SIEMENS

Data sheet

6ES7672-8AC01-0YA0



SIMATIC S7-1500, Software Controller CPU 1508S, Single License f. 1 install., R-SW, SW and docum. on DVD, license key on USB flash drive, R-SW Class A, 6 languages (de,en,it,fr,es,zh), executable in Windows 7/10 reference HW: IPC4x7E, IPC6x7E, IPC6x7E, IPC6x7D, IPC8x7D

General information	
Product type designation	CPU 1508S
Software version	V21.9
Product function	
I&M data	Yes; I&M0 to I&M3
Engineering with	
 STEP 7 TIA Portal configurable/integrated from version 	V17
Configuration control	
via dataset	Yes
Memory	
SIMATIC memory card required	No; Use of the PC mass storage
Work memory	
 integrated (for program) 	10 Mbyte
 integrated (for data) 	100 Mbyte
 integrated (for CPU function library of CPU Runtime) 	50 Mbyte
Load memory	
 integrated (on PC mass storage) 	1 024 Mbyte
Backup	
• with UPS	Yes; all memory areas declared retentive
 with non-volatile memory 	Yes; Depending on PC hardware
CPU processing times	
for bit operations, typ.	1 ns; On IPC427E, Intel Xeon processor
for word operations, typ.	2 ns; On IPC427E, Intel Xeon processor
for fixed point arithmetic, typ.	2 ns; On IPC427E, Intel Xeon processor
for floating point arithmetic, typ.	2 ns; On IPC427E, Intel Xeon processor
CPU-blocks	
Number of elements (total)	6 000; In addition to blocks such as DBs, FBs and FCs, UDTs, global constants, etc. are also regarded as elements
DB	
• Number, max.	5 999; Number range: 1 to 65535
• Size, max.	16 Mbyte
FB	
Number, max.	5 998; Number range: 1 to 65535
• Size, max.	1 024 kbyte
FC	
Number, max.	5 999; Number range: 1 to 65535
• Size, max.	1 024 kbyte
OB	
• Size, max.	1 024 kbyte
 Number of free cycle OBs 	100

 Number of time alarm OBs 	20
 Number of delay alarm OBs 	20
 Number of cyclic interrupt OBs 	20
 Number of process alarm OBs 	50
 Number of DPV1 alarm OBs 	3
 Number of isochronous mode OBs 	1
 Number of technology synchronous alarm OBs 	2
 Number of startup OBs 	100
 Number of asynchronous error OBs 	4
 Number of synchronous error OBs 	2
 Number of diagnostic alarm OBs 	1
Nesting depth	
 per priority class 	24
Counters, timers and their retentivity	
S7 counter	
• Number	2 048
Retentivity	
— adjustable	Yes
IEC counter	
Number	Any (only limited by the main memory)
Retentivity	
— adjustable	Yes
S7 times	
Number	2 048
Retentivity	
— adjustable	Yes
IEC timer	
• Number	Any (only limited by the main memory)
Retentivity	
— adjustable	Yes
	100
Data areas and their retentivity	
Data areas and their retentivity	
Data areas and their retentivity Retentive data area (incl. timers, counters, flags), max.	135 kbyte; on SIMATIC IPC427D, IPC477D, IPC427E, IPC477E, IPC627E, IPC677E; 35 KB on SIMATIC IPC627D, IPC677D and IPC827D
Retentive data area (incl. timers, counters, flags), max.	IPC677E; 35 KB on SIMATIC IPC627D, IPC677D and IPC827D
Retentive data area (incl. timers, counters, flags), max. Extended retentive data area (incl. timers, counters, flags), max.	IPC677E; 35 KB on SIMATIC IPC627D, IPC677D and IPC827D
Retentive data area (incl. timers, counters, flags), max. Extended retentive data area (incl. timers, counters, flags), max. Flag	IPC677E; 35 KB on SIMATIC IPC627D, IPC677D and IPC827D 100 Mbyte; When using PC mass storage for retentive data
Retentive data area (incl. timers, counters, flags), max. Extended retentive data area (incl. timers, counters, flags), max. Flag • Size, max.	IPC677E; 35 KB on SIMATIC IPC627D, IPC677D and IPC827D 100 Mbyte; When using PC mass storage for retentive data 16 kbyte
Retentive data area (incl. timers, counters, flags), max. Extended retentive data area (incl. timers, counters, flags), max. Flag • Size, max. • Number of clock memories Data blocks	IPC677E; 35 KB on SIMATIC IPC627D, IPC677D and IPC827D 100 Mbyte; When using PC mass storage for retentive data 16 kbyte
Retentive data area (incl. timers, counters, flags), max. Extended retentive data area (incl. timers, counters, flags), max. Flag • Size, max. • Number of clock memories Data blocks • Retentivity adjustable	IPC677E; 35 KB on SIMATIC IPC627D, IPC677D and IPC827D 100 Mbyte; When using PC mass storage for retentive data 16 kbyte 8; in 1 memory byte
Retentive data area (incl. timers, counters, flags), max. Extended retentive data area (incl. timers, counters, flags), max. Flag • Size, max. • Number of clock memories Data blocks	IPC677E; 35 KB on SIMATIC IPC627D, IPC677D and IPC827D 100 Mbyte; When using PC mass storage for retentive data 16 kbyte 8; in 1 memory byte Yes
Retentive data area (incl. timers, counters, flags), max. Extended retentive data area (incl. timers, counters, flags), max. Flag • Size, max. • Number of clock memories Data blocks • Retentivity adjustable • Retentivity preset Local data	IPC677E; 35 KB on SIMATIC IPC627D, IPC677D and IPC827D 100 Mbyte; When using PC mass storage for retentive data 16 kbyte 8; in 1 memory byte Yes No
Retentive data area (incl. timers, counters, flags), max. Extended retentive data area (incl. timers, counters, flags), max. Flag • Size, max. • Number of clock memories Data blocks • Retentivity adjustable • Retentivity preset Local data • per priority class, max.	IPC677E; 35 KB on SIMATIC IPC627D, IPC677D and IPC827D 100 Mbyte; When using PC mass storage for retentive data 16 kbyte 8; in 1 memory byte Yes
Retentive data area (incl. timers, counters, flags), max. Extended retentive data area (incl. timers, counters, flags), max. Flag • Size, max. • Number of clock memories Data blocks • Retentivity adjustable • Retentivity preset Local data • per priority class, max. Address area	IPC677E; 35 KB on SIMATIC IPC627D, IPC677D and IPC827D 100 Mbyte; When using PC mass storage for retentive data 16 kbyte 8; in 1 memory byte Yes No 64 kbyte; max. 16 KB per block
Retentive data area (incl. timers, counters, flags), max. Extended retentive data area (incl. timers, counters, flags), max. Flag • Size, max. • Number of clock memories Data blocks • Retentivity adjustable • Retentivity preset Local data • per priority class, max. Address area Number of IO modules	IPC677E; 35 KB on SIMATIC IPC627D, IPC677D and IPC827D 100 Mbyte; When using PC mass storage for retentive data 16 kbyte 8; in 1 memory byte Yes No
Retentive data area (incl. timers, counters, flags), max. Extended retentive data area (incl. timers, counters, flags), max. Flag • Size, max. • Number of clock memories Data blocks • Retentivity adjustable • Retentivity preset Local data • per priority class, max. Address area Number of IO modules I/O address area	IPC677E; 35 KB on SIMATIC IPC627D, IPC677D and IPC827D 100 Mbyte; When using PC mass storage for retentive data 16 kbyte 8; in 1 memory byte Yes No 64 kbyte; max. 16 KB per block 8 192
