**6**

Protocol converter

- echolink
- echochange
- echolink and echochange Accessories
- MPI / PPI Adapter
- Remote maintenance
- Remote maintenance Accessories
- Decentralized I/O via TCP/IP
- Gateway Ethernet to MPI / PPI

**6**

- for
- ▶ S7 / S5
 - ▶ Telnet
 - ▶ Modicon
 - ▶ IPC 620

56

echolink

Protocol conversion serial to Ethernet
Remote maintenance

**Seamless migrates data from serial devices onto Ethernet.
Enables remote maintenance of devices RS232 / RS422 / RS485 / MPI / PPI / TTY (20mA).**

AREAS OF APPLICATION

- Visualization, Measurement data logging, Statistics etc.
- Programming of Simatic S7 / S5 / 505 via LAN and WAN (with VCOM no Softnet required)
- Remote maintenance of the S7 / S5 / 505 via LAN and WAN
- Ethernet interface for Simatic S5 (AG 90U, 95U, 100U, 115U, 135U, 150U, 155U) via PG port
- Ethernet interface for Simatic S7 (S7-200, S7-300, S7-400) via MPI / PPI port
- Modbus RTU (serial) to Modbus on TCP converter
- Active data transfer between PLCs without programming (echoactive)
- Fetch / Write communication with S5 PLCs without handling blocks
- Webserver functionality to realize small visualization projects: Visualization without PHP, ActiveX, Perl, Applets et al. only with HTML
- Programming of AEG A 120 / A 250 via LAN and WAN
- Ethernet interface for Honeywell / Klöckner-Möller IPC controllers via CIM port (ABC protocol)

echolink basic

**Now with
Web Visualization**

- Including top hat rail adapter
- Including VCOM for Programming via Ethernet (see page 24)



Serial Ethernet Converter echolink
with 10 / 100 Mbps Ethernet

Note: A connector power pack is not included in the delivery. If necessary order it separately (see page 61)

