

## SIMATIC Programming Devices



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# SIMATIC Programming Devices

## Programming devices

### Field PG M6

#### Overview



- The mobile, industry-standard programming device for automation engineers with a powerful, eighth-generation Intel® Core™ i processor (Coffee Lake) and high-speed RAM (DDR4 RAM)
- Elegant, robust enclosure made of light-weight stable injection-molded magnesium with rubber-protected corners and retractable carry-handle
- Can optimally be used both for engineering in the office and for the commissioning, service or maintenance of automation systems
- Industrial notebook with all commonly used interfaces for industrial applications
- Can be used immediately thanks to pre-installed SIMATIC engineering software

#### Technical specifications

Article number	<b>6ES7718-.....-0...</b> SIMATIC Field PG M6
<b>General information</b>	
Design of the programming device	Notebook
<b>Display</b>	
Design of display	15.6" full HD display in 16:9 format
<b>Resolution (pixels)</b>	
• Horizontal image resolution	1 920 Pixel
• Vertical image resolution	1 080 Pixel
<b>General features</b>	
• Non-reflecting	Yes
• Luminance	300 cd/m <sup>2</sup>
<b>Backlighting</b>	
• Type of backlighting	LED
<b>Control elements</b>	
<b>Keyboard fonts</b>	
• Design	QWERTZ/QWERTY or AZERTY (French); 87 keys
<b>Touch operation</b>	
• Integrated touch pad	Yes; Clickpad
<b>Supply voltage</b>	
Design of the power supply	External wide-range power supply; 3-pole
permissible range, lower limit (AC)	100 V; ±10 %, sinusoidal
permissible range, upper limit (AC)	240 V; ±10 %, sinusoidal
<b>Line frequency</b>	
• permissible range, lower limit	47 Hz
• permissible range, upper limit	63 Hz
<b>Processor</b>	
Processor type	Intel Core i5-8400H (2.5 to 4.2 GHz, 4 cores and hyper-threading, 8 MB Smart Cache) or i7-8850H (2.6 to 4.3 GHz 6 cores and hyper-threading, 9 MB Smart Cache)
Chipset	Intel CM246
Hyper-threading	Yes
Turbo Boost Technology 2.0	Yes
<b>Graphic</b>	
Graphics controller	Intel® UHD Graphics 630
<b>Drives</b>	
SSD	Yes; Easy to replace
• Memory capacity	256 Gbyte; Up to 2 TB SSD
TPM Security Chip	Yes; 2.0 (version for China without TPM)
<b>Memory</b>	
Type of memory	DDR4-SDRAM SO-DIMM
<b>Work memory</b>	
• Number of slots	2; Can be equipped with 1x 8 GB, 1x 16 GB or 2x 16 GB
<b>Accumulator</b>	
Replaceable	Yes; Lithium-ion battery
Capacity	8.25 A-h

