

Application Note

S7A Driver V 8.00

connecting to a

S7-1200/1500

via

Symbolic Addressing

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Draft

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1 Configuration via S7A Power Tool

1.1 Start the S7A Power Tool



Picture 1: Starting S7A Power Tool via Windows Start Menu

You can start the S7A Power Tool via Windows Start Menu.

1.2 Create a new configuration

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SA 1 Insert	~ Ø				
▲ Cut ▲ Cut ▲ Copy ▲ Cut <					
Object Tree 💦 🖉 🖉 Driver Configuration					
Objects View + Image: STA (Online)					
ST Deliou STA Configurator ST Deliou STA Configurator ST Deliou Is connected to Driver Background Process ST T, Do Name: ST T, QO Name: ST, QO Program Path: C:\ASDK\STABO0_100/BINSTADRVEXE ST, Immer License: License: License:	-				
Image: Strate in the strate					
	Ţ				
Log vener 🔥 0 Warnings 🚯 Binfo Messa 🔂 Clear List. 🚺 Pause					
c # Timestamp Text	^				
 	00_T				
Debug Outputs Outputs					

Picture 2: Opening the program's backstage menu

CLPtogam FilesProficyPhotogr #IXDefault57A _ _ = x CLPtogam FilesProficyPhotogr #IXDefault57A ~ ©

Click on the S7A Program Icon to open the application (backstage) menu.

Picture 3: Creating a new (blank) configuration.

Select the menu item **New** to create a new (blank) configuration.

1.3 Create a new channel

C/Program Files/Proficy/Proficy iFIXUntitled s7a	_ = ×
Home Insert	~ 🧭
▲ Cut ▲ Copy ▲ Copy	
Ched Tree 🗾 🗸 🖈 Driver Configuration	
Objects View	
STA (Online)	
FSTA Configurator	
Name: S7ADriver / OPC Server Background Process, Version 8, 0, 0, 100 Running as: User process	
Program Path: C:\ASDKIS7A800_100\BIN\S7ADRV.EXE	
License: License undetermined while driver is st Demo: 120 min remain,	
Statistics, Performance_Diagnostics	
	
Log Vener	
C # Timestamp Text	
9 07.10.2010 09.09 Channel 'S7_LIA: Symbol Thread S7 ICP TIA terminated. 10 07.10.2016 08.08: Dev 'S7_ALAEM': Comm Thread S7 Alarms started	
10 07.10.2016 08.08 Dev "57 ALARM" Comm Thread 57 Alarms terminated.	
+ 👔 12 07.10.2016 08.08: New configuration created	t i
Debug Outputs Outputs	

Picture 4: Creating a new channel

Select the root item S7A (Online) in the Object Tree View, open the context menu via right mouse click and select *Add Channel* form the context menu to create a new channel object.

1.4 Configure the new channel

1

1

C:\Program Files\Proficy\Proficy\FDXUntitled s7a _ = X						
Fine Inset	0					
* Cut ************************************						
Object Tree 🔷 🖉 X 🚺 Channelist 🛤 and a source source and the source source and the source source source and the source sourc						
Objects View + □ □ Channel61 □ □ Channel61						
Genetic Channel Setting? LD Address Syntax iFIX Register Offset Communication Way ID Address Syntax iFIX Register Offset S7-300400 TCPIP Absolut S7 Not. IEC S7 Not. German S7M comp. is Byte Offset S7-1200/1500 TCPIP Absolut I S7 MPIPB via CIFICHX S5 TCPIP via INAT S5 or CP 14 Profibus DP via CIFIORX FROFINET via cIfX						
Log Vewer	۲					
🔒 0 Errors 🔐 0 Warnings 🔄 14 Info Mess 🕎 Clear List. 🔢 Pause						
c # Timestamp Text	•					
0 11 07.10.2016 08:08: Dev. "S7_ALARM": Comm. Thread S7 Alarms terminated.						
0 12 07.10.2016 08.08 New configuration created						
0 13 07.10.2016 08.11 Channel "Channel 60". Symbol Thread 57 TCP TIA started.	-					
Construction of the content of						
Depuil Anthread Ant						

Picture 5: Configuring the new channel, part 1.

