

## SINAMICS Intelligent Operator Panel (IOP)

### Firmware and Software Update Instructions



**Edition: August 2016**

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## 1. Firmware and Software Update Instructions

### 1.1 Limitations

The following limitations apply to the Firmware and Software Update of the SINAMICS Intelligent Operator Panel (IOP):

1. The IOP (6SL3255-0AA00-4JA\_) should only be connected to a standard USB port on the PC.
2. This version of the IOP Updater is compatible with the Windows XP and Windows 7 32 bit and 64 bit operating systems.
3. You need Admin rights on your PC account to install the USB-driver for the update procedure.
4. The IOP Updater must be started from a local drive.
5. Your Windows must provide .NET from version 4.5.1

### 1.2 Important Notes

With the Firmware V1.6.x a new IOP USB-Driver is provided. This driver must be installed before the firmware update can be performed. The firmware update driver installation procedure detailed in chapter 2 "IOP USB-Driver Installation Steps".

**Caution:**

During the firmware update the IOP and a SINAMICS Control Unit may not be simultaneously connected via USB to the PC.

### 1.3 Support of different SINAMICS IOP Hardware versions

IOP-Order-No.	IOP-Version	Supported IOP-Firmware	Supported USB Interface	Supported Operating System Environment for Upgrading the IOP
<b>6SL3255-0AA00-4JA0</b>	A02	V1.1 – V1.6.x	USB V1.1	Windows XP
	A03	V1.1 – V1.6.x	USB V1.1	Windows XP
	A04	V1.1 – V1.6.x	USB V1.1	Windows XP
	A05	V1.1 – V1.6.x	USB V1.1	Windows XP
	A06	V1.1 – V1.6.x	USB V1.1/ V2.0	Windows XP, Windows 7 32 Bit
	B01	V1.1 – V1.6.x	USB V1.1/ V2.0	Windows XP, Windows 7 32 Bit
	B02	V1.1 – V1.6.x	USB V1.1/ V2.0	Windows XP, Windows 7 32 Bit
<b>6SL3255-0AA00-4JA1</b>	A01	V1.1 – V1.6.x	USB V1.1/ V2.0	Windows XP, Windows 7 32 Bit
	B01	V1.1 – V1.6.x	USB V1.1/ V2.0	Windows XP, Windows 7 32/ 64 Bit
	C01	V1.1 – V1.6.x	USB V1.1/ V2.0	Windows XP, Windows 7 32/ 64 Bit
	D01	V1.1 – V1.6.x	USB V1.1/ V2.0	Windows XP, Windows 7 32/ 64 Bit
	D02	V1.1 – V1.6.x	USB V1.1/ V2.0	Windows XP, Windows 7 32/ 64 Bit
<b>6SL3255-0AA00-4JC1</b>	A01	V1.5.1 - V1.6.x	USB V1.1/ V2.0	Windows XP, Windows 7 32/ 64 Bit
	B01	V1.5.1 - V1.6.x	USB V1.1/ V2.0	Windows XP, Windows 7 32/ 64 Bit
	B02	V1.5.1 - V1.6.x	USB V1.1/ V2.0	Windows XP, Windows 7 32/ 64 Bit

The IOP currently does not Support USB V3.0. This can be identified by the blue connector.

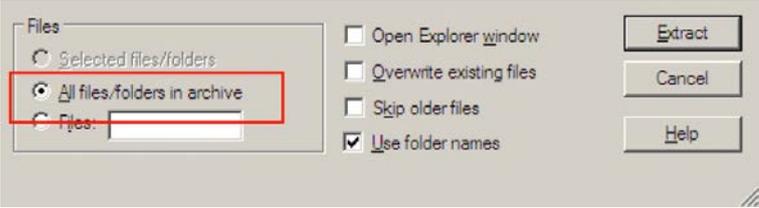
## 1.4 Software Downloads for SINAMICS IOP

The SINAMICS IOP Upgrades and Language Packages are available on the Internet:

