



Protocol Drivers

□ Comdrv

COMDRV can communicate with any kind of serial device supporting the protocols 3964R, DK3964R, and RK512 (S5). During parameterization the desired procedure variant may be

selected. Both, active and passive operation is supported.

COMDRV provides standard protocols for the serial connection of SIMATIC S5/S7 devices. In the S5 operating

mode the driver is able to interrupt data traffic in favour of a S5-request. After terminating the data traffic initialized by S5, the interrupted sequence of telegrams is re-started.

□ Parameters

Baud Rate	300 - 19.200 Bit/s
No. of Stop Bits	1, 2
No. of Data Bits	7, 8
Parity	even, odd, none
Modem Operation	No modem, leased line, dial/up line
Modem Watchdog	1 - 255 s
Operating Mode	3964R, DK3964R, RK512 (S5)

□ Unidrv

UNIDRV is used for the connection of asynchronous serial devices, such as printers, plotters, bar code scanners or scales. It supports the Siemens LAUF protocol, as well as the XON/XOFF protocol.

characters in the data stream a switch-over between both operating modes is feasible. An emulation of the Siemens LAUF protocol is integrated in the UNIDRV and can be set during parameterization. UNIDRV supports multi-point operation in half-duplex mode. Thus, several devices may be addressed simultaneously in one single line.

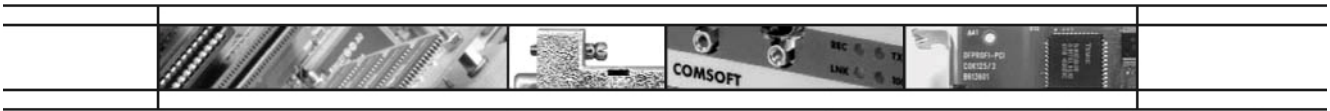
For protocol definition, the following protocol elements are available: transmission request characters, start sequence, ready-to-receive state, stop sequence, end sequence, block check, acknowledgement, timeout mode, block size.

UNIDRV allows to define simple protocols. Both, character-oriented and block-oriented transmission are supported. By means of control

They are 1 to 2 characters long and can be parameterized and switched off separately.

□ Parameters

Baud Rate	300 - 19.200 Bit/s
No. of Stop Bits	1, 2
No. of Data Bits	7, 8
Parity	even, odd, none
Modem operation	No modem, leased line, dial/up line
Board driver priority	high, low priority
Blocking	length of single blocks



Msv 2

MSV2 is a reliable, byte-synchronous transmission protocol which is mainly used for coupling main-frames (e.g. DU 05). The procedure is split up into connection establishment, data

transfer and connection release. Data block transmission is checked by a CRC16 block check mechanism and confirmed by the receiver. The MSV2 runs with modem and supports

standard formats, as well as transparent data transmission. The following parameters can be set:

Parameters

Baud Rate	300 - 9.600 Bit/s
No. of Stop Bits	1, 2
No. of Data Bits	7, 8
Parity	even, odd, none
Modem Operation	on/off (leased line)
Watchdog for	transmit, receive, modem signals
Connection Setup	high/low priority
Clock Pulse	internal or external
CRC-Generator Polygon	CRC 16

Hdlc

This proven driver is a bit-oriented, synchronous standard protocol for secured data transfer between PCs and

data terminals. It supports point-to-point as well as multi-point operations. Two protocol versions are available:

Hdlc unc-2

HDLC UNC-2 works in normal-response-mode (NRM), according to DIN 66221 part 3, with the following characteristics: Half-duplex Master-

Slave operation. In the Master operation, up to 30 Slaves can be addressed. The station addresses for

Master and Slave can be configured arbitrarily.

Parameters

Baud Rate	1.200 Bit/s - 1 Mbit/s (clock pulse controlled) 1.200 Bit/s - 38.400 Bit/s (clock pulse retrieval from receive data stream)
Modem Operation	on/off (leased line)
Modem Watchdog	1 - 255 ms
Operating Mode	Master/Slave
Data Coding	NRZ/NRZI
Clock Pulse Supply	internal baud rate generator, external clock, pulse of remote station or clock pulse, retrieval from receive data stream
Frame Size	128 - 1024 Bytes
Window Size	1 - 7 Frames



Hdlc bac 2.8

HDLC BAC 2.8 works in the asynchronous balanced mode (ABM) according to ISO 7776. It enables a point-to-point connection between two identical stations in full duplex

operation. The protocol version corresponds to LAP-B according to ITU and allows direct access to package switching networks on layer 2. This driver is certified according to NET2.

Parameters

Data Coding	NRZ/NRZI
Baud Rate	up to 1 Mbit/s (clock pulse controlled)
Clock Pulse Supply	internal baud rate generator or external clock pulse of remote station
Frame Size	64 - 1024 Bytes
Window Size	1 - 7 Frames

Frame

Frame is a bit-oriented standard protocol for synchronous data transmission between PCs and data terminals. It supports unreliable point-to-point operations. Data will be

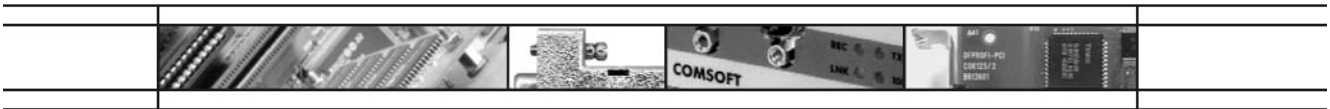
transmitted transparently, in bit-synchronous frames. The character size is fixed to 8 Bit/character. Data exchange is executed in unreliable mode according to ISO 7776. The

sender or receiver of the protocol driver can be parameterized for processing HDLC headers.

