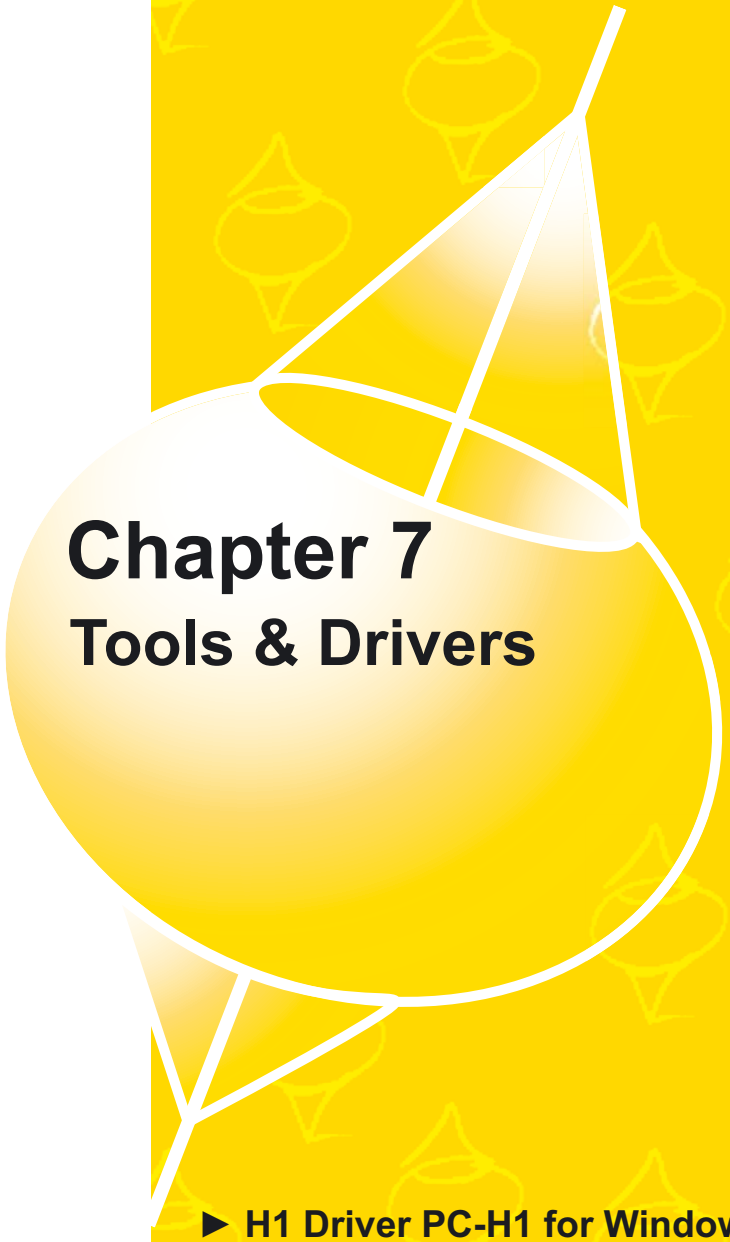

Chapter 7
Tools & Drivers

- ► H1 Driver PC-H1 for Windows
- ► H1 Driver PC-H1 for Linux
- ► MPI/PPI-DLL
- ► Virtual ComPort VCOM

H1 - driver and interface

H1 driver for PC-H1 PCs

You want to integrate your PCs/ IPCs into an ISO (H1) network in order to communicate with S7 and S5 PLCs?

The PC H1 Driver package makes this possible! In addition to the transport protocol ISO (H1), the S7 and S5 protocols are also implemented. Through that numerous possibilities are avaible via ISO (H1) networks: programming, visualization, capturing of process data, own applications...

Characteristics:

- No special network interface card required: PC-H1 can be operated with any Ethernet adaptor
- Easy application
  - Driver packets and applications are easy to create because the tool is designed as a language-independent library (DLL)
  - Included in delivery you will find example programs that will make your first step in application easy
  - Routines for Fetch / Write and Send / Receive
- Direct access to the following PLC elements
  - Data blocks
  - Flags
  - Inputs
  - Outputs
  - Periphery
  - Counter
  - Timer
  - System data
- Operating systems
  - Win 98 / ME / NT / 2000 / XP / 2003
- Test possibility
  - Free download of the H1 driver at www.inat.de
  - After every restart of your PC the driver is avaible for 10 hours

Test fist, then license!