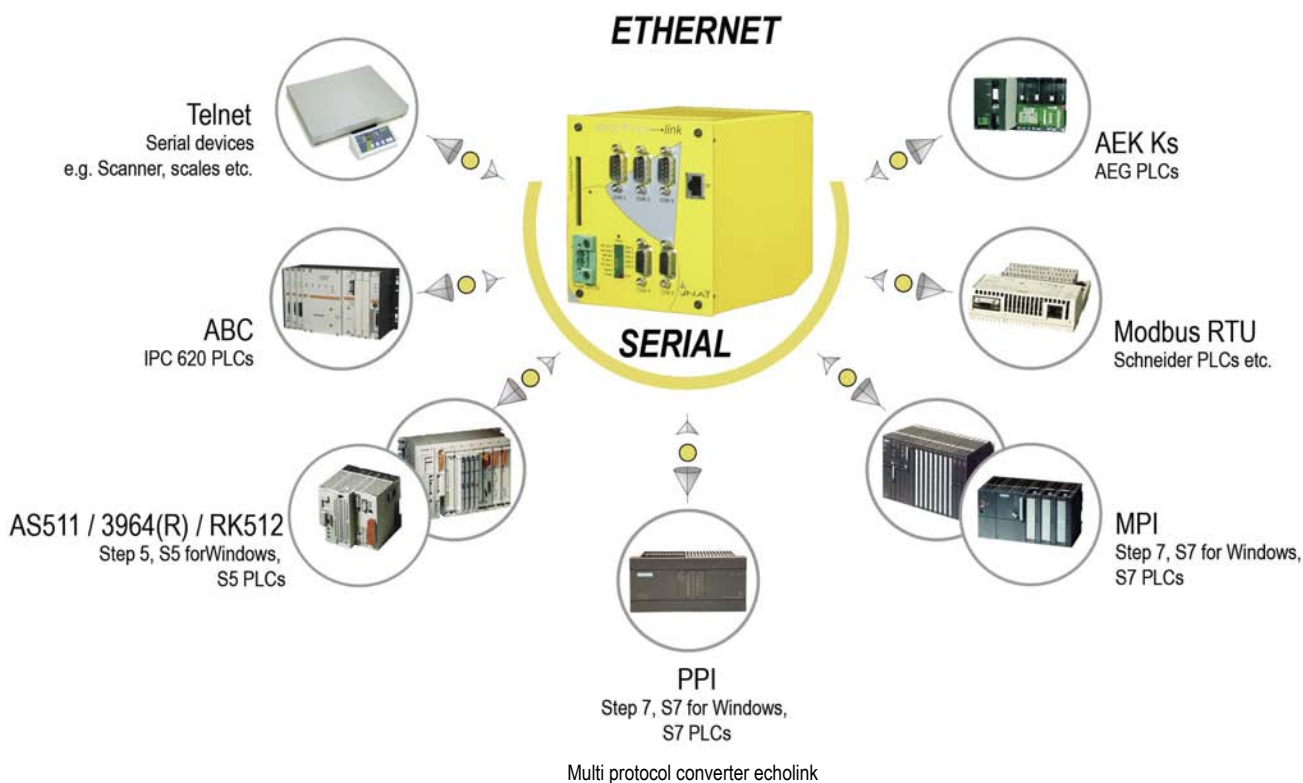
Ethernet Interface:	1 x RJ45, 10 / 100 MBit/s
Transport Protocols:	TCP/IP, TCP/IP with ISO on TCP (RFC1006), TCP/IP with PLC Header, ISO (H1)
Application Protocols:	S7 Protocol, S5-AP, Modbus on TCP, EtherNet/IP, Send / Receive (raw data / socket)
Serial Interfaces:	1 up to 5 serial interfaces; Basic device without interface modules Interface modules see page 57!
Serial Protocols:	AS511 (S5-PG), 3964(R), RK512, Modbus RTU, MPI, PPI, Telnet, AEG Ks <u>optional:</u> ABC (IPC 620 PLCs)
Power Supply:	18...36 V DC, ca. 1,1A
Dimensions [in mm]:	L = 110, T = 120, H = 120
	Order numbers:
echolink basic	200-6500-01
Adapter for S7-300 rail mounting	700-5600-01
Serial protocol for IPC PLCs	200-6560-01

echolink basic is not equipped with interface modules. Up to 5 interface modules, in any combinations, is possible are possible except for the following restrictions:

Notes:

- A maximum number of two MPI interfaces
- MPI interface on COM1 is not possible
- A maximum number of four RS485 interfaces
- With one ore more TTY interface(s) a maximum number of two RS232 interfaces
- With one or more RS485 interface(s) a maximum number of two RS232 interfaces
- Combination of RS422 and RS485 not possible

	Order numbers:
MPI	200-6580-01
MPI 2 port	200-6580-02
RS232	200-6581-01
TTY (20 mA)	200-6582-01
RS422 floating	200-6583-01
RS422 non-floating	200-6584-01
RS485 floating	200-6585-01
RS485 non-floating	200-6586-01



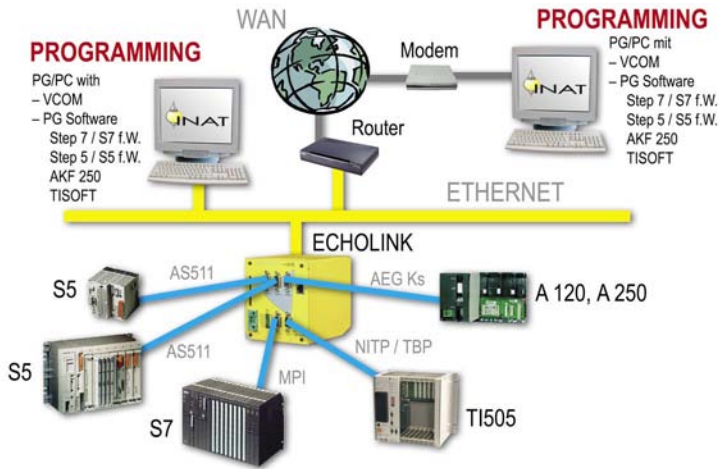
To change interface modules in the echolink basic

please send the echolink device (freight prepaid) back to INAT. A flat rate plus price of the new modules will be charged.



