

NETLink[®] PRO Family

Example of Expanded NETLink[®] Functions Project-Specific Interface

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Notes

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1 Overview

1.1 Application and function description

This document is intended as a supplement to NETLink[®] PRO family products.

You frequently come across applications that demand permanent installation of a NETLink[®] in an Ethernet. Access to the various permanently installed controllers from one central point is complicated because the access point has to be altered in the NETLink[®] S7 Net driver every time.

A new integrated function has been provided to make this easier. The interface can now be stored in the project from the NETLink[®] firmware releases 1.56 or 2.14, so that the PG/PC settings depend on the project in question.

The following pages describe how you can implement this kind of connection. The instructions refer to a structure with the here shown components and the used example IP addresses.



It is a precondition of using the project-specific interface that the RFC1006 function has been activated in the web interface (see Section 2).

In some newer firmware versions of the NETLink[®] product line the *"RFC 1006"* function is always active. What versions are effected, can be found in the appropriate historical texts of the adapter.

1.2 Information in the figures

Many of the figures in this document contain settings and directions for use marked or highlighted in red.

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Please pay attention to the information in the figures

2 RFC 1006 Activation via the Web Interface

All the examples described here require the prior activation of the RFC 1006 functionality.

A detailed description is also given in the NETLink[®] manual! Maybe there is already a firmware installed in your NETLink[®] for which this manual setting is no longer necessary.

2.1 Requirements

The NETLink[®] Ethernet gateway is connected to the PC via a network card. The STEP 7 software is also installed on this PC. The function of the web interface must be activated (by default). It is accessed via one of Internet browsers (for example, Mozilla Firefox, Opera, Konqueror).

You do not need to install any additional drivers for the NETLink[®].

The applications described here were performed on the Windows XP operating system with service package 3.

2.2 Adapting the configuration side

As soon as the Web interface has been opened by entering the relevant URL "*http://<ip address>*" the link to "*Configuration*" opens. As soon as you have answered the security query, you have write access to all parameters.

The *"RFC 1006 Interface ON/OFF"* option is activated by entering *"ON"* and confirming with the *"OK"* button (see Fig.)

In the next window, the settings are displayed again and must be confirmed with "*OK*" before they are finally transferred to the NETLink[®].

The following screenshots were created with NETLink[®] PRO. The settings can also be made in all NETLink[®] Ethernet variants.

1 As of NETLink firmware version 2.30 the RFC 1006 function is always active!

Configuration user interface of the NETLink[®] PRO:

Home	Status Basic Configuration S	ecurity Observe Variables Help
NETLink PRO Comp	act Basic Configuration	
Device specific parameters		
Device Name		
TCP/IP Parameters		
Static IP Address	192.168.4.49 Static parameters are used if DHC	JP is switched off
Static Subnet Mask	255.255.255.0 Static parameters are used if DHC	2P is switched off
Static Gateway	0.0.0.0 Static parameters are used if DHC	3P is switched off
Additional NETLink Port	7777 Don't take well-known ports less th	an 1024, (RFC-Port 102 is not allowed here)
DHCP	OFF •	
DHCP Timeout (in seconds)	DHCP is disabled	
vveb intenace	ON •	
NetLink Bus Address Single Master Single Master bus parameters	0 OFF • Bus Profil MPI • Baud rate 187,5 KBit/(• HSA 31 Tslot_init 415 Ttr 2048 Max. Tsdr 60 Min. Tsdr 20	(address settings of PG/PG interface is then (growd?) Is not evaluated if NETLIKs communicates via PG/PG interface These bus parameters are used if adapter is single master.
	Tset 12 Tqui 0	
	Gap Factor 5 Retry 2	
RFC Multi Computing with TSAP	OFF Bus Address	(Offers access to multiple PLCs in a rack hy one hus address)
RFC Multi Computing with TSAP	OFF Bus Address 2 OFF Rack/0.7) O Slot/0.31)	(Offers access to multiple PLCs in a rack by one bus address) (e.o. access over PROFIBUS-CP343-6 bv rack 0 stor 2)
RFC Multi Computing with TSAP RFC Routing over CPs with TSAI RFC TSAP Decimal Format	OFF Bus Address 2 OFF Rack(0-7) 0 Stot(0-31) 2 OFF <td< td=""><td>(Offers access to multiple PLCs in a rack by one bus address) (e.g. access over PHOPIBUS-CP342-8 by rack 0 slot 2) Default TSAP Format is hexadecimal (e.g. ControlMeesto uses decimal format)</td></td<>	(Offers access to multiple PLCs in a rack by one bus address) (e.g. access over PHOPIBUS-CP342-8 by rack 0 slot 2) Default TSAP Format is hexadecimal (e.g. ControlMeesto uses decimal format)
RFC Multi Computing with TSAP RFC Routing over CPs with TSAI RFC TSAP Decimal Format	OFF Bus Address 2 P OFF Rack(0-7) 0 Stot(0-31) 2 OFF • Rack(0-7) 0 Stot(0-31) 2	(Offers access to multiple PLCs in a risk by one bus address) (e.g. access over PROFIBUS-CP342-5 by read 0 slot 2) Default TSAP Format is hexadecimal (e.g. ControlMeastro uses decimal format)
RFC Multi Computing with TSAP RFC Routing over CPs with TSAI RFC TSAP Decimal Format User/Password Settings	OFF Bus Address Z P OFF Rack(0-7) 0 Stot(0-31) Z OFF • Rack(0-7) 0 Stot(0-31) Z	(Offen access to multiple PLCs in a rack by one bus address) (a.g. access over PROFIBUS-CP342-5 by rack 0 slot 2) Default TSAP Format is hexadecimal (e.g. ControlMaestro uses decimal format)
RFC Multi Computing with TSAP RFC Routing over CPs with TSAI RFC TSAP Decimal Format User/Password Settings User	OFF • Bus Address 2 OFF • Rack(0-7) 0 Stot(0-31) OFF • NetLink PRO Compact 1	(Offen access to multiple PLCs in a rack by one bus address) (e.g. access over PROPIBUS-CP342-6 by rack 0 stot 2) Default TSAP Format is hexadecimal (e.g. ControlMaestro uses decimal format)
RFC Multi Computing with TSAP RFC Routing over CPs with TSAI RFC TSAP Decimal Format User/Password Settings User New Password	OFF Bus Address 2 DFF Rack(0-7) OFF NETLink PRO Compact	(Offen access to multiple PLCs in a rack by one bus address) (e.g. access over PHOPIBUS-CP342-8 by rack 0 slot 2) Default TSAP Format is hexadecimal (e.g. ControlMaestro uses decimal format)

After the new parameterization data have been stored, the NETLink[®] PRO is restarted to activate the new configuration.

<u>[</u>

seconds.

Rebooting can take up to 15

- 3 Settings in STEP 7 NETPro
- 1. *"NETPro"* from Siemens is required for configuration, as shown below.



2. Now, a PROFIBUS and Industrial Ethernet subnet must be created.

	NetPro - [Projektspezifische 5 (Network) C:\Programme\\Step7\s7proj\TESTProj] Network Edit Insert PLC View Options Window Heip		- 0 ×
	MP(1) 1 ▲	Eind:	nt ni
	PROFIBUS(1) PROFIBUS	Selection of the network	
	Ethernet(1) Industrial Ethernet		
ا		1	
TO	o display the connection table, please select a module capable of a connection (CPU, FM module, PC server or application). To display the network address overview, please select a subnet.		
Re	sady NETLink PRO/MLAN(MPE) (X 431 Y 219 [Insert [Chg]/	PROFIBUS-DP slaves for SIMATIC S7, M7, and C7 (distributed rack)	€ <u></u>

3. And now it is necessary to insert a "*PC station*". This can be found under "*Stations -> Simatic PC Station*" in the catalog of NETPro. A CPU 412-2 PCI (6ES7 612-2QH00-0AB4 V3.4) must be integrated into this "*PC Station*". You can also skip steps 3 to 4 if you use the import function of "*NETPro*". You will find a ready-configured NETLink[®] Station on the NETLink product CD.



4. An "*IE_CP V6.2.1 (IE General)*" must be integrated into the "*PC station*". This must be done using the hardware manager. You will find this under "*Simatic PC Station -> CP-Industrial Ethernet* -> *IE General -> IE_CP SW V6.2 SP1*"



5. The completed station can now be saved and will appear in *"NETPro"*.

[ketPro - [Projektspezifische S (Network) C:\Programme\\Step7\s7proj\TESTProj] [s7proj\TESTProj] [s7proj\TESTProj]		
MPI(1) 1		
	Eind	nini
PROFIBUS(1)	Selection of	f the network
PROFIBUS		OFIBUS-PA
	e 🔂 Sta	tions
	j ⊞⊣_ Sut	onets
NETLink		
Ethernet(1)		
Industrial Ethernet		
× ×	1	
To display the connection table, please select a module capable of a connection (CPU, FM module, OPC server or application). To display the network address overview, please select a subnet.		
	PROFIBUS	-DP slaves for
 Ready NETLink PRO/MLAN(MPD) X 612 Y 432 Insert Chg /	distributed	7, M7, and U7 rack)