Retentive data area (incl. timers, counters, flags), max. Extended retentive data area (incl. timers, counters, flags), max. Flag • Size, max. • Number of clock memories Data blocks • Retentivity adjustable • Retentivity preset Local data • per priority class, max. Address area Number of IO modules I/O address area • Inputs	IPC677E; 35 KB on SIMATIC IPC627D, IPC677D and IPC827D 100 Mbyte; When using PC mass storage for retentive data 16 kbyte 8; in 1 memory byte Yes No 64 kbyte; max. 16 KB per block 8 192 32 kbyte
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Retentive data area (incl. timers, counters, flags), max. Extended retentive data area (incl. timers, counters, flags), max. Flag • Size, max. • Number of clock memories Data blocks • Retentivity adjustable • Retentivity preset Local data • per priority class, max. Address area Number of IO modules I/O address area • Inputs • Outputs Subprocess images • Number of distributed IO systems Number of DP masters • via PC interfaces Number of IO Controllers	IPC677E; 35 KB on SIMATIC IPC627D, IPC677D and IPC827D 100 Mbyte; When using PC mass storage for retentive data 16 kbyte 8; in 1 memory byte Yes No 64 kbyte; max. 16 KB per block 8 192 32 kbyte 32 kbyte 32
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Retentive data area (incl. timers, counters, flags), max. Extended retentive data area (incl. timers, counters, flags), max. Flag • Size, max. • Number of clock memories Data blocks • Retentivity adjustable • Retentivity preset Local data • per priority class, max. Address area Number of IO modules I/O address area • Inputs • Outputs Subprocess images • Number of subprocess images, max. Hardware configuration Number of DP masters • via PC interfaces Number of IO Controllers • via PC interfaces Time of day Clock	IPC677E; 35 KB on SIMATIC IPC627D, IPC677D and IPC827D 100 Mbyte; When using PC mass storage for retentive data 16 kbyte 8; in 1 memory byte Yes No 64 kbyte; max. 16 KB per block 8 192 32 kbyte 32 kbyte 32 20 1 20
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Retentive data area (incl. timers, counters, flags), max. Extended retentive data area (incl. timers, counters, flags), max. Flag • Size, max. • Number of clock memories Data blocks • Retentivity adjustable • Retentivity preset Local data • per priority class, max. Address area Number of IO modules I/O address area • Inputs • Outputs Subprocess images • Number of subprocess images, max. Hardware configuration Number of DP masters • via PC interfaces Number of IO Controllers • via PC interfaces Time of day Clock • Type • Deviation per day, max.	IPC677E; 35 KB on SIMATIC IPC627D, IPC677D and IPC827D 100 Mbyte; When using PC mass storage for retentive data 16 kbyte 8; in 1 memory byte Yes No 64 kbyte; max. 16 KB per block 8 192 32 kbyte 32 kbyte 32 20 1 20
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Clock synchronization	
	Yes
• supported	
• to DP, master	No
on Ethernet via NTP	Yes
on Windows clock, slave	Yes
Interfaces	•
Number of interfaces	3
Number of PROFINET interfaces	2
Number of PROFIBUS interfaces	1
1. Interface	
Interface type	CP 1625
Number of connections	192
Interface types	
RJ 45 (Ethernet)	Yes
— Transmission rate, max.	100 Mbit/s
— Industrial Ethernet status LED	Yes
Number of ports	2
integrated switch	Yes
Protocols	
IP protocol	Yes; IPv4
PROFINET IO Controller	Yes
PROFINET IO Device	Yes
SIMATIC communication	Yes
Open IE communication	Yes
Web server	Yes
PROFINET IO Controller	
Services	
 — Isochronous mode 	Yes
— Direct data exchange	Yes; Requirement: IRT and isochronous mode (MRPD optional)
— shortest clock pulse	500 µs
— IRT	Yes
— PROFlenergy	Yes
— Prioritized startup	Yes; max. 32 PROFINET devices; if you want to use the "Prioritized startup" functionality in STEP7 for the PROFINET interface of the CPU, the CPU and the device must be seperated by means of a switch (e.g SCALANCE X205) or CP1625
- Number of connectable IO Devices, max.	256; the maximal amount of supported devices on all interfaces (PN/PB) is 384 in total
- Of which IO devices with IRT, max.	64
 — Number of connectable IO Devices for RT, max. 	256
— of which in line, max.	256
- Number of IO Devices that can be simultaneously	8
activated/deactivated, max. — IO Devices changing during operation (partner	Yes; the CPU and changing IO devices must be separated by a switch (e.g.
ports), supported	SCALANCE X205)
 — Number of IO Devices per tool, max. — Updating times 	8 The minimum value of the update time also depends on communication share set for PROFINET IO, on the number of IO devices, and on the quantity of
	configured user data
Update time for IRT	
— for send cycle of 250 µs	250 µs to 4 ms
— for send cycle of 500 µs	500 µs to 8 ms
— for send cycle of 1 ms	1 ms to 16 ms
— for send cycle of 2 ms	2 ms to 32 ms
— for send cycle of 4 ms	Update time = set "odd" send clock (any multiple of 125 μs: 375 μs, 625 μs 3 875 μs)
 — With IRT and parameterization of "odd" send cycles 	Update time = set "odd" send clock (any multiple of 125 μs : 375 μs , 625 μs 3 875 $\mu s)$
Update time for RT	
— for send cycle of 250 µs	250 μs to 128 ms
— for send cycle of 500 μs	500 µs to 256 ms
— for send cycle of 1 ms	1 ms to 512 ms
— for send cycle of 2 ms	2 ms to 512 ms
 for send cycle of 4 ms 	4 ms to 512 ms

- Inputs max. - Explorements - Explore	Address area	
- Outputs. max. 16 ktyle Services - - Bicch mode No - PROFEMET ID Device Yes - PROFEMET ID Controllers with shared device. max. 4 - Protoce all ID Controllers with shared device. max. 4 - Number of ID Controllers with shared device. max. 4 - Asset management record Yes. - Industrial Efference) Oncheard PROFINET / Einterface X2 of the SIMATIC IPC, Intel Springville - Industrial Efference Yes. - Industrial Efference Yes. - Industrial Efference Yes. - Industrial Efference Yes. - Protocol Yes. - Protocol Yes. - Protocol Yes. - Protocol Yes. - Holdschmark Yes. - Protocol Yes. - Holdschmark Yes. - Holdschmark Yes. - Holdschmark Yes.		16 kbyte
PROFINET IO Device Isochronous mode No - Isochronous mode No Isochronous mode No - IRT Yes Isochronous mode Yes - PROFInerstry Yes Isochronous mode Yes - Sharde device Yes Isochronous mode Yes - Number of IO Controllers with shared device, max. 4 Yes - Asset management record Yes Isochronous mode Yes 2 Interfaces Isochronous mode Yes Isochronous mode Yes - Indext GEBernen() Yes Yes	-	
