Which settings do you have to operate a WinAC RTX (F) on a SIMATIC IPC?

SIMATIC IPC427C/IPC427D and SIMATIC IPC477C (PRO)/IPC477D with PROFINET IRT interface

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Note on security

The functions and solutions described in this article confine themselves predominantly to the realization of the automation task. Furthermore, please take into account that corresponding protective measures have to be taken in the context of Industrial Security when connecting your equipment to other parts of the plant, the enterprise network or the internet. Further information can be found in Entry ID 50203404.

https://support.industry.siemens.com/cs/ww/en/view/50203404

Question

Which settings do you have to make to operate a WinAC RTX (F) on a SIMATIC IPC427C/IPC427D or SIMATIC IPC477C (PRO)/IPC477D with PROFINET IRT interface?

Answer

Follow the instructions and notes listed in this document for a detailed answer to the above question.

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1 Task

Introduction

When a SIMATIC IPC427C/IPC427D or SIMATIC IPC477C (PRO)/IPC477D starts up for the first time with WinAC RTX (F) after installation of the Windows Embedded operating system and the RTX(F) or HMI/RTX(F) software package, the communication interfaces have to be assigned correctly. This is necessary because the SIMATIC IPCs are supplied with a preconfigured setting for PROFIBUS or PROFINET RT.

Notes

You must configure the interfaces after each restore procedure using the Restore DVD supplied.

2 Setting Communication Interfaces in WES2009 (only for SIMATIC IPC427C and 477C(PRO))

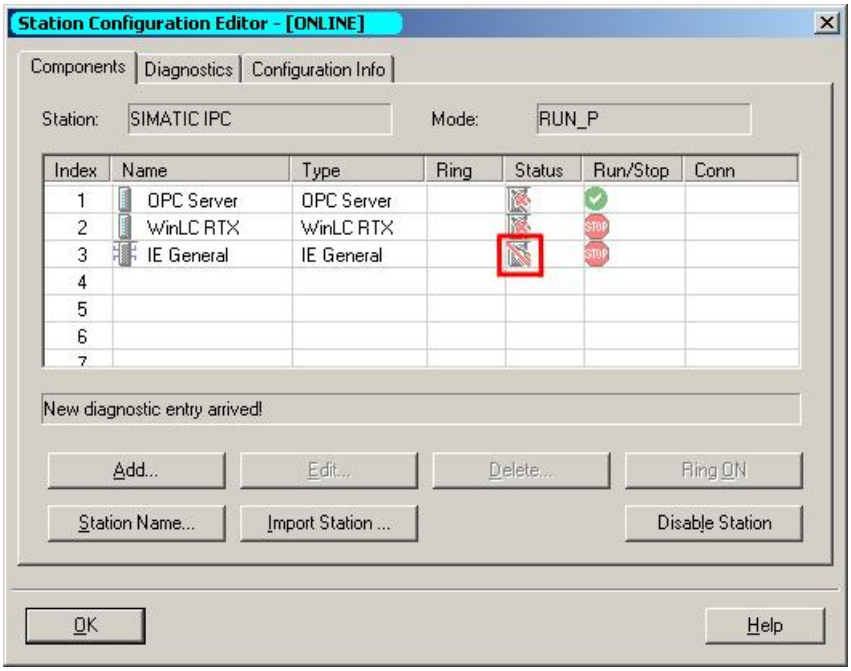
Windows Embedded Standard 2009 (WES2009) Operating System

2.1 Detecting Incorrect Assignment of the Communication Interface

Incorrect assignment of the communication interface is indicated in the taskbar by a flashing triangle above the icon for the Station Configuration Editor.

In the Station Configuration Editor the Intel card at Index 3 is displayed as "not available". You can tell this from the crossed-out icon.

Figure 2-1



You must assign the communication interface correctly to rectify this behavior.