<http://support.automation.siemens.com/WW/view/en/67273266>

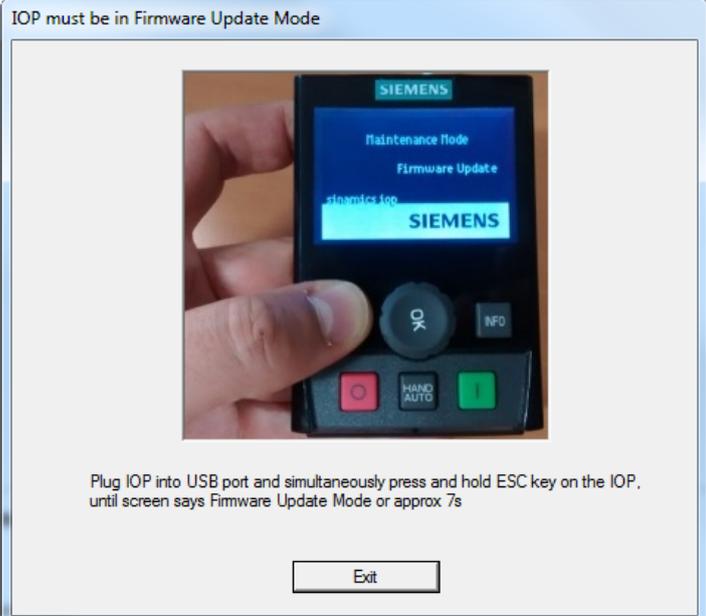
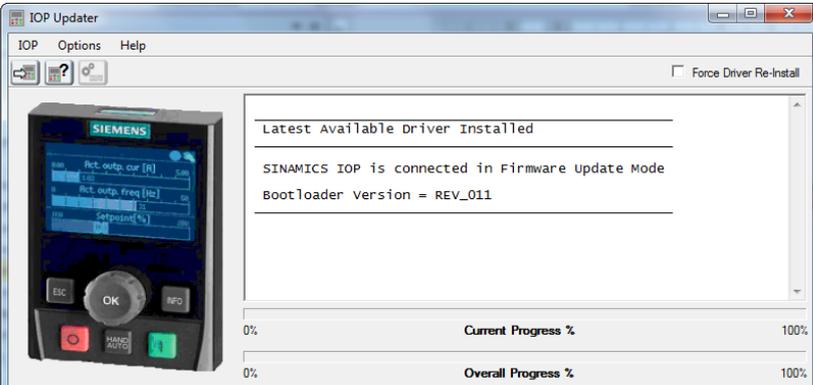
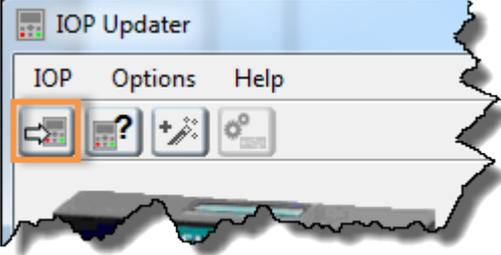
## 1.5 Extracting the software

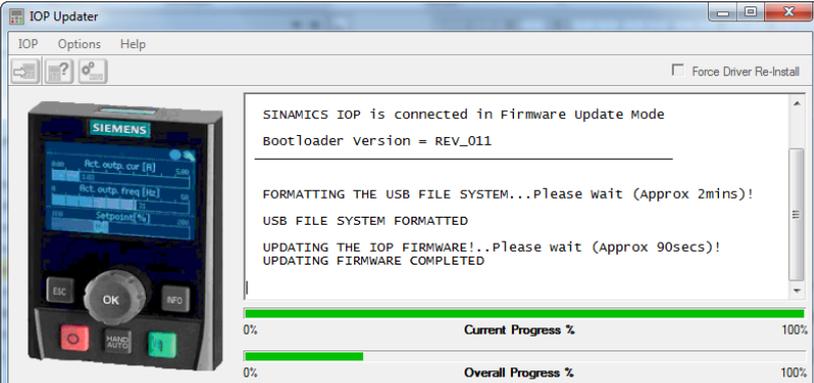
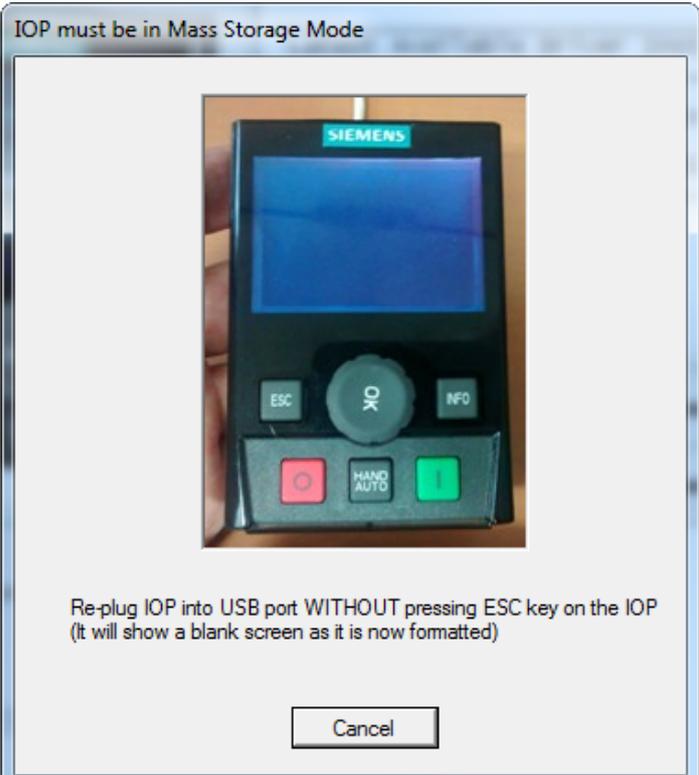
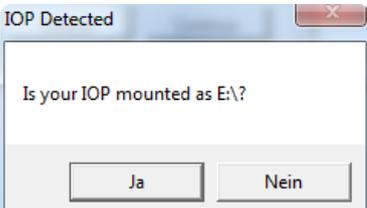
To extract the files, the following procedure should be performed:

No.	Instructions	
1.	Download the required file to an appropriate folder on your local drive.	
2.	Navigate to the folder containing the zipped update file on your local drive.	
3.	<p>Extract the update files.</p> <p><b>Note:</b> When extracting the zipped files it is essential that the "All files/folders in archive" option is selected.</p>	

## 1.6 Update process

To update the IOP, the following procedure should be performed:

No.	Instructions	
1.	Navigate to the folder to which the update files have been extracted.	
2.	Double-click the "IOPUpdater.exe" file.	
3.	Follow the instructions on screen.	 <p>IOP must be in Firmware Update Mode</p> <p>Plug IOP into USB port and simultaneously press and hold ESC key on the IOP, until screen says Firmware Update Mode or approx 7s</p> <p>Exit</p>
4.	<p>If the USB driver is present the following screen is displayed:</p> <p><b>NOTE:</b> If the driver is not installed, please note the instructions in chapter 2 "IOP USB-Driver – Installation Steps".</p>	 <p>IOP Updater</p> <p>IOP Options Help</p> <p>Force Driver Re-Install</p> <p>Latest Available Driver Installed</p> <p>SINAMICS IOP is connected in Firmware Update Mode Bootloader Version = REV_011</p> <p>0% Current Progress % 100%</p> <p>0% Overall Progress % 100%</p>
5.	Start the update process by selecting the icon "Update IOP"	 <p>IOP Updater</p> <p>IOP Options Help</p> <p>Update IOP icon highlighted</p>

<p>6.</p>	<p>After each part of the Update process the User is prompted by the onscreen instructions. First the Format is performed then the IOP Firmware is Updated.</p>	 <p>The screenshot shows the 'IOP Updater' window. On the left is a small image of the IOP device. The main text area displays: 'SINAMICS IOP is connected in Firmware update Mode', 'Bootloader Version = REV_011', 'FORMATTING THE USB FILE SYSTEM...Please wait (Approx 2mins)!', 'USB FILE SYSTEM FORMATTED', 'UPDATING THE IOP FIRMWARE!..Please wait (Approx 90secs)!', and 'UPDATING FIRMWARE COMPLETED'. At the bottom, there are two progress bars: 'Current Progress %' and 'Overall Progress %', both showing 100% completion.</p>
<p>7.</p>	<p>Next the user is prompted connect the IOP in Mass Storage Mode (the IOP will be blank as the File System has been Formatted).</p>	 <p>The screenshot shows a dialog box titled 'IOP must be in Mass Storage Mode'. It contains a central image of the IOP device with a blank screen. Below the image, the text reads: 'Re-plug IOP into USB port WITHOUT pressing ESC key on the IOP (It will show a blank screen as it is now formatted)'. A 'Cancel' button is located at the bottom of the dialog.</p>
<p>8.</p>	<p>After connecting the IOP in Mass Storage Mode and clicking "OK" the following is displayed. Select "Yes" if your IOP is mounted on the stated Drive.</p>	 <p>The screenshot shows a small dialog box titled 'IOP Detected'. The text inside asks: 'Is your IOP mounted as E:\?'. At the bottom, there are two buttons: 'Ja' (Yes) and 'Nein' (No).</p>

9. The following screen allows the selection and download of optional Wizards.  
Hint: The Basic Wizard is already installed. Choose “?” to get more information.