- Isochronous mode - Isochronous mode - Isochronous mode - Isochronous mode - PROFilesergy Yes - Profilesergy Yes - Profilesergy Yes - Number of Docorrollers with shared device, max. 4 - Asset management record // Yes // Asset for the SIMATIC IPC, Intel Springville // Yes // Asset for the SIMATIC IPC, Intel Springville // Yes // Asset for the SIMATIC IPC, Intel Springville // Yes // Asset for the SIMATIC IPC, Intel Springville // Yes // Asset for the SIMATIC IPC, Intel Springville // Yes // Asset for the SIMATIC IPC, Intel Springville // Yes // Asset for the SIMATIC IPC, Intel Springville // Yes // Asset for the SIMATIC IPC, Intel Springville // Yes // Asset for the SIMATIC IPC, Intel Springville // Yes // Asset for the SIMATIC IPC, Intel Springville // Yes // Asset for the SIMATIC IPC, Intel Springville // Yes // Yes // Asset for the SIMATIC IPC, Intel Springville // Yes //		
- IPT Yes - PROFInency Yes - PROFInency Yes - Shared device Yes - Number of IO Controlles with shared device, max. 4 - Asset management record Yes - Asset management record Onbased PROFINET / IE interface X2 of the SIMATIC IPC, Intel Springuile Interface Spre Onbased PROFINET / IE interface X2 of the SIMATIC IPC, Intel Springuile Interface Spre Onbased PROFINET / IE interface X2 of the SIMATIC IPC, Intel Springuile Interface Spre Onbased PROFINET / IE interface X2 of the SIMATIC IPC, Intel Springuile Interface Spre Onbased PROFINET / IE interface X2 of the SIMATIC IPC, Intel Springuile - Transmission rite, max. 100 - Industria Ethernet status LED Yes - Industria Swrth		
- IPT Yes - PROFInency Yes - PROFInency Yes - Shared device Yes - Number of IO Controlles with shared device, max. 4 - Asset management record Yes - Asset management record Onbased PROFINET / IE interface X2 of the SIMATIC IPC, Intel Springuile Interface Spre Onbased PROFINET / IE interface X2 of the SIMATIC IPC, Intel Springuile Interface Spre Onbased PROFINET / IE interface X2 of the SIMATIC IPC, Intel Springuile Interface Spre Onbased PROFINET / IE interface X2 of the SIMATIC IPC, Intel Springuile Interface Spre Onbased PROFINET / IE interface X2 of the SIMATIC IPC, Intel Springuile - Transmission rite, max. 100 - Industria Ethernet status LED Yes - Industria Swrth		No
- PROFINENTIAL Yes - Number of IO Controllers with shared device, max. 4 - Asset management record Yes 2 Interface 2101 Prinefrace type 0010000000000000000000000000000000000	— IRT	
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 Services Services<		
	•	
— Asset management record Yes 2. Interface Onboard PROFINET / IE Interface X2 of the SIMATIC IPC, Intel Springville 12107 Number of connections 192 Interface types - • R4 45 (Elnench) Yes • Interface types 100 Molks • Interface types 100 Molks • Integrated switch No • Protocol 1 • Protocol Yes • PROFINET ID Controller Yes • Media refundamenty No • Media refundamenty No • PROFINET ID Controller Yes • INTRO of controller Yes • Intornous mode No • INTRO of controller Yes • Number of controller ID Devices for RT, max 128 • Number of controller ID Devices for RT, max 128 • Number of ID Devices that can b		
2 Interface Interface type On-board PROFINET / IE interface X2 of the SIMATIC IPC, Intel Springville (2107 Number of connections 192 Interface type 100 M0/bs Interface type 100 M0/bs Integrated switch No Prodocol Yes; IPv4 IP protocol Yes; IPv4 IP protocol Yes; IPv4 IP ROFINET I D Device Yes INMER of Communication Yes INMER of Communication Yes INR Communication Yes IP ROFINET I D Device Yes INPORTER I D Devices for RT, max. Interface munication is switch (a) SCAANCE (200) INR Provinced startup Yes Interface is the communication in the simultaneously active communication share action the simultaneously active communication share action the simultaneously active communication share action the simultaneously active comone actin actin t		
Interface type Onbaced PROFINET / IE Interface X2 of the SIMATIC IPC, Intel Springville Interface type Onbaced PROFINET / IE Interface X2 of the SIMATIC IPC, Intel Springville Interface type Interface type Interface type Interface type Interface type Yes	-	
Image: Second		Onboard PROFINET / IF interface X2 of the SIMATIC IPC. Intel Springville
Interface types PL4 55 (Ethernet) Yes - Transmission rate, max.		
• RJ 45 (Ethernel) Yes - Transmission rate, max. 100 MbU/s - Industrial Ethernel status LED Yes • Number of ports 1 • Integrated switch No Protocols Yes • PROFINET 10 Controller Yes • PROFINET 10 Device Yes • SIMATIC communication Yes • Open E communication Yes • Web server Yes • Media redundancy No • PROFINET 10 Controller Yes • Media redundancy No • PROFINET 10 Controller Yes • Media redundancy No • Media redundancy No • PROFINET 10 Controller Yes - Isochronous mode No - IRT No - PROFINET of the PROFINET induces of the CPU and the eveloce mask to explanate the separated by the eveloce mask of a switch (e.g. CPU And the CPU and the device mask is the separated by and to use the "Provinized startup" functionality in STEP 7 for the PROFINET induce of the CPU and the device mask is three separated by and the sould be 509 (256+128+128), but it is accepted to be limited to 384 - of which in line, max. 128 - of which in line, max. 8 - of which in line, max. 8 - of which in line, max. 8 - outprise <	Number of connections	192
- Transmission rate, max. 100 Mbbbs - Industrial Ethernet status LED Yes Number of ports 1 Inlegrated switch No Protocols Yes - Protocol Transmission rate, max. No - Protocol Transmission rate, max. Yes - Started Startup Yes - Instrument of Device Transmission rate, max. No - Recor File Yes - Instrument of Device Transmission rate, max. No - Protochter Transmission rate, max. No - Protochter Transmission rate, max. Yes - Instrument of Devices for RT, max. 128 the maximal amount of supported devices (PNPP) is 334 (256+128+125), but it is accepted to be limited to 34 - of which in line, max. 128 - of which in line, max. 128 - of which in line, max. 128 - Inputs, max. 8 kbryte - Number of IO Devices per tool, max. 8 kbryte - Protolized startup The minimum value of the update time also depends o	Interface types	
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		100 Mbit/s
• integrated switch No Protocols Ves; IPV4 • IP protocol Yes; IPV4 • PROFINET IO Controller Yes • SIMATIC communication Yes • Open IE communication Yes • Media redundancy No • Media redundancy No • Media redundancy No • PROFINET IO Controller Services • Isochronous mode No - IRT No - PROFInergy Yes - PROFinergy Yes - Number of connectable IO Devices for RT, max. 128, the maximal amount of supported devices on all interfaces (PN/PB) is 34 - O which in line, max. 128 - O which in line, max. 128 - O which in line, max. 8 - O which in line, max. 8 - Updating times 8 Address area - - Inputs, max. 8 khyfe - Outputs, max. 8 khyfe - Inputs, max. 8 khyfe - Outputs, max. 8 khyfe - Inputs, max.		Yes