2.2 Assigning the Communication Interface

2.2.1 Making Settings in the Station Configuration Editor

Proceed as follows to enable use of "IE General":

Removing "IE General"

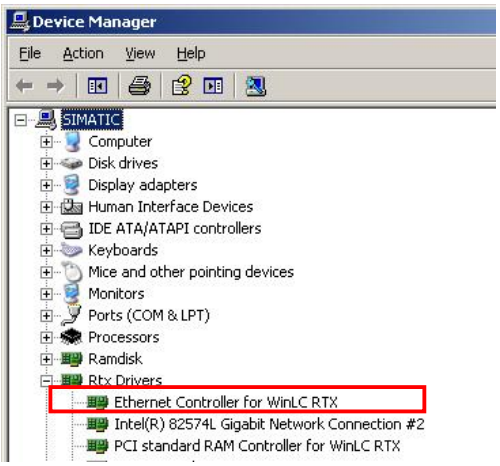
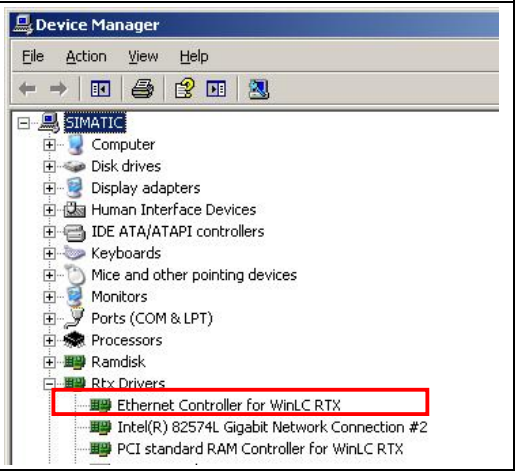
Table 2-1

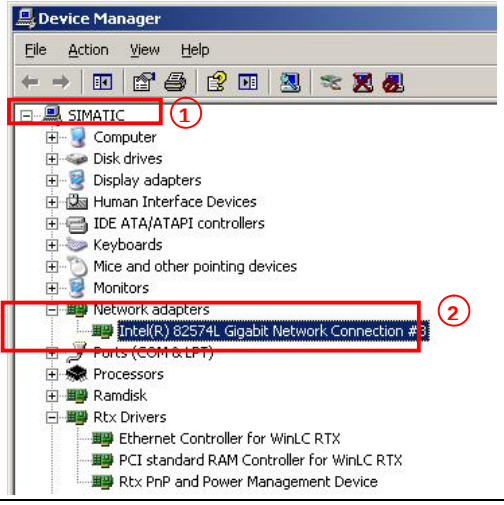
No.	Procedure
1.	In the Station Configuration Editor you mark "IE General" at Index 3.
2.	Click the "Delete" button.
3.	"IE General" is removed from Index 3.

2.2.2 Making System Settings in Windows

In order to be able to add the Intel communications processor in the Station Configuration Editor you must correctly assign the Intel communications processor in your system's device manager. Proceed as follows:

Table 2-2

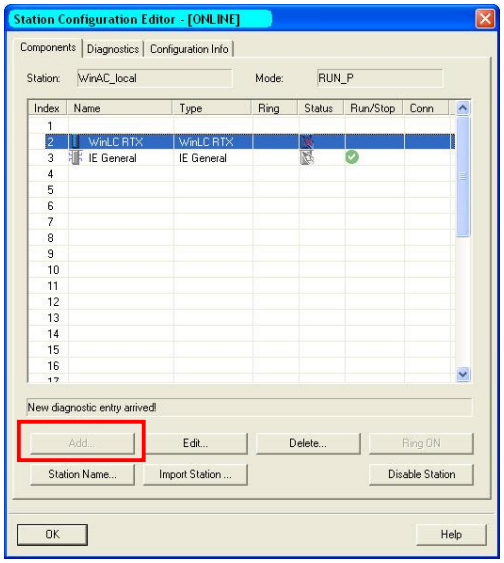
No.	Procedure	Pictures
1.	Open the system properties of the computer and navigate to the "Device Manager" tab. The "Device Manager" tab is to be found under "Start > Settings > Control Panel > System > Hardware > Device Manager".	
2.	In the Device Manager you navigate to "Rtx Drivers". The Intel communications processor is still set under the RTX drivers.	
3.	Uninstalling the Intel communications processor: Right-click the Intel communications processor and select the "Uninstall" command. The Intel communications processor is uninstalled.	

No.	Procedure	Pictures
4.	Right-click the computer name (first item) in the Device Manager. In this example the computer name is "**SIMATIC**" (1). In the pop-up menu that opens you select the command "Search for changed hardware". Once the system has searched for changed hardware, the Intel communications processor is added under the "Network adapters" item (2).	

