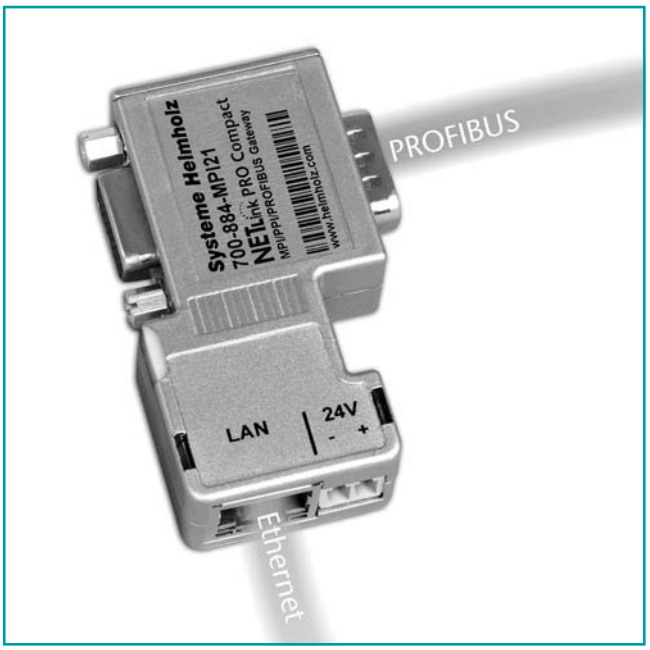
NETLink® Gateways

Ethernet Gateways
WLAN Gateways
Highspeed USB Gateways
for MPI/PPI/PROFIBUS

NETLink® PRO Compact, PROFIBUS-Ethernet Gateway



NETLink® PRO Compact, PROFIBUS-Ethernet Gateway

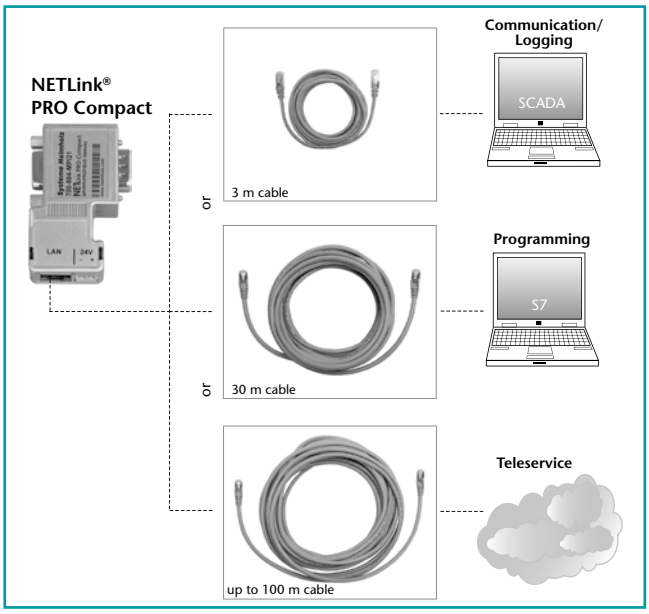
• Now with diagnostic function in the web interface

NETLink® PRO Compact offers flexibility, compact design and even more features than its predecessor.
It may be connected to any MPI/PROFIBUS interface of the bus system. The second PG socket permits connection to further devices. Power is supplied via the CPU of the automation device or optionally by an external 24 V DC. The network interface can be used with every standard Cat-5 cable, thus, cable lengths up to 100 meters are possible without any further components.
NETLink® PRO Compact permits conversion from TCP/IP to MPI/PPI/PROFIBUS with the full transmission rate of up to 12 Mbps with max. 32 simultaneous links. The baud rate is detected automatically and the Single-Master function supports the communication with passive participants.
The supplied driver automatically embeds in the S7 Engineering Tools. Furthermore, the widely used ISO on TCP (RFC 1006) protocol is active. Therefore, the integration of SCADA, HMI and OPC applications can be realized very easily. The integrated web interface provides even more parameterization- and security functions. Furthermore, you can perform diagnostics and configurations with the supplied SHTools software.
A free download of the latest SHTools version is available on our website www.helmholz.com. Thus, additional functions can be updated at every time on your own.

Features

- RFC 1006 (ISO on TCP)
- CPU-to-CPU communication
- Power supply from the CPU or alternatively via external 24 V DC
- Support for all common S7 Engineering Tools
- Dynamic address assignment with DHCP
- Security functions for securing TCP/IP access
- Additional CPU write protection
- For S7-200[1)], S7-300[1)], S7-400[1)]
- Up to 16 TCP connections
- Up to 32 links on MPI/PROFIBUS
- Simple configuration via the web interface
- Variable monitoring in the browser window
- Support of slave parameterization
- Electrical isolation to the MPI/PPI/PROFIBUS
- MPI/PPI/PROFIBUS from 9.6 kbps up to 12 Mbps