• integrated switch No Protocols Ves; IPv4 • IP protocol Yes; IPv4 • PROFINET IO Controller Yes • PROFINET IO Device Yes • SIMATIC communication Yes • Open IE communication Yes • Media redundancy No • Media redundancy No • Media redundancy No • PROFINET IO Controller Services Services - • Isochronous mode No - IRT No - PROFInergy Yes; max. 32 PROFINET fevices; if you want to use the "Prioritized startup" functionality in STEP 7 for the PROFINET fee, SCALANCE X2050) - Number of connectable IO Devices for RT, max. 128; the maximal amount of supported devices on all interfaces (PN/PB) is 34 - of which in line, max. 128 - of which in line, max. 128 - of which in line, max. 8 - Winder of IO Devices part tool, max. 8 - Number of IO Devices part tool, max. 8 - Updating times 8 kbyfe - Outputs, max. 8 kbyfe	Number of ports	1
Protocols Yes, IPv4 • IP protocol Yes, IPv4 • PROFINET IO Controller Yes • PROFINET IO Device Yes • SIMATIC communication Yes • Open IE communication Yes • Open IE communication Yes • Web server Yes • Media redundancy No PROFINET IO Controller Services - Isochronous mode No - Isochronous mode No - IRT No - PROFINET of connectable IO Devices for RT, max. 22 PROFINET devices; if you want to use the "Prioritized startup" functionality in STEP 7 for the PROFINET interface of the CPU, the CPU and the device must be separated by means of a witch (e.g. SCALANCE X205) - Number of connectable IO Devices for RT, max. 128; the maximal amount of a subjorted devices on al Interfaces (PINPE) is 334 (256+128) in total: theoretically it isbudy be 509 (256+128+125), but it is accepted to be limited to 384 - of which in line, max. 128; the maximal amount of a subjorted devices, and on the quantity of configured user data - Number of IO Devices per tool, max. 8 - Updating times The minimum value of the update time also depends on communication share set for PROFINET IO, on the number of IO devices, and on t		No
PROFINET IO Controller Yes PROFINET IO Device Yes SIMATIC communication Yes Open IE communication Yes Web server Yes Web server Yes Media redundancy No PROFINET IO Controller Image: Services Image: Service Image: Service Image: Service No Image: Service No Image: Service Image: Service Image: Service No Image: Service Service Image: Ser		
PROFINET IO Controller Yes PROFINET IO Device Yes SIMATIC communication Yes Open IE communication Yes Web server Yes Web server Yes Media redundancy No PROFINET IO Controller Image: Services Image: Service Image: Service Image: Service No Image: Service No Image: Service Image: Service Image: Service No Image: Service Service Image: Ser	IP protocol	Yes; IPv4
• PROFINET IO Device Yes • SIMATIC communication Yes • Open IE communication Yes • Web server Yes • Web server Yes • Media redundancy No PROFINET IO Controller Services - Isochronous mode No - IRT No - PROFINET of Controller startup Yes; max. 32 PROFINET devices; if you want to use the "Prioritized startup" functionality in STEP 7 for the PROFINET interface of the CPU, the CPU and the device musts be separated by means of a switch (e.g. SCALANCE X205) - Number of connectable IO Devices for RT, max. 128; the maximal amount of supported devices on all interfaces (PM/PB) is 384 (2564+128); intoial; theorefically it should be 509 (256+128+125), but it is accepted to be limited to 384 - of which in line, max. 128 - Number of IO Devices per tool, max. 8 - Updating times 8 - Updating times 8 Address area - - Inputs, max. 8 kbyte PORFINET IO Device Yes - Isochronous mode No - Inputs, max. 8 kbyte PORFINET IO Device Yes - Isochronous mode	•	
• SIMATIC communication Yes • Open IE communication Yes • Media redundancy No • Media redundancy No • PROFINET IO Controller - Services - • Isochronous mode No • PROFInergy Yes • Profitzed startup Yes • Profitzed startup Yes • Profitzed startup Yes • Profitzed startup Yes • Number of connectable IO Devices for RT, max. 128; the maximal amount of supported devices on all interfaces (PMPB) is 384 (266+128) in total; theoretically it should be 609 (256+128+125), but it is accepted to be limited to 384 • of which in line, max. 128 • Unther of IO Devices that can be simultaneously activated/deadivated, max. 8 • Updating times The minimum value of the update time also depends on communication share set for PROFINET IO, on the number of IO devices, and on the quantity of configured user data • Outputs, max. 8 kbyte • Outputs, max. 8 kbyte • PROFINET IO Device Yes • Number of IO Devices Yes • Updating times 8 kbyte • Updating times 8 kbyte • Unputs, max. 8 kbyte • No Yes • Insochronous mode No • I		
• Web server Yes • Media redundancy No PROFINET IO Controller	 SIMATIC communication 	Yes
• Web server Yes • Media redundancy No PROFINET IO Controller		Yes
• Media redundancy No PROFINET IO Controller Services		
PROFINET IO Controller Services - IRT - PROFInergy - Prioritized startup - Number of connectable IO Devices for RT, max. - of which in line, max. - of which in line, max. - Number of IO Devices per tool, max. - Number of IO Devices per tool, max. - Updating times 8 - Inputs, max. - Services - Inputs, max. - Strices - Strices - Inputs, max. - Strices - Shared device - Number of IO Controllers with shared device, max. - Inputs may - Number of IO Devices per tool, max. - Stared device - Inputs, max. - Sket management record - Number of IO Controllers with shared device, max. - Shared device - Number of IO Controllers with shared device, max.	Media redundancy	No
Services Isochronous mode No - IRT No - PROFIenergy Yes - Prioritized startup Yes; max. 32 PROFINET devices; if you want to use the "Prioritized startup" functionality in STEP 7 for the PROFINET interface of the CPU, the CPU, and the device must be separated by means of a switch (e.g. SCALANCE X205) - Number of connectable IO Devices for RT, max. 128; the maximal amount of supported devices on all interfaces (PN/PB) is 384 (256+128) in total; theoretically it should be 509 (256+128+125), but it is accepted to be limited to 384 - of which in line, max. 128 - Number of IO Devices per tool, max. 8 - Number of IO Devices per tool, max. 8 - Updating times 8 Meddress area 10 device must all set of the update time also depends on communication share set for PROFINET IO, on the number of IO devices, and on the quantity of configured user data Address area 8 kbyte - Inputs, max. 8 kbyte PROFINET IO Device 9 Services - - Isochronous mode No - RT No - PROFINET of Controllers with shared device, max. 4 - Asset management record Yes - Asset management record Yes - Number of IO Controllers with shared device, max. 4 - Asset management record Yes		