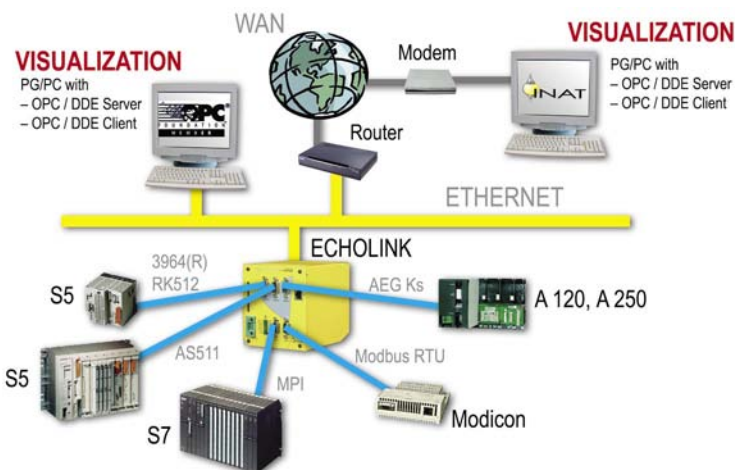
Order number:	200-5590-01
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1. Programming



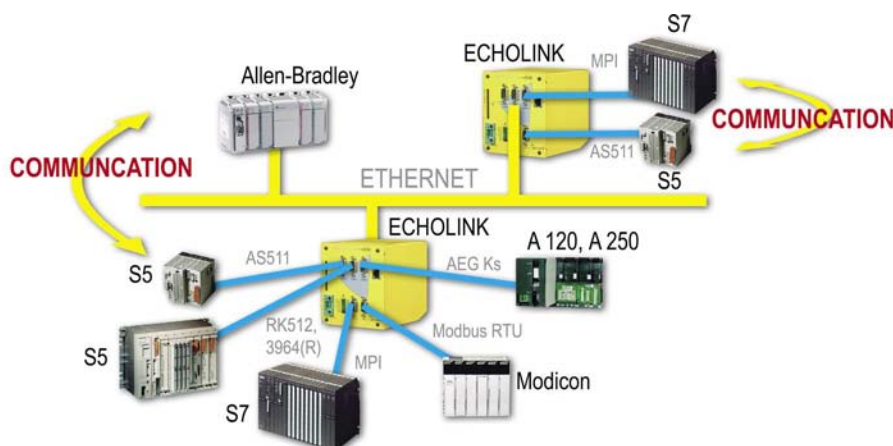
Programming Simatic S7, S5 and 505 PLCs and AEG PLCs (A 120 / A 250) via LAN and WAN.

2. Visualization



Visualization, Measurement data logging, Statistics etc. via LAN and WAN.

3. Communication between PLCs



Communication between PLCs via LAN and WAN. Communication between two devices serial connected with echolink.

**Converts several transport protocols and application protocols.
Gateway between two networks with the same or different protocols.**

AREAS OF APPLICATION

- Connects different controller worlds:
 - ⇒ Siemens (S7, S5)
 - ⇒ Rockwell Automation (Allen-Bradley ControlLogix, CompactLogix, SLC 500)
 - ⇒ Schneider Electric (Modicon)
- Separate Ethernet networks are connected via specific parameterized connections
- Connection of TCP/IP computers with ISO (H1) networks
- Remote maintenance of PLCs in an ISO (H1) network via TCP/IP
- Gateway between separated networks (protocols run at different media)
- Converter in a heterogeneous network (protocols run at the same media)