Since the new channel not yet has a specific communication way, you have to select the proper communication way **S7-1200/1500 TCP/IP Symbolic** from the **Communication Way** drop down list. The program then automatically loads the specific dialog for the selected

communication way.

1.4.1 Configure the specific channel parameters

C.\Program Files\Proficy\Proficy iFIX.Untitled.s7a _ 😑 🗴
T Home Insert 🗠 🧟
A Cut
Object Tree 🔹 🖉 TIA_CHT 🔝 Unver Conligueillon 🔍 🗸 🗴
Objects View
Rame: TIA_CH1 Partia T
Generic Channell Settings Communication Way I/O Address Syntax IFX Register Offset S7-1200/1500 TCPAP Symbolic S7 Not IEC S7 Not IEC S7 Not German S7M comp S7M
Log Vener
CErrors A Warnings 18 Info Mess Clear List Pause
C # Timestamp Text
15 07.10.2016 08:12: Channel "Channel61": Symbol Thread S7 TCP TIA started.
10 07.10.2010 00.14 Onamie Tra_Ch1: Satuessian teau symbol subant for S7A coning C.Program PrescienterseculormationPortal V13Projekte_Inclosofts7Ab00
18 07.10 2016 08:14 Channel "TIA_CH1". TIA symbol list successfully browsed! 162 symbols found. Tree depth = 8
Debug Outputs Outputs

Picture 6: Configuring the specific channel parameters.

- Give the channel an unique name. This name must not be used for another channel!
- Select the item "S7A Config File" from the "Read symbol information from" drop down list. With this option the S7A driver stores the symbol information in its configuration file. A permanent access to the TIA project file is not required.
- Select the TIA project file which contains the PLC project you want to access via symbolic addressing.
 - Click the Button "TIA > S7A" to transfer the symbol information from the TIA project file into the S7A driver configuration file.
 - Enable the channel.

For all other parameters the default values are suitable.

1.5 Create a new device

C:Program Files/Proficy/Proficy iFIXUntitled s7a	_ = x
Home Insert	~ 🧭
image: state stat	
Objects View • Image: Stat (Coline) Name: TIA_CH1 Image: TIA_CH1 Description:	Enabled
Edit Channel Sottings Way WO Address Syntax IFIX Register Offset Duplicate Channel OF/IP Symbolic OS7 Not. IEC S7 Not. German S7M comp. O_Lis Byte Offset Insert Channel above	ement Offset =
	ig File • V1 Browse
Device list	
	
Log Verwor	
19 07.10 2016 08.27 Channel TIA CH1: Enabled	
20 07.10.2016 08:27: Channel "TIA_CH1": Successfully read symbol stream from S7A config C:\Program Files\Siemens\Automation\Portal V13\Projekte_Ir	1CoSol\S7A800
0 21 07.10.2016 08:27: Channel "TIA_CH1": Start browsing TIA symbol list	
22 07.10.2016 08:27 Channel 'TIA_CH1"; TIA symbol list successfully browsed! 162 symbols found. Tree depth = 8	*
Debug Outputs Outputs	

Picture 7: Creating a new device

Select the previously created channel in the Object Tree View, open the context menu via right mouse click and select **Add Device** from the context menu to create a new device object.

1.6 Configure the new device



Picture 8: Configuring the specific device parameters.

Give the device an unique name. This name must not be used for another device!

Note! The device name will later on be used as part of an iFIX I/O address or an OPC item id.

- Enter the IP address of the S7-1200/1500 PLC you want to access.
- Select the proper PLC family type from the list.
- Select the TIA PLC name you want to access within your TIA project. Since a TIA project can contain multiple PLCs it is necessary to select the specific PLC name which has the previously entered IP address.

The following screen shot shows the PLC device configuration of the example PLC (with name PLC_1). The numbers in the red dots correspond to those in the above picture which shows the S7A device configuration.



Picture 9:TIA PLC type, name and IP address.

Enable the device.