NETLink PRO Compact

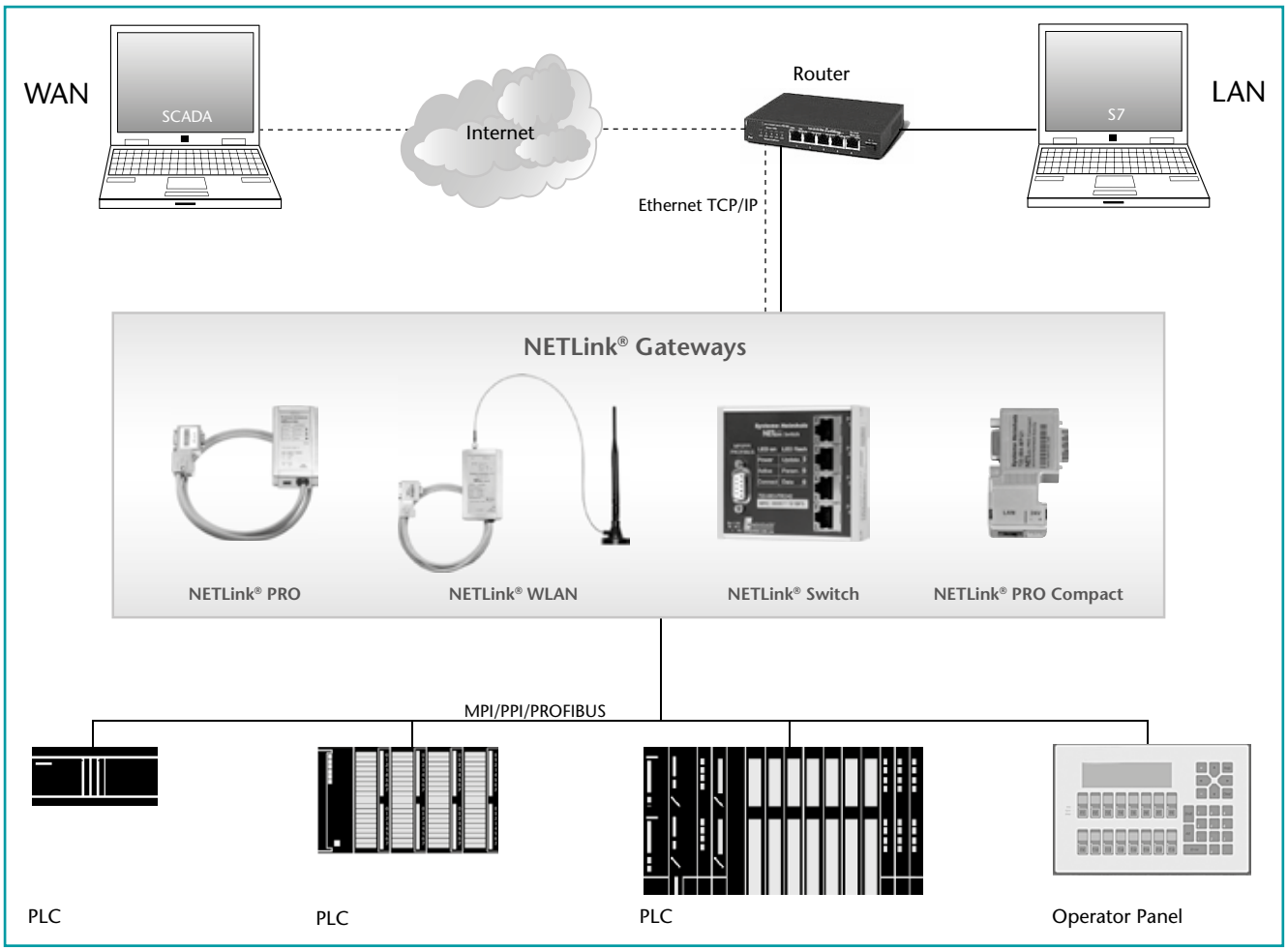


Application example NETLink® PRO Compact

Observe variables in the web interface

Ordering Data	
	Order No.
NETLink® PRO Compact (incl. 3 m Ethernet cable, Quick Start Guide, CD with software and manual)	**700-884-MPI21**
Manual NETLink® PRO Compact, German/English	**900-884-MPI21**

1) S7-200, S7-300 and S7-400 are registered trademarks of Siemens AG.



Application Example LAN-WAN connection via ISO on TCP

Technical Data	
Dimensions (D x W x H mm)	64 x 40 x 17
Weight	Approx. 110 g
Power Supply Voltage	 DC 24 V ±25 %
Current consumption max.	200 mA
Communication interface Type	 10 Base-T 100 Base-TX
Connector	RJ45
Transmission rate	10/100 Mbps, autodetection
MPI/PPI/PROFIBUS Type	 RS485, isolated
Transmission rate max.	12 Mbps, autodetection
Connector	SUB-D, 9-way with PG interface and repeater
Protocols	FDL frames, RFC 1006
Ambient temperature	0 °C ... 60 °C
Indicators	2 LEDs, therefrom one three coloured (for general status information)
Degree of protection	IP 20

Quick diagnostic information about bus activities in the Web Interface

NETLink® PRO, Ethernet Gateway for MPI/PROFIBUS

NETLink® PRO, Ethernet Gateway

• The classic for communication via LAN and WAN

NETLink® PRO for programming, projecting and visualization of Siemens S7 PLCs is placed directly on the interface of the CPU. The cable is designed as active line and thus represents no influence on the MPI / PROFIBUS. At the controller end, the NETLink® PRO supports the full transmission speed up to 12 Mbps. The bus connector is equipped with a PG socket and allows the connection of other devices.
A 3 m Ethernet cable is included. On the Ethernet side, the NETLink® PRO can be applied in the LAN and the WAN (to be used, for example, via VPN).
The baud rate is detected automatically and the communication to further passive participants on the bus is possible. The supplied driver automatically embeds in the S7 Engineering Tools. Furthermore, the widely used ISO on TCP (RFC 1006) protocol is supported. Therefore, the integration of SCADA, HMI and OPC applications can be realized very easily.
The integrated web interface provides even more parameterization- and security functions. Furthermore, you can perform diagnostics and configurations with the supplied SHTools software. A free download of the latest SHTools version is available on our website www.helmholz.com. Thus, additional functions can be updated at any time by yourself.

Ordering Data

	Order No.
NETLink® PRO (incl. 3 m Ethernet cable, Quick Start Guide, CD with software and manual)	700-881-MPI11
NETLink® PRO, 35° cable outlet for S7-400[1] (incl. 3 m Ethernet cable, Quick Start Guide, CD with software and manual)	700-881-MPI12
DIN rail adapter short **Power Plug** (optional)	700-751-HSH01 700-751-SNT01
Manual NETLink® PRO, German/English	900-881-MPI11

1) S7-200, S7-300 and S7-400 are registered trademarks of Siemens AG.

