

Germany

SIEMENS

10-12Days

100

6ES7518-4UP00-0AB0

15,10 x 15,40 x 4,60

CE

1 USD

PROFINET RT, 3rd interface: PROFINET basic services, 4th interface: PROFIBUS, 1 ns bit performance, SIMATIC memory card

Basic Information

- Place of Origin:
- Brand Name:
- Certification:
- Model Number:
- Minimum Order Quantity:
- Price:
- Packaging Details:
- Delivery Time:
- Payment Terms: L/C, T/T
- Supply Ability:



Product Specification

Our Product Introduction

Product Description

PROFINET RT, 3RD INTERFACE: PROFINET BASIC SERVICES, 4TH INTERFACE: PROFIBUS, 1 NS BIT PERFORMANCE, SIMATIC MEMORY CARD

Okay, based on the provided details, it seems you are referring to the SIEMENS 6ES7518-4FP00-1AB0 PROFINET RT controller module:

Product Description:

- The 6ES7518-4FP00-1AB0 is a SIMATIC S7-1500 CPU module with PROFINET RT (Real-Time) and PROFIBUS connectivity.
- It features 3 Ethernet interfaces for PROFINET RT communication, a 3rd interface for PROFINET basic services, and a 4th interface for PROFIBUS with 1ns bit performance.
 - This module requires a SIMATIC memory card for program storage and additional functionality.
- Key Features:
- PROFINET RT (Real-Time) services for deterministic, time-critical Ethernet-based communication.
- 3 x Ethernet interfaces for PROFINET RT connectivity.
- 3rd interface for PROFINET basic services for general Ethernet communication.
- 4th interface for PROFIBUS with 1ns bit performance for high-speed, deterministic communication.
- Suitable for time-critical applications such as motion control and manufacturing processes.
- Integrated PROFIBUS master functionality.
- Requires a SIMATIC memory card for program storage and additional features.
- Powerful CPU with 4 MB work memory and 20 MB load memory.
- Connectivity:
- 3 x Ethernet/PROFINET RT interfaces for deterministic, real-time Ethernet communication.
- 1 x PROFINET basic services interface for general Ethernet communication.
- 1 x PROFIBUS interface for connecting PROFIBUS devices and networks.
- Performance:
- 1ns bit performance on the PROFIBUS interface for high-speed, deterministic communication.
- Enables precise control and synchronization of connected devices.
- SIMATIC Memory Card:
- The 6ES7518-4FP00-1AB0 module requires a SIMATIC memory card for program storage and additional functionality.
- The memory card provides the necessary storage capacity and enables features like firmware updates, backup, and restore functionality.
- Certifications:
- The module likely has relevant industrial certifications and approvals, such as IEC 61131-2, IEC 61784-2 (PROFINET), UL, Hazardous Locations, and Marine approvals.

Please let me know if I have correctly identified the SIEMENS 6ES7518-4FP00-1AB0 PROFINET RT controller module based on the provided details.

General information	
Product type	CPU 1518TE-4 PN/DP
designation	
HW functional status	FS11
Firmware version	V3.1
 FW update possible 	Yes
Product function	
 I&M data 	Yes; I&M0 to I&M3
 Isochronous mode 	Yes; Distributed and central; with minimum OB 6x cycle of 125 μs (distributed) and 1 ms (central)
 SysLog 	Yes
Engineering with	·
 STEP 7 TIA Portal 	
configurable/integrated from version	V19 (FW V3.1) / V17 (FW V2.9) or higher
Configuration control	·
via dataset	Yes
Display	·
Screen diagonal [cm]	6.1 cm
Control elements	·
Number of keys	6
Mode selector switch	1
Supply voltage	·
Rated value (DC)	24 V
permissible range, lower limit (DC)	19.2 V
permissible range, upper limit (DC)	28.8 V
Reverse polarity protection	Yes
Mains buffering	
Mains/voltage failure	5 ms
stored energy time	
Input current	
Current consumption (rated value)	1.55 A
Current consumption, max.	1.9 A