Ethernet Converter echochange
with 10 / 100 Mbps Ethernet

echochange

- Including top hat rail adapter

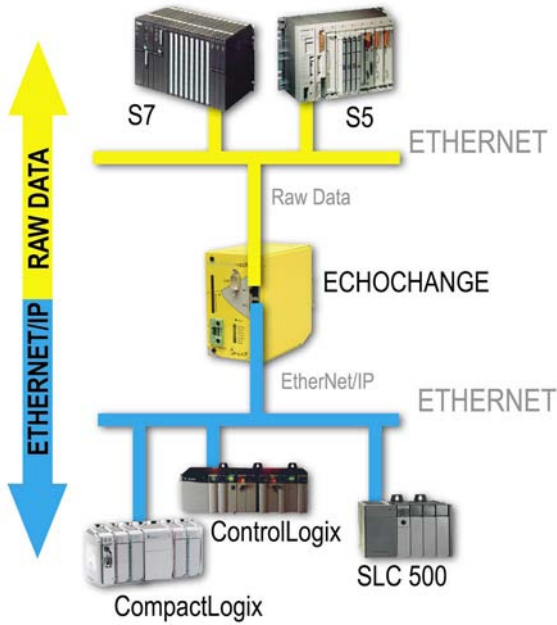
Ethernet Interfaces:	2 x RJ45, 10 / 100 Mbps
Transport Protocols:	TCP/IP, TCP/IP with ISO on TCP (RFC1006), TCP/IP with PLC Header, ISO (H1)
Application Protocols:	Send / Receive (raw data / socket) <u>optional:</u> EtherNet/IP (Allen-Bradley)
Serial Interfaces:	1 x RS232, for serial parameterization
Active connections:	Maximum 10
Power Supply:	18...36 V DC, ca. 0,8A
Dimensions [in mm]:	L = 76, D = 120, H = 120
	Order numbers:
echochange	200-6000-01
EtherNet/IP Protocol for Allen-Bradley PLCs	200-6100-01

Note: A connector power pack is not included in the delivery. If necessary order it separately (see page 61)