Parameters

Servant according to ISO/OSI	bisynchronous layer 1 protocol
Transmission Protocol	SDLC (HDLC Frame-Level)
Character Size	8 Bit fix
Baud Rate	50 - 19.200 Bit/s at RS232 1 Mbit/s at V.11/X.27 interfaces (baud rate can be increased to 2 Mbit/s on demand)
Transmission Mode	Bitsynchronous
Clock Pulse	external/internal clock pulse

Receiving/Sending Clock Pulse	Can be selected separately
Coding	NRZ/NRZI
Frame Size	128 - 1024 Byte
Time Control for Transmitter	internal handling according to data length
Time Control for Receiver	20 ms - 60 s
Special Services	<input type="checkbox"/> Framing for transmit/receive jobs <input type="checkbox"/> CREDITS for 1...255 Frames/Blocks or continuous, permanent reception. <input type="checkbox"/> Support of modem signal lines.



□ **X.25**

X.25 is a network protocol driver for connection to WANs. X.25 allows to run several logical channels on one

physical line. Permanent virtual circuits (PVCs), switched virtual circuits (SVCs) and leased lines are supported.

□ **Parameters**

Baud Rate	300 Bit/s - 1 Mbit/s synchronous
Frame Size	1 - 7 Frames
Packet Length	64 - 1024 Byte
Operation Mode	DCE or DTE
Modem Operation	on/off (leased lines)
Modem Watchdog	1 - 255 ms

In addition, all HDLC parameter settings are admissible also for this driver. This driver is certified according to NET3.

□ **SINEC-L1**

SINEC-L1 is a local network for connection of up to 30 automation components, such as, for example, SIMATIC S5. SINEC-L1-bus is the first fieldbus protocol developed by Siemens. It is perfectly suited for non time-critical control transactions and

works according to the Master-Slave principle. The driver has the following characteristics: support of up to 30 stations, emergency messages, broadcast, direct traffic from Slave to Slave, collective READ-function, arbitrarily configurable alarm and

polling list, list of all failed Slaves available in Master operation mode, protocol timeouts may be parameterised arbitrarily, PG-operation possible.

□ **Parameters**

Baud Rate	9.600 Bit/s
No. of Stop Bits	1, 2
No. of Data Bits	7, 8
Parity	even, odd, none
Operating Mode	SINEC-L1 master and slave



□ PROFIBUS

As PROFIBUS supports various different protocol variants, it is ideal for fast, time-critical data transfer, as well as for extensive and complex communication tasks. The COMSOFT PROFIBUS protocol driver supports all PROFIBUS protocol variants (L2, FMS, DP and DPV1) up to a baud rate of 1.5 Mbit/s for the DF PROFI family. For the DF PROFI II family DPVo/DPV1 as Master class 1/2 and DPVo as DP Slave is supported up to 12 Mbit/s. It can be operated as Master, Slave or combination Master. In the combination Master mode, the individual protocol

variants can be run in parallel. The protocol driver comprises the application layer interface (ALI) for PROFIBUS, simplifying the structure of the user interface.

In operation as L2 or FMS Master, ALI takes over the administration of its own object list and answers the requests of other participants autonomously, thus taking load off the application. In the DP Master operation, ALI generates a cyclic process image of the attached bus participants, which can be read and modified by the application at any time.

Cyclic DP services and counter-cyclic DPV1 services (Master class 2) can be used simultaneously. In this way, an enhanced communication with complex units from the processing and automation area is realized.

In the DP Slave operation mode standard conformant DP Masters are supported. A GSD file for configuration of the master is included in the scope of delivery. The operating modes DP, DPV1 Master and DP Slave are also supported by the COMSOFT OPC-Server.

□ Parameters

Certificate	PNO-certificate for layer 2	
Protocol Version	FMS	Master
	DP/DPV1	Master or Slave
	FMS/DP	Combination Master
Baud Rates	9.6,19.2,45.45,93.75,187.5, 500 Kbit/s 1.5Mbit/s (also 3, 6, 12 Mbit/s for DF PROFI II)	
Layer 2 Services	SDA, SDN and (C)SRD, live list and L2-identification	
Layer 7 Services	initiate, abort, reject, status, unsolicited-(FMS, PA) status, identify, get-ov, read, write, event-notification, acknowledge-event-notification, event-notification-with-type, alter-event-notification-monitoring, information-report, information-report-with-type	
DP Services	Class 1 Master-Slave	
DP/DPV1 Services	Class 2 Master-Slave	
	MSAC2_initiate, SAC2_read, MSAC2_write, MSAC2_data_transport, MSAC2_abort	