2.2.3 Adding Intel Communications Processor in the Station Configuration Editor

Below is a description of how to assign the Intel communications processor to the "IE General" in the Station Configuration Editor.

Table 2-3

No.	Procedure	Pictures
1.	Adding "IE General": Using the "Add" button you place the "IE General" in slot "3" in the Station Configuration Editor. • Mark the third slot. • Click the "Add" button. The "Add Component" window opens. • In the "Add Component" window you select the "IE General" type. Select number "3" as index. • Confirm the entries with "OK".	
2.	Configuring "IE General": • Select the Index 3 ("IE General") and click the "Edit" button. • In the opened window, for "Parameter assig:" you select the Intel communications processor via which the SIMATIC IPC communicates.	

Notes

After assigning the Intel communications processor in the Station Configuration Editor you must check the setting of the communications processor in the operating system.

Go to "Start > Settings > Control Panel > Network Connections" and select the Intel communications processor with which the SIMATIC IPC communicates and, if necessary, change the IP address.

Once you have checked the network settings of the Intel communications processor you can use your system.

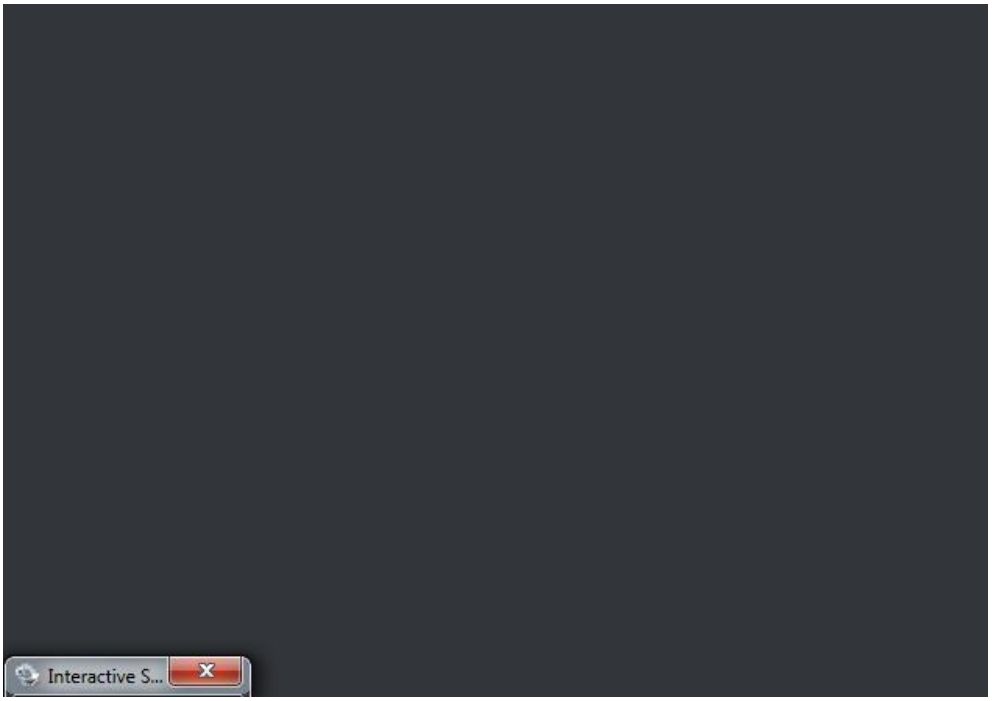
3 Setting Communication Interfaces in WES7