- IRT No - PROFlenergy Yes - Prioritized startup Yes, max. 32 PROFINET devices; if you want to use the "Prioritized startup" inclinantily in STEP 7 for the PROFINET interface of the CPU, the CPU and the device must be separated by means of a switch (e.g. SCALANCE X205) - Number of connectable IO Devices for RT, max. 128; the maximal amount of supported devices on all interfaces (PN/PB) is 384 (256+128) in total; theoretically it should be 509 (256+128+125), but it is accepted to be limited to 384 - of which in line, max. 128 - Number of IO Devices that can be simultaneously activated/deactivated, max. 8 - Number of IO Devices per tool, max. 8 - Updating times 8 - Updating times 8 kbyte - Outputs, max. 8 kbyte - Outputs, max. 8 kbyte - PROFINET IO Device 9 Services - - Isochronous mode No - IRT No - PROFINET IO Controllers with shared device, max. 4 - PROFINET of Controllers with shared device, max. 4 - Asset management record Yes - Number of IO Controllers with shared device, max. 4 - Asset management record Yes - Inter		
- IRT No - PROFlenergy Yes - Prioritized startup Yes, max. 32 PROFINET devices; if you want to use the "Prioritized startup" throutionality in STEP 7 for the PROFINET interface of the CPU, the CPU and the device must be separated by means of a switch (e.g. SCALANCE X205) - Number of connectable IO Devices for RT, max. 128; the maximal amount of supported devices on all interfaces (PN/PB) is 384 (256+128) it total; theoreticality it should be 509 (256+128+125), but it is accepted to be limited to 384 - of which in line, max. 128 - Number of IO Devices that can be simultaneously activated/deactivated, max. 8 - Number of IO Devices per tool, max. 8 - Updating times The minimum value of the update time also depends on communication share set for PROFINET IO, on the number of IO devices, and on the quantity of control to private max. Address area - - Inputs, max. 8 kbyte - Outputs, max. 8 kbyte PROFINET IO Device - Services - - IRT No - IRT No - Robelinergy Yes - Shared device Yes - Number of IO Controllers with shared device, max. 4 - Asset management record Yes - Asset m	— Isochronous mode	No
PROFlenergy Yes Prioritized startup Yes; max. 32 PROFINET devices; if you want to use the "Prioritized startup" functionality in STEP 7 for the PROFINET interface of the CPU, the CPU and the device must be separated by means of a switch (e.g. SCALANCE X205) Number of connectable IO Devices for RT, max. 128, the maximal amount of supported devices on all interfaces (PN/PB) is 384 (256+128) in total; theoretically it should be 509 (256+128+125), but it is accepted to be limited to 384 of which in line, max. 128 of which in line, max. 128 Number of IO Devices that can be simultaneously activated/deactivated, max. 8 Number of IO Devices per tool, max. 8 Updating times 8 Updating times 8 Outputs, max. 8 kbyte Outputs, max. 8 kbyte Outputs, max. 8 kbyte Inputs, max. 8 kbyte Inputs, max. 9 kbyte Schronous mode No IRT No PROFlenergy Yes Stared device Yes Number of IO Controllers with shared device, max. 4 PROFlenergy Yes Number of IO Controllers with shared device, max. 4	— IRT	No
Prioritized startup Yes; max. 32 PROFINET devices; if you want to use the "Prioritized startup" functionality in STEP 7 for the PROFINET interface of the CPU, the CPU and the device must be separated by means of a switch (e.g. SCALANCE X205) Number of connectable IO Devices for RT, max. 128; the maximal amount of supported devices on all interfaces (PN/PB) is 384 (256+128) in total; theoretically it should be 509 (256+128+125), but it is accepted to be limited to 384 of which in line, max. 128 of which in line, max. 128 Number of IO Devices that can be simultaneously activated/deactivated, max. 8 Updating times 8 Updating times 8 Updating times 8 Outputs, max. 8 Outputs, max. 8 kbyte PROFINET IO Devices 8 Outputs, max. 8 kbyte Outputs, max. 8 kbyte Outputs, max. 8 kbyte Dupovice	— PROFleneray	Yes
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266+128) in total; theoretically it should be 509 (256+128+125), but it is accepted to be limited to 384 - of which in line, max. 128 - Number of IO Devices that can be simultaneously activated/deactivated, max. 8 - Number of IO Devices per tool, max. 8 - Updating times 8 - Updating times 8 Address area 8 - Inputs, max. 8 kbyte - Outputs, max. 8 kbyte PROFINET IO Device 8 Services - - Isochronous mode No - IRT No - PROFIENT IO Controllers with shared device, max. 4 - Shared device Yes - Number of IO Controllers with shared device, max. 4 - Number of IO Controllers with shared device, max. 4 - Asset management record Yes Stateface PROFIBUS with CP 5622, CP 5622 onboard		functionality in STEP 7 for the PROFINET interface of the CPU, the CPU and
Number of IO Devices that can be simultaneously activated/deactivated, max. 8 Number of IO Devices per tool, max. 8 Updating times The minimum value of the update time also depends on communication share set for PROFINET IO, on the number of IO devices, and on the quantity of configured user data Address area 8 Inputs, max. 8 kbyte Outputs, max. 8 kbyte PROFINET IO Device 8 Services	 — Number of connectable IO Devices for RT, max. 	(256+128) in total; theoretically it should be 509 (256+128+125), but it is
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- Updating times The minimum value of the update time also depends on communication share set for PROFINET IO, on the number of IO devices, and on the quantity of configured user data Address area 8 kbyte - Inputs, max. 8 kbyte - Outputs, max. 8 kbyte PROFINET IO Device 8 kbyte Services - - Isochronous mode No - IRT No - PROFIEnergy Yes - Shared device Yes - Number of IO Controllers with shared device, max. 4 - Asset management record Yes Streface Interface type Number of connections 44		8
Address area set for PROFINET IO, on the number of IO devices, and on the quantity of configured user data Address area 8 kbyte — Inputs, max. 8 kbyte — Outputs, max. 8 kbyte PROFINET IO Device 8 Services - — Isochronous mode No — IRT No — PROFIenergy Yes — Shared device Yes — Number of IO Controllers with shared device, max. 4 — Asset management record Yes 3. Interface PROFIBUS with CP 5622, CP 5622 onboard Number of connections 44	- Number of IO Devices per tool, max.	8
Inputs, max. 8 kbyte Outputs, max. 8 kbyte PROFINET IO Device 9 Services	— Updating times	set for PROFINET IO, on the number of IO devices, and on the quantity of
- Outputs, max. 8 kbyte PROFINET IO Device Services - Isochronous mode No - IRT No - PROFIenergy Yes - Shared device Yes - Number of IO Controllers with shared device, max. 4 - Asset management record Yes Interface type PROFIBUS with CP 5622, CP 5622 onboard Number of connections 44	Address area	
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PROFINET IO Device Services - Isochronous mode No - IRT No - PROFIenergy Yes - Shared device Yes - Number of IO Controllers with shared device, max. 4 - Asset management record Yes State face Interface type Interface type PROFIBUS with CP 5622, CP 5622 onboard Number of connections 44	— Inputs, max.	
