SIEMENS

Data sheet

6ES7155-6AU01-0CN0



SIMATIC ET 200SP, PROFINET, 2-port interface module IM 155-6PN/2 High Feature, 1 slot for BusAdapter, max. 64 I/O modules and 16 ET 200AL modules, S2 redundancy, multi-hotswap, 0.25 ms, isochronous mode, optional PN strain relief, including server module

General information	
Product type designation	IM 155-6 PN/2 HF
HW functional status	From FS02
Firmware version	V4.2
 FW update possible 	Yes
Product function	
● I&M data	Yes; I&M0 to I&M3
 Module swapping during operation (hot swapping) 	Yes; Multi-hot swapping
Isochronous mode	Yes
 Tool changer 	Yes; Docking station and docking unit
 Local coupling, IO data 	No
 Local coupling, data records 	No
Engineering with	
 STEP 7 TIA Portal configurable/integrated from version 	STEP 7 V15.1 or higher
 STEP 7 configurable/integrated from version 	Configurable via GSD file
 PROFINET from GSD version/GSD revision 	GSDML V2.3
Configuration control	
via dataset	Yes
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 stored energy time 	10 ms
Input current	
Current consumption, max.	700 mA
Inrush current, max.	4.5 A
l²t	0.25 A ² ·s
Power loss	
Power loss, typ.	2.4 W
Address area	
Address space per module	
 Address space per module, max. 	288 byte; For input and output data respectively
Address space per station	
 Address space per station, max. 	1 440 byte; Dependent on configuration
Hardware configuration	
Rack	