Windows Embedded Standard 7 (WES7) Operating System

3.1 Detecting Incorrect Assignment of the Communication Interface

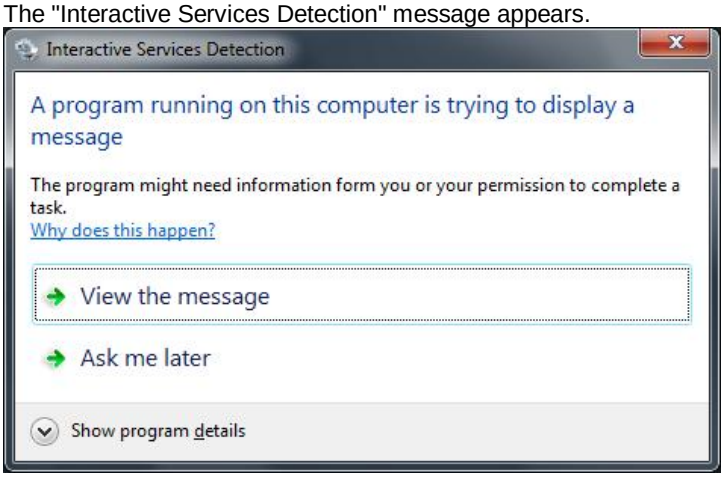
Incorrect assignment is recognized by the fact that a black screen with a message in the bottom left-hand corner appears after startup.

Figure 3-1: Message during startup after system recovery with Restore DVD



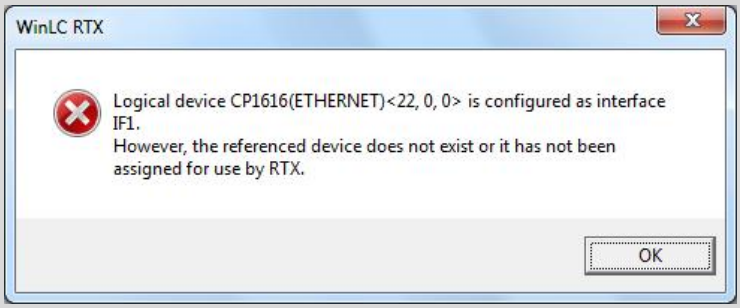
Proceed as follows to rectify this behavior.

Table 3-1

No.	Procedure
1.	Press the "Alt + Tab" key combination to open the message. The "Interactive Services Detection" message appears. 
2.	Select the "View the message" button in the "Interactive Services Detection" message. The "Internal Error" message is displayed.
3.	Acknowledge the message with "OK".
4.	Select the "Return now" button in the "Interactive Services Detection" message.
5.	The computer boots completely.

Notes

You can ignore the message about the status of the CP1616.



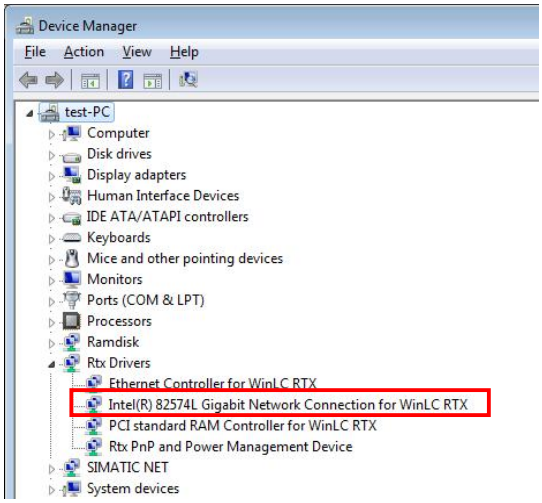
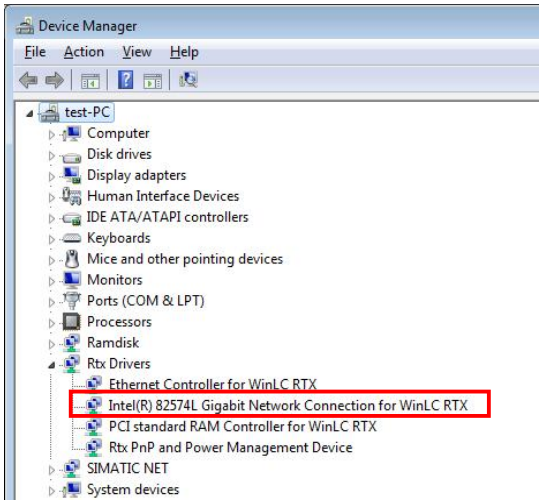
3.2 Assigning the Communication Interface