Features

- RFC 1006 (ISO on TCP)
- Power supply from the CPU or alternatively via external 24 V DC
- Support for all common S7 Engineering Tools
- Dynamic address assignment with DHCP
- Security functions for securing TCP/IP access
- For S7-200[1], S7-300[1], S7-400[1]
- Up to 6 TCP connections
- Up to 12 links on MPI/PROFIBUS
- Simple configuration via the web interface
- Variable monitoring in the browser window
- Support of slave parameterization
- Electrical isolation to the MPI/PPI/PROFIBUS
- MPI/PPI/PROFIBUS from 9.6 kbps up to 12 Mbps
- Create your own visualizations with NETLink® WebService by using HTML

NETLink PRO

Technical Data

Dimensions (D x W x H mm)		102 x 54 x 30
Weight		Approx. 180 g
Power Supply Voltage		DC 24 V ±25 %
Current consumption	max.	150 mA
Communication interface Type		10 Base-T 100 Base-TX
Connector		RJ45
Transmission rate		10/100 Mbps, autodetection
MPI/PPI/PROFIBUS Type		RS485, isolated
Transmission rate	max.	12 Mbps, autodetection
Connector		SUB-D, 9-way with PG interface and repeater
Protocols		FDL frames, RFC 1006
Ambient temperature		0 °C ... 60 °C
Indicators		3 LEDs, therefrom 2 two coloured
Degree of protection		IP 20

NETLink® Switch, Ethernet Gateway with integrated 4-port Switch

NETLink® Switch

• Programming – Visualization – data acquisition and switching over Ethernet

The NETLink® Switch is an Ethernet Gateway with integrated 4 port store-and-forward switch for programming on S7-200[1)], S7-300[1)] and S7-400[1)] PLCs. It is intended for mounting on a DIN rail bracket. Either it is integrated in the bus with a PROFIBUS connector or plugged directly with an active drop cable onto the MPI/PPI or PROFIBUS interface of a bus subscriber.
The NETLink® Switch is powered from an external 24 V DC power source. At the controller end, the NETLink® Switch permits the full transmission speed of 12 Mbps with maximum 32 simultaneous connections via MPI or PROFIBUS.
The baud rate is detected automatically and a Single-Master function enables communication to passive participants. The supplied driver automatically embeds in the S7 Engineering Tools. Furthermore, NETLink® Switch supports widely used ISO on TCP (RFC 1006) protocol. Therefore, the integration of SCADA, HMI and OPC applications can be realized very easily. The integrated web interface provides even more parameterization- and security functions. Besides the gateway function the integrated 4 port 10Base-T/100Base-TX switch can be used to integrate additional Ethernet subscribers. Furthermore, you can perform diagnostics and configurations with the supplied SHTools software.
A free download of the latest SHTools version is available on our website www.helmholz.com. Thus, additional functions can be updated at any time by yourself.

Ordering Data	
	Order No.
NETLink® Switch (incl. 3 m Ethernet cable, Quick Start Guide, CD with software and manual)	**700-883-PRO42**
Manual NETLink® Switch, German/English	**900-883-PRO42**

1) S7-200, S7-300, S7-400 and Simatic are registered trademarks of Siemens AG.

Features

- RFC 1006 (ISO on TCP)
- CPU-to-CPU communication
- Support for all common S7 Engineering Tools
- Dynamic address assignment with DHCP
- Security functions for securing TCP/IP access
- Additional CPU write protection
- For S7-200[1)], S7-300[1)], S7-400[1)]
- Up to 16 TCP connections
- Up to 32 links on MPI/PROFIBUS
- Simple configuration via the web interface
- Clear diagnostic page in the web interface
- Variable monitoring in the browser window
- Support of slave parameterization
- Electrical isolation to the MPI/PPI/PROFIBUS
- MPI/PPI/PROFIBUS from 9.6 kbps up to 12 Mbps
- Create your own visualization with NETLink® WebService by using HTML

NETLink Switch

Technical Data		
Dimensions (D x W x H mm)		35 x 83 x 72
Weight		Approx. 180 g
Power Supply Voltage		DC 24 V
Current consumption	approx.	120 mA
Communication interfaces Type		10 Base-T 100 Base-TX
Connectors		RJ45
Transmission rate		10/100 Mbps, autodetection
Switch Ports		4
Features		Autonegotiation, Autouplink, Flow Control, MDI/MDI-X Auto Crossover, Spanning Tree
Switching method		Store and foreward
MPI/PPI/PROFIBUS Type		RS485, isolated
Transmission rate	max.	12 Mbps, autodetection
Connector		SUB-D, 9-way
Protocols		FDL frames, RFC 1006
Ambient temperature		0 °C ... 60 °C
Indicators		3 LEDs, therefrom 2 two coloured
Degree of protection		IP 20

NETLink® WLAN, PROFIBUS Ethernet WLAN Gateway

NETLink® WLAN

• Flexible wireless programming using Ad Hoc or Infrastructure mode

The NETLink® WLAN is an Ethernet Gateway with integrated WLAN (Wi-Fi) interface for programming on S7-200[1], S7-300[1] and S7-400[1] PLCs. The bus connector (with PG socket) is plugged directly onto the MPI or PROFIBUS interface of the CPU. The NETLink® WLAN can optionally be powered from an external 24 V DC power source. At the controller end, the NETLink® WLAN permits the full transmission speed of 12 Mbps with max. 32 simultaneous connections via MPI or PROFIBUS.
The baud rate is detected automatically and the Single-Master function supports the communication to passive participants. The supplied driver automatically embeds in the S7 Engineering Tools. Furthermore, widely used ISO on TCP (RFC 1006) protocol is supported. Therefore, the integration of SCADA, HMI and OPC applications can be realized very easily.
An integrated web interface provides even more parameterization and security functions. Besides the RJ45 socket, the WLAN interface (802.11 b/g) can be connected with up to 54 Mbps. This can be parameterized via the web interface for “ad hoc” or “infrastructure” mode. All standard Wireless Security methods such as: WEP, WPA and WPA2 are supported. Furthermore, you can perform diagnostics and configurations with the supplied SHTools software.
A free download of the latest SHTools version is available on our website www.helmholz.com. Thus, additional functions can be updated at any time by yourself.

Ordering Data	
	Order No.
NETLink® WLAN (incl. 3 m Ethernet cable, Quick Start Guide, CD with software and manual)	**700-882-MPI21**
DIN rail adapter long **Power Plug** (optional)	**700-751-HSH10** **700-751-SNT01**
Manual NETLink® WLAN, German/English	**900-882-MPI21**

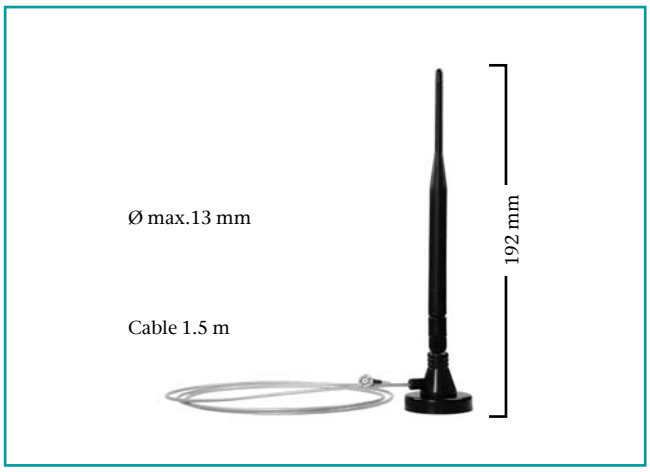
1) S7-200, S7-300, S7-400 are registered trademarks of Siemens AG.