The optional Wizards can be downloaded from the Siemens Online Support Portal from IOP V1.6:  
<https://support.industry.siemens.com/cs/ww/en/view/67273266>

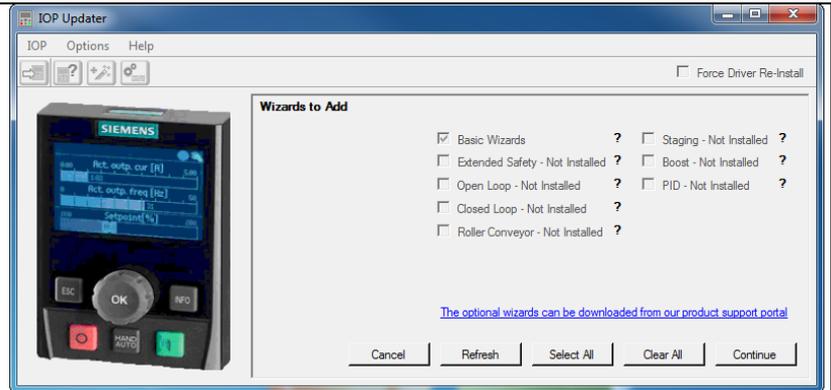
Detailed information about the optional Wizards can be found in the Operating Instructions Manual “Intelligent Operator Panel (IOP)”:  
<https://support.industry.siemens.com/cs/ww/en/view/101920450>

Download the needed Wizards from our Support Portal to an appropriate folder on your local drive. Navigate to the folder containing the zipped Wizard files on your local drive.

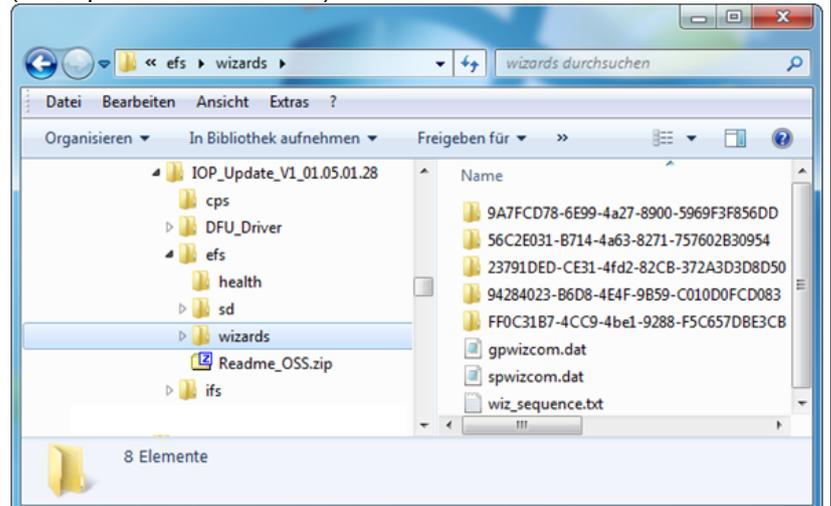
Extract the Wizard files.

**Note:**  
When extracting the zipped files it is essential that the "All files/folders in archive" option is selected.

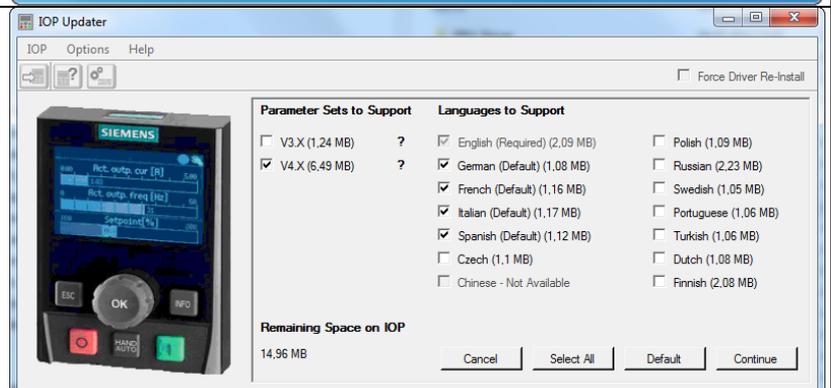
Opens two windows, one to download from your local folder, the other to copy the contents of the unzipped downloaded folder into the other opened window with 32 character folder names (...IOP\_Update\_Vxxx\efs\wizards)