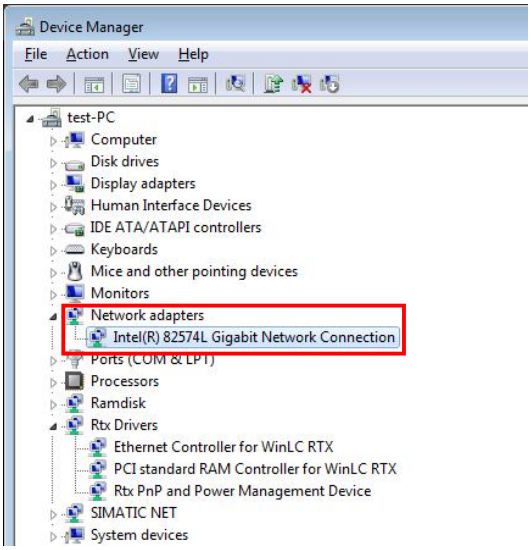
3.2.1 Making System Settings in Windows

Correctly assign the Intel communications processor in the Windows system

Proceed as follows to add the "IE General" Intel card to the system:

Table 3-2

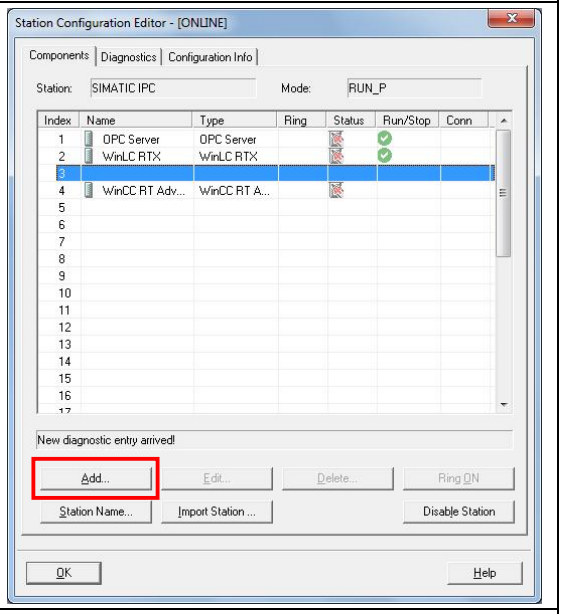
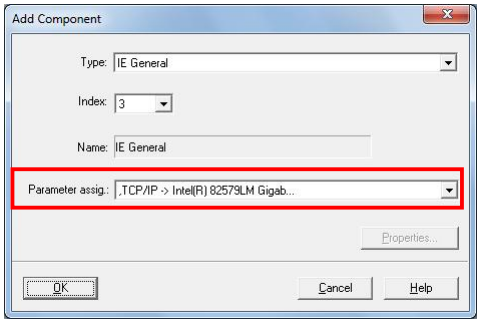
No.	Procedure	Pictures
1.	Open the system properties of the computer and navigate to the "Device Manager" tab. The "Device Manager" tab is to be found under "Start > Settings > Control Panel > System > Hardware > Device Manager".	
2.	In the Device Manager you navigate to "Rtx Drivers". The Intel communications processor is still set under the RTX drivers.	
3.	Uninstalling the Intel communications processor: Right-click the Intel communications processor and select the "Uninstall" command. The Intel communications processor is uninstalled.	