6. Now a "*PG/PC Station*" is inserted that can be found under "*Stations -> PG/PC*".

KetPro - [Projektspezifische 5 (Network) C:\Programme\\Step7\s7proj\TESTProj]		_ 🗆 🗵
The Network Edit Insert PLC View Options Window Help		_ <u>8</u> ×
NPT PROFIBUS(1) PROFIBUS NETLink For a support For a support	End: Selection of the network	<u></u>
1		
To display the connection table, please select a module capable of a connection (CPU, FM module, OPC server or application). To display the network address overview, please select a subnet.		
Ready VETLink PRO/WLAN(MPI) [X 413 Y 423 [traset] [Chg //	PROFIBUS-DP slaves for SIMATIC S7, M7, and C7 (distributed rack)	₹ <u>≺</u>

7. Double-clicking the "*PG/PC station*" displays its properties window. This interface must be added there under "*Interfaces -> New... -> Industrial Ethernet*".

Properties - PG/PC			
General Interface	s Assignment		1
Name	Туре	Address	Subnet
New	New Interface - Type Selection		Delete
ок		Ca	ncel Help

8. A window then appears in which the *"Industrial Ethernet"* settings must be made for the PC (IP / subnet mask). The subnet must also be set (*"Industrial Ethernet"*, to which the NETLink[®] is connected)

Properties - Ethernet interface IE General (R0/	(S2)					
General Parameters						
Set MAC address / use ISO protocol						
MAC address: 08-00-06-01-00-00	If a subnet is selected, the next available addresses are suggested.					
✓ IP protocol is being used						
IP address: 192.168.4.40	Gateway © Do not use router					
	O Use router Address:					
Subnet:	,					
not networked Phomet(1)	New					
	Properties					
	Delete					
ОК	Cancel Help					

9. Now look for the configured interface Ethernet Interface on the *"Assignment"* tab card and link it with *"TCP/IP(Auto) -> xxx"* (LAN card used) using the *"Assign…"* button.

Properties	-PG/PC						×
General	Interfaces	Assignment					
⊢ Not As	sianed ———						
<u>C</u> onfigu	ured Interfaces:						
Name	e	Туре		Subnet			
Ethen	net Schnittstelle	(1) Industrial	Ethernet	Ethernet	1)		
Interfac	ce Parameter A	ssignments in the	PG/PC:				
TCP/	IP(Auto) -> TAF	-Win32 Adapter	V8				
TS Ad	dapter dapter IE						
TCP/	'IP(Auto) -> Inte	(R) 82566DM Gi	g			<u>A</u> ssig	ŋn
Assign	ed:					Discon	nect
Interf	ace	Parameter assi	gn Su	ibnet	S7Online a		
						S70NLINE	Access:
						🗖 Active	
ОК	7					ancel	Help
							holp

10. After the configured interface as been assigned, the window should look like this.

Properties -PG/PC			2
General Interfaces	Assignment		
Not Assigned Configured Interfaces:			
Name	Туре	Subnet	
Interface Parameter As	eignments in the PG/PC		
CP5711(MPI)	agrimenta in the FG/FC		
CP5711(PROFIBUS) IBHNet(MPI)			
IBHNet(PPI)			Assign
A <u>s</u> signed:			Disconnect
Interface	Parameter assign	Subnet S7Online a	
Ethernet Schnittste	ICP/IP(Auto) -> I	themet(1) Active	S70NLINE Access:
<u> • </u>			Active
ОК		(Cancel Help

11. Now the "*Industrial Ethernet*" is connected to the "*PG/PC*".

KetPro - [Projektspezifische S (Network) C:\Programme\\Step7\s7proj\TE5TProj] Network Edit Insert P.C. View Options Window Heip			
MPI(1) 1	-		
		Eind:	<u>m† mi</u>
PROFIBUS(1)		Selection of the network	
PROFIBUS		PROFIBUS PA	
		PROFINET IO D Stations	
Ethernet(1) Industrial Ethernet			
To display the connection table, please select a module capable of a connection (CPU, FM module,			
ore server of applications, to display the network address overview, please select a subject			
			₹
		SIMATIC S7, M7, and C7 (distributed rack)	
Ready [NETLink PRO/WLAN(MPI)] X 393 Y 385 [I	isert Chg //		