1.7 Create a new data block

C:\Program Files\Proficy\Proficy iFIX\Untitled.s7a				
Fix Home Inset				
image: Source image: Source<				
Ext STA (Online) Ext STA (Online) Ext STA (Online) Ext STA (Online) Ext STA (CHI Ext State Ext Sta				
Zetat Device Settings				
Timeout: 16				
TIA PLC Name: PLC_1 Retries: 3 C				
The series of the second secon				
Device Settings				
1 Add Data Block				
Data Block List				
Statistics and Diagnostics				
🔽 0 Errors 🔐 0 Warnings 😨 22 Info Mess 😨 Clear List 🔰 Pause				
c # Timestamp Text				
19 07.10.2016 08:27: Channel TIA_CH1: Enabled				
20 07.10.2016 0827: Channel "TIA_CH1": Successfully read symbol stream from S7A config C:Program Files/Siemens/Automation/Portal V13/Projekte_InCoSol/S7A800				
21 07.10.2016 08:27: Channel 'TIA_CH1': Start browsing TIA symbol list				
1 2 07.10.2016 08:27 Channel 'TIA_CH1'' TIA symbol list successfully browsed! 162 symbols found. Tree depth = 8				

Picture 10: Creating a new data block

	C:\Program Files\Proficy	Proficy iFIX_S	7TIA.S7A					. = :
Home								
A Cut Copy Paste ✓ Paste Clipboard Obj	pend hater Above Below act Tree Actions	tart Stop						
Object Tree 💎 💉 💦	B TIA_DB1							
□ □ \$7A (Online) □ □ TIA_CH1 □ ⊕ TIA_D11 • ⊕ TIA_D11	Name: TIA_DB1 D	escription:						nabled 4
4. 101_001						Memory	Pool (total/free): 28928 / 28531	
	Symbol	TIA Data Type D	B Access	HMI access	HMI Sel visible cte	e Flags	Current Value	
	Blocks	Block List						
	+ C DB_1	Data Block	1					
	Jurgen_1	S7_Int	RW					- 1
	Bit 1	S7_Bool	RW					_
	Bit_2	S7_Bool	RW			2		
	Bit_3	S7_Bool	RW					-
	Polling Setup Primary Rate (sec.) 🖬 1,0 🔅 Second	lary Rate (sec.):			Access Ti	me (sec.)	200 🗧 🗖 Altow uns	olicited
Log Viewer								
🔔 0 Errors 🔥 2 Warnings 🕤 31 II	nfo Mess							
C # Timestamp Text								
0 25 05.04.2017 10.14 Channel 'TIA_CH1' Symbol Thread S7 TCP TIA started.								
20 05.04-2017 10.14 Continuent TIA_CH1T Statt Feating TIA project TIAL. Continuent TIA_CH1T Statt Feating TIA project TIAL. To 504 2017 10.14 Continuent TIAL Continuent TIAL Continuent TIAL STAL STAL STAL STAL STAL STAL STAL ST								

1.8 Configure the new data block

Picture 11: Configuring the Data Block

Give the data block an unique name. This name must not be used for another data block!

Expand the TIA symbol tree till you reach the level with the simple variables you want to

Page 10

access in this data block.



Select all variables you want to access in the data block. The data block represents a logical container for a set of TIA symbols. Any symbol of an elementary data type or arrays of elementary data types are allowed to add to the data block's variable set.



Enable the data block.

Now your minimum configuration is completed. Of course you can add additional channels, devices and data blocks as required for your application.

All parameters for channel, device and data block which are not described in this documentation can be left at their default values. The only parameters which may have to be adapted are the polling parameters (primary rate, secondary rate and access time) of the data block.