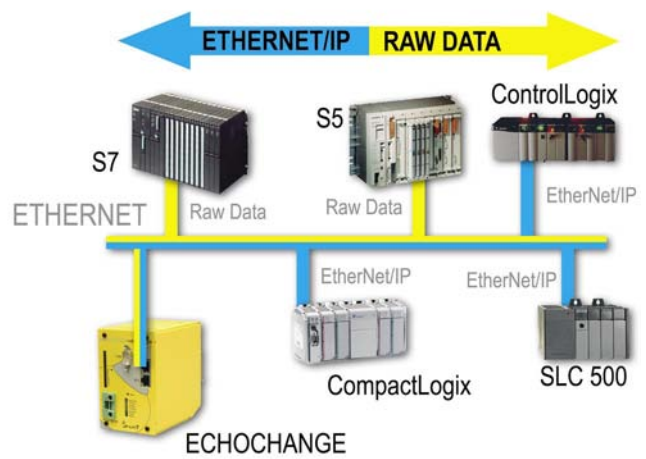
1. Conversion of application protocols

Raw Data ↔ EtherNet/IP

TWO SEPARATED NETWORKS



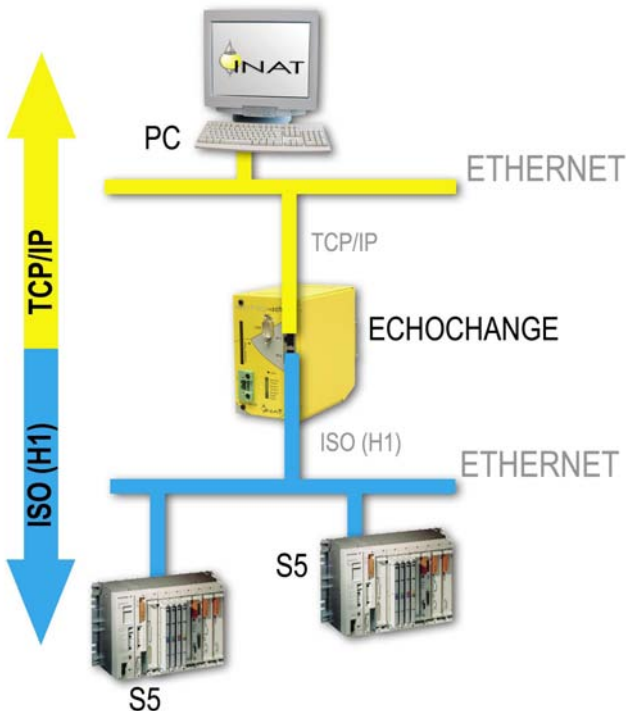
ONE HETEROGENEOUS NETWORK



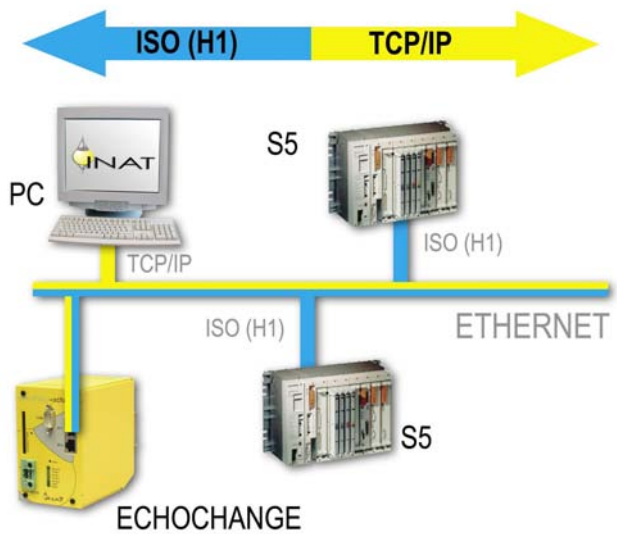
1. Conversion of transport protocols

TCP/IP ↔ ISO (H1)

TWO SEPARATED NETWORKS



ONE HETEROGENEOUS NETWORK



echolink and echochange Accessories



Connector power pack 24 V DC

Connector power pack 24 V DC

- 100 - 240 V AC, 47 - 63 Hz, sec. 24 V, 1,25A

	Order numbers:
Version EURO	700-5596-01
Version UK	700-5596-02
Version USA	700-5596-03



RS232 - TTY (20 mA)
9pin female - 15pin male

Connection cable RS232 - PLC TTY

- Connection cable RS232 - TTY
- RS232, 9pin D-sub female - TTY (20 mA), 15pin D-sub male

	Order numbers:
5 meters	700-1500-05
10 meters	700-1500-10
15 meters	700-1500-15

APPLICATION:

- echolink with RS232
- PC and other devices with RS232 } to S5 PG



echolink TTY - AG TTY
9pin female - 15pin male

Connection cable echolink TTY - PLC TTY

- echolink TTY, 9pin D-sub female - TTY, 15pin D-sub male

	Order numbers:
Basic cable 1 meter	700-1800-01
Each additional meter	700-1800-xx (xx = Length in meters)

APPLICATION:

- echolink with TTY (20 mA) to S5 PG



echolink TTY – PLC (AS511)
9pin female – 25pin female

Connection cable echolink TTY – PLC TTY (25-pol.)

- echolink TTY, 9pin D-sub female – PLC (AS511), 25pin D-sub female

		Order numbers:
	Basic cable 1 meter	700-1850-01
	Each additional meter	700-1850-xx (xx = Length in meters)

APPLICATION:

- echolink with TTY (20 mA) to S5 PG (e.g. AG 150)



RS232 – PPI cable
9pin female – 9pin male

RS232 – PPI cable

- PPI cable for the connection with a S7-200
- RS232, 9pin D-sub female – PPI, 9pin D-sub male
- Length: 3 meters

		Order number:
		700-6100-01

APPLICATION:

- echolink with RS232 to S7-200 PG interface



USB – RS232 converter cable

USB – RS232 converter cable

- Converter cable USB – RS232
- USB-A connector – RS232, 9pin D-sub male
- Length: 0,35 meters

		Order number:
		900-8300-01

**Direct access via MPI to S7-400, S7-300 or via PPI to S7-200.
Convert the data of a RS232 / USB interface to MPI / PPI bus.**

AREAS OF APPLICATION

- Visualization, Measurement data logging, statistics
- Programming
- Connect a PC or Notebook to a S7 PLC via serial interface