Inrush current, max.	1.9 A; Rated value
l²t	0.4 A ² ·s
Power	1
Infeed power to the	12 W
backplane bus	
Power consumption	00 M
from the backplane bus	30 W
Power loss	
Power loss, typ.	24 W
Memory	<u>F</u>
Number of slots for	
SIMATIC memory card	
SIMATIC memory card	Ves
required	
Work memory	1
• integrated (for	9 Mbyte
program)	FO Mouto
Memory Card), max.	32 Gbyte
Backup	
maintenance-free	Yes
CPU processing times	1
for bit operations, typ.	1 ns
for word operations,	2 nc
typ.	
for fixed point	2 ns
arithmetic, typ.	
for floating point	6 ns
arithmetic, typ.	<u> </u>
CPU-DIOCKS	1
	20 000; Blocks (OB, FB, FC, DB) and UDTs
DB	<u> </u>
	1 60 999: subdivided into: number range that can be used by the
 Number range 	user: 1 59 999, and number range of DBs created via SFC 86:
-	
	60 000 60 999
• Size, max.	16 Mbyte; For DBs with absolute addressing, the max. size is 64
• Size, max.	16 Mbyte; For DBs with absolute addressing, the max. size is 64 KB
• Size, max. FB	16 Mbyte; For DBs with absolute addressing, the max. size is 64 KB
 Size, max. FB Number range 	16 Mbyte; For DBs with absolute addressing, the max. size is 64 KB 0 65 535
 Size, max. FB Number range Size, max. 	16 Mbyte; For DBs with absolute addressing, the max. size is 64 KB 0 65 535 1 Mbyte
 Size, max. FB Number range Size, max. FC 	16 Mbyte; For DBs with absolute addressing, the max. size is 64 KB 0 65 535 1 Mbyte
 Size, max. FB Number range Size, max. FC Number range 	0 65 535 0 65 535 0 65 535
 Size, max. FB Number range Size, max. FC Number range Size, max. 	0 65 535 0 65 535 1 Mbyte 0 65 535 1 Mbyte
 Size, max. FB Number range Size, max. FC Number range Size, max. OB 	60 000 60 999 16 Mbyte; For DBs with absolute addressing, the max. size is 64 KB 0 65 535 1 Mbyte 0 65 535 1 Mbyte
 Size, max. FB Number range Size, max. FC Number range Size, max. OB Size, max. 	60 000 60 999 16 Mbyte; For DBs with absolute addressing, the max. size is 64 KB 0 65 535 1 Mbyte 0 65 535 1 Mbyte 1 Mbyte
 Size, max. FB Number range Size, max. FC Number range Size, max. OB Size, max. Number of free cycle 	60 000 60 999 16 Mbyte; For DBs with absolute addressing, the max. size is 64 KB 0 65 535 1 Mbyte 0 65 535 1 Mbyte 1 Mbyte 1 Mbyte
 Size, max. FB Number range Size, max. FC Number range Size, max. OB Size, max. Number of free cycle OBs Number of the cycle obs 	60 000 60 999 16 Mbyte; For DBs with absolute addressing, the max. size is 64 KB 0 65 535 1 Mbyte 0 65 535 1 Mbyte 1 Mbyte 1 Mbyte
 Size, max. FB Number range Size, max. FC Number range Size, max. OB Size, max. Number of free cycle OBs Number of time alarm 	60 000 60 999 16 Mbyte; For DBs with absolute addressing, the max. size is 64 KB 0 65 535 1 Mbyte 0 65 535 1 Mbyte 1 Mbyte 20
 Size, max. FB Number range Size, max. FC Number range Size, max. OB Size, max. Number of free cycle OBs Number of time alarm OBs Number of delay. 	60 000 60 999 16 Mbyte; For DBs with absolute addressing, the max. size is 64 KB 0 65 535 1 Mbyte 0 65 535 1 Mbyte 1 Mbyte 20
 Size, max. FB Number range Size, max. FC Number range Size, max. OB Size, max. Number of free cycle OBs Number of time alarm OBs Number of delay alarm OBs 	60 000 60 999 16 Mbyte; For DBs with absolute addressing, the max. size is 64 KB 0 65 535 1 Mbyte 0 65 535 1 Mbyte 1 Mbyte 20 20 20
 Size, max. FB Number range Size, max. FC Number range Size, max. OB Size, max. Number of free cycle OBs Number of time alarm OBs Number of delay alarm OBs Number of cyclic 	60 000 60 999 16 Mbyte; For DBs with absolute addressing, the max. size is 64 KB 0 65 535 1 Mbyte 0 65 535 1 Mbyte 1 Mbyte 20 20 20 20
 Size, max. FB Number range Size, max. FC Number range Size, max. OB Size, max. Number of free cycle OBs Number of time alarm OBs Number of delay alarm OBs Number of cyclic interrupt OBs 	60 000 60 999 16 Mbyte; For DBs with absolute addressing, the max. size is 64 KB 0 65 535 1 Mbyte 0 65 535 1 Mbyte 1 Mbyte 20 20 20 20; with minimum OB 3x cycle of 100 μs
 Size, max. FB Number range Size, max. FC Number range Size, max. OB Size, max. OB Size, max. Number of free cycle OBs Number of time alarm OBs Number of delay alarm OBs Number of cyclic interrupt OBs Number of process 	60 000 60 999 16 Mbyte; For DBs with absolute addressing, the max. size is 64 KB 0 65 535 1 Mbyte 0 65 535 1 Mbyte 1 Mbyte 20 <
 Size, max. FB Number range Size, max. FC Number range Size, max. OB Size, max. Number of free cycle OBs Number of time alarm OBs Number of delay alarm OBs Number of cyclic interrupt OBs Number of process alarm OBs 	60 000 60 999 16 Mbyte; For DBs with absolute addressing, the max. size is 64 KB 0 65 535 1 Mbyte 0 65 535 1 Mbyte 1 Mbyte 20 20 20 20 20 20 20 20 20 20 20 20 20 20 50
 Size, max. FB Number range Size, max. FC Number range Size, max. OB Size, max. Number of free cycle OBs Number of time alarm OBs Number of delay alarm OBs Number of cyclic interrupt OBs Number of process alarm OBs Number of DPV1 	60 000 60 999 16 Mbyte; For DBs with absolute addressing, the max. size is 64 KB 0 65 535 1 Mbyte 0 65 535 1 Mbyte 1 Mbyte 20 20 20 20; with minimum OB 3x cycle of 100 μs 50 3
 Size, max. FB Number range Size, max. FC Number range Size, max. OB Size, max. OB Size, max. Number of free cycle OBs Number of time alarm OBs Number of delay alarm OBs Number of cyclic interrupt OBs Number of process alarm OBs Number of DPV1 alarm OBs Number of DPV1 alarm OBs 	60 000 60 999 16 Mbyte; For DBs with absolute addressing, the max. size is 64 KB 0 65 535 1 Mbyte 0 65 535 1 Mbyte 1 Mbyte 20 20 20 20; with minimum OB 3x cycle of 100 μs 50 3