12. Then the PC station (in this case: NETLink[®]) must be configured by double-clicking *"IE General"*.

Properties - Ethernet interface IE General (R0/S2)				
General Parameters	1			
Set MAC address / use ISO protocol				
MAC address:				
✓ IP protocol is being used				
IP address: 192.168.4.49	Gateway			
Subnet mask: 255.255.0.0				
	Address:			
Subnet:				
not networked Elborret(1)	New			
chemet(1)	Properties			
	Delete			
ОК	Cancel Help			

13. A click on "Properties..." parameterizes the interface. The IP and subnet mask have to be entered here. The subnet to which the "PG/PC" is connected must also be selected.

General Options PROFINET Diagnostics Short Description: IE General Substitute for any Industrial Ethemet module, PROFINET IO Controller, ISO, TCP/IP, S7 connections, PG functions, routing, SIMATIC NET CO 11/2003 SP1	
Short Description: IE General Substitute for any Industrial Ethernet module, PROFINET IO Controller, ISO, TCP/IP, S7 connections, PG functions, routing, SIMATIC NET CI 11/2003 SP1	
Image: Barrier Structure Order No./firmware: IE_CP / V6.2.1 Name: IE General Interface Type: Ethemet Address: 192.168.4.49 Networked: Yes Networked: Yes Properties	
OK Cancel H	elp

14. The main window of "NETPro" now likes like this:

NetPro - [Projektspezifische S (Network) C:\Programme\\Step7 Network Edit Insert PLC View Options Window Help	\s7proj\TESTProj]			_ D × _ 5 ×
ビー戦 会日日 111 11 3 3 2 1 1 	1	-	Find	×
Ethernet(1) Industrial Ethernet	NETLink		Selection of the network P PROFIBUS DP PROFIBUS-PA PROFINET IO P PROFINET IO P Stations (b) Stations	
Ready	NETLINK PRO/MLAN(MPD) X 62 Y 220 [Insert (Ch	9 //	PROFIBUS-DP slaves for SIMATIC S7, M7, and C7 (distributed rack)	₹ś

If everything has worked, ("*TCP/IP(Auto) -> xxx (network card*") will be entered as the "*PG/PC*" interface on the bottom line. Now it is necessary to assign a bus address (PROFIBUS in this case) to the DP or MPI interface of the NETLink[®] and to connect this with the subnet.

15. Now a CPU can be added to the corresponding subnet as required. *"CPU 315-2 DP"* is this example

NetPro - [Projektspezifische S (Network) C:\Programme\\Step7\s7proj\TESTProj]			
S genork gat per fit gen ogans ginnom gep			느뜨스
_MPI(1) 1	-		
MPL		Eind	nt ni
		Selection of the network	
PROFIBUS(1) PROFIBUS		PROFIBUS DP	
		PROFIBUS-PA	
		Gations	
		H- Subnets	
SIMATIC 300(1)			
Industrial Ethernet			
۲	-		
To display the connection table, please select a module canable of a connection (CPU, EM module	-		
OPC server or application). To display the network address overview, please select a subnet.			
			₹
		SIMATIC S7, M7, and C7	
Ready [NETLink PRO/WLAN(MPI)] X 231 Y 433 [Insert Chg	11.	[laisabutea rack]	

16. Then the project has to be saved and compiled.

NetPro - [Projektspezifische S (Network) C:\Programme\\Step7\s7proj\TESTProj]	- 🗆 ×
We Network Edit Insert PLC Yew Options Window Help	_ & ×
	비치
MPI Eind:	<u>m</u> t mi
Selection of the netwo	k
PROFIBUS(1)	
PROFIBUS PA	
🗄 🔁 Subnets	
EIMATIC 200(4)	
SIMATIC SOU(1)	
10 2	
6 PG/PC(1)	
Ethernet(1)	
To display the connection table, please select a module capable of a connection (CPU, FM module,	
OPC server or application). To display the network address overview, please select a subnet.	
	Ť.
PROFILES.DF starse	for
Ready NETLink PRO/WLAN(MPI) X 185 Y 407 [Insert (distributed rack)	ur -

17. The connection to the CPU is possible from the STEP7 project.

4 Settings with the TIA-Portal Software

1. Before you begin with your configuration, a new project in TIA-Portal has to be created. After that you switch to the Project view (at bottom left-hand side). With a double-click Devices & networks the needed stations can be created and configured.