At **www.inat.de** you can find a 10 hour trial version of the H1 driver

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Ostendstr. 50 A
90482 Nuremberg

Phone +49 911 544 27-0
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www.inat.de

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Routines:

► FUNCTIONS FOR COMMUNICATIONS BASED ON LAYER 4

GENERAL FUNCTIONS

- H1DriverOpen
- H1DriverClose
- H1GetVersion
- H1StartConnect
- H1StartConnectCard
- H1StopConnect
- H1TestStatus
- H1GetLineCaracteristics
- H1ListRunningConnections
- H1GetStationAddress
- H1GetStationAddressCard
- H1SetStationAddress
- H1SetStationAddressCard
- H1GetStandardValues
- H1SetStandardValues

SPECIFIC FUNCTIONS

- H1SendData
- H1StartSend
- H1PollSend
- H1SendDataEx
- H1ReadData
- H1StartRead
- H1PollRead
- H1ReadDataEx
- H1StartReadEx
- H1PollReadEx

► FUNCTIONS FOR COMMUNICATIONS BASED ON LAYER 7

CONNECTION HANDLING

- S5StartConnection
- S5StartConnectionCard
- S5StartConnectionH1
- S5StopConnection

SPECIFIC FUNCTIONS

- S5ReadFromPLC
- S5StartRead
- S5PollRead
- S5FetchPassiv
- S5StartFetchPassiv
- S5PollFetchPassiv
- S5WriteToPLC
- S5StartWrite
- S5PollWrite
- S5WritePassiv
- S5StartWritePassiv
- S5PollWritePassiv

Order data:

PC-H1: H1 driver and interface single-user licence, including test programs	Order No.: 100-4500-01
Upgrade	Order No.: 100-4500-Upg

Stand: 02.2009

H1- driver and interface for Linux

H1 driver for LINUX PCs

You want to integrate your PCs/ IPCs into an ISO (H1) network in order to communicate with S7 and S5 PLCs?

The PC H1 Driver package makes this possible! In addition to the transport protocol ISO (H1), the S7 and S5 protocols are also implemented. Through that numerous possibilities are avaible via ISO (H1) networks: programming, visualization, capturing of process data, own applications...

Special features:

- No special network interface card required: PC-H1 can be operated with any Ethernet adaptor
- Easy application
  - Driver packets and applications are easy to create because the tool is designed as a language-independent library (DLL)
  - Included in delivery you will find example programs that will make your first step in application easy
  - Routines for Fetch / Write and Send / Receive
- Direct access to the following PLC elements
  - Data blocks
  - Flags
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  - Periphery
  - Counter
  - Timer
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- Operating systems
  - Win 98 / ME / NT / 2000 / XP / 2003
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Routines:

► FUNCTIONS FOR COMMUNICATIONS BASED ON LAYER 4

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- H1GetStationAddress
- H1GetStationAddressCard
- H1SetStationAddress
- H1SetStationAddressCard
- H1GetStandardValues
- H1SetStandardValues

SPECIFIC FUNCTIONS

- H1SendData
- H1StartSend
- H1PollSend
- H1SendDataEx
- H1ReadData
- H1StartRead
- H1PollRead
- H1ReadDataEx
- H1StartReadEx
- H1PollReadEx

► FUNCTIONS FOR COMMUNICATIONS BASED ON LAYER 7

CONNECTIONS HANDLING

- S5StartConnection
- S5StartConnectionCard
- S5StartConnectionH1
- S5StopConnection

SPECIFIC FUNCTIONS

- S5ReadFromPLC
- S5StartRead
- S5PollRead
- S5FetchPassiv
- S5StartFetchPassiv
- S5PollFetchPassiv
- S5WriteToPLC
- S5StartWrite
- S5PollWrite
- S5WritePassiv
- S5StartWritePassiv
- S5PollWritePassiv

Order data:

PC-H1 for Linux: **H1 driver and interface single-user licence, including test programs**	Order No.: 100-4540-01
Upgrade	Order No.: 100-4540-Upg

Stand: 02.2009

MPI / PPI -DLL

Creating own applications for S7 PLCs

Access to the MPI/PPI DLL S7

You want to connect your applications with the Siemens S7? Use the existing routines!

With the MPI/PPI-DLL you realize the acces to the S7 via an MPI/PPI-Adapter.

Additional to the routines for Fetch/ Write there are example programs for the S7 access as sources included in the delivery also.