- Isochronous mode No - IRT No - PROFlenergy Yes - Shared device Yes - Number of IO Controllers with shared device, max. 4 - Asset management record Yes 3. Interface PROFIBUS with CP 5622, CP 5622 onboard Number of connections 44	•	8 kbyte
- IRT No - PROFlenergy Yes - Shared device Yes - Number of IO Controllers with shared device, max. 4 - Asset management record Yes 3. Interface Yes Interface type PROFIBUS with CP 5622, CP 5622 onboard Number of connections 44	— Outputs, max.	8 kbyte
PROFlenergy Yes Shared device Yes Number of IO Controllers with shared device, max. 4 Asset management record Yes 3. Interface Yes Interface type PROFIBUS with CP 5622, CP 5622 onboard Number of connections 44	Outputs, max. PROFINET IO Device	8 kbyte
Shared device Yes Number of IO Controllers with shared device, max. 4 Asset management record Yes 3. Interface Interface type Interface type PROFIBUS with CP 5622, CP 5622 onboard Number of connections 44	— Outputs, max. PROFINET IO Device Services	
Shared device Yes Number of IO Controllers with shared device, max. 4 Asset management record Yes 3. Interface Interface type Interface type PROFIBUS with CP 5622, CP 5622 onboard Number of connections 44	— Outputs, max. PROFINET IO Device Services — Isochronous mode	No
Number of IO Controllers with shared device, max. 4 Asset management record Yes 3. Interface Interface type Interface type PROFIBUS with CP 5622, CP 5622 onboard Number of connections 44	Outputs, max. PROFINET IO Device Services Isochronous mode OIRT	No No
Asset management record Yes 3. Interface Interface type Interface type PROFIBUS with CP 5622, CP 5622 onboard Number of connections 44	Outputs, max. PROFINET IO Device Services Isochronous mode IRT PROFlenergy	No No Yes
3. Interface Interface type PROFIBUS with CP 5622, CP 5622 onboard Number of connections 44	 Outputs, max. PROFINET IO Device Services Isochronous mode IRT PROFlenergy Shared device 	No No Yes Yes
Interface type PROFIBUS with CP 5622, CP 5622 onboard Number of connections 44	 Outputs, max. PROFINET IO Device Services Isochronous mode IRT PROFlenergy Shared device Number of IO Controllers with shared device, max. 	No No Yes Yes 4
Number of connections 44	 Outputs, max. PROFINET IO Device Services Isochronous mode IRT PROFIenergy Shared device Number of IO Controllers with shared device, max. Asset management record 	No No Yes Yes 4
	 Outputs, max. PROFINET IO Device Services Isochronous mode IRT PROFIenergy Shared device Number of IO Controllers with shared device, max. Asset management record 3. Interface 	No No Yes Yes 4 Yes
	 Outputs, max. PROFINET IO Device Services Isochronous mode IRT PROFlenergy Shared device Number of IO Controllers with shared device, max. Asset management record 3. Interface Interface type	No No Yes Yes 4 Yes PROFIBUS with CP 5622, CP 5622 onboard

• RS 485	Yes
Protocols	Vee
PROFIBUS DP master	Yes
PROFIBUS DP slave	No
SIMATIC communication	Yes; no PG/STEP 7 connection possible
PROFIBUS DP master	24
Number of DP slaves, max.	64
Services	
— Equidistance	No
— Isochronous mode	No
Address area	
— Inputs, max.	8 kbyte
— Outputs, max.	8 kbyte
4. Interface	
Interface type	PROFIBUS with CP 5623
Number of connections	44
Interface types	
• RS 485	Yes
Protocols	
PROFIBUS DP master	Yes
PROFIBUS DP slave	No
SIMATIC communication	Yes; no PG/STEP 7 connection possible
PROFIBUS DP master	
 Number of DP slaves, max. 	125
Services	
— Equidistance	No
— Isochronous mode	No
Address area	
— Inputs, max.	8 kbyte
— Outputs, max.	8 kbyte
Protocols	
PROFIsafe	No
	No
PROFIsafe Number of connections • Number of connections, max.	192
PROFIsafe Number of connections • Number of connections, max. • Number of connections reserved for ES/HMI/web	
PROFIsafe Number of connections • Number of connections, max. • Number of connections reserved for ES/HMI/web • Number of S7 routing paths	192
PROFIsafe Number of connections • Number of connections, max. • Number of connections reserved for ES/HMI/web • Number of S7 routing paths Redundancy mode	192 10
PROFIsafe Number of connections • Number of connections, max. • Number of connections reserved for ES/HMI/web • Number of S7 routing paths Redundancy mode Media redundancy	192 10 16
PROFIsafe Number of connections • Number of connections, max. • Number of connections reserved for ES/HMI/web • Number of S7 routing paths Redundancy mode Media redundancy — MRP	192 10 16 Yes
PROFIsafe Number of connections • Number of connections, max. • Number of connections reserved for ES/HMI/web • Number of S7 routing paths Redundancy mode Media redundancy	192 10 16
PROFIsafe Number of connections • Number of connections, max. • Number of connections reserved for ES/HMI/web • Number of S7 routing paths Redundancy mode Media redundancy — MRP	192 10 16 Yes
PROFIsafe Number of connections Number of connections, max. Number of connections reserved for ES/HMI/web Number of S7 routing paths Redundancy mode Media redundancy — MRP — MRPD — Switchover time on line break, typ. — Number of stations in the ring, max.	192 10 16 Yes Yes; Requirement: IRT
PROFIsafe Number of connections Number of connections, max. Number of connections reserved for ES/HMI/web Number of S7 routing paths Redundancy mode Media redundancy — MRP — MRPD — Switchover time on line break, typ. — Number of stations in the ring, max. SIMATIC communication	192 10 16 Yes Yes; Requirement: IRT 200 ms; For MRP, bumpless for MRPD 50
PROFIsafe Number of connections Number of connections, max. Number of connections reserved for ES/HMI/web Number of S7 routing paths Redundancy mode Media redundancy — MRP — MRP — MRPD — Switchover time on line break, typ. — Number of stations in the ring, max. SIMATIC communication • PG/OP communication	192 10 16 Yes Yes; Requirement: IRT 200 ms; For MRP, bumpless for MRPD 50 Yes
PROFIsafe Number of connections • Number of connections, max. • Number of connections reserved for ES/HMI/web • Number of S7 routing paths Redundancy mode Media redundancy - MRP - MRPD - Switchover time on line break, typ. - Number of stations in the ring, max. SIMATIC communication • S7 routing	192 10 16 Yes Yes; Requirement: IRT 200 ms; For MRP, bumpless for MRPD 50 Yes Yes
PROFIsafe Number of connections Number of connections, max. Number of connections reserved for ES/HMI/web Number of S7 routing paths Redundancy mode Media redundancy — MRP — MRP — MRPD — Switchover time on line break, typ. — Number of stations in the ring, max. SIMATIC communication • PG/OP communication	192 10 16 Yes Yes; Requirement: IRT 200 ms; For MRP, bumpless for MRPD 50 Yes
PROFIsafe Number of connections • Number of connections, max. • Number of connections reserved for ES/HMI/web • Number of S7 routing paths Redundancy mode Media redundancy - MRP - MRPD - Switchover time on line break, typ. - Number of stations in the ring, max. SIMATIC communication • S7 routing	192 10 16 Yes Yes; Requirement: IRT 200 ms; For MRP, bumpless for MRPD 50 Yes Yes