2. At first it is necessary to add a "*PC system*", which can be found in the Hardware catalogue under "*PC systems -> Communications modules -> PROFINET/Ethernet -> IE general*". Now a CP 5512 has to be added in the PC station. This CP (6GK1 551-2AA00) is in the Hardware catalogue under "*PC systems -> Communications modules -> PROFIBUS -> CP 5512*".

TIA_Test → NETLinl	(SIMATIC	PC station	1						_00>	Hardware catalog	
						[🚽 Topology view	A Network view	Device view	Options	_
NETLink			🗄 🔍 ± 100%								5
STOL .			and a source							✓ Catalog	
										Gearchy	101 101
			and a							Elber	
			gen os						-	N PPC	
			* •	-						1 HM	÷
		-	1 2	3					- 1	▼ In PC systems	
SIMATIC PC station			n							PC general	
		11 I.								SIMATIC Box PC	
										SIMATIC Panel PC	
										SIMATIC Rack PC	
										Image: SIMATIC S7 Embedded Controller	
										Fin SIMATIC Thin Client	
										SIMATIC Controller Application	
		_	-							User applications	
										 Communications modules 	
										PROFINETIEthernet	
										• 📺 CP 1604	
										CP 1612 (A2)	
										CP 1613 (A2)	
										• 📺 CP 1616	
										• CP 1623	
										E general	
<			III		1001 1001				>	PROFIEUS	
Device overview					- 1000000					AGK15512AA00	
W) Modula		Index	Tura	Order no	Coltunate or	Commant				• CP 5611 A2	
- JE neperal 1		1	li ceneral	IE CP	V7 1.0	Comment				CP 5613 A2	
PROFINET	interface	1 X1	PROFINETinterface	100	11.1.0				1	• CP 5613 FO	
CP 5512-1		2	CP 5512	6GK1 551-2A400	V6.1.0					> 📑 CP 5614 A2	
0.37(t_1)		3								→ 🛅 CP 5623	
		4) 📺 CP 5624	
		5								🗸 🔸 🛅 CP 5711	1

3. After step 2 the Ethernet interface is configured. Here the IP-address of your NETLink Device is entered. Then the Ethernet interface has to be connected with the Ethernet subnet. But you have to add first a new Ethernet subnet and then you can choose it.



4. With a click on the PROFIBUS/MPI interface of the CP you can configure this interface. At the Interface type you can choose the type you want and enter the bus address your NETLink.

FIA_Test ► NETLink [SIMA	TIC PC station	<u>a</u>						_ * *
						🚰 Topology view	Network view	Device view
net NETLink		👍 🏦 🔍 ± 100%						E
		12						
		eneral 552						
		*° 8						
SIMATIC PC station		1 2	3					
1		m			_		_	3
Davice oversiow				1.4.1.2.1.				
Lindula	Index	Time	Order no	Software or	Commont			
	1	IF general	IF CP	V7.1.0	Comment			
PROFINET interfac	e 1 X1	PROFINET interface						
CP 5512_1	2	CP 5512	6GK1 551-2AA00	V6.1.0				
	3							
	4							
a lon presi	5	_		_	-			
IP 5512_1 [CP 5512]		and the second second				Properties	🗓 Info 🤢 🖏 Diag	nostics
General								
General		Subnet: PROFIB	US_1		-			
PROFIBUS address			Add new subnet					
Assignment								
Operating mode Par	ameters							
Reserve LSAPS		No. of Concession, Name						
-	In	terface type: 180988	US 💌					
•		Address: 2	•					
	High	estaddress: 126	Y					
	Transmi	ssion speed: 1.5 Mb	v zq					

fl Here the IP-address of the NETLink device has to be entered.

1

Here the PROFI-BUS/MPI-address of your NETLink device has to be inserted.

- 5. Next the PC itself with which you connect on the PLC is being added. This happens again with a PC station *"IE general"* (see step 2 where it is found in the Hardware catalogue).
- 6. Now the Ethernet interface can be configured under *"Properties"*. After entering the IP-address of the PC, you have to connect this interface with the subnet.