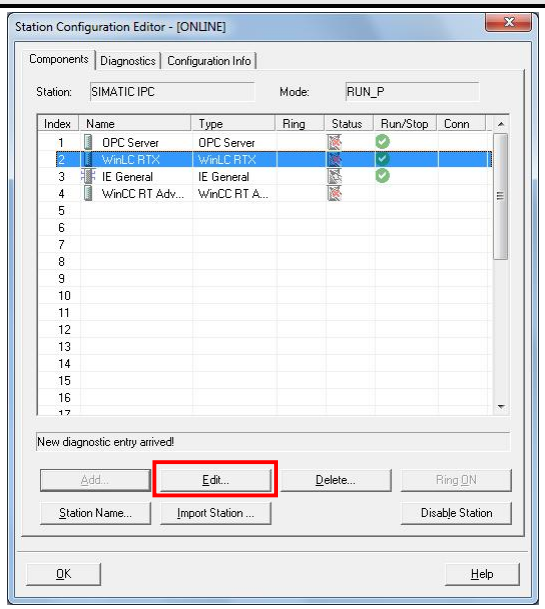
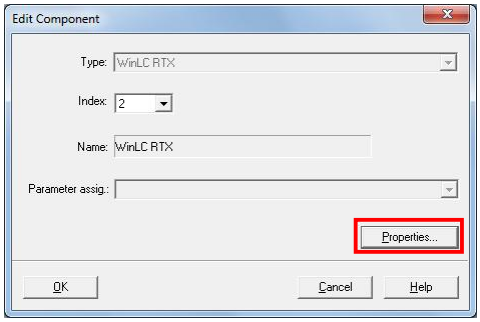
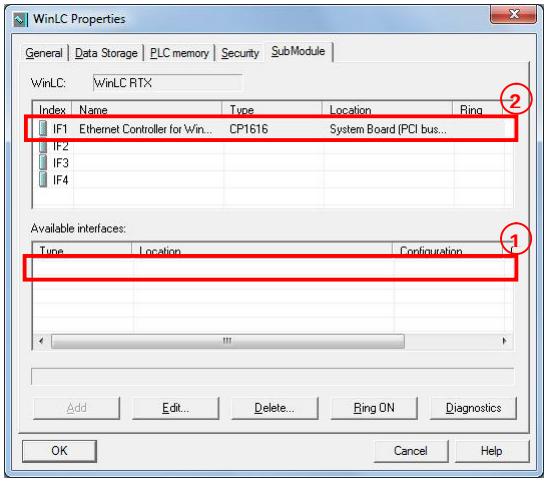
No.	Procedure	Pictures
4.	Restart the computer. The Intel communications processor is now available under the "Network adapters" item.	

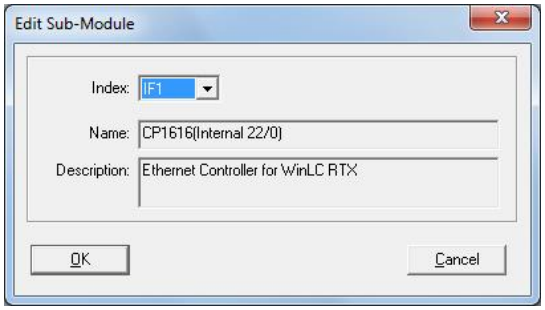
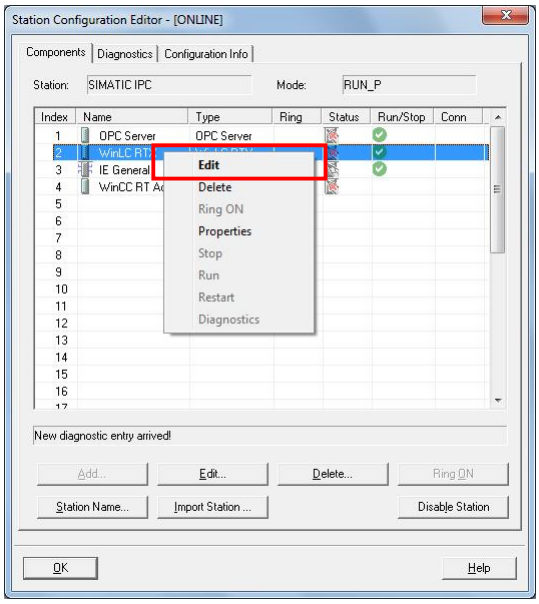
3.2.2 Adding Intel Communications Processor in the Station Configuration Editor

