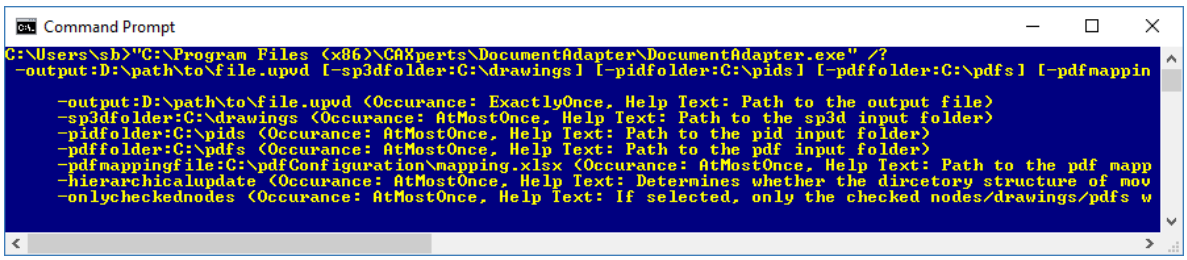
An example for a mapping file is available in “C:\Program Files (x86)\CAXperts\DocumentAdapter\Templates\PDF-Mapping.xlsx”

The synchronise button writes all links into the selected mapping-file.

Command line mode

DocumentAdapter can also be started in command line mode. To get all parameters directly in a command window, just type:

"C:\Program Files (x86)\CAXperts\DocumentAdapter\DocumentAdapter.exe" /?



Available parameters are:

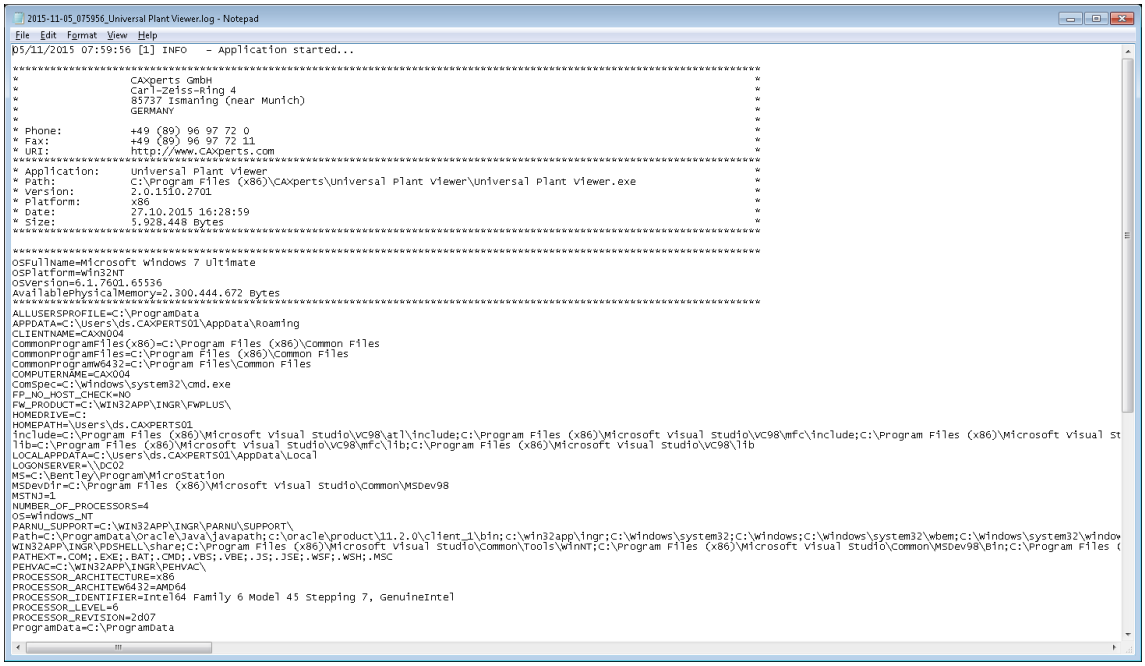
-output:D:\path\to\file.upvd (Occurance: ExactlyOnce, Help Text: Path to the output file)
-sp3dfolder:C:\drawings (Occurance: AtMostOnce, Help Text: Path to the sp3d input folder)
-pidfolder:C:\pids (Occurance: AtMostOnce, Help Text: Path to the pid input folder)
-pdffolder:C:\pdfs (Occurance: AtMostOnce, Help Text: Path to the pdf input folder)
-pdfmappingfile:C:\pdfConfiguration\mapping.xlsx (Occurance: AtMostOnce, Help Text: Path to the pdf mapping input file)
-hierarchicalupdate (Occurance: AtMostOnce, Help Text: Determines whether the dircetory structure of moved drawings should be updated)
-onlycheckednodes (Occurance: AtMostOnce, Help Text: If selected, only the checked nodes/drawings/pdfs will be updated/added. Otherwise all nodes in all sub folder of the given folder will be considered)

Possible syntax for command-line:

"C:\Program Files (x86)\CAXperts\DocumentAdapter\DocumentAdapter.exe" -output:D:\path\file.upvd -sp3dfolder:C:\drawings -pidfolder:C:\pids -pdffolder:C:\pdfs -pdfmappingfile:C:\pdfConfiguration\mapping.xlsx

4 Log files

The software creates log files in the local TEMP directory (e.g. "`C:\Temp\DocumentAdapter\`". The user can also open these files by double-clicking on the CAXperts **DocumentAdapter** status bar:



5 Technical support

Need more help? Contact CAXperts support by email, online, or phone:

mailto: support@caxperts.com

www.caxperts.com