7. After all your *"Device & network"* window should look like the following:



1 You have to pay attention that the IPaddresses of the NETLink device and your PC are in the same range. 8. Finally you add your PLC model that will be used. The different PLC's can be found in the Hardware catalogue under *"PLC"*. After adding it, the interface of the PLC has to be configured with the right bus address and then connected to the subnet. In this example it is a CPU314C-2 PN/DP (with a power supply), which is connected via PROFIBUS.

_Test → Devices & networks			_ 01
		🛃 Topology view 🛛 🎄 Network view	Device view
Network Connections HMI connection	💌 🖏 🖽 🔍 ± 100% 💌		
PLC_1 CPU 314C-2 PN/	SIMATIC PC stati	PC SIMATIC PC stati	
	(PN/IE_1	
-	PROFIBUS_1		
п			
	Network data		

9. At last all 3 stations have to be compiled and the project saved. You do this by right-clicking on the appropriate station and choosing *"Compile -> All"*.

TIA_Test > Devices & networks					_ # =×
			🚽 Topology view	h Network view	Device view
R Network Connections HM connection	1 ×	🥰 🔛 🔍 ± 100% 🔹			3
					^
					-
nue a IN Device configuration		N7711-1 20 20 00 00 00			
CPU 314C Change device		SIMATIC PC stati			
X Cut	Ctrl+X				
E Copy	Ctrl+C				
💼 Paste	Ctrl+V				
× Delete	Del	PROFIBIIS 1			
Rename	F2				
Go to Topology view					
Compile	•	All			
Go online	Ctrl+K	Software			
🖉 Go offine	Ctrl+M	Software (rebuild all)			
S Online & diagnostics	Ctrl+D				
Assign device name Show force values					
Cross-reference informatic	n Shift, FR				
ind robernes					
					~
<	п				> 🗉
		Network data			

The Hardware configuration has to be downloaded only on the PLC! It is essential to ensure that the NETLink device is plugged on the correct interface port of the PLC.

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5 Troubleshooting

The points described here show some typical situations that can occur when using the "*RFC 1006*" function.

Please also refer to the descriptions for trouble shooting in the accordant NETLink $^{\rm \tiny \$}$ manual!

If a problem is not described here and this manual does not provide any information on how to remedy it, the support of Helmholz GmbH & Co. KG will gladly help you to solve the problem.

Q: How is a firmware update performed in a NETLink[®] adapter?

A: The following steps must be performed:

1) Download the up-do-date *"SHTools"* software from the Helmholz GmbH & Co. KG web site:

 www.helmholz.com -> Download -> NETLink[®] PRO (or analog NETLink[®] Ethernet gateway)

and install this on your computer.

2) After *"SHTools"* has been started, make sure that the appropriate NETLink[®] product is activated on the status bar



If there appear another product, so simply press the right mouse button over the status bar and select the product based on its name and order number in the dialog box that then opens.

fl A firmware update on the NETLink WLAN must always be performed via the network socket. 3) After you have pressed the "*Adapter->Update adapter*" menu, the dialog box shown below appears (example):

Bios V2.39 Jun 7 2011 ✓ NETLink BIOS Compact V2.39 Jun 7 2011 BL_I West Link PRO Compact v2.62 Aug 23 2016 NETLink PRO Compact v2.62 Aug 23 2016 NETLink PRO Compact v2.62 Aug 23 2016 ✓ NETLink PRO Compact v2.60 Jul 26 2016 NET NETLink PRO Compact v2.54 Mar 31 2015 NET	Description	Version	Volume		Name of
Image: Wext-Link BIOS Compact V2.39 Jun 7 2011 Image: Image: Wext-Link BIOS Compact V2.39 Jun 7 2011 ✓ BL_I Image: Image	Bios				
 NETLink BIOS Compact V2.39 Jun 7 2011 BL_1 User program NETLink PRO Compact V2.62 Aug 23 2016 Aug 23 2016 NETLink PRO Compact V2.62 Aug 23 2016 NET NETLink PRO Compact V2.60 Jul 26 2016 NET NETLink PRO Compact V2.54 Mar 31 2015 NET	📆 NETLink BIOS Compact	V2.39	Jun 7 2011		
User program v2.62 Aug 23 2016 Image: NETLink PRO Compact v2.62 Aug 23 2016 Image: NETLink PRO Compact v2.62 Aug 23 2016 Image: NETLink PRO Compact v2.60 Jul 26 2016 Image: NETLink PRO Compact v2.54 Mar 31 2015	NETLink BIOS Compact	V2.39	Jun 7 2011	1	BL_NET
Image: NETLink PR0 Compact v2.62 Aug 23 2016 Image: NETLink PR0 Compact v2.62 Aug 23 2016 Image: NETLink PR0 Compact Image: NETLink PR0 Compact v2.60 Jul 26 2016 NET Image: NETLink PR0 Compact v2.54 Mar 31 2015 NET	User program				
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NETLink PRO Compact v2.54 Mar 31 2015 NET	NETLink PRO Compact	v2.60	Jul 26 2016		NETLin
	NETLink PRO Compact	v2.54	Mar 31 2015		NETLin