PROFIsafe Number of connections • Number of connections, max. • Number of connections reserved for ES/HMI/web • Number of S7 routing paths Redundancy mode Media redundancy - MRP - MRPD - Switchover time on line break, typ. - Number of stations in the ring, max. SIMATIC communication • S7 routing • S7 communication, as server • S7 communication, as client • User data per job, max.	192 10 16 Yes Yes; Requirement: IRT 200 ms; For MRP, bumpless for MRPD 50 Yes Yes Yes
PROFIsafe Number of connections Number of connections, max. Number of connections reserved for ES/HMI/web Number of S7 routing paths Redundancy mode Media redundancy — MRP — MRPD — Switchover time on line break, typ. — Number of stations in the ring, max. SIMATIC communication PG/OP communication S7 routing S7 communication, as server S7 communication, as client	192 10 16 Yes Yes; Requirement: IRT 200 ms; For MRP, bumpless for MRPD 50 Yes Yes Yes Yes Yes Yes SEND/BRCV: 64 KB; PUT/GET: 960 bytes
PROFIsafe Number of connections • Number of connections, max. • Number of connections reserved for ES/HMI/web • Number of S7 routing paths Redundancy mode Media redundancy - MRP - MRPD - Switchover time on line break, typ. - Number of stations in the ring, max. SIMATIC communication • S7 routing • S7 communication, as server • S7 communication, as client • User data per job, max.	192 10 16 Yes Yes; Requirement: IRT 200 ms; For MRP, bumpless for MRPD 50 Yes Yes Yes Yes
PROFIsafe Number of connections • Number of connections, max. • Number of connections reserved for ES/HMI/web • Number of S7 routing paths Redundancy mode Media redundancy - MRP - MRPD - Switchover time on line break, typ. - Number of stations in the ring, max. SIMATIC communication • PG/OP communication • S7 routing • S7 communication, as server • S7 communication, as client • User data per job, max. Open IE communication • TCP/IP - Data length, max.	192 10 16 Yes Yes; Requirement: IRT 200 ms; For MRP, bumpless for MRPD 50 Yes Yes Yes Yes Yes Yes SEND/BRCV: 64 KB; PUT/GET: 960 bytes
PROFIsafe Number of connections • Number of connections, max. • Number of connections reserved for ES/HMI/web • Number of S7 routing paths Redundancy mode Media redundancy - MRP - MRPD - Switchover time on line break, typ. - Number of stations in the ring, max. SIMATIC communication • S7 routing • S7 communication, as server • S7 communication, as client • User data per job, max. Open IE communication • TCP/IP	192 10 16 Yes Yes; Requirement: IRT 200 ms; For MRP, bumpless for MRPD 50 Yes Yes Yes Yes 64 kbyte; BSEND/BRCV: 64 KB; PUT/GET: 960 bytes Yes
PROFIsafe Number of connections • Number of connections, max. • Number of connections reserved for ES/HMI/web • Number of S7 routing paths Redundancy mode Media redundancy - MRP - MRPD - Switchover time on line break, typ. - Number of stations in the ring, max. SIMATIC communication • PG/OP communication • S7 routing • S7 communication, as server • S7 communication, as client • User data per job, max. Open IE communication • TCP/IP - Data length, max.	192 10 16 Yes Yes; Requirement: IRT 200 ms; For MRP, bumpless for MRPD 50 Yes Yes Yes Yes 64 kbyte; BSEND/BRCV: 64 KB; PUT/GET: 960 bytes Yes 64 kbyte Yes 64 kbyte Yes 64 kbyte
PROFIsafe Number of connections • Number of connections, max. • Number of connections reserved for ES/HMI/web • Number of S7 routing paths Redundancy mode Media redundancy - MRP - MRPD - Switchover time on line break, typ. - Number of stations in the ring, max. SIMATIC communication • S7 routing • S7 communication, as server • S7 communication, as client • User data per job, max. Open IE communication • TCP/IP - Data length, max. • ISO-on-TCP (RFC1006)	192 10 16 Yes Yes; Requirement: IRT 200 ms; For MRP, bumpless for MRPD 50 Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes
PROFIsafe Number of connections Number of connections, max. Number of connections reserved for ES/HMI/web Number of S7 routing paths Redundancy mode Media redundancy — MRP — MRPD — MRPD — Switchover time on line break, typ. — Number of stations in the ring, max. SIMATIC communication PG/OP communication S7 routing S7 communication, as server S7 communication, as client User data per job, max. Open IE communication TCP/IP — Data length, max. ISO-on-TCP (RFC1006) — Data length, max.	192 10 16 Yes Yes; Requirement: IRT 200 ms; For MRP, bumpless for MRPD 50 Yes Yes Yes Yes 64 kbyte; BSEND/BRCV: 64 KB; PUT/GET: 960 bytes Yes 64 kbyte Yes 64 kbyte Yes 64 kbyte
PROFIsafe Number of connections Number of connections, max. Number of connections reserved for ES/HMI/web Number of S7 routing paths Redundancy mode Media redundancy — MRP — MRPD — MRPD — Switchover time on line break, typ. — Number of stations in the ring, max. SIMATIC communication PG/OP communication S7 routing S7 communication, as server S7 communication, as client User data per job, max. Open IE communication TCP/IP — Data length, max. UDP	192 10 16 Yes Yes; Requirement: IRT 200 ms; For MRP, bumpless for MRPD 50 Yes Yes Yes Yes 64 kbyte; BSEND/BRCV: 64 KB; PUT/GET: 960 bytes Yes 64 kbyte Yes 64 kbyte Yes
PROFIsafe Number of connections Number of connections, max. Number of connections reserved for ES/HMI/web Number of S7 routing paths Redundancy mode Media redundancy — MRP — MRPD — Switchover time on line break, typ. — Number of stations in the ring, max. SIMATIC communication PG/OP communication PG/OP communication S7 routing S7 communication, as server S7 communication, as client User data per job, max. Open IE communication TCP/IP — Data length, max. UDP — Data length, max.	192 10 16 Yes Yes; Requirement: IRT 200 ms; For MRP, bumpless for MRPD 50 Yes Yes Yes Yes Yes 64 kbyte; BSEND/BRCV: 64 KB; PUT/GET: 960 bytes Yes 64 kbyte; BSEND/BRCV: 64 KB; PUT/GET: 960 bytes
PROFIsafe Number of connections Number of connections, max. Number of connections reserved for ES/HMI/web Number of S7 routing paths Redundancy mode Media redundancy — MRP — MRPD — MRPD — Switchover time on line break, typ. — Number of stations in the ring, max. SIMATIC communication PG/OP communication S7 routing S7 communication, as server S7 communication, as client User data per job, max. Open IE communication TCP/IP — Data length, max. UDP — Data length, max. — UDP multicast	192 10 16 Yes Yes; Requirement: IRT 200 ms; For MRP, bumpless for MRPD 50 Yes Yes Yes Yes 64 kbyte; BSEND/BRCV: 64 KB; PUT/GET: 960 bytes Yes 64 kbyte Yes 64 kbyte Yes 72 kbyte 72 kbyte 7
PROFIsafe Number of connections Number of connections, max. Number of connections reserved for ES/HMI/web Number of S7 routing paths Redundancy mode Media redundancy — MRP — MRPD — Switchover time on line break, typ. — Number of stations in the ring, max. SIMATIC communication • PG/OP communication • S7 routing • S7 communication, as server • S7 communication, as client • User data per job, max. Open IE communication • TCP/IP — Data length, max. • UDP — Data length, max. — UDP multicast • DHCP	192 10 16 Yes Yes; Requirement: IRT 200 ms; For MRP, bumpless for MRPD 50 Yes Yes Yes Yes 64 kbyte; BSEND/BRCV: 64 KB; PUT/GET: 960 bytes Yes 64 kbyte Yes 64 kbyte Yes 65 kbyte Yes 66 kbyte Yes 66 kbyte Yes 67 kbyte Yes 67 kbyte Yes 67 kbyte Yes 68 kbyte Yes 69 kbyte Yes 69 kbyte Yes 60 kbyte Yes 60 kbyte Yes 60 kbyte Yes 60 kbyte Yes 60 kbyte Yes 61 kbyte Yes 62 kbyte Yes 63 kbyte Yes 64 kbyte Yes 76 kbyte Yes