## Technical specifications (continued)

Article number	<b>6ES7718-.....0...</b> SIMATIC Field PG M6
<b>Interfaces</b>	
PROFIBUS/MPI	1x PROFIBUS DP / MPI; 9-pin Sub-D socket; 9.6 kBaud to 12 MBaud
Number of RS 232 interfaces	1; 25-pin socket
Number of USB interfaces	4
• Type A	3; 1x USB port incl. integrated charging function for USB devices (e.g. smartphone) – also with device switched off
• Type C	1; USB 3.1 Gen. 2
Number of chip-card readers	1; Smart Card Reader (ISO/IEC 7816)
Bluetooth radio standard	Yes; V5.0
Multimedia card/SD card slot	2 in 1 (SDHC UHS-II, MMC)
Card reader for SIMATIC memory cards	SIMATIC memory cards (for S7-300/400), SMC (for S7-1x00), SIMATIC micro memory card (for S7-300/C7/ET 200) - including programming interfaces
Universal Audio Jack	Yes; Audio socket for 3.5 mm jack
<b>Video interfaces</b>	
• analog video signal (VGA)	Yes; via adapter from DVI to VGA
• DVI-I	Yes; 1x
• DisplayPort	Yes; 1x
<b>Industrial Ethernet</b>	
• Industrial Ethernet interface	2x Ethernet (RJ45)
- 100 Mbps	Yes
- 1000 Mbps	Yes; Gigabit Ethernet; 2x RJ45 with 2 independent MAC/IP addresses
• Wake on LAN	Yes
• IAMT (Intel Active Management Technology)	Yes
<b>WLAN</b>	
• Type	802.11ac
<b>Integrated Functions</b>	
<b>Monitoring functions</b>	
• Status LEDs	Battery status, device status, access to HDD/DVD, access to SD/MMC, MPI/DP, S5 and S7 modules / Card Reader (except Smart Card Reader), Num Lock, Caps Lock, WLAN active
<b>EMC</b>	
<b>Interference immunity against discharge of static electricity</b>	
• Interference immunity against discharge of static electricity acc. to IEC 61000-4-2	Yes; $\pm 4$ kV contact discharge acc. to IEC 61000-4-2, ESD; $\pm 8$ kV air discharge acc. to IEC 61000-4-2, ESD
<b>Interference immunity to cable-borne interference</b>	
• Interference immunity on supply cables	$\pm 2$ kV (according to IEC 61000-4-4, burst); $\pm 1$ kV (according to IEC 61000-4-5, surge pulse/line to line); $\pm 2$ kV (according to IEC 61000-4-5, surge pulse/line to ground)
• Interference immunity on signal cables	$\pm 1$ kV (according to IEC 61000-4-4, burst, length < 30 m); $\pm 2$ kV (according to IEC 61000-4-4, burst, length > 30 m); $\pm 2$ kV (according to IEC 61000-4-5, surge sym./line to ground, length > 30 m)
<b>Standards, approvals, certificates</b>	
CE mark	Yes
CSA approval	Yes
UL approval	Yes
DIN/ISO 9001	Yes

Article number	<b>6ES7718-.....0...</b> SIMATIC Field PG M6
<b>Ambient conditions</b>	
<b>Ambient temperature during operation</b>	
• min.	5 °C; Max. 10 °C/h (no condensation)
• max.	40 °C; Max. 10 °C/h (no condensation)
<b>Ambient temperature during storage/transportation</b>	
• min.	-20 °C; Max. 20 °C/h (no condensation)
• max.	60 °C; Max. 20 °C/h (no condensation)
<b>Relative humidity</b>	
• Operation, min.	5 %; At 30 °C/h (no condensation); Tested according to IEC 60068-2-78, IEC 60068-2-30, IEC 60068-2-14
• Operation, max.	85 %; At 30 °C/h (no condensation); Tested according to IEC 60068-2-78, IEC 60068-2-30, IEC 60068-2-14
<b>Vibrations</b>	
• Operation, tested according to IEC 60068-2-6	Yes
<b>Shock testing</b>	
• tested according to IEC 60068-2-27	Yes
<b>Operating systems</b>	
Additional info on operating system	Multi-Language User Interface (MUI): 6 languages (English, German, French, Spanish, Italian, Chinese)
<b>pre-installed operating system</b>	
• Windows 10	Yes; Windows 10 Enterprise 64-bit
<b>Software</b>	
<b>Preinstalled</b>	
• STEP 7 Professional (TIA Portal)	Yes; Software version: V15.1
• STEP 7	Yes; Professional 2017 SR1
• WinCC flexible Advanced 2008	Yes; Software version: SP5
• WinCC Advanced (TIA Portal)	Yes; Software version: V15.1
• STEP 5	Yes; Optional; software version: STEP 5 V7.23 HF2 (incl. GRAPH 5/II V7.15)
<b>Mechanics/material</b>	
Material of housing	metal
Handle	Yes; retractable
Socket for Kensington lock	Yes
rubber corner guards	Yes
<b>Dimensions</b>	
Width	385 mm
Height	53 mm
Depth	275 mm
<b>Weights</b>	
Weight, approx.	3.4 kg; incl. rechargeable battery
<b>Scope of supply</b>	
Accumulator	Yes
Power supply	Yes
Backpack	Yes
SIMATIC Software	Yes
Recovery media	Yes; Restore & Recovery