• Quantity of anorable ET 2008P modules, may	64
 Quantity of operable ET 200SP modules, max. Quantity of operable ET 200AL modules, max. 	16
Submodules	10
Number of submodules per station, max.	256
· ·	230
Time stamping	10 mg
Accuracy	10 ms
Interfaces	
Number of PROFINET interfaces	1; 2 ports (switch)
1. Interface	
Interface types	
Number of ports	2; via BusAdapter
integrated switch Duradenter (DDOENLET)	Yes
BusAdapter (PROFINET)	Yes; compatible BusAdapters: BA 2x RJ45, BA 2x M12, BA 2x FC, BA 2x LC, BA LC/RJ45, BA LC/FC, BA 2x SCRJ, BA SCRJ/RJ45, BA SCRJ/FC,
Protocols	
PROFINET IO Device	Yes
 Open IE communication 	Yes
Media redundancy	Yes; PROFINET MRP
Interface types	
RJ 45 (Ethernet)	
 Transmission procedure 	PROFINET with 100 Mbit/s full duplex (100BASE-TX)
• 10 Mbps	No
• 100 Mbps	Yes; PROFINET with 100 Mbit/s full duplex (100BASE-TX)
 Autonegotiation 	Yes
Autocrossing	Yes
Protocols	
Number of connections	
 Number of MtM communication relationships/connections, max. 	16
PROFINET IO Device	
PROFINET IO Device Services	
	Yes; 250 $\mu s,$ 500 $\mu s,$ 1 ms, 2 ms, 4 ms additionally with IRT with high performance: 250 μs to 4 ms in 125 μs frame
Services	
Services — IRT	performance: 250 µs to 4 ms in 125 µs frame
Services — IRT — PROFlenergy	performance: 250 µs to 4 ms in 125 µs frame Yes
Services — IRT — PROFlenergy — Prioritized startup	performance: 250 µs to 4 ms in 125 µs frame Yes Yes
Services — IRT — PROFlenergy — Prioritized startup — Shared device — Number of IO Controllers with shared device,	performance: 250 µs to 4 ms in 125 µs frame Yes Yes Yes
Services — IRT — PROFlenergy — Prioritized startup — Shared device — Number of IO Controllers with shared device, max.	performance: 250 µs to 4 ms in 125 µs frame Yes Yes Yes
Services — IRT — PROFlenergy — Prioritized startup — Shared device — Number of IO Controllers with shared device, max. Redundancy mode • PROFINET system redundancy (S2) • H-Sync forwarding	performance: 250 µs to 4 ms in 125 µs frame Yes Yes Yes 4
Services - IRT - PROFlenergy - Prioritized startup - Shared device - Number of IO Controllers with shared device, max. Redundancy mode • PROFINET system redundancy (S2) • H-Sync forwarding Media redundancy	performance: 250 µs to 4 ms in 125 µs frame Yes Yes 4 Yes; NAP S2
Services - IRT - PROFlenergy - Prioritized startup - Shared device - Number of IO Controllers with shared device, max. Redundancy mode • PROFINET system redundancy (S2) • H-Sync forwarding Media redundancy - MRP	performance: 250 µs to 4 ms in 125 µs frame Yes Yes Yes 4 Yes; NAP S2 Yes Yes
Services - IRT - PROFlenergy - Prioritized startup - Shared device - Number of IO Controllers with shared device, max. Redundancy mode • PROFINET system redundancy (S2) • H-Sync forwarding Media redundancy - MRP - MRP - MRP	performance: 250 µs to 4 ms in 125 µs frame Yes Yes Yes 4 Yes; NAP S2 Yes
Services — IRT — PROFlenergy — Prioritized startup — Shared device — Number of IO Controllers with shared device, max. Redundancy mode • PROFINET system redundancy (S2) • H-Sync forwarding Media redundancy — MRP — MRPD Open IE communication	performance: 250 µs to 4 ms in 125 µs frame Yes Yes Yes 4 Yes; NAP S2 Yes Yes No
Services — IRT — PROFlenergy — Prioritized startup — Shared device — Number of IO Controllers with shared device, max. Redundancy mode • PROFINET system redundancy (S2) • H-Sync forwarding Media redundancy — MRP — MRPD Open IE communication • TCP/IP	performance: 250 µs to 4 ms in 125 µs frame Yes Yes Yes 4 Yes; NAP S2 Yes Yes No
Services — IRT — PROFlenergy — Prioritized startup — Shared device — Number of IO Controllers with shared device, max. Redundancy mode • PROFINET system redundancy (S2) • H-Sync forwarding Media redundancy — MRP — MRPD Open IE communication • TCP/IP • SNMP	performance: 250 µs to 4 ms in 125 µs frame Yes Yes Yes 4 Yes; NAP S2 Yes Yes No Yes No
Services - IRT - PROFlenergy - Prioritized startup - Shared device - Number of IO Controllers with shared device, max. Redundancy mode • PROFINET system redundancy (S2) • H-Sync forwarding Media redundancy - MRP - MRP - MRP Open IE communication • TCP/IP • SNMP • LLDP	performance: 250 µs to 4 ms in 125 µs frame Yes Yes Yes 4 Yes; NAP S2 Yes Yes No
Services - IRT - PROFlenergy - Prioritized startup - Shared device - Number of IO Controllers with shared device, max. Redundancy mode • PROFINET system redundancy (S2) • H-Sync forwarding Media redundancy - MRP - MRPD Open IE communication • TCP/IP • SNMP • LLDP	performance: 250 µs to 4 ms in 125 µs frame Yes Yes Yes 4 Yes; NAP S2 Yes Yes No Yes Yes Yes Yes Yes
Services IRT PROFlenergy Prioritized startup Shared device Number of IO Controllers with shared device, max. Redundancy mode • PROFINET system redundancy (S2) • H-Sync forwarding Media redundancy MRP MRPD Open IE communication • TCP/IP • SNMP • LLDP Isochronous mode Equidistance	performance: 250 µs to 4 ms in 125 µs frame Yes Yes Yes 4 Yes; NAP S2 Yes Yes No Yes No Yes Yes Yes Yes