C:\Program Files\Proficy\Proficy iFIX_S7TIA.S7A SA 1 Cut Ż -Edit Duplicate Append Ab 🗟 TIA_DB1 SA Driver Confi * = S7A (On TIA_DB1 Name Description: Enabled 28928 / 28531 Symbol TIA Data Type DB Access HMI HMI Sele visible cted Flags Watch all selected E Blocks Block List DB_1 Data Bloc Jürgen_1 S7_Int RW V -Bit_0 S7_Bool RW S7_Bool RW V V V Bit 2 S7 Bool RW . . S7_Boo 1 Bit_3 RW ing Setup ary Rate (sec.): 🔽 1,0 📑 **2** 300 \$ Allow unsolicite <u>A</u> 2 Warnings 🚽 🕜 31 Info Mess 🔝 Clear List 🛛 👭 Pause Text 05.04.2017 10:14:... Channel "TIA_CH1": Symbol Thread S7 TCP TIA started a 05.04.2017 10:14:... Channel "TIA_CH1": Start reading TIA project file. 0 26 27 05.04.2017 10:14:. Configuration file C:/Program Files/Proficy/Proficy IFIX_S7TIA.S7A loaded

1.9 Save the new configuration

Picture 12: Opening the program's backstage menu

Click the S7A Program Icon to reach the application (backstage) menu.

		C:\Program Files\Proficy\Proficy iFIX\Untitled.s7a	_ = X
Home Ins	ert		^ @
New	Calua		
Open	Setup		
Save	Default Paths		
Save As	Advanced		
Close			
Options	Logging & Debug		
🔀 Exit			

Picture 13: Saving the new configuration

2

Select the menu item Save As... to open the File Save dialog.

Save 57A configuration file			×
Lokaler Datenträger (C:) • Progr	amme 🝷 Proficy 👻 Proficy iFIX 👻	 Proficy iFIX durchsuchen 	2
Organisieren 🔻 Neuer Ordner			- 🕡
Proficy	Name	Änderungsdatum - 06.09.2016 12:41	S7A File
Proficy CIMPLICITY Proficy Common Proficy Database	V8_FMS_Channel.s7a	04.09.2016 21:10 31.08.2016 06:38	S7A File S7A File
Proficy Drivers Proficy Global Discovery Server Proficy Historian	🐼 ALARMS.S7A 🐼 ALARME.S7A 😿 XXX.S7A	26.08.2016 11:58 26.08.2016 09:56 23.08.2016 12:40	S7A File S7A File S7A File
20150199_ 20150199_220150199 2W1L-XHYK	V8_S7_TCP_Channel.s7a	23.08.2016 11:54	S7A File
Dateiname TIA_Config.S7A Dateityp: S7A files (*.s7a)			•
Ordner ausblenden		<u>Speichern</u> 4 b	brechen

Picture 14: Configuration file save dialog



Select a folder and enter a valid file name. The name must have the extension .S7A. Click the Save button to finally save the configuration to disk.

		C:\Program Files\Proficy\Proficy iFIX\Untitled.s7a	_ = ×
Home Inser			^ Ø
New	De	efault paths and file names	
Open	Setup	- Startup Configuration	
Save	Default Paths	Path: C:\Program Files\Proficy\Proficy iFIX	
Save As		File name (SZA): TIA Test SZA	
Close	Advanced		
Options	Logging & Debug		
Evit			
E LAIL			
		Save 5	

1.10 Set the new configuration as default/startup configuration

Picture 15: Setting default configuration path and file

- **1** Open the application (backstage) menu and select the menu item **Options**.
- Click the **Default Paths** button to open the Default paths and filenames dialog.
- Benter the complete path of the previously saved configuration file.
- 4 Enter the name of the previously saved configuration file.
- Click the **Save** button to save the changed parameters permanently.

1.11 Online check of the new configuration

C:\Program Files\Proficy/Proficy iFIXIUntitled.s7a						
SA Home 1 ar	t		^ Ø			
New		Default paths and file names				
Open		Startup Configuration				
Save	Default Paths	Path: C:\Program Files\Proficy\Proficy iFIX				
Save As		File name (.S7A): TIA_Test.S7A				
Close	Advanced					
Options	Logging & Debug					
🔀 Exit						
		Save				

Picture 16: From backstage view to configuration view



Click the Home tab to go back to the configuration view

Picture 17: Message sequence in Log Viewer window

Check the program window's header line for the correct configuration file path and name which you have entered as default/startup configuration.



If the driver is not yet started, click the *Start* button to start it.