# SIMATIC Programming Devices

## Programming devices

### Field PG M6

#### Ordering data

#### Article No.

##### Field PG M6 Comfort programming device

6ES7718- 0 0 0 - 0 0 0

Intel i5-8400H processor  
(8 MB Smart Cache, 2.5 to 4.2 GHz, 4 cores + Hyper-Threading),  
15.6" display, full HD (1920x1080),  
DVD+-RW drive, UHD graphics 630,  
WLAN 802.11ac, Bluetooth v5.0;  
without SIMATIC S5 interface,  
without SIMATIC S5 EPROMMER

##### RAM

- 1 x 8 GB DDR4 SDRAM SO-DIMM **A**
- 1 x 16 GB DDR4 SDRAM SO-DIMM **B**
- 2 x 16 GB DDR4 SDRAM SO-DIMM **C**

##### Hard disk

- 256 GB SSD SATA **A**
- 512 GB SSD SATA **B**
- 2 TB SSD SATA **C**

##### Keyboard and power cable (essential)

- Keyboard: QWERTY (& German); power supply cable: Germany, France, the Netherlands, Spain, Belgium, Austria, Sweden, Finland **0**
- Keyboard: AZERTY (France); power supply cable: Germany, France, the Netherlands, Spain, Belgium, Austria, Sweden, Finland **1**
- Keyboard: QWERTY (& German); power supply cable: Italy **2**
- Keyboard: QWERTY (& German); power supply cable: Switzerland **3**
- Keyboard: QWERTY (& German); power supply cable: USA **4**
- Keyboard: QWERTY (& German); power supply cable: United Kingdom **5**
- Keyboard: QWERTY (& German); power supply cable: China; approval for China (CCC) **6**
- Keyboard: QWERTY (& German); without power supply cable **7**

#### Article No.

##### Field PG M6 Comfort programming device (cont.)

6ES7718- 0 0 0 - 0 0 0

##### Operating system

- Windows 10 Enterprise, 64-bit **A**

##### SIMATIC software licenses

- Trial license: **A**  
STEP 7 Professional Combo (STEP 7 Prof. V15.1 and STEP 7 Prof. 2017 SR1), WinCC Advanced Combo (WinCC V15.1 and WinCC flexible 2008 SP8), Safety Advanced Combo (Safety Adv. V15.1 and Distributed Safety V5.4 SP5)
- License: **B**  
STEP 7 & WinCC & Safety in the TIA Portal:  
STEP 7 Prof. V15.1, WinCC Adv. V15.1, Safety Advanced V15.1
- License: **C**  
STEP 7 & WinCC & Safety Combo:  
STEP 7 Professional Combo (STEP 7 Prof. V15.1 and STEP 7 Prof. 2017 SR1), WinCC Advanced Combo (WinCC V15.1 and WinCC flexible 2008 SP8), Safety Advanced Combo (Safety Adv. V15.1 and Distributed Safety V5.4 SP5)