Services IRT PROFlenergy Prioritized startup Shared device Number of IO Controllers with shared device, max. Redundancy mode • PROFINET system redundancy (S2) • H-Sync forwarding Media redundancy MRP MRPD Open IE communication • TCP/IP • SNMP • LLDP Isochronous mode Equidistance shortest clock pulse	performance: 250 µs to 4 ms in 125 µs frame Yes Yes Yes 4 Yes; NAP S2 Yes Yes No Yes No Yes Yes Yes Yes Yes Yes
Services IRT PROFlenergy Prioritized startup Shared device Number of IO Controllers with shared device, max. Redundancy mode • PROFINET system redundancy (S2) • H-Sync forwarding Media redundancy MRP MRP • TCP/IP • SNMP • LLDP Isochronous mode Equidistance shortest clock pulse max. cycle	performance: 250 µs to 4 ms in 125 µs frame Yes Yes Yes 4 Yes; NAP S2 Yes Yes No Yes Yes Yes Yes Yes Yes Yes
Services IRT PROFlenergy Prioritized startup Shared device Number of IO Controllers with shared device, max. Redundancy mode • PROFINET system redundancy (S2) • H-Sync forwarding Media redundancy MRP MRPD Open IE communication • TCP/IP • SNMP • LLDP Isochronous mode Equidistance shortest clock pulse max. cycle Bus cycle time (TDP), min.	performance: 250 µs to 4 ms in 125 µs frame Yes Yes Yes 4 Yes; NAP S2 Yes Yes No Yes Yes Yes Yes Yes Yes Yes Z50 µs 4 ms 250 µs
Services IRT PROFlenergy Prioritized startup Shared device Number of IO Controllers with shared device, max. Redundancy mode • PROFINET system redundancy (S2) • H-Sync forwarding Media redundancy MRP MRPD Open IE communication • TCP/IP • SNMP • LLDP Isochronous mode Equidistance shortest clock pulse max. cycle Bus cycle time (TDP), min. Jitter, max.	performance: 250 µs to 4 ms in 125 µs frame Yes Yes Yes 4 Yes; NAP S2 Yes Yes No Yes No Yes Yes Yes Yes Yes Yes Yes
Services IRT PROFlenergy Prioritized startup Shared device Number of IO Controllers with shared device, max. Redundancy mode • PROFINET system redundancy (S2) • H-Sync forwarding Media redundancy MRP MRP • TCP/IP • SNMP • LLDP Isochronous mode Equidistance shortest clock pulse max. cycle Bus cycle time (TDP), min. Jitter, max. Interrupts/diagnostics/status information	performance: 250 μs to 4 ms in 125 μs frame Yes Yes Yes 4 Yes; NAP S2 Yes Yes No Yes Yes Yes Yes Yes Yes Z50 μs 4 ms 250 μs 1 μs
Services IRT PROFlenergy Prioritized startup Shared device Number of IO Controllers with shared device, max. Redundancy mode • PROFINET system redundancy (S2) • H-Sync forwarding Media redundancy MRP MRPD Open IE communication • TCP/IP • SNMP • LLDP Isochronous mode Equidistance shortest clock pulse max. cycle Bus cycle time (TDP), min. Jitter, max. Interrupts/diagnostics/status information	performance: 250 µs to 4 ms in 125 µs frame Yes Yes Yes 4 Yes; NAP S2 Yes Yes No Yes No Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes
Services IRT PROFlenergy Prioritized startup Shared device Number of IO Controllers with shared device, max. Redundancy mode • PROFINET system redundancy (S2) • H-Sync forwarding Media redundancy MRP MRPD Open IE communication • TCP/IP • SNMP • LLDP Isochronous mode Equidistance shortest clock pulse max. cycle Bus cycle time (TDP), min. Jitter, max. Interrupts/diagnostics/status information Status indicator Alarms	performance: 250 µs to 4 ms in 125 µs frame Yes Yes Yes 4 Yes; NAP S2 Yes No Yes No Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes
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RUN LED	Yes; green LED
• ERROR LED	Yes; red LED
MAINT LED	Yes; Yellow LED
 Monitoring of the supply voltage (PWR-LED) 	Yes; green PWR LED
 Connection display LINK TX/RX 	Yes; 2x green link LEDs on BusAdapter
Potential separation	
between backplane bus and electronics	No
between PROFINET and all other circuits	Yes
between supply and all other circuits	No
Isolation	
Isolation tested with	707 V DC (type test)
Standards, approvals, certificates	
Network loading class	3
Security level	According to Security Level 1 Test Cases V1.1.1
Ambient conditions	
Ambient temperature during operation	
 horizontal installation, min. 	-30 °C; No condensation
 horizontal installation, max. 	60 °C
 vertical installation, min. 	-30 °C; No condensation
 vertical installation, max. 	50 °C
Altitude during operation relating to sea level	
 Installation altitude above sea level, max. 	5 000 m; Restrictions for installation altitudes > 2 000 m, see manual
connection method / header	
ET-Connection	
 via BU/BA Send 	Yes; + 16 ET 200AL modules
Mechanics/material	
Strain relief	Yes; Optional
Dimensions	
Width	50 mm
Height	117 mm
Depth	74 mm
Weights	
Weight, approx.	120 g; without BusAdapter
last modified:	

last modified:

3/2/2021 🖸