Features

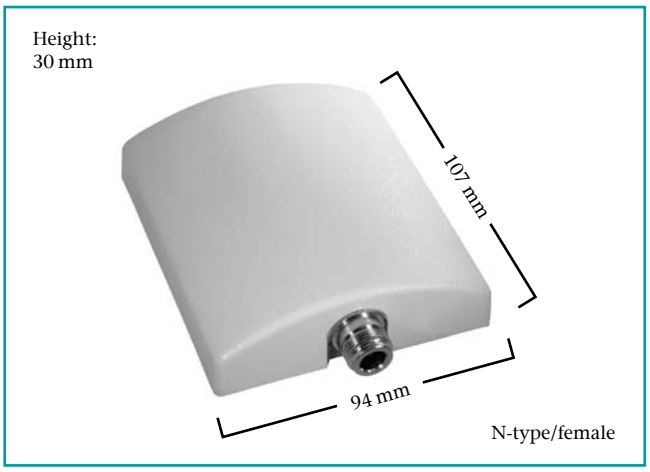
- RFC 1006 (ISO on TCP)
- CPU-to-CPU communication
- Support for all common S7 Engineering Tools
- Dynamic address assignment with DHCP
- Security functions for securing TCP/IP access
- Additional CPU write protection
- For S7-200[1], S7-300[1], S7-400[1]
- Up to 16 TCP connections
- Up to 32 links on MPI/PROFIBUS
- Simple configuration via the web interface
- Clear diagnostic page in the web interface
- Variable monitoring in the browser window
- Support of slave parameterization
- Electrical isolation to the MPI/PPI/PROFIBUS
- MPI/PPI/PROFIBUS from 9.6 kbps up to 12 Mbps
- Create your own visualization with NETLink® WebService by using HTML

NETLink WLAN

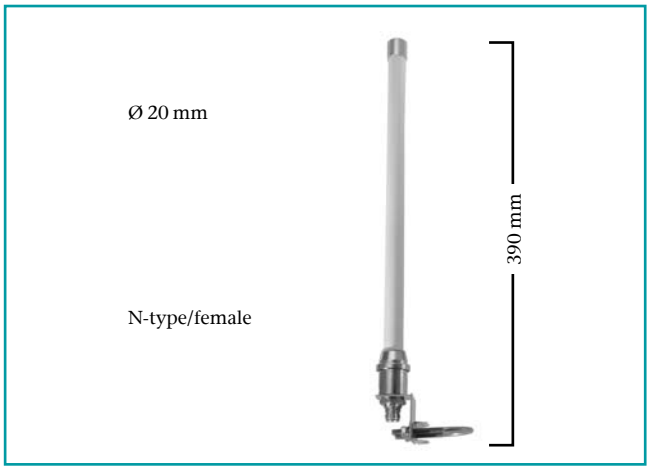
Technical Data	
Dimensions (D x W x H mm)	130 x 68 x 30
Weight	Approx. 280 g
Power Supply Voltage	 DC 24 V ±25 %
Current consumption typ.	200 mA
Communication interface Type	 10 Base-T 100 Base-TX
Connector	RJ45
Transmission rate	10/100 Mbps, autodetection
WLAN Specifications Type	 IEEE 802.11b; 802.11g
Frequency Range	2.412 - 2.484 GHz
Output Power	14 dBm + 1.5 dBm/-1.0 dBm
Data Rates	54 Mbps
Security	WEP, WPA, WPA2
MPI/PPI/PROFIBUS Type	 RS485, isolated
Transmission rate max.	12 Mbps, autodetection
Connector	SUB-D, 9-way with PG interface and repeater
Protocols	FDL frames, RFC 1006
Ambient temperature	0°C ... 60°C
Indicators	5 LEDs, therefrom 2 two coloured
Degree of protection	IP 20



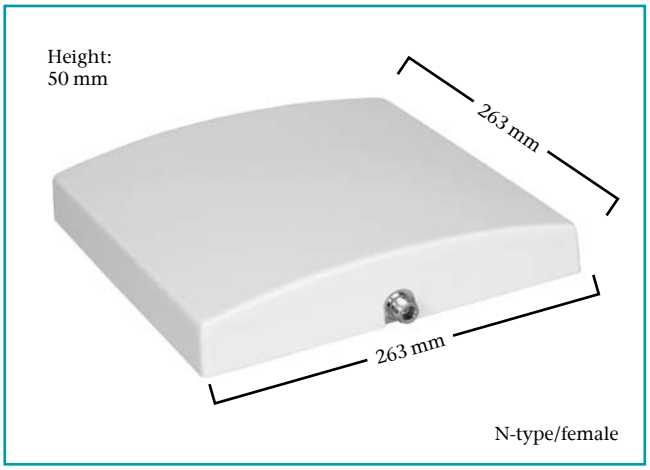
5 dBi magnetic base antenna



Panel 8 dBi antenna



Omni 8 dBi antenna, including wallclamp



Panel 18 dBi antenna

To optimize the reception power of the NETLink® WLAN and the PROFIBUS radio system viBlu, Systeme Helmholz GmbH can provide a selection of different antennas. Depending on the design, connecting cables can be procured to match. When planning a radio link, it is important always to note that, both in a mobile and in a stationary installations, the range is to some degree influenced by obstacles and the surrounding structures. Due to the max. transmission power of 100 mW in the 2.4 GHz band, radio links of 10 to 30 meters can be implemented in buildings. Outdoors, 100 to 300 meters can be considered realistic for an unobstructed radio link. With a directed panel antenna, more than 300 meters are possible in optimum conditions.