 Size, max. FB Number range Size, max. FC Number range Size, max. OB Size, max. Number of free cycle OBs Number of time alarm OBs Number of delay alarm OBs Number of cyclic interrupt OBs Number of process alarm OBs Number of DPV1 alarm OBs Number of DPV1 alarm OBs Number of DPV1 	60 000 60 999 16 Mbyte; For DBs with absolute addressing, the max. size is 64 KB 0 65 535 1 Mbyte 0 65 535 1 Mbyte 1 Mbyte 20 20 20 20; with minimum OB 3x cycle of 100 μs 50 3 3
 Size, max. FB Number range Size, max. FC Number range Size, max. OB Size, max. Number of free cycle OBs Number of time alarm OBs Number of delay alarm OBs Number of process alarm OBs Number of DPV1 alarm OBs Number of DPV1 alarm OBs Number of cyclic sochronous mode OBs 	60 000 60 999 16 Mbyte; For DBs with absolute addressing, the max. size is 64 KB 0 65 535 1 Mbyte 0 65 535 1 Mbyte 1 Mbyte 20 20 20 20 20 20 3 3
 Size, max. FB Number range Size, max. FC Number range Size, max. OB Size, max. Number of free cycle OBs Number of time alarm OBs Number of delay alarm OBs Number of cyclic interrupt OBs Number of process alarm OBs Number of DPV1 alarm OBs Number of isochronous mode OBs Number of technology 	60 000 60 999 16 Mbyte; For DBs with absolute addressing, the max. size is 64 KB 0 65 535 1 Mbyte 0 65 535 1 Mbyte 1 Mbyte 20 20 20 20 20 20 3 3
 Size, max. FB Number range Size, max. FC Number range Size, max. OB Size, max. Number of free cycle OBs Number of time alarm OBs Number of delay alarm OBs Number of process alarm OBs Number of DPV1 alarm OBs Number of isochronous mode OBs Number of technology synchronous alarm 	60 000 60 999 16 Mbyte; For DBs with absolute addressing, the max. size is 64 KB 0 65 535 1 Mbyte 0 65 535 1 Mbyte 1 Mbyte 20 20 20 20 20 20 3 3 2
 Size, max. FB Number range Size, max. FC Number range Size, max. OB Size, max. Number of free cycle OBs Number of time alarm OBs Number of delay alarm OBs Number of process alarm OBs Number of DPV1 alarm OBs Number of isochronous mode OBs Number of technology synchronous alarm OBs 	60 000 60 999 16 Mbyte; For DBs with absolute addressing, the max. size is 64 KB 0 65 535 1 Mbyte 0 65 535 1 Mbyte 1 Mbyte 20 20 20 20 20 20 20 3 3 2
 Size, max. FB Number range Size, max. FC Number range Size, max. OB Size, max. Number of free cycle OBs Number of time alarm OBs Number of delay alarm OBs Number of cyclic interrupt OBs Number of process alarm OBs Number of DPV1 alarm OBs Number of isochronous mode OBs Number of technology synchronous alarm OBs Number of startup 	16 Mbyte; For DBs with absolute addressing, the max. size is 64 KB 0 65 535 1 Mbyte 0 65 535 1 Mbyte 1 Mbyte 20 3 3 3 2 100
 Size, max. FB Number range Size, max. FC Number range Size, max. OB Size, max. Number of free cycle OBs Number of time alarm OBs Number of delay alarm OBs Number of cyclic interrupt OBs Number of process alarm OBs Number of DPV1 alarm OBs Number of isochronous mode OBs Number of technology synchronous alarm OBs Number of startup OBs 	16 Mbyte; For DBs with absolute addressing, the max. size is 64 KB 0 65 535 1 Mbyte 0 65 535 1 Mbyte 1 Mbyte 20 3 3 2 100
 Size, max. FB Number range Size, max. FC Number range Size, max. OB Size, max. OB Size, max. Number of free cycle OBs Number of free cycle OBs Number of delay alarm OBs Number of delay alarm OBs Number of cyclic interrupt OBs Number of process alarm OBs Number of DPV1 alarm OBs Number of IPV1 alarm OBs Number of isochronous mode OBs Number of technology synchronous alarm OBs Number of startup OBs Number of startup OBs Number of 	16 Mbyte; For DBs with absolute addressing, the max. size is 64 KB 0 65 535 1 Mbyte 0 65 535 1 Mbyte 1 Mbyte 20 3 3 3 2 100 .
 Size, max. FB Number range Size, max. FC Number range Size, max. OB Size, max. OB Size, max. Number of free cycle OBs Number of time alarm OBs Number of delay alarm OBs Number of cyclic interrupt OBs Number of process alarm OBs Number of DPV1 alarm OBs Number of IPV1 alarm OBs Number of the OBS Numb	16 Mbyte; For DBs with absolute addressing, the max. size is 64 KB 0 65 535 1 Mbyte 0 65 535 1 Mbyte 1 Mbyte 20 3 3 2 100 4
 Size, max. FB Number range Size, max. FC Number range Size, max. OB Size, max. OB Size, max. Number of free cycle OBs Number of time alarm OBs Number of delay alarm OBs Number of cyclic interrupt OBs Number of process alarm OBs Number of DPV1 alarm OBs Number of DPV1 alarm OBs Number of isochronous mode OBs Number of technology synchronous alarm OBs Number of startup OBs Number of startup OBs Number of asynchronous error OBs Number of 	16 Mbyte; For DBs with absolute addressing, the max. size is 64 KB 0 65 535 1 Mbyte 0 65 535 1 Mbyte 1 Mbyte 20 3 3 2 100 4
 Size, max. FB Number range Size, max. FC Number range Size, max. OB Size, max. Number of free cycle OBs Number of free cycle OBs Number of time alarm OBs Number of delay alarm OBs Number of cyclic interrupt OBs Number of process alarm OBs Number of DPV1 alarm OBs Number of DPV1 alarm OBs Number of IPV1 alarm OBs Number of the OBs Number of DPV1 alarm OBs Number of the O	16 Mbyte; For DBs with absolute addressing, the max. size is 64 KB 0 65 535 1 Mbyte 0 65 535 1 Mbyte 1 Mbyte 100 20 20; with minimum OB 3x cycle of 100 μs 50 3 2 100 2 2 100 2 2 2 100 2 2 2 100 2 2 100 2 2 100 4 2