RS232 – MPI / PPI adapter,
187,5 KBaud

RS232 – MPI / PPI adapter, 187,5 KBaud

- With integrated LCD display
- RS232, 9pin D-sub female, up to 115,2 KBaud – MPI / PPI, 9pin D-sub male, up to 187,5 KBaud
- Length: 3 meters

Order number:	400-9359-MPI
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RS232 + USB – MPI / PPI adapter,
12 MBaud

RS232 + USB – MPI / PPI adapter, 12 MBaud

- With integrated LCD display and membrane keys
- RS232, 9pin D-sub female, up to 115,2 KBaud – MPI / PPI, 9pin D-sub male, up to 12 MBaud or USB, USB-A connector, USB 1.0 – MPI / PPI 9pin D-sub male, up to 12 MBaud
- Length: 3 meters

Order number:	400-9352-MPI
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USB-A connector – USB-A connector, 1.8 meter, Order number: 400-8200-01



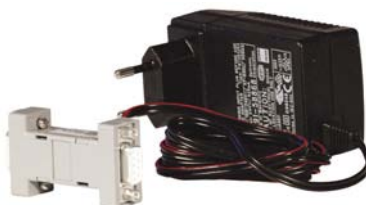
USB – MPI / PPI adapter, 12 MBaud

USB – MPI / PPI adapter, 12 MBaud

- With integrated LCD display and membrane keys
- USB, USB-A connector, USB 1.0 – MPI / PPI 9pin D-sub male, up to 12 MBaud
- Length: 3 meters

Order number:	400-9352-USB
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USB-A connector – USB-A connector, 1.8 meter, Order number: 400-8200-01



MPI Network adapter

Network adapter

- To lengthen the MPI / PPI adapter on MPI side (24 V)

Order number:	400-9350-04
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- for
- ▶ S7-400
 - ▶ S7-300
 - ▶ S7-200
 - ▶ S5

Remote maintenance via phone

Remote maintenance
via phone, GSM

Remote maintenance of S7 and S5 via telephone.
Remote maintenance of S7 and S5 via mobile phone.

AREAS OF APPLICATION

- Teleservice with all S7 PLCs with MPI interface onboard
- Teleservice with all S5 PLCs
- Integrated modem (analogue and ISDN)
- 2 PCMCIA slots for memory cards, special modem cards (e.g. GSM, Wireless LAN)
- Send SMS direct from the PLC
- Fax direct from the PLC
- Comfortable operation and configuration via Web Browser



Tele-PROF II

Tele-PROF II

- Integrated high speed modem (ISDN and analogue)

Serial Interfaces:	1 x MPI / PPI, up to 12 MBaud, 1 x PG RS232, 1 x AG RS232, 1 x PG TTY (20 mA), 1 x AG TTY (20 mA), 2 x USB Master
Ethernet Interfaces:	1 x RJ45, 10 / 100 Mbps
Telephone extension:	1 x ISDN (DSS1 or 1TR6), 1 x analogue modem
Compatibility:	S7-400, S7-300, S7-200, all S5 PLCs
Display:	2 x 16 characters, LCD display with membrane keys
Power Supply:	24 V DC @0,35A
Dimensions [in mm]:	L = 290, D = 170, H = 55
Order number:	400-9372-01

Remote Maintenance Accessories



Connector power pack
100 - 240 V AC / 24 V DC

Connector power pack 24 V DC

- 100 - 240 V AC, 47 - 63 Hz, sec. 24 V, 1,25A

	Order numbers:
Version EURO	700-5596-01
Version UK	700-5596-02
Version USA	700-5596-03



Connection cable
Tele-PROF – PLC TTY

Connection cable Tele-PROF – PLC TTY

- TTY (20 mA), 15pin D-sub male – TTY (20 mA), 15pin D-sub female
- Length: 3 meters

Order number:	400-9361-03
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ISDN Adapter

ISDN Adapter

- For Tele-PROF, if there is only ISDN access available

Order number:	400-9370-ISDN
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USB cable