# SIMATIC Programming Devices

## Programming devices

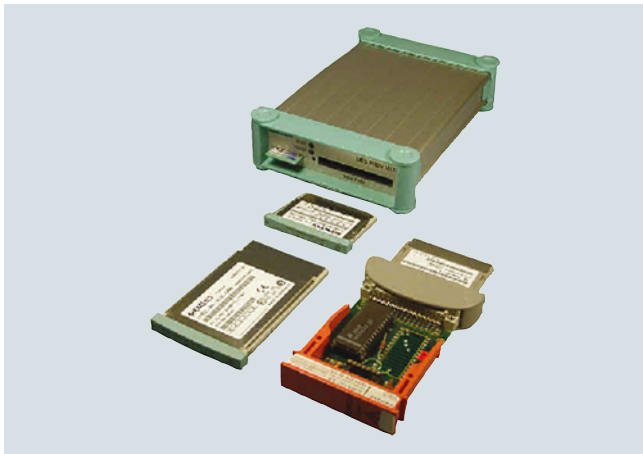
### Field PG M6

Ordering data	Article No.	Article No.
<b>Accessories</b>		
<b>Memory expansion</b>		
8 GB RAM	6ES7648-3AK00-0PA0	
16 GB RAM	6ES7648-3AK10-0PA0	
<b>AC/DC external power supply unit</b>	6ES7798-0GA05-0XA0	
For Field PG M6 only; spare part, included in the scope of supply of the Field PG M6		
<b>Power cord (length 3 m)</b>		
For Field PG M2/M4/M5/M6 only		
For Germany, France, the Netherlands, Spain, Belgium, Austria, Sweden, Finland	6ES7900-5AA00-0XA0	
For Great Britain	6ES7900-5BA00-0XA0	
For Switzerland	6ES7900-5CA00-0XA0	
For USA	6ES7900-5DA00-0XA0	
For Italy	6ES7900-5EA00-0XA0	
For China	6ES7900-5FA00-0XA0	
<b>Spare battery (lithium ion, 8.25 Ah)<sup>1)</sup></b>	6ES7798-0AA10-0XA0	
For Field PG M6 only; spare part, included in the scope of supply of the Field PG M6		
<b>MPI cable</b>	6ES7901-0BF00-0AA0	
For connecting a PG and SIMATIC S7 via MPI; 5 m		
<b>S5 EPROM programming adapter</b>	6ES7798-0CA00-0XA0	
For SIMATIC S5 EPROM programming using the Field PG		
<b>S5 connection cable</b>	6ES5734-2BF00	
For connecting programming devices to SIMATIC S5 PLCs, 5 m		
<b>Replaceable SSD kit</b>		
Replaceable SSD 512 GB serial ATA; with protective pocket and torx screwdriver; for Field PG M5/M6	6ES7791-2BA22-0AA0	
Replaceable SSD 2 TB serial ATA; with protective pocket and torx screwdriver; for Field PG M6	6ES7791-2BA25-0AA0	
		<b>Adapter serial ATA to USB 3.0</b>
		6ES7790-1AA01-0AA0
		For using the removable hard disk in the hard disk kit as an external hard disk (only for Field PG M4/M5/M6)
		<b>Backpack for Field PG M4/M5/M6</b>
		6ES7798-0DA02-0XA0
		<b>SIMATIC IPC Image &amp; Partition Creator V3.5</b>
		6ES7648-6AA03-5YA0
		Software tool for very easy preventive data backup and efficient partition management on SIMATIC IPCs
		<b>SIMATIC IPC Remote Manager V1.3</b>
		6ES7648-6EA01-3YA0
		Software tool for efficient remote maintenance and management of a SIMATIC IPC
		<b>Software Update Service (Standard Edition)<sup>2)</sup></b>
		The delivery is implemented according to the number of ordered SUS products (e.g. 10 upgrade packages with 10 DVDs, 10 USB flash drives, etc.)
		• STEP 7 Professional V1x
		• STEP 7 Professional Combo (STEP 7 Prof. V1x (TIA Portal) and STEP 7 Prof.)
		• SIMATIC WinCC Advanced
		• SIMATIC STEP 7 Safety Advanced
		6ES7822-1AA00-0YL5
		6ES7810-5CC04-0YE2
		6AV6613-0AA00-0AL0
		6ES7833-1FC00-0YX2
		<b>Software Update Service (download)<sup>2)</sup></b>
		The upgrades and service packs are available for downloading. Email address required for delivery
		• STEP 7 Professional V1x
		• STEP 7 Professional Combo (STEP 7 Prof. V1x (TIA Portal) and STEP 7 Prof.)
		• SIMATIC WinCC Advanced
		• SIMATIC STEP 7 Safety Advanced
		6ES7822-1AE00-0YY0
		6ES7810-5CC04-0YY2
		6AV6613-0AA00-0AY0
		6ES7833-1FC00-0YY0

<sup>1)</sup> The capacity of the battery decreases for technological reasons with each charging/discharging cycle and also as the result of being stored at excessively high or low temperatures. The running time per charge decreases therefore over the course of time. With normal use, the battery can be charged and discharged over a period of six months from when the Field PG is purchased. Loss of capacity is not covered by the warranty. For the battery's operation we grant a warranty of six months. We recommend replacing the battery with an original Siemens battery at the end of these six months if there is a significant drop in performance.