 Number of diagnostic 	4
alarm OBs	
Nesting depth	
 per priority class 	24; Up to 8 possible for F-blocks
Counters, timers and th	eir 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	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
, 	Yes
Data areas and their re	tentivity
Retentive data area	
(incl. timers, counters, flags), max.	768 kbyte; In total; available retentive memory for bit memories, timers, counters, DBs, and technology data (axes): 700 KB
data area (incl. timers, counters, flags), max.	20 Mbyte; When using PS 6 0W 24/48/60 V DC HF
Flag	
 Size, max. 	16 kbyte
 Number of clock 	8: 8 clock memory bit, grouped into one clock memory byte
memories	
Data blocks	
 Retentivity adjustable 	Yes
 Retentivity preset 	No
Local data	
• per priority class, max.	64 kbyte; max. 16 KB per block
Address area	
Number of IO modules	16 384; max. number of modules / submodules
I/O address area	
	32 kbyte; All inputs are in the process image
Outputs	32 kbyte; All outputs are in the process image
per integrated IO subsy	
- Inputs (volume)	32 kbyte; max. 32 KB via X1; max. 8 KB via X2 or X4
- Outputs (volume)	32 KDyte; max. 32 KB via X1; max. 8 KB via X2 or X4
per CM/CP	
- Inputs (volume)	круге
- Outputs (volume)	8 kbyte
Subprocess images	
Number of	
· · ·	
subprocess images,	32
subprocess images, max.	32
subprocess images, max. Hardware configuration	32
subprocess images, max. Hardware configuration Number of distributed IO systems	32 64; A distributed I/O system is characterized not only by the integration of distributed I/O via PROFINET or PROFIBUS communication modules, but also by the connection of I/O via AS-i master modules or links (e.g. IE/PB-Link)
subprocess images, max. Hardware configuration Number of distributed IO systems Number of DP masters	32 64; A distributed I/O system is characterized not only by the integration of distributed I/O via PROFINET or PROFIBUS communication modules, but also by the connection of I/O via AS-i master modules or links (e.g. IE/PB-Link)
subprocess images, max. Hardware configuration Number of distributed IO systems Number of DP masters • integrated	32 64; A distributed I/O system is characterized not only by the integration of distributed I/O via PROFINET or PROFIBUS communication modules, but also by the connection of I/O via AS-i master modules or links (e.g. IE/PB-Link) 1
subprocess images, max. Hardware configuration Number of distributed IO systems Number of DP masters • integrated	32 64; A distributed I/O system is characterized not only by the integration of distributed I/O via PROFINET or PROFIBUS communication modules, but also by the connection of I/O via AS-i master modules or links (e.g. IE/PB-Link) 1 8; A maximum of 8 CMs/CPs (PROFIBUS, PROFINET, Ethernet)
subprocess images, max. Hardware configuration Number of distributed IO systems Number of DP masters • integrated • Via CM	32 64; A distributed I/O system is characterized not only by the integration of distributed I/O via PROFINET or PROFIBUS communication modules, but also by the connection of I/O via AS-i master modules or links (e.g. IE/PB-Link) 1 8; A maximum of 8 CMs/CPs (PROFIBUS, PROFINET, Ethernet) can be inserted in total
subprocess images, max. Hardware configuration Number of distributed IO systems Number of DP masters • integrated • Via CM Number of IO Controlle	32 64; A distributed I/O system is characterized not only by the integration of distributed I/O via PROFINET or PROFIBUS communication modules, but also by the connection of I/O via AS-i master modules or links (e.g. IE/PB-Link) 1 8; A maximum of 8 CMs/CPs (PROFIBUS, PROFINET, Ethernet) can be inserted in total rs
subprocess images, max. Hardware configuration Number of distributed IO systems Number of DP masters • integrated • Via CM Number of IO Controlle • integrated	32 64; A distributed I/O system is characterized not only by the integration of distributed I/O via PROFINET or PROFIBUS communication modules, but also by the connection of I/O via AS-i master modules or links (e.g. IE/PB-Link) 1 8; A maximum of 8 CMs/CPs (PROFIBUS, PROFINET, Ethernet) can be inserted in total rs 2
subprocess images, max. Hardware configuration Number of distributed IO systems Number of DP masters • integrated • Via CM Number of IO Controlle • integrated • Via CM	32 64; A distributed I/O system is characterized not only by the integration of distributed I/O via PROFINET or PROFIBUS communication modules, but also by the connection of I/O via AS-i master modules or links (e.g. IE/PB-Link) 1 8; A maximum of 8 CMs/CPs (PROFIBUS, PROFINET, Ethernet) can be inserted in total rs 2 8; A maximum of 8 CMs/CPs (PROFIBUS, PROFINET, Ethernet) can be inserted in total
subprocess images, max. Hardware configuration Number of distributed IO systems Number of DP masters • integrated • Via CM Number of IO Controlle • integrated • Via CM Rack	32 64; A distributed I/O system is characterized not only by the integration of distributed I/O via PROFINET or PROFIBUS communication modules, but also by the connection of I/O via AS-i master modules or links (e.g. IE/PB-Link) 1 8; A maximum of 8 CMs/CPs (PROFIBUS, PROFINET, Ethernet) can be inserted in total rs 2 8; A maximum of 8 CMs/CPs (PROFIBUS, PROFINET, Ethernet) can be inserted in total
subprocess images, max. Hardware configuration Number of distributed IO systems Number of DP masters • integrated • Via CM Number of IO Controlle • integrated • Via CM Rack • Modules per rack,	 32 64; A distributed I/O system is characterized not only by the integration of distributed I/O via PROFINET or PROFIBUS communication modules, but also by the connection of I/O via AS-i master modules or links (e.g. IE/PB-Link) 1 8; A maximum of 8 CMs/CPs (PROFIBUS, PROFINET, Ethernet) can be inserted in total 7s 2 8; A maximum of 8 CMs/CPs (PROFIBUS, PROFINET, Ethernet) can be inserted in total 32: CPU + 31 modules
subprocess images, max. Hardware configuration Number of distributed IO systems Number of DP masters • integrated • Via CM Number of IO Controlle • integrated • Via CM Rack • Modules per rack, max.	32 64; A distributed I/O system is characterized not only by the integration of distributed I/O via PROFINET or PROFIBUS communication modules, but also by the connection of I/O via AS-i master modules or links (e.g. IE/PB-Link) 1 8; A maximum of 8 CMs/CPs (PROFIBUS, PROFINET, Ethernet) can be inserted in total rs 2 8; A maximum of 8 CMs/CPs (PROFIBUS, PROFINET, Ethernet) can be inserted in total 32; CPU + 31 modules
subprocess images, max. Hardware configuration Number of distributed IO systems Number of DP masters • integrated • Via CM Number of IO Controlle • integrated • Via CM Rack • Modules per rack, max. PtP CM	32 64; A distributed I/O system is characterized not only by the integration of distributed I/O via PROFINET or PROFIBUS communication modules, but also by the connection of I/O via AS-i master modules or links (e.g. IE/PB-Link) 1 8; A maximum of 8 CMs/CPs (PROFIBUS, PROFINET, Ethernet) can be inserted in total rs 2 8; A maximum of 8 CMs/CPs (PROFIBUS, PROFINET, Ethernet) can be inserted in total 32; CPU + 31 modules
subprocess images, max. Hardware configuration Number of distributed IO systems Number of DP masters • integrated • Via CM Number of IO Controlle • integrated • Via CM Rack • Modules per rack, max. PtP CM • Number of PtP CMs	32 64; A distributed I/O system is characterized not only by the integration of distributed I/O via PROFINET or PROFIBUS communication modules, but also by the connection of I/O via AS-i master modules or links (e.g. IE/PB-Link) 1 8; A maximum of 8 CMs/CPs (PROFIBUS, PROFINET, Ethernet) can be inserted in total rs 2 8; A maximum of 8 CMs/CPs (PROFIBUS, PROFINET, Ethernet) can be inserted in total 32; CPU + 31 modules the number of connectable PtP CMs is only limited by the number of available slots
subprocess images, max. Hardware configuration Number of distributed IO systems Number of DP masters • integrated • Via CM Number of IO Controlle • integrated • Via CM Rack • Modules per rack, max. PtP CM • Number of PtP CMs Time of day	32 64; A distributed I/O system is characterized not only by the integration of distributed I/O via PROFINET or PROFIBUS communication modules, but also by the connection of I/O via AS-i master modules or links (e.g. IE/PB-Link) 1 8; A maximum of 8 CMs/CPs (PROFIBUS, PROFINET, Ethernet) can be inserted in total 7s 2 8; A maximum of 8 CMs/CPs (PROFIBUS, PROFINET, Ethernet) can be inserted in total 32; CPU + 31 modules the number of connectable PtP CMs is only limited by the number of available slots