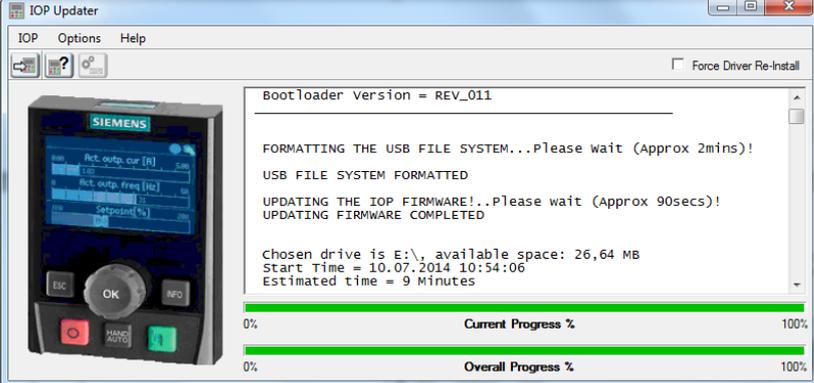
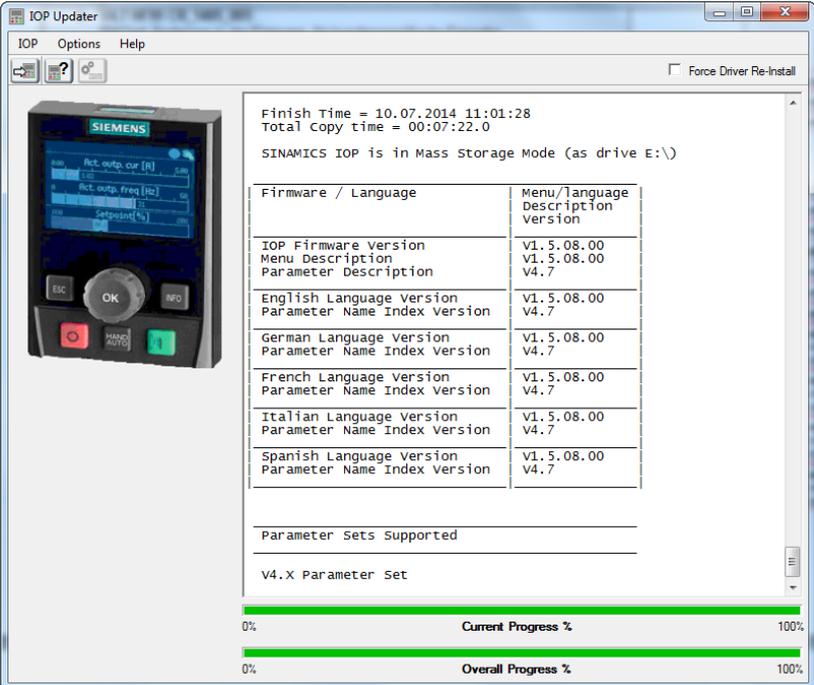
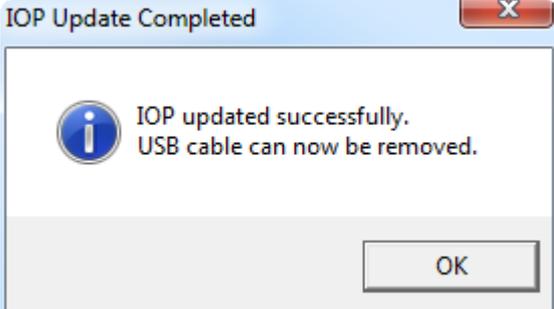
Target folder “efs\wizards” within the IOP-Updater folder structure (Example based on V1.5.x):



10. The following screen allows the selection of the requested languages and the supported parameter sets (firmware version V3.x or V4.x; choose “?” to get more information).