<sup>2)</sup> For more information on the Software Update Service, see page 11/2.

### Overview



- External EPROM programming device
- For programming SIMATIC Memory Cards, SIMATIC Micro Memory Cards as well as SIMATIC EPROM and EEPROM modules
- For connection to the PC via the USB interface

### Technical specifications

Article number	<b>6ES7792-0AA00-0XA0</b> USB Prommer, 115/220V
<b>General information</b>	
Design of the programming device	Desktop device
<b>Display</b>	
Design of display	without
<b>Supply voltage</b>	
Design of the power supply	90 to 264 V; 47 to 63 Hz; wide range power supply unit
<b>Ambient conditions</b>	
<b>Ambient temperature during operation</b>	
• min.	5 °C
• max.	40 °C
<b>Ambient temperature during storage/transportation</b>	
• min.	-20 °C
• max.	60 °C
<b>Dimensions</b>	
Width	172 mm
Height	40 mm
Depth	121 mm
<b>Weights</b>	
Weight, approx.	400 g

### Ordering data

### Article No.

**EPROM programming device,  
USB Prommer**  
For programming SIMATIC Memory  
Cards and EPROM modules

**6ES7792-0AA00-0XA0**

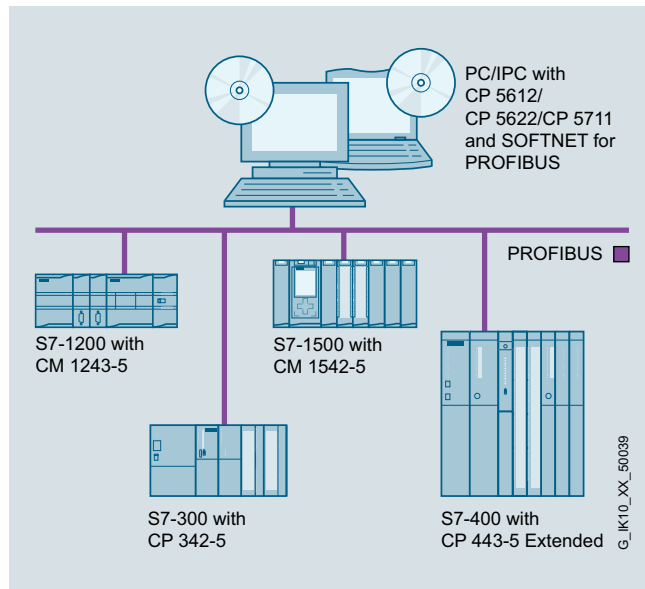
# SIMATIC Programming Devices

Accessories

Communications software

## SOFTNET for PROFIBUS

### Overview



DP-M	DP-S	FMS	OPC	PG/OP	S7/S5
●	●		●	●	●

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- Software for connecting PCs/programming devices and notebooks to automation systems
- Communication services:
  - PROFIBUS DP master Class 1 and 2 with acyclic expansions
  - PROFIBUS DP slave
  - PG/OP communication
  - S7 communication
  - Open communication (SEND/RECEIVE) based on the FDL interface
- The appropriate OPC servers and configuration tools are included in the scope of supply of the respective communications software

### Technical specifications

Performance data	CP 5612/CP 5622/CP 5711
<u>Mono protocol mode</u>	
Number of connectable DP slaves	max. 60
Number of FDL tasks waiting	max. 50
Number of PG/OP and S7 connections	max. 8
• DP master	DP-V0, DP-V1 with SOFTNET-PB DP
• DP slave	DP-V0, DP-V1 with SOFTNET-PB DP slave