	Hardware clock
Backup time	6 wk: At 40 °C ambient temperature, typically
Dackup time Deviation per day	
• Deviation per day,	10 s; Typ.: 2 s
Operating hours counter	 r
	16
	10
	Maa
	ites Maa
• to DP, master	res
• to DP, slave	Yes
• in AS, master	Yes
• in AS, slave	Yes
on Ethernet via NTP	Yes
Interfaces	
Number of PROFINET	3
interfaces	
Number of PROFIBUS	1
interfaces	
1. Interface	
Interface types	
 RJ 45 (Ethernet) 	Yes; X1
 Number of ports 	2
 integrated switch 	Yes
Protocols	1
IP protocol	Yes; IPv4
PROFINET IO	
Controller	Yes
PROFINET IO	
Device	lives
SIMATIC	
communication	Yes
Open IF	
communication	Yes; Optionally also encrypted
Web server	Yes
Media redundancy	Yes
PROFINET IO Controlle	er
Sonvisoo	
ISEIVICES	
– Isochronous mode	Yes
Isochronous mode Direct data	Yes
Isochronous mode Direct data exchange	Yes Yes; Requirement: IRT and isochronous mode (MRPD optional)
- Isochronous mode - Direct data exchange - IRT	Yes Yes; Requirement: IRT and isochronous mode (MRPD optional) Yes
Isochronous mode Isochronous mode Direct data exchange IRT PBOElenergy	Yes Yes; Requirement: IRT and isochronous mode (MRPD optional) Yes Yes: per user program
 – Isochronous mode – Direct data exchange – IRT – PROFlenergy – Prioritized startup 	Yes Yes; Requirement: IRT and isochronous mode (MRPD optional) Yes Yes; per user program Yes: Max. 32 PROFINET devices
 Isochronous mode Direct data exchange IRT PROFlenergy Prioritized startup Number of 	Yes Yes; Requirement: IRT and isochronous mode (MRPD optional) Yes Yes; per user program Yes; Max. 32 PROFINET devices
 Isochronous mode Direct data exchange IRT PROFlenergy Prioritized startup Number of connectable IO 	Yes Yes; Requirement: IRT and isochronous mode (MRPD optional) Yes Yes; per user program Yes; Max. 32 PROFINET devices 512; In total, up to 1 000 distributed I/O devices can be connected
 Isochronous mode Direct data exchange IRT PROFlenergy Prioritized startup Number of connectable IO Devices, max. 	Yes Yes; Requirement: IRT and isochronous mode (MRPD optional) Yes Yes; per user program Yes; Max. 32 PROFINET devices 512; In total, up to 1 000 distributed I/O devices can be connected via AS-i, PROFIBUS or PROFINET
 Isochronous mode Direct data exchange IRT PROFlenergy Prioritized startup Number of connectable IO Devices, max. Of which IO devices 	Yes Yes; Requirement: IRT and isochronous mode (MRPD optional) Yes Yes; per user program Yes; Max. 32 PROFINET devices 512; In total, up to 1 000 distributed I/O devices can be connected via AS-i, PROFIBUS or PROFINET
 Isochronous mode Direct data exchange IRT PROFlenergy Prioritized startup Number of connectable IO Devices, max. Of which IO devices with IRT, max. 	Yes Yes; Requirement: IRT and isochronous mode (MRPD optional) Yes Yes; per user program Yes; Max. 32 PROFINET devices 512; In total, up to 1 000 distributed I/O devices can be connected via AS-i, PROFIBUS or PROFINET 64
 Iservices Isochronous mode Direct data exchange IRT PROFlenergy Prioritized startup Number of connectable IO Devices, max. Of which IO devices with IRT, max. Number of 	Yes Yes; Requirement: IRT and isochronous mode (MRPD optional) Yes Yes; per user program Yes; Max. 32 PROFINET devices 512; In total, up to 1 000 distributed I/O devices can be connected via AS-i, PROFIBUS or PROFINET 64
 Isochronous mode Direct data exchange IRT PROFlenergy Prioritized startup Number of connectable IO Devices, max. Of which IO devices with IRT, max. Number of connectable IO Devices 	Yes Yes; Requirement: IRT and isochronous mode (MRPD optional) Yes Yes; per user program Yes; Max. 32 PROFINET devices 512; In total, up to 1 000 distributed I/O devices can be connected via AS-i, PROFIBUS or PROFINET 64 512
 Isochronous mode Isochronous mode Direct data exchange IRT PROFlenergy Prioritized startup Number of connectable IO Devices, max. Of which IO devices with IRT, max. Number of connectable IO Devices for RT, max. 	Yes Yes; Requirement: IRT and isochronous mode (MRPD optional) Yes Yes; per user program Yes; Max. 32 PROFINET devices 512; In total, up to 1 000 distributed I/O devices can be connected via AS-i, PROFIBUS or PROFINET 64 512
 Isochronous mode Isochronous mode Direct data exchange IRT PROFlenergy Prioritized startup Number of connectable IO Devices, max. Of which IO devices with IRT, max. Number of connectable IO Devices for RT, max. of which in line, 	Yes Yes; Requirement: IRT and isochronous mode (MRPD optional) Yes Yes; per user program Yes; Max. 32 PROFINET devices 512; In total, up to 1 000 distributed I/O devices can be connected via AS-i, PROFIBUS or PROFINET 64 512
 Isochronous mode Isochronous mode Direct data exchange IRT PROFlenergy Prioritized startup Number of connectable IO Devices, max. Of which IO devices with IRT, max. Number of connectable IO Devices for RT, max. of which in line, max. 	Yes Yes; Requirement: IRT and isochronous mode (MRPD optional) Yes; Per user program Yes; Max. 32 PROFINET devices 512; In total, up to 1 000 distributed I/O devices can be connected via AS-i, PROFIBUS or PROFINET 64 512
 Isochronous mode Isochronous mode Direct data exchange IRT PROFlenergy Prioritized startup Number of connectable IO Devices, max. Of which IO devices with IRT, max. Number of connectable IO Devices for RT, max. of which in line, max. Number of IO 	Yes Yes; Requirement: IRT and isochronous mode (MRPD optional) Yes; Per user program Yes; Max. 32 PROFINET devices 512; In total, up to 1 000 distributed I/O devices can be connected via AS-i, PROFIBUS or PROFINET 64 512
 Isochronous mode Isochronous mode Direct data exchange IRT PROFlenergy Prioritized startup Number of connectable IO Devices, max. Of which IO devices with IRT, max. Number of connectable IO Devices for RT, max. of which in line, max. Number of IO Devices that can be 	Yes Yes; Requirement: IRT and isochronous mode (MRPD optional) Yes; Per user program Yes; Max. 32 PROFINET devices 512; In total, up to 1 000 distributed I/O devices can be connected via AS-i, PROFIBUS or PROFINET 64 512
 Isochronous mode Isochronous mode Direct data exchange IRT PROFlenergy Prioritized startup Number of connectable IO Devices, max. Of which IO devices with IRT, max. Number of connectable IO Devices for RT, max. of which in line, max. Number of IO Devices that can be simultaneously 	Yes Yes; Requirement: IRT and isochronous mode (MRPD optional) Yes; Per user program Yes; Max. 32 PROFINET devices 512; In total, up to 1 000 distributed I/O devices can be connected via AS-i, PROFIBUS or PROFINET 64 512 512 8; in total across all interfaces
 Isochronous mode Isochronous mode Direct data exchange IRT PROFlenergy Prioritized startup Number of connectable IO Devices, max. Of which IO devices with IRT, max. Number of connectable IO Devices for RT, max. of which in line, max. Number of IO Devices that can be simultaneously activated/deactivated, 	Yes Yes; Requirement: IRT and isochronous mode (MRPD optional) Yes; Per user program Yes; Max. 32 PROFINET devices 512; In total, up to 1 000 distributed I/O devices can be connected via AS-i, PROFIBUS or PROFINET 64 512 512 8; in total across all interfaces
 Isochronous mode Isochronous mode Direct data exchange IRT PROFlenergy Prioritized startup Number of connectable IO Devices, max. Of which IO devices with IRT, max. Number of connectable IO Devices for RT, max. of which in line, max. Number of IO Devices that can be simultaneously activated/deactivated, max. 	Yes Yes; Requirement: IRT and isochronous mode (MRPD optional) Yes; Per user program Yes; Max. 32 PROFINET devices 512; In total, up to 1 000 distributed I/O devices can be connected via AS-i, PROFIBUS or PROFINET 64 512 512 8; in total across all interfaces
 Isochronous mode Isochronous mode Direct data exchange IRT PROFlenergy Prioritized startup Number of connectable IO Devices, max. Of which IO devices with IRT, max. Number of connectable IO Devices for RT, max. of which in line, max. Number of IO Devices that can be simultaneously activated/deactivated, max. Number of IO Devices that can be simultaneously activated/deactivated, max. Number of IO Devices that can be simultaneously activated/deactivated, max. 	Yes Yes; Requirement: IRT and isochronous mode (MRPD optional) Yes; Per user program Yes; Max. 32 PROFINET devices 512; In total, up to 1 000 distributed I/O devices can be connected via AS-i, PROFIBUS or PROFINET 64 512 512 8; in total across all interfaces 8
 Isochronous mode Isochronous mode Direct data exchange IRT PROFlenergy Prioritized startup Number of connectable IO Devices, max. Of which IO devices with IRT, max. Number of connectable IO Devices for RT, max. of which in line, max. Number of IO Devices that can be simultaneously activated/deactivated, max. Number of IO Devices per tool, max. 	Yes Yes; Requirement: IRT and isochronous mode (MRPD optional) Yes; Per user program Yes; Max. 32 PROFINET devices 512; In total, up to 1 000 distributed I/O devices can be connected via AS-i, PROFIBUS or PROFINET 64 512 512 512 8; in total across all interfaces 8
 Isochronous mode Isochronous mode Direct data exchange IRT PROFlenergy Prioritized startup Number of connectable IO Devices, max. Of which IO devices with IRT, max. Number of connectable IO Devices for RT, max. of which in line, max. Number of IO Devices that can be simultaneously activated/deactivated, max. Number of IO Devices per tool, max. 	Yes Yes; Requirement: IRT and isochronous mode (MRPD optional) Yes; Per user program Yes; Max. 32 PROFINET devices 512; In total, up to 1 000 distributed I/O devices can be connected via AS-i, PROFIBUS or PROFINET 64 512 512 512 8; in total across all interfaces 8 The minimum value of the update time also depends on