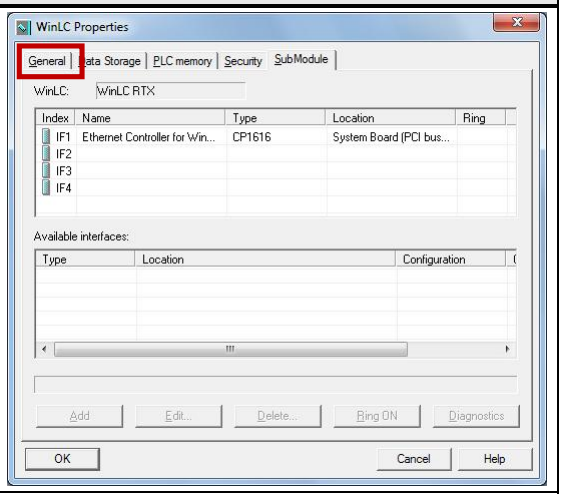
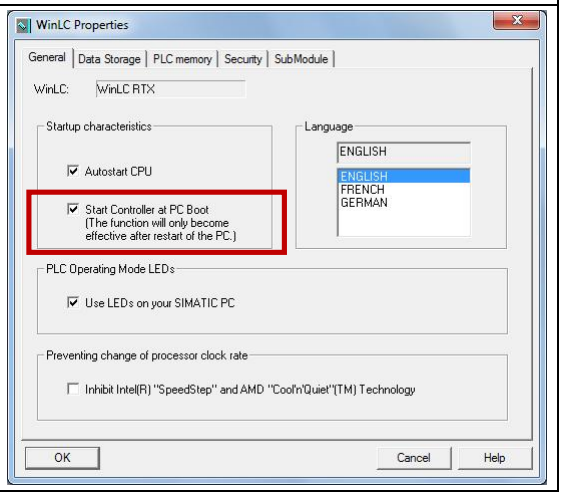
Proceed as follows to assign the Intel communications processor to the "IE General" Intel card in the Station Configuration Editor:

Table 3-3

No.	Procedure	Pictures
1.	In the info area of the Windows taskbar double-click the icon for the Station Configuration Editor. The Station Configuration Editor opens. It shows the configuration of your PC station.	
2.	Adding "IE General": Using the "Add" button you place the "IE General" in slot "3". • Mark the third slot. • Click the "Add" button. The "Add Component" window opens. • In the "Add Component" window you select the "IE General" type. Select number "3" as index. • Confirm the entries with "OK".	
3.	Configuring "IE General": • Select the Index 3 ("IE General") and click the "Edit" button. • In the opened window, for "Parameter assig:" you select the Intel communications processor via which the SIMATIC IPC communicates.	

No.	Procedure	Pictures
4.	Adding CP 1616-1: Select the WinLC RTX in the Station Configuration Editor and click the "Edit" button. The window for parameterizing the WinLC RTX properties opens.	
5.	Adding CP 1616: In this picture you click the "Properties..." button to continue configuring.	
6.	Adding CP 1616: In the "Available interfaces" field you mark the built-in Ethernet card and add this to the WinLC using the "Add" button (1). Using the "Edit..." button you can then edit the added "Ethernet interface" (2).	

No.	Procedure	Pictures
7.	**Only SIMATIC IPC427D and IPC477D** If WinAC does not recognize the CP1616, you must first correct the registry. a) By executing the "WinAC_CP1616.reg" file started from a USB stick, for example. You need administrator rights for this. b) Experts with a good knowledge of Windows can change the key directly in the registration editor. [HKEY_LOCAL_MACHINE\SOFTWARE\SIEMENS\WINLC_RTX\Drivers\CP1616] "Base Revision ID"=dword:00000000 After this change the CP1616 is recognized and can be added.	
8.	Adding CP 1616: Edit Submodule. In this setting mask you can select the index of the network card. This must be the same index as in the STEP 7 hardware configuration. In this example the index is "F1". Confirm the entries with "OK".	
9.	When you open the "Submodule" tab again and the message about the status of the CP 1616 is displayed, you can ignore it.	
10.	Right-click the WinLC in the Station Configuration Editor and select the "Properties" item.	

No.	Procedure	Pictures
11.	In the opened window you select the "General" tab.	
12.	In the "Startup characteristics" field check whether the "Start computer at PC boot" option is enabled. This option must be enabled. The other settings are optional. Confirm the entries with "OK".	

Notes You must accept the "Install required drivers" question.

Notes After assigning the Intel communications processor in the Station Configuration Editor you must check the setting of the communications processor in the operating system.

Go to "Start > Settings > Control Panel > Network Connections" and select the Intel communications processor with which the SIMATIC IPC communicates and, if necessary, change the IP address.

Once you have checked the network settings of the Intel communications processor you can use your system.

4 Changelog

Tabelle 4-1

Version	Date	Change
V1.2	2015-05-28	Update of Screenshots in Chapter 3 Setting Communication Interfaces in WES7
V1.1	2013-08-13	Update
V1.0	2011-08-19	Initial Version