Ordering data	Article No.	Ordering data	Article No.
<b>SOFTNET-PB S7</b> Software for S7 communication, incl. FDL protocol with OPC server and configuration tool, runtime software, software and electronic manual on DVD-ROM, license key on USB flash drive, Class A; for CP 5612 (Win 7 and higher), CP 5622 (Win 7 and higher), CP 5711		<b>SOFTNET-PB DP Slave</b> Software for DP slave, with OPC server and configuration tool, single license for one installation, runtime software, software and electronic manual on DVD-ROM, license key on USB flash drive, Class A; for CP 5612 (Win 7 and higher), CP 5622 (Win 7 and higher), CP 5711	
<b>SOFTNET-PB S7 V15</b> For 32/64-bit: Windows 7 SP1 for Windows 7 SP1 (Professional, Enterprise, Ultimate), 64-bit For Windows Server 2008 R2 SP1 (Standard or Enterprise Edition) For Windows Server 2012 R2 Update (Standard Edition) For Windows 10 Pro, 64-bit, Version 1607 or higher For Windows 10 Enterprise, 64-bit, Version 1607 or higher English/German • Single license for one installation	<b>6GK1704-5CW15-0AA0</b>	<b>SOFTNET-PB DP Slave V15</b> For Windows 7 SP1 (Professional, Enterprise, Ultimate), 64-bit For Windows Server 2008 R2 SP1 (Standard or Enterprise Edition) For Windows Server 2012 R2 Update (Standard Edition) For Windows 10 Pro, 64-bit, Version 1607 or higher For Windows 10 Enterprise, 64-bit, Version 1607 or higher English/German • Single license for one installation	<b>6GK1704-5SW15-0AA0</b>
<b>Software Update Service</b> For 1 year, with automatic extension Requirement: current software version	<b>6GK1704-5CW00-3AL0</b>	<b>Software Update Service</b> For 1 year, with automatic extension Requirement: current software version	<b>6GK1704-5SW00-3AL0</b>
<b>Upgrade</b> • From Edition 2006 to SOFTNET-S7 Edition 2008 or V15	<b>6GK1704-5CW00-3AE0</b>	<b>Upgrade</b> • From Edition 2006 to SOFTNET-DP Slave Edition 2008 or V15	<b>6GK1704-5SW00-3AE0</b>
<b>SOFTNET-PB DP</b> Software for DP protocol (master Class 1 and 2), incl. FDL protocol with OPC server and configuration tool; runtime software, software and electronic manual on DVD-ROM, license key on USB flash drive; for CP 5612 (Win 7 and higher), CP 5622 (Win 7 and higher), CP 5711			
<b>SOFTNET-PB DP V15</b> For Windows 7 SP1 (Professional, Enterprise, Ultimate), 64-bit For Windows Server 2008 R2 SP1 (Standard or Enterprise Edition) For Windows Server 2012 R2 Update (Standard Edition) For Windows 10 Pro, 64-bit, Version 1607 or higher For Windows 10 Enterprise, 64-bit, Version 1607 or higher English/German • Single license for one installation	<b>6GK1704-5DW15-0AA0</b>		
<b>Software Update Service</b> For 1 year, with automatic extension Requirement: current software version	<b>6GK1704-5DW00-3AL0</b>		
<b>Upgrade</b> • From Edition 2006 to SOFTNET-DP Edition 2008 or V15	<b>6GK1704-5DW00-3AE0</b>		