 Isochronous mode Isochronous mode Direct data exchange IRT PROFlenergy Prioritized startup Number of connectable IO Devices, max. Of which IO devices with IRT, max. Number of connectable IO Devices for RT, max. of which in line, max. Number of IO Devices that can be simultaneously activated/deactivated, max. Number of IO Devices per tool, max. Updating times 	Yes Yes; Requirement: IRT and isochronous mode (MRPD optional) Yes; Per user program Yes; Max. 32 PROFINET devices 512; In total, up to 1 000 distributed I/O devices can be connected via AS-i, PROFIBUS or PROFINET 64 512 512 8; in total across all interfaces 8 The minimum value of the update time also depends on communication share set for PROFINET IO, on the number of IO
 Isochronous mode Isochronous mode Direct data exchange IRT PROFlenergy Prioritized startup Number of connectable IO Devices, max. Of which IO devices with IRT, max. Of which IO devices for RT, max. of which in line, max. Number of IO Devices that can be simultaneously activated/deactivated, max. Number of IO Devices per tool, max. Updating times 	Yes Yes; Requirement: IRT and isochronous mode (MRPD optional) Yes; Per user program Yes; Max. 32 PROFINET devices 512; In total, up to 1 000 distributed I/O devices can be connected via AS-i, PROFIBUS or PROFINET 64 512 512 8; in total across all interfaces 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
 Isochronous mode Isochronous mode Direct data exchange IRT PROFlenergy Prioritized startup Number of connectable IO Devices, max. Of which IO devices with IRT, max. Of which IO devices with IRT, max. Of which IO Devices for RT, max. of which in line, max. Number of IO Devices that can be simultaneously activated/deactivated, max. Number of IO Devices per tool, max. Updating times PROFINET Security Class 	Yes Yes; Requirement: IRT and isochronous mode (MRPD optional) Yes; Per user program Yes; Max. 32 PROFINET devices 512; In total, up to 1 000 distributed I/O devices can be connected via AS-i, PROFIBUS or PROFINET 64 512 512 8; in total across all interfaces 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 1
 Isochronous mode Isochronous mode Direct data exchange IRT PROFlenergy Prioritized startup Number of connectable IO Devices, max. Of which IO devices with IRT, max. Of which IO devices with IRT, max. Of which IO Devices for RT, max. of which in line, max. Number of IO Devices that can be simultaneously activated/deactivated, max. Number of IO Devices per tool, max. Updating times PROFINET Security Class 	Yes Yes; Requirement: IRT and isochronous mode (MRPD optional) Yes; Per user program Yes; Max. 32 PROFINET devices 512; In total, up to 1 000 distributed I/O devices can be connected via AS-i, PROFIBUS or PROFINET 64 512 512 8; in total across all interfaces 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 1
 Isochronous mode Isochronous mode Direct data exchange IRT PROFlenergy Prioritized startup Number of connectable IO Devices, max. Of which IO devices with IRT, max. Of which IO devices with IRT, max. Of which IO Devices for RT, max. of which in line, max. of which in line, max. Number of IO Devices that can be simultaneously activated/deactivated, max. Number of IO Devices per tool, max. Updating times PROFINET Security Class Update time for IRT 	Yes Yes; Requirement: IRT and isochronous mode (MRPD optional) Yes Yes; per user program Yes; Max. 32 PROFINET devices 512; In total, up to 1 000 distributed I/O devices can be connected via AS-i, PROFIBUS or PROFINET 64 512 512 8; in total across all interfaces 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 1
 Isochronous mode Isochronous mode Direct data exchange IRT PROFlenergy Prioritized startup Number of connectable IO Devices, max. Of which IO devices with IRT, max. Number of connectable IO Devices for RT, max. of which in line, max. Number of IO Devices that can be simultaneously activated/deactivated, max. Number of IO Devices per tool, max. Updating times PROFINET Security Class Update time for IRT for send cycle of 125 	Yes Yes; Requirement: IRT and isochronous mode (MRPD optional) Yes Yes; per user program Yes; Max. 32 PROFINET devices 512; In total, up to 1 000 distributed I/O devices can be connected via AS-i, PROFIBUS or PROFINET 64 512 512 512 8; in total across all interfaces 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 1
 Isochronous mode Isochronous mode Direct data exchange IRT PROFlenergy Prioritized startup Number of connectable IO Devices, max. Of which IO devices with IRT, max. Number of connectable IO Devices for RT, max. Number of IO Devices that can be simultaneously activated/deactivated, max. Number of IO Devices per tool, max. Updating times PROFINET Security Class Update time for IRT for send cycle of 125 µs 	Yes; Requirement: IRT and isochronous mode (MRPD optional) Yes; Per user program Yes; Max. 32 PROFINET devices 512; In total, up to 1 000 distributed I/O devices can be connected via AS-i, PROFIBUS or PROFINET 64 512 512 8; in total across all interfaces 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 1
 Isochronous mode Isochronous mode Direct data exchange IRT PROFlenergy Prioritized startup Number of connectable IO Devices, max. Of which IO devices with IRT, max. Number of connectable IO Devices for RT, max. of which in line, max. Number of IO Devices that can be simultaneously activated/deactivated, max. Number of IO Devices per tool, max. Updating times PROFINET Security Class Update time for IRT for send cycle of 125 µs for send cycle of 187 5 us 	Yes Yes; Requirement: IRT and isochronous mode (MRPD optional) Yes Yes; per user program Yes; Max. 32 PROFINET devices 512; In total, up to 1 000 distributed I/O devices can be connected via AS-i, PROFIBUS or PROFINET 64 512 512 512 8; in total across all interfaces 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 1 125 μs 187.5 μs
 Isochronous mode Isochronous mode Direct data exchange IRT PROFlenergy Prioritized startup Number of connectable IO Devices, max. Of which IO devices with IRT, max. Number of connectable IO Devices for RT, max. of which in line, max. Number of IO Devices that can be simultaneously activated/deactivated, max. Number of IO Devices per tool, max. Updating times PROFINET Security Class Update time for IRT for send cycle of 125 µs for send cycle of 125 	Yes Yes; Requirement: IRT and isochronous mode (MRPD optional) Yes Yes; per user program Yes; Max. 32 PROFINET devices 512; In total, up to 1 000 distributed I/O devices can be connected via AS-i, PROFIBUS or PROFINET 64 512 512 512 8; in total across all interfaces 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 1 125 μs 187.5 μs
 Isochronous mode Isochronous mode Direct data exchange IRT PROFlenergy Prioritized startup Number of connectable IO Devices, max. Of which IO devices with IRT, max. Number of connectable IO Devices for RT, max. of which in line, max. Number of IO Devices that can be simultaneously activated/deactivated, max. Number of IO Devices per tool, max. Updating times PROFINET Security Class Update time for IRT for send cycle of 125 μs for send cycle of 250 μs 	Yes Yes; Requirement: IRT and isochronous mode (MRPD optional) Yes Yes; per user program Yes; Max. 32 PROFINET devices 512; In total, up to 1 000 distributed I/O devices can be connected via AS-i, PROFIBUS or PROFINET 64 512 512 512 8; in total across all interfaces 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 1 125 μs 187.5 μs 250 μs to 4 ms
 Isochronous mode Isochronous mode Direct data exchange IRT PROFlenergy Prioritized startup Number of connectable IO Devices, max. Of which IO devices with IRT, max. Number of connectable IO Devices for RT, max. of which in line, max. Number of IO Devices that can be simultaneously activated/deactivated, max. Number of IO Devices per tool, max. Updating times PROFINET Security Class Update time for IRT for send cycle of 125 µs for send cycle of 250 µs 	Yes Yes; Requirement: IRT and isochronous mode (MRPD optional) Yes Yes; per user program Yes; Max. 32 PROFINET devices 512; In total, up to 1 000 distributed I/O devices can be connected via AS-i, PROFIBUS or PROFINET 64 512 512 8; in total across all interfaces 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 1 125 μs 187.5 μs 250 μs to 4 ms
 Isochronous mode Isochronous mode Direct data exchange IRT PROFlenergy Prioritized startup Number of connectable IO Devices, max. Of which IO devices with IRT, max. Number of connectable IO Devices for RT, max. of which in line, max. Number of IO Devices that can be simultaneously activated/deactivated, max. Number of IO Devices per tool, max. Updating times PROFINET Security Class Update time for IRT for send cycle of 125 µs for send cycle of 250 µs for send cycle of 500 	Yes Yes; Requirement: IRT and isochronous mode (MRPD optional) Yes Yes; per user program Yes; Max. 32 PROFINET devices 512; In total, up to 1 000 distributed I/O devices can be connected via AS-i, PROFIBUS or PROFINET 64 512 512 8; in total across all interfaces 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 1 125 μs 187.5 μs 250 μs to 4 ms 500 μs to 8 ms
 Isochronous mode Isochronous mode Direct data exchange IRT PROFlenergy Prioritized startup Number of connectable IO Devices, max. Of which IO devices with IRT, max. Number of connectable IO Devices for RT, max. Of which in line, max. Number of IO Devices that can be simultaneously activated/deactivated, max. Number of IO Devices per tool, max. Updating times PROFINET Security Class Update time for IRT for send cycle of 125 µs for send cycle of 250 µs 	Yes Yes; Requirement: IRT and isochronous mode (MRPD optional) Yes Yes; per user program Yes; Max. 32 PROFINET devices 512; In total, up to 1 000 distributed I/O devices can be connected via AS-i, PROFIBUS or PROFINET 64 512 512 8; in total across all interfaces 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 1 125 µs 187.5 µs 250 µs to 4 ms 500 µs to 8 ms