PROFIsafe Number of connections Number of connections, max. Number of connections reserved for ES/HMI/web Number of S7 routing paths Redundancy mode Media redundancy — MRP — MRPD — Switchover time on line break, typ. — Number of stations in the ring, max. SIMATIC communication PG/OP communication S7 routing S7 communication, as server S7 communication, as server S7 communication, as client User data per job, max. Open IE communication TCP/IP — Data length, max. UDP — Data length, max. — UDP multicast DHCP EDNS	192 10 16 Yes Yes; Requirement: IRT 200 ms; For MRP, bumpless for MRPD 50 Yes Yes Yes Yes 64 kbyte; BSEND/BRCV: 64 KB; PUT/GET: 960 bytes Yes 64 kbyte Yes 64 kbyte Yes 64 kbyte Yes 64 kbyte Yes 64 kbyte Yes 64 kbyte Yes 65 KB Yes 66 KB; PUT/GET: 960 bytes Yes 66 Kbyte Yes 67 KB Yes 68 KB; PUT/GET: 960 bytes Yes 69 Kbyte Yes 60 KB; PUT/GET: 960 bytes Yes 60 KB; PUT/GET: 960 bytes Yes 60 KB; PUT/GET: 960 bytes Yes 60 Kbyte Yes 61 Kbyte Yes 62 Kbyte Yes 63 Kbyte Yes 74 KB; PUT/GET: 960 bytes Yes 75 Kbyte Yes 75 Kbyte Yes

Web server	
• HTTP	Yes
• HTTPS	Yes
OPC UA	
Runtime license required	Yes; "Large" license required
OPC UA Client	Yes; Data access (read, write), method call
- Security policies	Yes; Available security policies: None, Basic128Rsa15, Basic256Rsa15,
	Basic256Sha256
- User authentication	Yes; "anonymous" or by user name & password
 Number of connections, max. 	40
 — Number of nodes of the client interfaces, recommended max. 	5 000
 — Number of elements for one call of OPC_UA_NodeGetHandleList/OPC_UA_ReadList/OPC_L max. 	300
 — Number of elements for one call of OPC_UA_NameSpaceGetIndexList, max. 	20
 — Number of elements for one call of OPC_UA_MethodGetHandleList, max. 	100
 — Number of simultaneous calls of the client instructions for session management, per connection, max. 	1
 — Number of simultaneous calls of the client instructions for data access, per connection, max. 	5
- Number of registerable nodes, max.	5 000
 — Number of registerable method calls of OPC_UA_MethodCall, max. 	100
 — Number of inputs/outputs when calling OPC_UA_MethodCall, max. 	20
OPC UA Server	Yes; Data access (read, write, subscribe), method call, custom address space
 Application authentication 	Yes
— Security policies	Yes; Available security policies: None, Basic128Rsa15, Basic256Rsa15, Basic256Sha256
— User authentication	Yes; "anonymous" or by user name & password
 Number of sessions, max. 	64
 Number of accessible variables, max. 	200 000
 Number of registerable nodes, max. 	50 000
 Number of subscriptions per session, max. 	20
— Sampling interval, min.	10 ms
— Publishing interval, min.	10 ms
 — Number of server methods, max. 	100
 Number of inputs/outputs per server method, max. 	20
 Number of monitored items, recommended max. 	10 000; for 1 s sampling interval and 1 s send interval
 Number of server interfaces, max. 	10
 — Number of nodes for user-defined server interfaces, max. 	30 000
Further protocols	
MODBUS	Yes; MODBUS TCP
S7 message functions	
Number of login stations for message functions, max.	32
Program alarms	Yes
Number of configurable program messages, max.	10 000
Number of loadable program messages in RUN, max.	5 000
Number of simultaneously active program alarms	1 000
Number of program alarms	1 000
 Number of alarms for system diagnostics 	200
 Number of alarms for motion technology objects 	160
Test commissioning functions	
Joint commission (Team Engineering)	Yes; Parallel online access possible for up to 10 engineering systems
Status block	Yes; up to 8 simultaneously
Single step	Yes
Number of breakpoints	8
Status/control	
Status/control variable	Yes

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Variables	Inputs, outputs, memory bits, DB, times, counters
Number of variables, max.	
— of which status variables, max.	200
— of which control variables, max.	200
Forcing	
• Forcing	Yes
 Forcing, variables 	Inputs, outputs
 Number of variables, max. 	200
Diagnostic buffer	
• present	Yes
Number of entries, max.	1 000
— of which powerfail-proof	300
Traces	
Number of configurable Traces	4
Memory size per trace, max.	512 kbyte
Interrupts/diagnostics/status information	
Diagnostics indication LED	
• RUN/STOP LED	Yes; HW LED of SIMATIC IPC227E, IPC427D/E, IPC627D/E, IPC827D, IPC677D/E
• ERROR LED	Yes; HW LED of SIMATIC IPC227E, IPC427D/E, IPC627D/E, IPC826D, IPC677D/E
• MAINT LED	Yes; HW LED of SIMATIC IPC227E, IPC427D/E, IPC627D/E, IPC827D, IPC677D/E
Supported technology objects	
Motion Control	Yes; Note: The number of technology objects affects the cycle time of the PLC
	program; selection guide via the TIA Selection Tool or SIZER
 Number of available Motion Control resources for technology objects 	4 800
 Required Motion Control resources 	
— per speed-controlled axis	40
— per positioning axis	80
— per synchronous axis	160
— per external encoder	80
— per output cam	20
— per cam track	160
— per probe	40
Positioning axis	
 — Number of positioning axes at motion control cycle of 4 ms (typical value) 	30; On IPC427E, Intel Xeon processor
 — Number of positioning axes at motion control cycle of 8 ms (typical value) 	60; On IPC427E, Intel Xeon processor
Controller	
PID_Compact	Yes; Universal PID controller with integrated optimization
PID_3Step	Yes; PID controller with integrated optimization for valves
PID-Temp	Yes; PID controller with integrated optimization for temperature
Counting and measuring	
High-speed counter	Yes
Hardware requirement	
Hardware required	SIMATIC IPC4x7E, IPC6x7D/E, IPC8x7D/E
Processor	
Single-core processor	No
 Single-core processor with hyper-threading 	No
Multi-core processor	Yes
 Multi-core processor with hyper-threading 	Yes
occupied cores	1; For multicore processors with activated Hyper-Threading, one complete physical core is reserved for the CPU 1507S
Memory	
Work memory, min.	8 Gbyte
 Hard disk memory required for installation 	720 Mbyte
 Temporary hard disk memory for installation 	230 Mbyte
Hard disk memory required at runtime	1 000 Mbyte
Operating systems	
Runs under operating system	

• Windows 7	Yes; Professional, Enterprise, Ultimate (32 bit and 64 bit); Windows Embedded Standard 7 with delivery image of the SIMATIC IPC
• Windows 10	Yes; Windows 10 Enterprise 2016 LTSB, 64-bit, MUI on IPC2x7E, IPC4x7E, IPC6x7D, IPC8x7D; Windows 10 Enterprise 2019 LTSC 64-bit, MUI on IPC2x7E, IPC4x7E, IPC6x7E, IPC8x7E
configuration / header	
configuration / programming / header	
Programming language	
— LAD	Yes
— FBD	Yes
— STL	Yes
— SCL	Yes
— CFC	No
— GRAPH	Yes
Know-how protection	
 User program protection/password protection 	Yes
Copy protection	Yes
Block protection	Yes
Access protection	
 Protection level: Write protection 	Yes
 Protection level: Read/write protection 	Yes
 Protection level: Complete protection 	Yes
programming / cycle time monitoring / header	
lower limit	adjustable minimum cycle time
• upper limit	adjustable maximum cycle time
Open Development interfaces	
 Size of ODK SO file, max. 	9.8 Mbyte

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