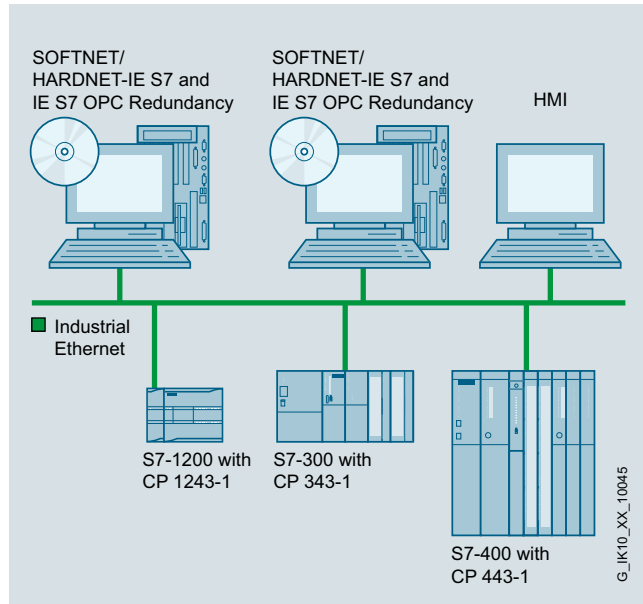
# SIMATIC Programming Devices

Accessories

Communications software

## SOFTNET for Industrial Ethernet

### Overview



System configuration SOFTNET for Industrial Ethernet

ISO	TCP/UDP	PN	MRP	OPC	PG/OP	S7/S5	IT
●	●			●	●	●	

- Software for coupling programming devices/PCs/workstations to automation systems
- Communication services:
  - PG/OP communication
  - S7 communication
  - Open communication (SEND/RECEIVE)
- Can be used with
  - Layer 2 Ethernet card (PCI/PCIe), e.g. CP 1612 A2
  - Integrated Industrial Ethernet interface
  - Modem/ISDN (Remote Access Service RAS)
- Complete protocol stack as a software package
- Increased availability thanks to additional option packages such as OPC server redundancy

### Technical specifications

#### Technical specifications

#### Performance data

#### S7 and PG/OP communication (number of operable connections)

- SOFTNET-IE S7 Extended
 

Max. 255 (S7-300 / S7-400)
Max. 512 (S7-1200 / S7-1500)
- SOFTNET-IE S7
 

Max. 64
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- SOFTNET-IE S7 Lean
 

Max. 8
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Ordering data	Article No.	Ordering data	Article No.
<b>SOFTNET S7 for Industrial Ethernet</b> Software for S7 and open communication, incl. OPC server, PG/OP communication, and NCM PC/STEP 7 Professional V12, runtime software, software and electronic manual on CD-ROM, license key on USB flash drive, Class A		<b>SOFTNET-IE S7 Lean Edition V15</b> For Windows 7 SP1 Prof./Ult. (64-bit); Windows Server 2008 R2 SP1, Windows Server 2012 R2; Windows 10 PRO/Enterprise (64-bit), Version 1607 or higher; Windows Server 2016; Up to eight connections; English/German; single license for one installation • On DVD • Download <sup>1)</sup>	<b>6GK1704-1LW15-0AA0</b> <b>6GK1704-1LW15-0AK0</b>
<b>SOFTNET-IE S7 V15</b> For Windows 7 SP1 Prof./Ult. (64-bit); Windows Server 2008 R2 SP1, Windows Server 2012 R2; Windows 10 PRO/Enterprise (64-bit), Version 1607 or higher; Windows Server 2016; English/German  Up to 64 connections; single license for one installation • On DVD • Download <sup>1)</sup>	<b>6GK1704-1CW15-0AA0</b> <b>6GK1704-1CW15-0AK0</b>	<b>Software Update Service</b> For 1 year with automatic extension Requirement: current software version	<b>6GK1704-1LW00-3AL0</b>
<b>Software Update Service</b> For 1 year with automatic extension Requirement: current software version	<b>6GK1704-1CW00-3AL0</b>	<b>Upgrade</b> • From Edition 2006 to Edition 2008 or V13 • From V6.0, V6.1, V6.2 or V6.3 to Edition 2008 or V13	<b>6GK1704-1LW00-3AE0</b> <b>6GK1704-1LW00-3AE1</b>
<b>SOFTNET-IE S7 REDCONNECT VM V15</b> Software for fail-safe S7 communication via redundant networks, incl. S7 OPC server, runtime software, software and electronic manual on CD-ROM, license key on USB flash drive, Class A For Windows 7 SP1 Prof./Ult. (64-bit); Windows Server 2008 R2 SP1, Windows Server 2012 R2; Windows 10 PRO/Enterprise (64-bit), Version 1607 or higher; Windows Server 2016; English/German • Single license for one installation	<b>6GK1704-0HB15-0AA0</b>	<b>IE S7 OPC Redundancy</b> Software for redundant OPC servers in the environment of Industrial Ethernet software, S7 products, runtime software, software and electronic manual on CD-ROM, license key on USB flash drive, Class A	
		<b>IE S7 OPC Redundancy V13</b> For 64-bit: Windows 2008 Server R2 SP1; English/German • Single license for one installation	<b>6GK1706-1CW13-0AA0</b>

<sup>1)</sup> For more details of online software delivery, visit:  
<http://www.siemens.com/tia-online-software-delivery>

## SIMATIC Programming Devices

### Notes

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