To perform an update from a firmware version lower than V1.42 to a version higher than V1.42, it is first necessary to update to version 1.42 as an intermediate step.

After that, an update to all higher versions can be performed in a further step.

Q: Why do I get an address conflict when trying to communicate via STEP 7 with the RFC 1006 mode activated even though the station-related address has been adapted in the driver?

A: You have probably changed your own address in the Web interface (default = 0). The NETLink[®] PRO automatically tries to go online with this address on the bus in RFC mode. Conflicts will occur if another node uses the same address. In this case, the altered entry in STEP 7 is ignored. Check the status of the active stations in the Web interface.

Q: My adapter can't go online. Why?

A: Is the online LED on the adapter lit? If not, check the BUS parameters with which the adapter is to go online via RFC. You will find the parameters in the web interface in section *"Configuration."*

Q: When the users are reachable, they are not displayed.

A: This function is not supported via the project-specific interface, but a variable table or the module status can be used to ensure that the connection to the controller has been established.

Q: When browsing the network in the TIA Online Diagnostics, the searched IP address is not displayed.

	Device	Device type	Slot	Type	Address	Subnet
	IE Allgemein_1	IE general	1 X1	PN/IE	172.16.0.50	PN/IE_1
4						
	Ту	pe of the PG/PC interf	ace:	PN/IE		•
		PG/PC inter	ace:	Realtek PC	le GBE Family Controlle	er 💌 🤻
	Conne	ction to interface/sub	net:	PN/IE_1		-
		1st gate	way:			-
	Compatible devices in ta	rget subnet:			Show all compa	tible devices
	Device	Device type	Type		Address	Target device
	Device pn-can-gateway-tests	Device type S7-300	Type PN/IE		Address 172.30.132.7	Target device
	Device pn-can-gateway-tests pn-can-gateway-lss-tes	Device type \$7-300 \$7-300	Type PN/IE PN/IE		Address 172.30.132.7 172.30.132.10	Target device
	Device pn-can-gateway-tests pn-can-gateway-lss-tes sh-pncan-co-99	Device type \$7-300 \$7-300 PN/CAN-Gateway	Type PN/IE PN/IE PN/IE		Address 172.30.132.7 172.30.132.10 172.30.132.13	Target device
	Device pn-can-gateway-tests pn-can-gateway-lss-tes sh-pncan-co-99 sh-pncan-co-201	Device type \$7-300 \$7-300 PN/CAN-Gateway PN/CAN-Gateway	Type PN/IE PN/IE PN/IE PN/IE		Address 172.30.132.7 172.30.132.10 172.30.132.13 172.30.132.22	Target device
	Device pn-can-gateway-tests pn-can-gateway-lss-tes sh-pncan-co-99 sh-pncan-co-201 teilnehmer	Device type \$7-300 \$7-300 PN/CAN-Gateway PN/CAN-Gateway Helmholz PN-Swit	Type PN/IE PN/IE PN/IE PN/IE PN/IE		Address 172.30.132.7 172.30.132.10 172.30.132.13 172.30.132.22 172.30.132.95	Target device
Flash LED	Device pn-can-gateway-tests pn-can-gateway-testes sh-pncan-co-99 sh-pncan-co-201 teilnehmer pc214-siem	Device type S7-300 S7-300 PN/CAN-Gateway PN/CAN-Gateway Helmholz PN-Swit SIMATIC-PC	Type PN/IE PN/IE PN/IE PN/IE PN/IE PN/IE		Address 172.30.132.7 172.30.132.10 172.30.132.13 172.30.132.22 172.30.132.95 172.30.132.102	Target device