Magnetic base antenna 5 dBi
For mounting on smooth magnetic surfaces. The permanently mounted 1.5 meter long connecting cable further increases the radius of action. The magnetic base can be unscrewed. In this way, the dipole can also be directly operated on the WLAN module and is especially suitable for unobstructed mid-distance links. The omnidirectional antenna can also be correctly aligned with the integrated knee-joint.

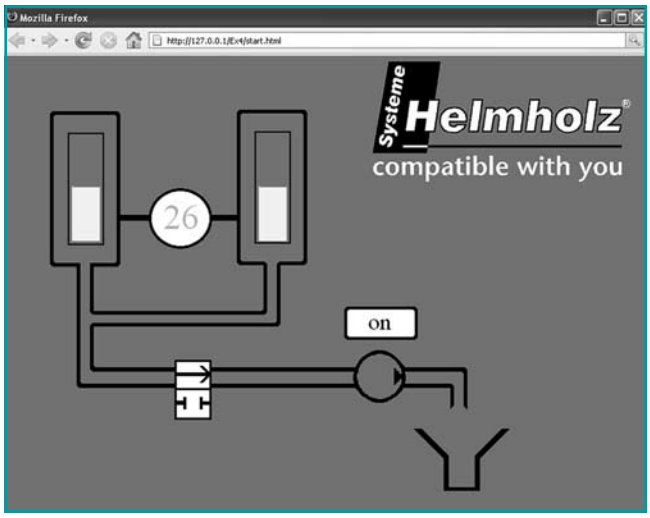
Omnidirectional antenna 8 dBi
This omni antenna protected by the stable GFK conduit is supplied with mounting brackets to be able to mount it on masts or walls – preferably outdoors. To obtain the best omnidirectional emission properties, there should be no metallic surfaces or obstructions near to the emitting antenna. A cable, available as an accessory, is required for a type N connection.

Panel antenna 8 dBi (wall mounting) and panel antenna 18 dBi (mast mounting)
Ideal for use in directional transmission and reception indoors and outdoors. The range and WLAN performance are considerably improved by this design. The appropriate fixtures are supplied. A cable, available as an accessory, is required for a type N connection.

Ordering Data	Order No.
2.4 GHz 5 dBi magnetic base antenna, with 1.5 m antenna cable	700-889-ANT01
2.4 GHz Omni 8 dBi antenna (antenna cable required)	700-889-ANT02
2.4 GHz Panel 8 dBi antenna (antenna cable required)	700-889-ANT03
2.4 GHz Panel 18 dBi antenna (antenna cable required)	700-889-ANT04
2.4 GHz antenna cable, 3 m; 1.7 dB; Ø 5 mm	700-889-ANK01
2.4 GHz antenna cable, 5 m; 2.8 dB; Ø 5 mm	700-889-ANK02
2.4 GHz antenna cable, 6 m; 1.4 dB; Ø 10.3 mm	700-889-ANK03
2.4 GHz antenna cable, 10 m; 2.3 dB; Ø 10.3 mm	700-889-ANK04

NETLink® PRO Family applications

What is NETLink® WebService?

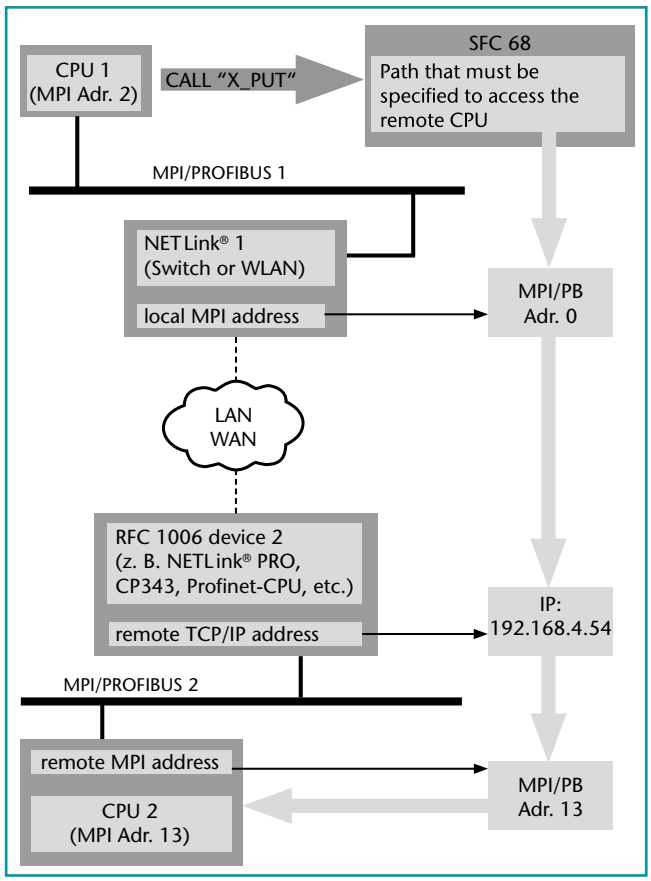


Example of NETLink® WebService visualization

NETLink® WebService

NETLink® WebService is a service to help you create your own browser interface for simple visualization tasks. Operand values from your PLC can be visualized for monitoring services via a NETLink® Ethernet device (except of NETLink® PRO Compact). The program modules required for this are available free of charge. Using application examples and the configuration tool, changes in value can be visualized in a few steps.
Using Java-Script functions status images can be integrated, which, for example, indicate fill levels of tanks or valve positions in the visualization.
Furthermore, the values from a NETLink® Ethernet gateway can be adapted for display by means of stored arithmetic operations.
If you release your scripts to a web host, they can be accessed from any internet computer. This means that machine states can be called up from any location.
The examples supplied by Systeme Helmholz GmbH can be freely edited. However, HTML and Java Script programming knowledge is required to expand your own user interfaces.

What is CPU-to-CPU communication?