Check the messages in the Log Viewer window. For the previously configured channel and device the following sequence of messages should appear:

Channel <Your channel name>: AG-Link Device 0 successfully opened! Channel <Your channel name>: Hardware adapter successfully initialized! Channel <Your channel name>: Start reading TIA project file... Dev. Your device name: Connection to IP Addr. <Your IP address> successfully established! Channel <Your channel name>: Successfully read TIA project <your TIA project path and file> Channel <Your channel name>: Start browsing TIA symbol list... Channel <Your channel name>: TIA symbol list successfully browsed! <x> symbols found. Tree depth = <yy>

If some of these messages are not shown but instead error messages then you should verify all channel, device and data block parameters, you have configured before. If the problem should persist please contact our support team at support@incosol.de and send us a screen shot of the Log Viewer Window for further analysis.

Hint: For a better presentation of the messages in the Log Viewer window you can drag this window out of the S7A Power Tool's program frame. Afterwards you can resize the separated window in height and width to display a larger amount of messages.

	C:\Program Files\Proficy\Proficy iFIX\TIA_Test.S7A	_ = X
Home Insert		~ @
Clipboard Cut Support	Append Inset Below Delete Delet Delete Staff Stop Object Tree Actions Staff Stop	
Object Tree 💎 💉 🕹	A Driver Configuration	
Objects View V STA (Online) TIA_CH1	Config. Name: C:\Program Files\Proficy\Proficy iFIX\TIA_Test.S7A	
(2) TIA_D81	STA Configurator	DCBSS
	Program Path: CTASDKIS7A800_100/EINIS7ADRVEXE License: Matrix Key with SN 20150199 Matrix Key Channel Ust	
	Statistics, Performance_Diagnostics	
		*
Log Viewer		
0 Errors 🕜 Warnings	16 Info Mess Clear List 🔢 Pause	
C # Timestamp	Text	^
13 07.10.2016 11:47:	Channel "TIA_CH1": TIA symbol list successfully browsed! 162 symbols found. Tree depth = 8	
	Channel "TIA_CH1": AG-Link Device u successfully openedi	
→ 15 07.10.2016 11:47	Dev "TIA_D11" Connection to IP Addr 19272 214 79 successfully established	
Debun Outputs Outputs		•

Picture 18: Dragging the Log Viewer window

To drag the window click into the header line of the Log Viewer window, keep the left mouse button pressed and drag the window to the desired area of the desk top. Now you can resize the separated window by pulling it with the mouse cursor at any edge or corner of the window.

:::	utput	s.		=	×		
<u>, 0</u>	🗼 0 Errors 🚽 🕂 1 Warnings 🚽 🖓 28 Info Mess 🖼 Clear List 🔋 Pause						
0	c	#	Timestamp	Text	-		
3	0	19	07.09.2016 11:54:	Trying to find valid Matrix Key			
3	0	20	07.09.2016 11:54:	S7A Matrix Key with SN 20150199 and version 8.00 found!			
3	0	21	07.09.2016 11:54:	S7A V8.00: Driver started.			
3	0	22	07.09.2016 11:54:	Driver Started			
3	0	23	07.09.2016 11:54:	Channel "TIA_CH1": AG-Link Device 0 successfully opened!			
3	0	24	07.09.2016 11:54:	Channel "TIA_CH1": Hardware adapter successfully initialized!			
3	0	25	07.09.2016 11:54:	Channel "TIA_CH1": Start reading TIA project file			
3	0	26	07.09.2016 11:54:	Dev. TIA_D11 Connection to IP Addr. 192.72.214.79 successfully established!			
3	0	27	07.09.2016 11:54:	Channel "TIA_CH1": Successfully read TIA project C:\Program Files\Siemens\Automation\Portal V13\Projekte_InCoSol\S7A800_Test_V13_SP1\.			
1	0	28	07.09.2016 11:54:	Channel "TIA_CH1": Start browsing TIA symbol list			
+ (•	29	07.09.2016 11:54:	Channel "TIA_CH1": TIA symbol list successfully browsed! 400 symbols found. Tree depth = 10			
					-		
Deb	bug C	Outputs	Outputs				