Characteristics:

- Data transfer
  - Synchronuous und asynchronuous mode possible
- Transmission rate
  - COM1 to COM4 can be used with rates up to 115200 baud
- Easy application
  - Driver packets and applications are easy to create because the tool is designed as a language-independent library (DLL)
  - Included in delivery you will find example programs that will make your first step in application easy
- Protocols
  - MPI for the acces to the S7-300/S7-400
  - PPI for access to the S7-200
- Direct access to the following PLC elements
  - Data blocks
  - Flags
  - Inputs
  - Outputs
  - Periphery
  - Counter
  - Timer
  - System data

Routines:

- Functions for communication with the SPS
  - MpiConnect
  - MpiStopConnection
  - MpiStopConnections
  - MpiGetStatus
  - MpiS7Init
  - MpiReadWait
  - MpiWriteWait
  - MpiStartConnection
  - MpiStartRead
  - MpiStartWrite
- Functions for communication with the adapter
  - MpiConnect
  - MpiGetFirmwareVersion
  - MpiAdapterIniGetVersion
  - MpiGetLifeList
  - MpiGetDirectConnected
  - MpiGoOffline

Order data:

MPI/PPI-DLL single user licence, including test programs	Order No.: 100-3380-01
Enterprise licence for each location of an enterprise	Order No.: 100-3381-01

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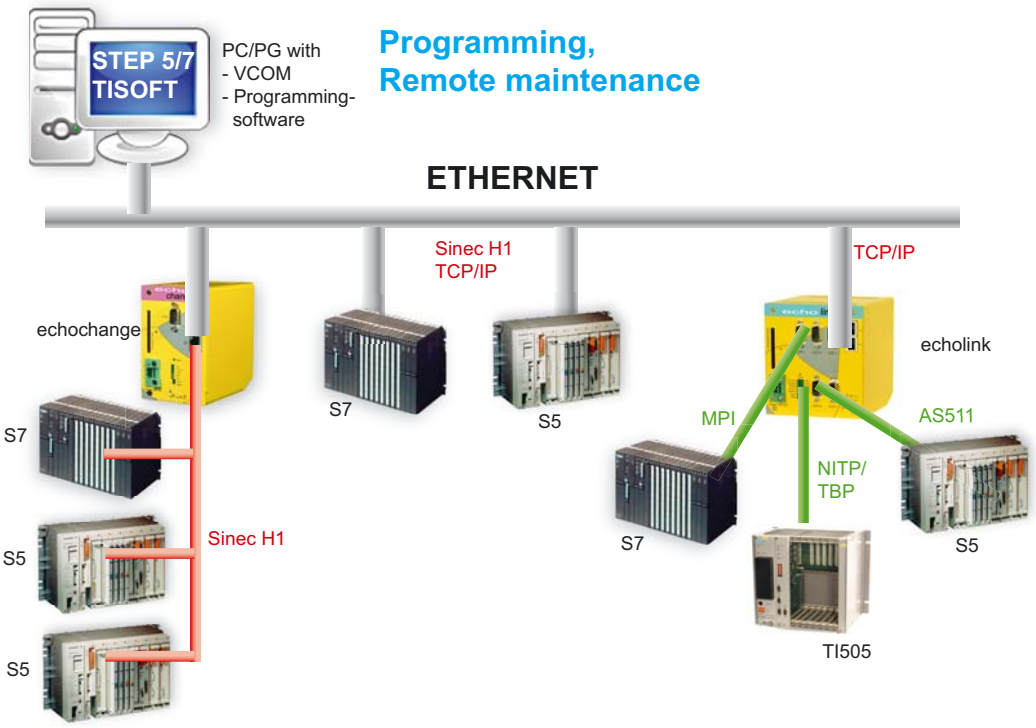
Stand: 02.2009

INAT Industrial Networks for Automation Technology

Virtual ComPort

Redirecting serial communication to the network interface card



Many software applications are designed exclusively for the serial interface. Running these applications via Ethernet is in many cases only possible with additional - mostly expensive - software or hardware. Virtual ComPort(VCOM) is the easy-to-use alternative at an affordable price.

Special features:

- Operate programs, which access to the serial interface, via the network
- Programming of the S7 and S5 with Step® 7 and Step® 5 via TCP/IP and Sinec H1 WITHOUT Softnet®
- Programming of PLCs that are connected to echolink in series
  - S7 PLCs (S7-400, S7-300 with Step® 7)
  - S5 PLCs with Step 5
  - TI PLCs with TISOFT
  - other PLCs via Telnet

Functioning:

- With VCOM serial application and configuration software becomes network-compatible.
- Additional virtual serial interfaces are being set up on the PG / PC. The application „sees“ these serial interfaces and uses them like a „real“ interface.
- If the application accesses to one of these virtual ports data is redirected automatically via network to the serial interface.

Technical characteristics:

- Ethernet protocols
  TCP/IP, ISO (H1)
- Serial protocols
  MPI, AS511, AEG Ks, TI505 (NITP/TBP), Telnet
- Provided PLCs
  S7-400®, S7-300®, S5, A 120, A 250
  Operation systems
  Win NT, 2000, XP

Order data:

Virtual ComPort VCOM
INAT hardware included in the delivery, no licensing needed

Telnet
Download: www.inat.de
Licence MPI, AS511, TI505; TCP/IP and H1
Order No.: 100-3400-02

Stand: 02.2009

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