Implement a CPU-to-CPU link using the S7 basic communication. The connection types MPI and PROFIBUS are supported on all S7-300[1)] and S7-400[1)] PLCs. Siemens S7 software features simple functions (SFCs) for the transmission of data between two stations. All NETLink® Ethernet gateways (NETLink® PRO just passive) of the Systeme Helmholz GmbH support this S7 mechanisms X_PUT and X_GET (read and write data from/to a communicating partner outside the local S7 station).
For this type of client-server communication, the familiar RFC1006 transport protocol (ISO on top of TCP) is used. This enables use of CP's or Profinet CPU's that support this protocol as clients.
The connections are not configured but are explicitly established during the SFC call. For that reason, a connection resource is only permanently assigned for the communication at the "active" end. The "passive" end responds to the queries of the active partner and therefore only requires a resource if it establishes a connection.
This has the advantage that function calls only need to be stored at the active end (server).
If the intention is to expand an already configured X_PUT/X_GET process via TCP/IP, it is only necessary to include an additional X_PUT (with the parameters for the remote station – see illustration) in the program execution to open the communication channel via a NETLink® Ethernet gateway.
The number of useful data items that can be transmitted per communication request is up to 76 bytes for the entire system.
For support with configuration (including newcomers), Systeme Helmholz GmbH provides simple example projects for the STEP[1)] 7 programming software free of charge. Using the associated application description, the CPU-to-CPU communication can be implemented in just a few steps.

1) S7-200, S7-300, S7-400, Simatic and STEP are registered trademarks of Siemens AG.

NETLink® USB Compact, mini PROFIBUS USB Gateway

NETLink® USB Compact, mini PROFIBUS USB Gateway

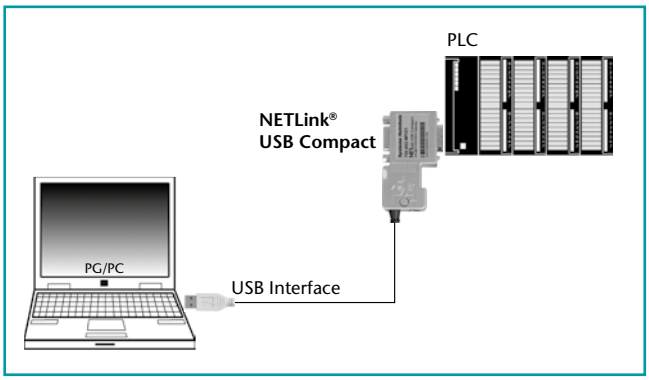
• The mobile plug and play programming adapter

NETLink® USB Compact offers flexibility and compact design with the advantages of plug and play via USB. It may be connected to any MPI/PROFIBUS interface of the bus system.
The second PG socket permits connection of further devices.The connection with the PC is established using the integrated 3 m high-speed USB cable.
The NETLink® USB Compact is supplied with power from the USB bus. At the USB end, the protocols Fullspeed (12 Mbps) and Highspeed (480 Mbps) are supported. The NETLink® USB Compact permits conversion of a USB interface to MPI/PROFIBUS for programming or visualization with the full transmission rate of up to 12 Mbps with max. 32 simultaneous links.
Baud rate is detected automatically and a Single-Master function enables the communication with passive participants. The supplied driver automatically embeds in the S7 Engineering Tools.
The MPI/PROFIBUS is electrically isolated from the USB interface (functional isolation). Furthermore, you can perform diagnostics and configurations with the supplied SHTools software.
A free download of the latest SHTools version is available on our website www.helmholz.com. Thus, additional functions can be updated at any time by yourself.

Features

- Support for all common S7 Engineering Tools
- For S7-200[1)], S7-300[1)], S7-400[1)]
- Up to 32 links on MPI/PROFIBUS
- Support of slave parameterization
- Electrical isolation to the MPI/PPI/PROFIBUS
- MPI/PPI/PROFIBUS from 9.6 kbps up to 12 Mbps
- USB 2.0 up to 480 Mbps (Highspeed)
- No separate power supply required
- With programming device connector (PG) as standard

NETLink USB Compact



Application Example NETLink® USB Compact

Ordering Data	
	Order No.
NETLink® USB Compact (incl. Quick Start Guide, CD with software and manual)	**700-892-MPI21**
Manual NETLink® USB Compact, German/English	**900-892-MPI21**

Technical Data		
Dimensions (D x W x H mm)		64x 40 x 17
Weight		Approx. 115 g
Power Supply Voltage		DC 5 V USB
Current consumption	typ.	200 mA at DC 5 V USB
Communication interface Type		USB 2.0
Connector		USB-A-female connector
Transmission rate		12 Mbps Fullspeed/ 480 Mbps Highspeed
MPI/PPI/PROFIBUS Type		RS485, isolated
Transmission rate	max.	12 Mbps, autodetection
Connector		SUB-D, 9-way with PG interface
Protocols		FDL frames
Ambient temperature		0 °C ... 60 °C
Indicators		2 LEDs, therefrom one three coloured (for general status information)
Degree of protection		IP 20

1) S7-200, S7-300 and S7-400 are registered trademarks of Siemens AG.

NETLink® USB, Highspeed USB Gateway for MPI/PROFIBUS

NETLink® USB, Highspeed USB Gateway

Features

- Support for all common S7 Engineering Tools
- For S7-200[1)], S7-300[1)], S7-400[1)]
- Up to 12 links on MPI/PROFIBUS
- Support of slave parameterization
- Electrical isolation to the MPI/PPI/PROFIBUS
- MPI/PPI/PROFIBUS from 9.6 kbps up to 12 Mbps
- USB 2.0 up to 480 Mbps (Highspeed)
- Power supply via USB or external 24 V power source possible
- With programming device connector (PG) as standard