Picture 19: Separated Log Viewer Window

C:\Program Files\Pro	ficy\Proficy iFIX\TIA_Test.S7A		_ = x
Home Insert			~ @
▲ Cut ▲ ■ ▲ ■ ▲ ■	Start Stop Driver Control		
Object Tree 🔹 💉 🕅 TIA_DB1 🔛 Driver Contiguration			× ×
Objects View -			▲
E STA (Online) □ In TTA_CH1 Primary Rate (sec.): ☑ 1,0 • Set	condary Rate (sec.): Access	Time (sec.):	Allow unsolicited
Other Settings			
Dead Band: 1 C Block Write	Mode: Disabled 🔹 📃 Latch Data	Disable Outputs Suppres	s COMM Alarms
- Logging Setup			
Log Read Operations	Log Write Operations 📃 Log unsolic	ited Messages	
Statistics and Diagnostics			
Totals:	Timestamps:	Performance:	
R/W Requests: 378	Last Read: 10 10 16 20:55:16 109	Overruns: 0	
R/W Responses: 378	Last Write:	Poll Time, Set: 1000 Act	tual: 1100
Unsolicited:	Last Unsol.:	Demand. Bytes: 0 Fra	agm.: 0
Timeouts: 0	Last Error:	Scans/sec.: 10	
Retries: 0	Status:	Runtime (ms): 17 Ma	ax.: 49
Errors: 0	Data Quality: Good	Pend. Wr. Reqs.: 0 Ma	x.: 0
Last Error:			
Class: 0 Code: 0 Text:	No error		
Log Viewer			
🔽 0 Errors 🔄 🚯 0 Warnings 👔 16 Info Mess 🛒 Clear List 🚺 Pause			
Debug Outputs Outputs			
			.1

1.12 Check the communication state of a particular data block

Picture 20: Data block statistics

Click the expand button in the data block's **Statistics and Diagnostics** Group to expand the dialog. The expanded dialog now shows numerous data fields with counter values, timestamp and other values which give you a detailed view of the runtime behaviour of the data block.

When the data block (the TIA symbols) is polled properly, the counter fields *R/W Requests* and *R/W Responses* should increase in the rate specified by the Primary Rate field.

The **Data Quality** should show **Good**.

The Last Error Class and Code should show 0 and the Text field should show No Error.

C:\Program Files\Proficy\Proficy iFIX\TIA_Test.S7A Mome -🔏 Cut 坑 Copy 3 Ż 4 Edit Duplicate Append Above Below Dele 📝 Paste B TIA_DB1 S7A (Online) TIA_CH1 TIA_D11 TIA_D11 TIA_D81 Description: Name TIA_DB1 🛛 Enab I/O Address Setup 28928 / 28531 TIA Data Type DB Access HMI HMI Sele Flags Symbo Watch all selected Block List Blocks 🖻 DB_ Data Block Jürgen_1 S7_Int RW **V v** 1234 Bit_0 S7_Bool RW . . . RW S7_Bool true Bit_1 RW V V V Bit_2 S7_Bool alse Bit 3 S7 Bool RW ¥ Polling Setup Secondary Rate (sec.): 🗹 10,0 🗧 Access Time (sec.): 🗹 300 🗘 ary Rate (sec.): 📝 <mark>1,0</mark> ¢ Allow unsolicited Clear List 🚺 Pause @ 62 Info Mess Text Timestamp 05.04.2017 10:33: Dev. "TIA_D11": Connection to IP Addr. 192.72.214.79 successfully established 0 64 05.04.2017 10:35:... CDeviceTIA::GetDataBlockFromSymbol PLC_1: Ready for scan. 0 65 05.04.2017 10:35:... CDeviceTIA::GetDataBlockFromSymbol PLC_1.Blocks: Ready for scan Symbol PLC_1.Blocks.DB_1: Ready for scan ceTIA:

1.13 Check the values of the selected symbols

Picture 21: Current values of the selected symbols.



By checking the *Watch all selected* check box, the program starts to read the current values of all the selected symbols.



The current values are shown and updated cyclically as long as the **Watch all selected** check box is checked. Values of an array type are displayed one after another separated by a comma.

