

SIMATIC ET 200SP, PROFINET 2-port interface module IM155-6PN/2 High Feature, 1 slot for SIMATIC BusAdapter, max. 64 Periphery modules and 16 ET 200AL modules, S2 redundancy, Multi Hot swapping, 0,25ms isochronous mode, inclusive server module



General information	
Product type designation	IM 155-6 PN/2 HF with server module
HW functional status	From FS02
Firmware version	V4.2
<ul style="list-style-type: none"> FW update possible 	Yes
Number of MtM communication relationships/connections, max.	16
Product function	
<ul style="list-style-type: none"> I&M data 	Yes; I&M0 to I&M3
<ul style="list-style-type: none"> Module swapping during operation (hot swapping) 	Yes; Multi-hot swapping
<ul style="list-style-type: none"> Isochronous mode 	Yes
<ul style="list-style-type: none"> Tool changer 	Yes; Docking station and docking unit
<ul style="list-style-type: none"> Local coupling, IO data 	No
<ul style="list-style-type: none"> Local coupling, data records 	No
Engineering with	
<ul style="list-style-type: none"> STEP 7 TIA Portal configurable/integrated as of version 	STEP 7 V15.1 or higher
<ul style="list-style-type: none"> STEP 7 configurable/integrated as of version 	Configurable via GSD file

Configuration control

via dataset	Yes
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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
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Input current

Current consumption, max.	700 mA
Inrush current, max.	4.5 A
I^2t	0.25 A ² ·s

Power loss

Power loss, typ.	2.4 W
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Address area

Address space per module

• Address space per module, max.	288 byte; For input and output data respectively
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Address space per station

• Address space per station, max.	1 440 byte; Dependent on configuration
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Hardware configuration

Rack

• Modules per rack, max.	64; + 16 ET 200AL modules
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Submodules

• Number of submodules per station, max.	256
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Time stamping

Accuracy	10 ms
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Interfaces

Number of PROFINET interfaces	1; 2 ports (switch)
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1. Interface

Interface types

• Number of ports	2; via BusAdapter
• integrated switch	Yes
• BusAdapter (PROFINET)	Yes; Compatible BusAdapter: BA 2x RJ45, BA 2x FC, BA 2x SCRJ, BA SCRJ / RJ45, BA SCRJ / FC, BA 2x LC, BA LC / RJ45, BA LC / FC

Protocols

• PROFINET IO Device	Yes
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- 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

PROFINET IO Device

Services

- Isochronous mode Yes; Bus cycle time: min. 250 μ s
- Open IE communication Yes
- IRT Yes; 250 μ s, 500 μ s, 1 ms, 2 ms, 4 ms additionally with IRT with high performance: 250 μ s to 4 ms in 125 μ s frame
- PROFINergy Yes
- Prioritized startup Yes
- Shared device Yes
- Number of IO Controllers with shared device, max. 4

Redundancy mode

- PROFINET system redundancy (S2) Yes; NAP S2
- Redundant PROFINET configuration (R1) No
- H-Sync forwarding Yes

Media redundancy

- MRP Yes
- MRPD No

Open IE communication

- TCP/IP Yes
- SNMP Yes
- LLDP Yes

Isochronous mode

- Equidistance Yes
- shortest clock pulse 250 μ s
- max. cycle 4 ms
- Bus cycle time (TDP), min. 250 μ s
- Jitter, max. 1 μ s

Interrupts/diagnostics/status information

- Status indicator Yes
- Alarms Yes

Diagnostics function	Yes
Diagnostics indication LED	
• 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	
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
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