NETLink USB

• The plug and play classic for communication via USB

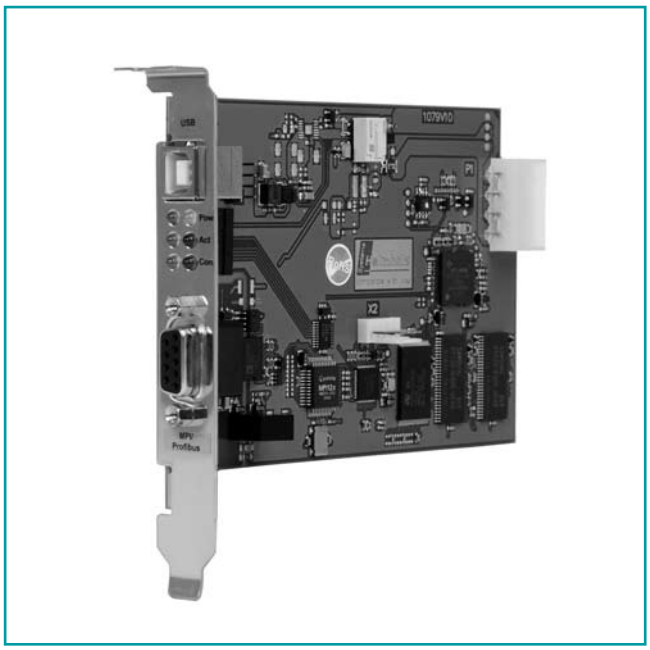
The NETLink® USB for programming, projecting and visualization of Siemens S7 PLCs may be connected to any MPI/PROFIBUS interface of the bus system.
NETLink® USB is powered from the USB bus, but also features an optional 24 V DC power supply. The cable connection is 1.2 m long and is designed as active line and thus represents no influence on the MPI/PROFIBUS. The integrated PG socket permits connection of further devices. The connection to the PC is established with the included 3-m-high-speed USB cable. NETLink® USB allows full transmission speed up to 12 Mbps to MPI/PPI and PROFIBUS.
Baud rate is detected automatically and communication to further passive participants on the bus is possible. At the USB end the protocols Fullspeed (12 Mbps) and Highspeed (480 Mbps) are supported. The supplied driver automatically embeds in the Simatic[1)] Engineering Tools. The MPI/PPI/PROFIBUS is electrically isolated from the external 24 V DC power source and from the USB interface (functional separation). Furthermore, you can perform diagnostics and configurations with the supplied SHTools software.
A free download of the latest SHTools version is available on our website www.helmholz.com. Thus, additional functions can be updated at any time by yourself.

Ordering Data	
	Order No.
NETLink® USB (incl. 3 m USB cable, Quick Start Guide, CD with software and manual)	**700-890-MPI11**
DIN rail adapter short **Power Plug** (optional)	**700-751-HSH01** **700-751-SNT01**
Manual NETLink® USB, German/English	**900-890-MPI11**

1) S7-200, S7-300, S7-400 and Simatic are registered trademarks of Siemens AG.

Technical Data		
Dimensions (D x W x H mm)		102 x 54 x 30
Weight		Approx. 180 g
Power Supply Voltage		DC 24 V ±25 % DC 5 V USB, automatically selected
Current consumption	max. max.	150 mA at DC 24 V/ 500 mA at DC 5 V USB
Communication interface Type		USB 2.0
Connector		USB-B female connector
Transmission rate		12 Mbps (Fullspeed)/ 480 Mbps (Highspeed)
MPI/PPI/PROFIBUS Type		RS485, isolated
Transmission rate	max.	12 Mbps, autodetection
Connector		SUB-D, 9-way with PG interface and terminating resistor
Protocols		FDL frames
Ambient temperature		0 °C ... 60 °C
Indicators		3 LEDs, therefrom 2 two coloured
Degree of protection		IP 20

NETLink® SLOT USB, Highspeed USB Gateway as a plug-in board



NETLink® SLOT USB

- **Plug-in card for standard programming PCs, industrial PCs, operator panel PCs, etc.**
- **No connection to the PCI bus of the motherboard**

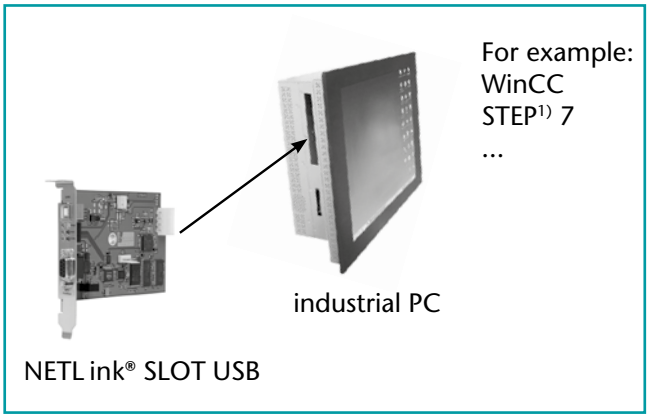
The NETLink® SLOT USB is an alternative to a PROFIBUS-CP plug-in board and is directly installed in the computer. It is connected to the programmable controller by means of a standard PROFIBUS connection.
Connection to the USB bus is possible directly from the mother board using the cable supplied. The necessary 5 volts are also provided through this connection. Moreover, a direct connection from the computer power supply unit can be used for the power supply. As an alternative, complete connection of the NETLink® SLOT USB is also possible through an external USB cable. The NETLink® SLOT USB features automatic baud rate detection and supports the USB protocols Fullspeed (12 Mbps) and Highspeed (480 Mbps). The NETL ink® SLOT USB permits programming or visualization from a USB interface on up to 32 simultaneous MPI/PPI/PROFIBUS connections with the full transmission rate of 12 Mbps.
The baud rate is detected automatically and the Single-Master function supports the communication with passive participants. The supplied driver automatically embeds in the S7 Engineering Tools. The MPI/PPI/PROFIBUS is electrically isolated from the PC power supply and from the USB interface (functional isolation). Furthermore, you can perform diagnostics and configurations with the supplied SHTools software.
A free download of the latest SHTools version is available on our website www.helmholz.com. Thus, additional functions can be updated at any time by yourself.

Ordering Data	
	Order No.
NETLink® SLOT USB (incl. Quick Start Guide, CD with software and manual)	**700-891-MPI21**
Manual NETLink® SLOT USB, German/English	**900-891-MPI21**

Features

- Support for all common S7 Engineering Tools
- For S7-200[1)], S7-300[1)], S7-400[1)]
- Up to 32 links on MPI/PROFIBUS
- Support of slave parameterization
- Electrical isolation to the MPI/PPI/PROFIBUS
- MPI/PPI/PROFIBUS with 9.6 kbps to 12 Mbps
- USB 2.0 with up to 480 Mbps (Highspeed)
- 5 V power supply via USB
- 12 V power supply possible internally in the PC

NETLink SLOT USB



Application example NETLink® SLOT USB for industrial PCs

Technical Data		
Dimensions (D x W x H mm)		140 x 120 x 16
Weight		Approx. 180 g
Power Supply Voltage		DC 5 V USB, PC-power supply, automatically selected
Current consumption	typ.	350 mA at DC 5 V
Communication interface Type		USB 2.0
Connector		USB-B-female (extern) 4-way post plug connector for motherboard (intern)
Transmission rate		12 Mbps (Fullspeed)/ 480 Mbps (Highspeed)
MPI/PPI/PROFIBUS Type		RS485, isolated
Transmission rate	max.	12 Mbps, autodetection
Connector		SUB-D, 9-way
Protocols		FDL frames
Ambient temperature		0 °C ... 60 °C
Indicators		6 status LEDs
Degree of protection		Without degree of protection

1) S7-200, S7-300, S7-400, WinCC and STEP are registered trademarks of Siemens AG.