Configuration of the Clients (iFIX or OPC)

The Item ID and iFIX I/O Address must follow the following structure:

```
<Device Name>:<TIA Symbol Path>
```

2

<Device Name> Is the name of the S7A device as specified in chapter 1.6.



Picture 22: Device name is part of the I/O address

<TIA Symbol Path> Is the full path of a TIA symbol but without the TIA PLC name.

Name:	TIA_DB1	Description:		
I/O Add	ress Setup			
	Symbol	TIA Data Type	Sel	Flags
ΞB	locks	Block List		0
E	DB_1	Data Block		0
	Bit_0	S7_Bool		0
	Bit_1	S7_Bool		0
	Bit_2	S7_Bool	1	2
	Bit_3	S7_Bool	v	2
+	Byte_0	S7_Byte		2
	Byte_1	S7_Byte	v	2

Picture 23: Parts of the TIA symbol path

To make it fast and easy to enter an I/O address in an iFIX data base block, you can select the desired symbol in the S7A data block's symbol tree, open the context menu (right mouse click) and select **Copy symbol as iFIX I/O address to clip board.** Now the clip board contains the full I/O address in the format iFIX or an OPC client it requires and you can paste it directly into the data base block's I/O address field or the OPC client's item ID field.

- <mark>I/O Ad</mark>	dress Setup						I	Memory	Pool (total/free): 28928 / 28444
	Symbol	TIA Data Type	DB	Access	HMI access	HMI visible	Sele cted	Flags	Current Value
	Bit_1	S7_Bool		RW	¥	1	1		
	Bit_2	S7_Bool		RW		1	1		
	Bit_3	S7_Bool		RW	1	1	V		
	Byte_0	S7_Byte		RW	4	1			
22	Byte_1	S7_Byte	_	RW	4	4			
+	Byte_2	C7 Puto		DIA					-
	Word_0 Expand all nodes with selected symbols Copy Symbol as iFIX I/O address to clip board								

Picture 24: Symbol context menü to copy symbol path to clip board

2.1 Example of an iFIX data base

🚯 🖻 6	🕌 🖻 🔣 🗧 iFIX Database Manager - [FIX : 7 rows] — 🗆 🗙								
Hom	view View					0 -	- = x		
	Save Reload Load Import Expor	Add Modify Delete	↓○ Find ↓☆ Verify a ♣♣ Replace ↓ Summary a ♣♣ Go to	Drivers	Doptions				
Clipboard	Process Database	Blocks	Edit Diagnostics	Drivers Customize To	ols 🗟 Settings				
	Tag Name Ty	pe Description Scan Time	1/0 Dev 1/0.	Addr	H/W Options	Curr Value	: ^		
1	TIA_STRING_0 TX	1	S7A TIA_D11:Blocks.DB	_1.String_0	SPACEFILL	BMW	ION		
2	TIA_DB1_BYTE1 AI	1	S7A TIA_D11:Blocks.DB	_1.Byte_0		100	ON		
3	TIA_DB1_WORD0 AI	1	S7A TIA_D11:Blocks.DB	_1.Word_0		10,000	ON		
4	TIA_DB3_REAL_ARRAY AF		S7A TIA_D11:Blocks.DB	_3.REAL_ARRAY[0]		99.98	OFF		
5	TIA_DB1_BIT1 DI	1	S7A TIA_D11:Blocks.DB	_1.Bit_1		CLOSE	ON		
6	TIA_DATE TX	1	S7A TIA_D11:Blocks.DB	_1.Date_0	DATE_ENG	02/06/2016	ON		
7	TIA_DATE_AND_TIME TX	1	S7A TIA_D11:Blocks.DB	_1.DuT_0	DT_ENG	02/06/2016 02:58:00	ON		
8							~		
For Help, press F1 OFF EDIT default default default									

Picture 25: Example of an iFIX data base

2.2 OPC Item Browsing

The driver fully supports OPC item browsing for TIA symbols. The following screen shot shows a browser dialog with expanded symbol tree nodes. The list on the right shows all selectable simple variables of the selected symbol node in the left tree view window.



Picture 26: Example of an OPC item browser