for send cycle of 1	1 ms to 16 ms
for send cycle of 2	
ms	2 ms to 32 ms
for send cycle of 4	A
ms	4 ms to 64 ms
- With IRT and	I Indate time – set "odd" send clock (any multiple of 125 us: 375
parameterization of	105625 us = 3.875 us
"odd" send cycles	
Update time for RT	
for send cycle of 250	250 μs to 128 ms
μs	
For send cycle of 500	500 µs to 256 ms
μs	
for send cycle of 1	1 ms to 512 ms
ms	
for send cycle of 2	2 ms to 512 ms
ms	
for send cycle of 4	4 ms to 512 ms
	No
	Vas: Minimum send cycle of 250 us
	νας, winimum senu cycle of 200 μs
	n eo, per user program Vac
Controllers with shared	4
device, max.	
-	
activation/deactivation	Yes: per user program
of I-devices	
Asset management	
record	l ser program
- PROFINET Security	SNMP Configuration and DCP Bead Only
Class	
2. Interface	
Interface types	
Interface types • RJ 45 (Ethernet)	Yes; X2
Interface types • RJ 45 (Ethernet) • Number of ports	Yes; X2 1
 Interface types RJ 45 (Ethernet) Number of ports integrated switch 	Yes; X2 1 No
 Interface types RJ 45 (Ethernet) Number of ports integrated switch Protocols 	Yes; X2 1 No
Interface types RJ 45 (Ethernet) Number of ports integrated switch Protocols IP protocol	Yes; X2 1 No Yes; IPv4
Interface types RJ 45 (Ethernet) Number of ports integrated switch Protocols IP protocol PROFINET IO Controller	Yes; X2 1 No Yes; IPv4 Yes
Interface types RJ 45 (Ethernet) Number of ports integrated switch Protocols IP protocol PROFINET IO Controller PROFUNET IO	Yes; X2 1 No Yes; IPv4 Yes
Interface types • RJ 45 (Ethernet) • Number of ports • integrated switch Protocols • IP protocol • PROFINET IO Controller • PROFINET IO Device	Yes; X2 1 No Yes; IPv4 Yes Yes
Interface types • RJ 45 (Ethernet) • Number of ports • integrated switch Protocols • IP protocol • PROFINET IO Controller • PROFINET IO Device • SIMATIC	Yes; X2 1 No Yes; IPv4 Yes Yes
Interface types • RJ 45 (Ethernet) • Number of ports • integrated switch Protocols • IP protocol • PROFINET IO Controller • PROFINET IO Device • SIMATIC communication	Yes; X2 1 No Yes; IPv4 Yes Yes Yes
Interface types • RJ 45 (Ethernet) • Number of ports • integrated switch Protocols • IP protocol • PROFINET IO Controller • PROFINET IO Device • SIMATIC communication • Open IE	Yes; X2 1 No Yes; IPv4 Yes Yes Yes
Interface types • RJ 45 (Ethernet) • Number of ports • integrated switch Protocols • IP protocol • PROFINET IO Controller • PROFINET IO Device • SIMATIC communication • Open IE communication	Yes; X2 1 No Yes; IPv4 Yes Yes Yes Yes Yes; Optionally also encrypted
Interface types	Yes; X2 1 No Yes; IPv4 Yes Yes Yes Yes; Optionally also encrypted Yes
Interface types	Yes; X2 1 No Yes; IPv4 Yes Yes Yes Yes; Optionally also encrypted Yes No
Interface types RJ 45 (Ethernet) Number of ports integrated switch Protocols IP protocol PROFINET IO Controller PROFINET IO Device SIMATIC communication Open IE communication Web server Media redundancy PROFINET IO Controlle	Yes; X2 1 No Yes; IPv4 Yes Yes Yes Yes; Optionally also encrypted Yes No er
Interface types RJ 45 (Ethernet) Number of ports integrated switch Protocols IP protocol PROFINET IO Controller PROFINET IO Device SIMATIC communication Open IE communication Web server Media redundancy PROFINET IO Controlle Services	Yes; X2 1 No Yes; IPv4 Yes Yes Yes Yes; Optionally also encrypted Yes No er
Interface types • RJ 45 (Ethernet) • Number of ports • integrated switch Protocols • IP protocol • PROFINET IO Controller • PROFINET IO Device • SIMATIC communication • Open IE communication • Web server • Media redundancy PROFINET IO Controlle Services — Isochronous mode	Yes; X2 1 No Yes; IPv4 Yes Yes Yes Yes; Optionally also encrypted Yes No Pr
Interface types	Yes; X2 1 No Yes; IPv4 Yes Yes Yes Yes; Optionally also encrypted Yes No Pr
Interface types	Yes; X2 1 No Yes; IPv4 Yes Yes Yes Yes; Optionally also encrypted Yes No No No
Interface types	Yes; X2 1 No Yes; IPv4 Yes Yes Yes Yes; Optionally also encrypted Yes No No No No
Interface types	Yes; X2 1 No Yes; IPv4 Yes Yes Yes Yes; Optionally also encrypted Yes No Pr No No No No No Yes; per user program
Interface types	Yes; X2 1 No Yes; IPv4 Yes Yes Yes Yes Yes; Optionally also encrypted Yes No er No No No No No No No No No Yes; per user program No
Interface types	Yes; X2 1 No Yes; IPv4 Yes Yes Yes Yes Yes Yes Yes No Pr No No No No No Yes; per user program No 128: In total, up to 1,000 distributed I/O devices can be connected
Interface types RJ 45 (Ethernet) Number of ports integrated switch Protocols IP protocol PROFINET IO Controller PROFINET IO Device SIMATIC communication Open IE communication Web server Media redundancy PROFINET IO Controlle Services Isochronous mode Direct data exchange IRT PROFIenergy Prioritized startup Number of connectable IO	Yes; X2 1 No Yes; IPv4 Yes Yes Yes Yes Yes Yes Yes Yes
Interface types RJ 45 (Ethernet) Number of ports integrated switch Protocols IP protocol PROFINET IO Controller PROFINET IO Device SIMATIC communication Open IE communication Web server Media redundancy PROFINET IO Controlle Services Isochronous mode Direct data exchange IRT PROFIenergy Prioritized startup Number of connectable IO Devices, max.	Yes; X2 1 No Yes; IPv4 Yes Yes Yes Yes Yes Yes Yes Yes
Interface types RJ 45 (Ethernet) Number of ports integrated switch Protocols IP protocol PROFINET IO Controller PROFINET IO Device SIMATIC communication Open IE communication Web server Media redundancy PROFINET IO Controlle Services Isochronous mode Direct data exchange IRT PROFIenergy Prioritized startup Number of connectable IO Devices, max. Number of	Yes; X2 1 No Yes; IPv4 Yes Yes Yes Yes Yes Yes Yes Yes
Interface types RJ 45 (Ethernet) Number of ports integrated switch Protocols IP protocol PROFINET IO Controller PROFINET IO Device SIMATIC communication Open IE communication Web server Media redundancy PROFINET IO Controlle Services Isochronous mode Direct data exchange IRT PROFIenergy Prioritized startup Number of connectable IO Devices far RT PROFIE IO Devices for PT movi	Yes; X2 1 No Yes; IPv4 Yes Yes Yes Yes; Optionally also encrypted Yes No Yes No Pr No No No No No No No No 128; In total, up to 1 000 distributed I/O devices can be connected via AS-i, PROFIBUS or PROFINET 128
Interface types RJ 45 (Ethernet) Number of ports integrated switch Protocols IP protocol PROFINET IO Controller PROFINET IO Device SIMATIC communication Open IE communication Web server Media redundancy PROFINET IO Controlle Services Isochronous mode Direct data exchange IRT PROFIenergy Prioritized startup Number of connectable IO Devices, max. Number of connectable IO Devices for RT, max. auchick is line.	Yes; X2 1 No Yes; IPv4 Yes Yes Yes Yes; Optionally also encrypted Yes No Yes No Pr No No No No No No Yes; per user program No 128; In total, up to 1 000 distributed I/O devices can be connected via AS-i, PROFIBUS or PROFINET 128
Interface types RJ 45 (Ethernet) Number of ports integrated switch Protocols IP protocol PROFINET IO Controller PROFINET IO Device SIMATIC communication Open IE communication Web server Media redundancy PROFINET IO Controlle Services Isochronous mode Direct data exchange IRT PROFIenergy Prioritized startup Number of connectable IO Devices, max. Number of connectable IO Devices for RT, max. of which in line, max	Yes; X2 1 No Yes; IPv4 Yes Yes Yes Yes Yes; Optionally also encrypted Yes No Yes No No No No No No No 128; In total, up to 1 000 distributed I/O devices can be connected via AS-i, PROFIBUS or PROFINET 128
Interface types RJ 45 (Ethernet) Number of ports integrated switch Protocols IP protocol PROFINET IO Controller PROFINET IO Device SIMATIC communication Open IE communication Web server Media redundancy PROFINET IO Controlle Services Isochronous mode Direct data exchange IRT PROFIenergy Prioritized startup Number of connectable IO Devices, max. Number of connectable IO Devices for RT, max. of which in line, max. Number of IO	Yes; X2 1 No Yes; IPv4 Yes Yes Yes Yes; Optionally also encrypted Yes No Yes No Yes No No No No No No No 128; In total, up to 1 000 distributed I/O devices can be connected via AS-i, PROFIBUS or PROFINET 128
Interface types RJ 45 (Ethernet) Number of ports integrated switch Protocols IP protocol PROFINET IO Controller PROFINET IO Device SIMATIC communication Open IE communication Web server Media redundancy PROFINET IO Controlle Services Isochronous mode Direct data exchange IRT PROFIenergy Prioritized startup Number of connectable IO Devices, max. Number of connectable IO Devices for RT, max. _ of which in line, max. Number of IO Devices that can be	Yes; X2 1 No Yes; IPv4 Yes Yes Yes Yes Yes; Optionally also encrypted Yes No Yes No Yes No No No No No No No No Yes; per user program No 128; In total, up to 1 000 distributed I/O devices can be connected via AS-i, PROFIBUS or PROFINET 128 128
Interface types RJ 45 (Ethernet) Number of ports integrated switch Protocols IP protocol PROFINET IO Controller PROFINET IO Device SIMATIC communication Open IE communication Web server Media redundancy PROFINET IO Controlle Services Isochronous mode Direct data exchange IRT PROFIenergy Prioritized startup Number of connectable IO Devices, max. Number of connectable IO Devices for RT, max. Number of IO Devices that can be simultaneously	Yes; X2 1 No Yes; IPv4 Yes Yes Yes Yes Yes; Optionally also encrypted Yes No Yes No Pr No No No No No Yes; per user program No 128; In total, up to 1 000 distributed I/O devices can be connected via AS-i, PROFIBUS or PROFINET 128 8: in total across all interfaces
Interface types RJ 45 (Ethernet) Number of ports integrated switch Protocols IP protocol PROFINET IO Controller PROFINET IO Device SIMATIC communication Open IE communication Web server Media redundancy PROFINET IO Controlle Services Isochronous mode Direct data exchange IRT PROFIenergy Prioritized startup Number of connectable IO Devices, max. Number of connectable IO Devices for RT, max. Number of IO Devices that can be simultaneously activated/deactivated.	Yes; X2 1 No Yes; IPv4 Yes Yes Yes Yes Yes Yes Yes Yes
Interface types RJ 45 (Ethernet) Number of ports integrated switch Protocols IP protocol PROFINET IO Controller PROFINET IO Device SIMATIC communication Open IE communication Web server Media redundancy PROFINET IO Controlle Services Isochronous mode Direct data exchange IRT PROFIenergy Prioritized startup Number of connectable IO Devices, max. Number of IO Devices that can be simultaneously activated/deactivated, max.	Yes; X2 1 No Yes; IPv4 Yes Yes Yes Yes Yes Yes No Yes; Optionally also encrypted Yes No No No No No No No No 128; In total, up to 1 000 distributed I/O devices can be connected via AS-i, PROFIBUS or PROFINET 128 128 8; in total across all interfaces
Interface types • RJ 45 (Ethernet) • Number of ports • integrated switch Protocols • IP protocol • PROFINET IO Controller • PROFINET IO Device • SIMATIC communication • Open IE communication • Web server • Media redundancy PROFINET IO Controlle Services — Isochronous mode — Direct data exchange — IRT — PROFIenergy — Prioritized startup — Number of connectable IO Devices, max. — Number of connectable IO Devices for RT, max. — Number of IO Devices that can be simultaneously activated/deactivated, max.	Yes; X2 1 No Yes; IPv4 Yes Yes Yes Yes Yes Yes No Yes No r No No No No No No I28; per user program No 128; in total, up to 1 000 distributed I/O devices can be connected via AS-i, PROFIBUS or PROFINET 128 128 8; in total across all interfaces