OPC-Server

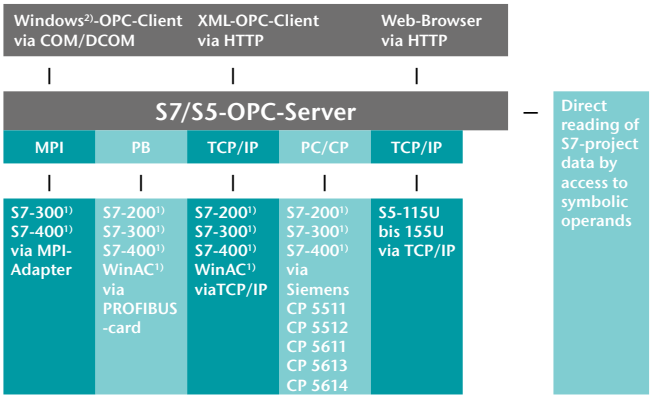
Fast access to S7 and S5 data
The S7/S5 OPC server allows you fast and easy access to process data in WinAC[1)], S7-200[1)], S7-300[1)], S7-400[1)], C7- and S5 controllers.
Addressing of variables can be performed completely with S7 semantics and can be imported directly from an Excel file or a S7 project if required. With each OPC-compliant client application, you can read or write all input/output data, data blocks, flags, timers and counters in the S7/S5 controllers. You can also access up to 256 controllers at one time.
The control program does not have to be adapted for communication with the S7/S5 OPC server. No detailed knowledge of the PLC program that is running is necessary.

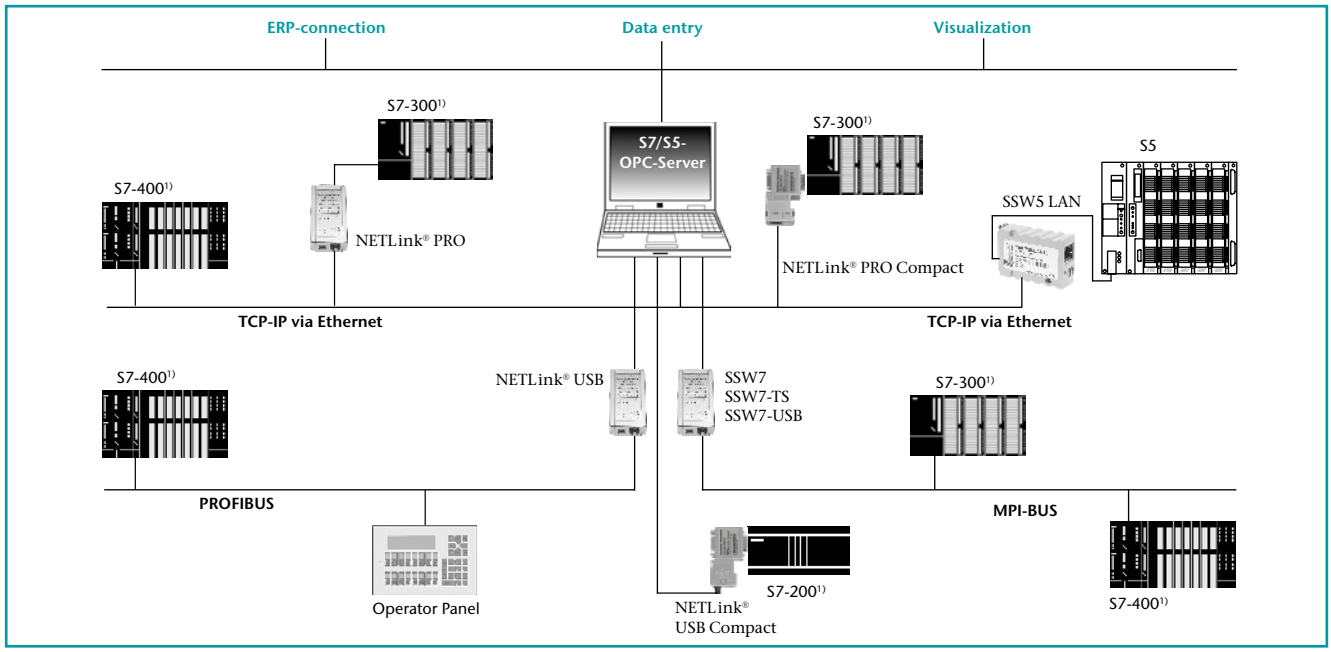
New functions and expansions
On the S7-300[1)] and S7-400[1)] the DATE_AND_TIME and ASCII strings are supported as additional data formats.
OPC Client Controls are now contained in the scope of supply of the S7/S5 OPC server as ActiveX components.
The S5 syntax for creating items can now be used. Access to array elements has been improved.

Integrated Web server
The S7/S5 OPC server features an integrated Web server. This is used for diagnosing the OPC server and for providing its own web pages for operating and monitoring using any standard browser. The architecture and performance of the web server is designed for small visualization systems.

Flexible connection
There are many ways of connecting the controllers to the S7/S5 OPC server such as TCP/IP, PROFIBUS, MPI, PPI or AS511.
For communication, Systeme Helmholz GmbH provides the following devices:
- SSW7, SSW7-TS, SSW7-USB for MPI
- All products of NETLink® family
- SSW3, SSW4 and SSW5 for AS511

Also a selection of communication modules of other manufacturers, such as CP243, CP343, and CP443 from Siemens are supported.
The current OPC server version and further technical information are available for download at www.helmholz.de.





Application example for OPC-Server

Ordering Data	
	Order No.
S7-OPC-Server with USB-Dongle	**800-880-OPC20**

1) WinAC, S7-200, S7-300, S7-400, STEP and WinCC are registered trademarks of Siemens AG.
2) Windows is a registered trademark of Microsoft Corporation.