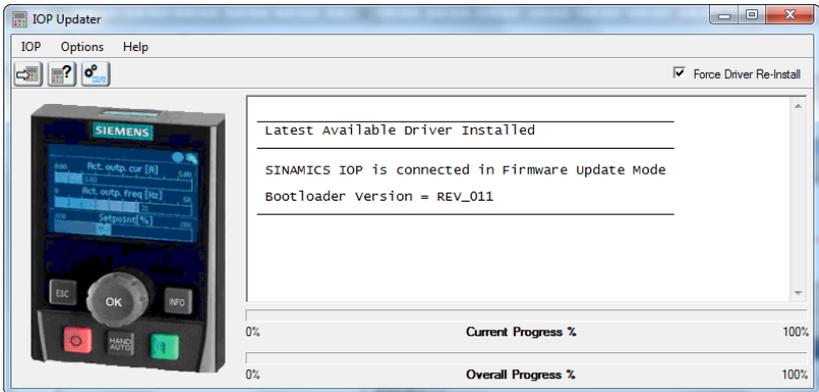
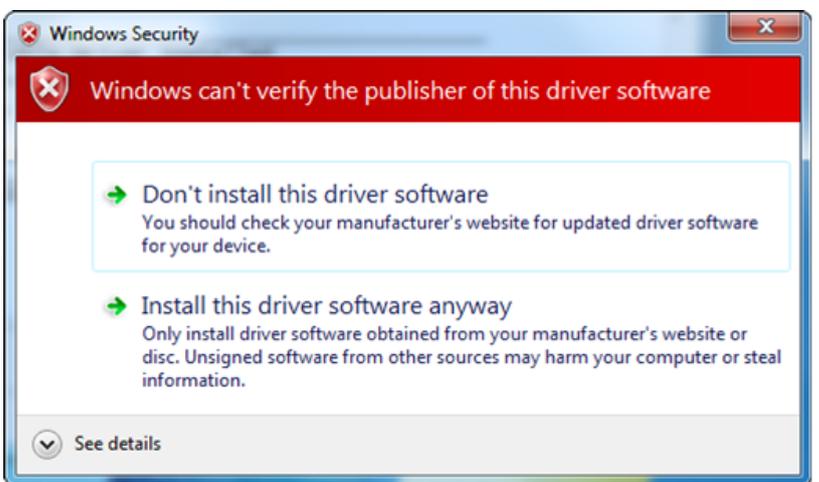
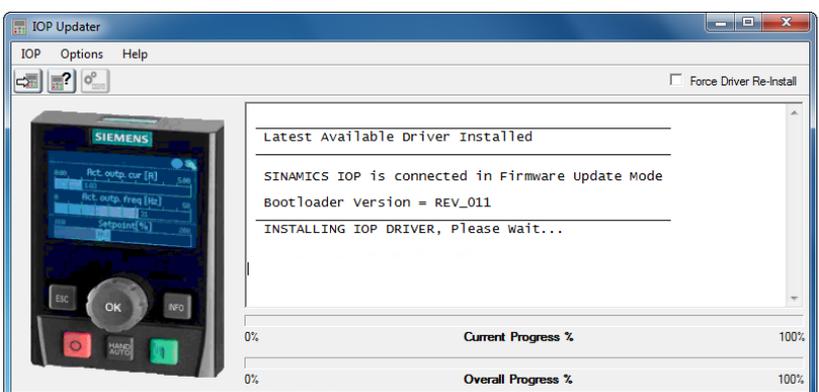
11. The following is displayed when the File System is being copied.