- Number of IO	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	
- PROFINET Security Class	1	
Update time for RT	l	
- for send cycle of 1	4	
ms	1 ms to 512 ms	
PROFINET IO Device	·	
Services		
- Isochronous mode	No	
— IRT	No	
- PROFlenergy	Yes: per user program	
- Prioritized startup	No	
- Shared device	Yes	
Number of IO		
Controllers with shared	4	
device, max.		
activation/deactivation of I-devices	Yes; per user program	
Asset management	Yes; per user program	
- PROFINET Security		
Class	SNMP Configuration and DCP Read Only	
3. Interface	ı	
Interface types		
 B.I 45 (Ethernet) 	Ves: X3	
	1	
integrated switch	No.	
PIOLOCOIS		
	Yes; IPV4	
	No	
	No	
• SIMATIC	Yes	
	Yes; Optionally also encrypted	
• Web server	Voc	
4 Interface	163	
4. Interface		
Intenace types	Nee: VA	
• RS 485	Yes; X4	
Number of ports	1	
Protocols		
	Yes	
	NI-	
PROFIBUS DP slave	NO	
• SIMATIC	Yes	
	l	
PROFIBUS DP master		
Number of	48; for the integrated PROFIBUS DP interface	
connections, max.		
INUMBER OF DP	1/25; IT LOTAI, UP TO 1 UUU dISTRIBUTED I/U devices can be connected	
siaves, max.	VIA AS-1, PRUFIBUS OF PRUFINE I	
Services	h/	
	Yes	
- Isocnronous mode	Yes	
Activation/deactivation	Yes	
OF DP slaves		
Interface types		
KJ 45 (Ethernet)	b/	
• 100 Mbps	Yes	
• 1000 Mbps	Yes; Only possible at the X3 interface of the CPU 1518	
Autonegotiation	Yes	
 Autocrossing 	Yes	
 Industrial Ethernet 	Vaa	
status LED	It es	
HS 485		