Flash LED	Device pn-can-gateway-tests pn-can-gateway-testes sh-pncan-co-99 sh-pncan-co-201 teilnehmer pc214-siem pc214-siem	Device type S7-300 S7-300 PN/CAN-Gateway PN/CAN-Gateway Helmholz PN-Swit SIMATIC-PC SIMATIC-PC	Type PN/IE PN/IE PN/IE PN/IE PN/IE PN/IE PN/IE		Address 172.30.132.7 172.30.132.10 172.30.132.13 172.30.132.22 172.30.132.95 172.30.132.102 172.30.132.104	Target device
Flash LED	Device pn-can-gateway-tests pn-can-gateway-testes sh-pncan-co-99 sh-pncan-co-201 teilnehmer pc214-siem pc214-siem	Device type 57-300 57-300 PN/CAN-Gateway Helmholz PN-Swit SIMATIC-PC SIMATIC-PC	Type PN/IE PN/IE PN/IE PN/IE PN/IE PN/IE		Address 172.30.132.7 172.30.132.10 172.30.132.13 172.30.132.22 172.30.132.95 172.30.132.102 172.30.132.104	Target device
Flash LED	Device pn-can-gateway-tests pn-can-gateway-tests sh-pncan-co-99 sh-pncan-co-201 teilnehmer pc214-siem pc214-siem	Device type 57-300 57-300 PN/CAN-Gateway Helmholz PN-Swit SIMATIC-PC SIMATIC-PC	Type PN/IE PN/IE PN/IE PN/IE PN/IE PN/IE		Address 172:30:132:7 172:30:132:10 172:30:132:13 172:30:132:22 172:30:132:25 172:30:132:102 172:30:132:102	Target device
Flash LED	Device pn-can-gateway-tests pn-can-gateway-tests sh-pncan-co-99 sh-pncan-co-201 teilnehmer pc214-siem pc214-siem sion:	Device type \$7-300 \$7-300 PN/CAN-Gateway PN/CAN-Gateway PN/CAN-Gateway Helmholz PN-Swit SIMATIC-PC SIMATIC-PC	Type PN/IE PN/IE PN/IE PN/IE PN/IE PN/IE PN/IE		Address 172:30:132:7 172:30:132:10 172:30:132:13 172:30:132:22 172:30:132:95 172:30:132:102 172:30:132:104	Target device
Flash LED	Device pn-can-gateway-tests pn-can-gateway-tests sh-pncan-co-99 sh-pncan-co-201 teilnehmer pc214-siem pc214-siem sion: 36 compatible devices of 36 i information	Device type \$7-300 \$7-300 PNICAN-Gateway PNICAN-Gateway PNICAN-Gateway Helmholz PN-Swit SIMATIC-PC SIMATIC-PC	Type PN/IE PN/IE PN/IE PN/IE PN/IE PN/IE PN/IE		Address 172:30.132.7 172:30.132.10 172:30.132.13 172:30.132.22 172:30.132.95 172:30.132.102 172:30.132.104	Target device
Flash LED ine status informat Scan completed. Retrieving device	Device pn-can-gateway-tests pn-can-gateway-tests sh-pncan-co-99 sh-pncan-co-201 teilnehmer pc214-siem pc214-siem sion: 36 compatible devices of 36 a information	Device type \$7-300 \$7-300 PNICAN-Gateway PNICAN-Gateway HeImholz PN-Swit SIMATIC-PC SIMATIC-PC accessible devices for	Type PN/IE PN/IE PN/IE PN/IE PN/IE PN/IE		Address 172:30.132.7 172:30.132.10 172:30.132.13 172:30.132.22 172:30.132.95 172:30.132.102 172:30.132.104	Target device
Flash LED line status informat Scan completed. Retrieving device Display only error	Device pn-can-gateway-tests pn-can-gateway-tests sh-pncan-co-90 sh-pncan-co-201 teilnehmer pc214-siem pc214-siem ion: 36 compatible devices of 36 a information	Device type S7-300 S7-300 PNI/CAN-Gateway PNI/CAN-Gateway Helmholz PN-Swit SIMATIC-PC SIMATIC-PC SIMATIC-PC	Type PN/IE PN/IE PN/IE PN/IE PN/IE PN/IE		Address 172:30.132.7 172:30.132.10 172:30.132.13 172:30.132.22 172:30.132.95 172:30.132.102 172:30.132.104	Target device

A: At this point, not all IP addresses are listed.

Q: What should I do if I want to call your technical support?

A: Please keep all relevant data of your system installation with the connected participants and program modules ready when you contact the technical support of Helmholz GmbH & Co. KG.

6 Directory of Sources

You can download all NETLink[®] manuals for free in German and English language at http://www.helmholz.com.