	 <p>IOP Updater</p> <p>IOP Options Help</p> <p>Force Driver Re-Install</p> <p>Bootloader version = REV_011</p> <p>FORMATTING THE USB FILE SYSTEM...Please wait (Approx 2mins)!</p> <p>USB FILE SYSTEM FORMATTED</p> <p>UPDATING THE IOP FIRMWARE!..Please wait (Approx 90secs)!</p> <p>UPDATING FIRMWARE COMPLETED</p> <p>Chosen drive is E:\, available space: 26,64 MB</p> <p>Start Time = 10.07.2014 10:54:06</p> <p>Estimated time = 9 Minutes</p> <p>0% Current Progress % 100%</p> <p>0% Overall Progress % 100%</p>																												
<p>12. Once the process ends the following screen is displayed.</p>	 <p>IOP Updater</p> <p>IOP Options Help</p> <p>Force Driver Re-Install</p> <p>Finish Time = 10.07.2014 11:01:28</p> <p>Total Copy time = 00:07:22.0</p> <p>SINAMICS IOP is in Mass Storage Mode (as drive E:\)</p> <table border="1"> <thead> <tr> <th>Firmware / Language</th> <th>Menu/Language Description Version</th> </tr> </thead> <tbody> <tr> <td>IOP Firmware Version</td> <td>V1.5.08.00</td> </tr> <tr> <td>Menu Description</td> <td>V1.5.08.00</td> </tr> <tr> <td>Parameter Description</td> <td>V4.7</td> </tr> <tr> <td>English Language Version</td> <td>V1.5.08.00</td> </tr> <tr> <td>Parameter Name Index Version</td> <td>V4.7</td> </tr> <tr> <td>German Language Version</td> <td>V1.5.08.00</td> </tr> <tr> <td>Parameter Name Index Version</td> <td>V4.7</td> </tr> <tr> <td>French Language Version</td> <td>V1.5.08.00</td> </tr> <tr> <td>Parameter Name Index Version</td> <td>V4.7</td> </tr> <tr> <td>Italian Language Version</td> <td>V1.5.08.00</td> </tr> <tr> <td>Parameter Name Index version</td> <td>V4.7</td> </tr> <tr> <td>Spanish Language Version</td> <td>V1.5.08.00</td> </tr> <tr> <td>Parameter Name Index version</td> <td>V4.7</td> </tr> </tbody> </table> <p>Parameter Sets Supported</p> <p>V4.X Parameter Set</p> <p>0% Current Progress % 100%</p> <p>0% Overall Progress % 100%</p>	Firmware / Language	Menu/Language Description Version	IOP Firmware Version	V1.5.08.00	Menu Description	V1.5.08.00	Parameter Description	V4.7	English Language Version	V1.5.08.00	Parameter Name Index Version	V4.7	German Language Version	V1.5.08.00	Parameter Name Index Version	V4.7	French Language Version	V1.5.08.00	Parameter Name Index Version	V4.7	Italian Language Version	V1.5.08.00	Parameter Name Index version	V4.7	Spanish Language Version	V1.5.08.00	Parameter Name Index version	V4.7
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Spanish Language Version	V1.5.08.00																												
Parameter Name Index version	V4.7																												
	 <p>IOP Update Completed</p> <p>IOP updated successfully. USB cable can now be removed.</p> <p>OK</p>																												

## 2 IOP USB-Driver - Installation Steps

This chapter includes the installation steps for installing the IOP USB-Driver. **Admin rights** are needed to install a Device Driver. It is not necessary to have the IOP connected to install the IOP Driver.

### 2.1 Driver Installation

No.	Instructions	
1.	Navigate to the folder to which the update files have been extracted.	
2.	Double click "IOPUpdater.exe". The screen opposite shows that the IOP Driver is already installed. However, you can select Force Driver Re-install to install the IOP Driver again.	
3.	Select Install IOP Driver  , and screen opposite is displayed.  Select "Install this driver software anyway".	
4.	The IOP-Updater informs about the running installation process.	
5.	After installation is completed the following screen should be	

No.	Instructions
	displayed.

## 3 Service & Support

### 3.1 Tips & Tricks

Problem	Title
IOP shows a blank screen	<p>If you get a blank screen when you plug your IOP into a Drive, this means the FW Update did not work properly. Start the update process.</p> <p>Another reason for a blank screen can be you have no files on your IOP. This can be quickly determined by plugging the IOP into the USB port and looking at the IOP device as a Drive. If it is blank then no files exist on the IOP, please run "IOPUpdater.exe" again.</p>
IOP shows "Consistency check error"	This means that the IOP Update of the Firmware has not work properly, please run IOPUpdater.exe again. This could be related to the following FAQ's.

### 3.2 FAQs

SIOS-ID	Title
<a href="#">67273266</a>	Which IOP version supports which SINAMICS Control Unit and/or SINAMICS firmware version?
<a href="#">56293000</a>	Is there a SINAMICS IOP (V1.1) Firmware USB Update problem?

More FAQs concerning IOP you can find here:

<http://support.automation.siemens.com/WW/view/en/30563514/133000> (use search item "IOP")

### 3.3 Documentation

SIOS-ID	Title
<a href="#">109736312</a>	German: Operating Instructions Intelligent Operator Panel (IOP), 02/2016, FW V1.6 SP2
<a href="#">109736312</a>	English: Operating Instructions Intelligent Operator Panel (IOP), 02/2016, FW V1.6 SP2