USB cable

- USB-A connector – USB-B connector
- Length: 3 meters

	Order number:	400-8200-03
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Analogue Telephone Cable,
Germany and USA

Analogue Telephone Cable, Germany and USA

- Length: 3 meters

	Order number:	400-9370-08
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Analogue Telephone Cable, country-specific

Analogue Telephone Cable, country-specific

- Specify country with order
- Length: 3 meters

	Order number:	400-9370-01
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ISDN Telephone Cable

ISDN Telephone Cable


- Length: 3 meters

	Order number:	400-9370-09
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TCP/IP access to decentralized I/O via OPC
 TCP/IP access to decentralized I/O
 from S7 / S5

Decentral I/O

S7 ◀ for
 S5 ◀
 Modbus ◀
 EtherNet/IP ◀



**Allows direct data access to I/Os via OPC / DDE Server.
 Interface for decentralized I/Os to S7 and S5.**

AREAS OF APPLICATION

- Expansion of inputs and outputs in places without fieldbus
- PC based control technology
- Expansion of the S7 and S5 via TCP/IP interface
- Direct access to decentralized I/Os via INAT OPC / DDE Server

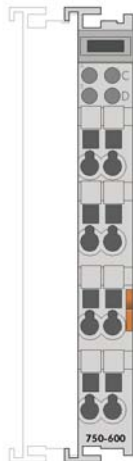


TCP/IP Bus coupler

TCP/IP Bus Coupler for Wago Bus Terminals

- Digital and analogue signals

Ethernet Protocols:	Modbus on TCP, EtherNet/IP, HTTP, BootP, DHCP, DNS, SNTP, FTP, SMTP
Ethernet:	RJ45, 10 /100 Mbps
Number of bus terminals:	255 (price list on request)
Digital signals:	max. 2040 (Inputs and Outputs)
Analogie signals:	max. 1020 (Inputs and Outputs)
Number of I/O modules:	limited with Ethernet specification
Configuration:	via PC
Type of Protection:	IP 20
Power Supply:	24 V DC (-15% / +20%)
Dimensions [in mm]:	L = 51, D = 100, H = 65
Order number:	300-2000-01



End terminal

Accessories: End terminal

Order number:	300-2020-01
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Note: Input and Output modules see page 54.

Gateway Ethernet to MPI / PPI

Gateway Ethernet MPI / PPI
Remote maintenance

**Reduces costs because there is no need for a communications processor.
Visualization and Programming via Ethernet.**

AREAS OF APPLICATION

- Ethernet interface via MPI / PPI port of the Simatic¹⁾ S7 (AS 200, 300 and 400)
- Programming the S7 without Softnet¹⁾
- Remote maintenance of the S7 via LAN and WAN
- Access to data blocks, flags, periphery, counter, timer, OP status
- Works with all INAT Ethernet Servers

NetLink



NetLink

- NetLink MPI – Ethernet
- Linking via a switch, a hub or directly with the PC
- Configuration via Ethernet diagnosis channel
- Data link via FDL telegrams
- LED display: devices status, communication

Ethernet Interface:	RJ45, 10 / 100 Mbps
Serial Interface:	MPI, 12 MBaud
PLCs:	S7-400, S7-300
Power Supply:	24 V DC, 70 mA via MPI interface
Dimensions [in mm]:	L = 65, D = 48, H = 16
Cable length:	3 meters
Order number:	500-4010-01

IBHLink



IBHLink

- IBHLink MPI / PPI – Ethernet
- Programming function under Step 7 and S7 for Windows
- Linking via a switch, a hub or directly with the PC
- Configuration via Ethernet diagnosis channel
- Data link via FDL telegrams
- LED display: devices status, communication

Ethernet Interface:	RJ45, 10 / 100 MBit/s
Serial Interface:	MPI, 12 MBaud
PLCs:	S7-400, S7-300, S7-200
Power Supply:	24 V DC, 70 mA über MPI-Anschluss
Dimensions [in mm]:	L = 65, T = 48, H = 16
Cable length:	3 Meter
Order number:	500-4000-01