

SIMATIC ET 200SP, PROFINET 3-port interface module IM155-6PN/3 High Feature, 2 slots for SIMATIC BusAdapter, max. 64 Periphery modules and 16 ET 200AL modules, S2 redundancy, Multi Hot Swapping, 0,25ms isochronous mode, optional PN strain relief, inclusive server module



General information	
Product type designation	IM 155-6 PN/3 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 	Yes
<ul style="list-style-type: none"> <ul style="list-style-type: none"> Number of coupling modules 	16
<ul style="list-style-type: none"> <ul style="list-style-type: none"> Number of coupling submodules per module 	4
<ul style="list-style-type: none"> Local coupling, data records 	No
Engineering with	

- STEP 7 TIA Portal configurable/integrated as of version V15.1
- STEP 7 configurable/integrated as of version Configurable via GSD file
- PROFINET as of GSD version/GSD revision GSDML V2.3

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

<ul style="list-style-type: none"> • Mains/voltage failure stored energy time 	10 ms
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Input current

Current consumption (rated value)	175 mA; At 24 V, 2 slots 2x RJ45 BusAdapter, no I/O modules
Current consumption, max.	950 mA
Inrush current, max.	9 A
I ² t	0.34 A ² ·s

Power loss

Power loss, typ.	4.9 W
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Address area

Address space per module	
<ul style="list-style-type: none"> • Address space per module, max. 	288 byte; For input and output data respectively
Address space per station	
<ul style="list-style-type: none"> • Address space per station, max. 	1 440 byte; Dependent on configuration

Hardware configuration

Rack	
<ul style="list-style-type: none"> • Modules per rack, max. 	64; + 16 ET 200AL modules
Submodules	
<ul style="list-style-type: none"> • Number of submodules per station, max. 	256

Interfaces

Number of PROFINET interfaces	1; 3 ports (switch)
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1. Interface

Interface types	
<ul style="list-style-type: none"> • Number of ports • integrated switch • BusAdapter (PROFINET) 	3; Via 2 BusAdapter slots Yes 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	
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- PROFINET IO Device
- Open IE communication
- Media redundancy

Yes
Yes
Yes; PROFINET MRP

Interface types

RJ 45 (Ethernet)

- Transmission procedure
- 10 Mbps
- 100 Mbps
- Autonegotiation
- Autocrossing

PROFINET with 100 Mbit/s full duplex (100BASE-TX)
No
Yes; PROFINET with 100 Mbit/s full duplex (100BASE-TX)
Yes
Yes

Protocols

PROFINET IO Device

Services

- IRT
- PROFINergy
- Prioritized startup
- Shared device
- Number of IO Controllers with shared device, max.

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
Yes
Yes
Yes
4

Redundancy mode

- PROFINET system redundancy (S2)
- Redundant PROFINET configuration (R1)
- H-Sync forwarding

Yes; NAP S2
No
Yes

Media redundancy

- MRP
- MRPD

Yes
No

Open IE communication

- TCP/IP
- SNMP
- LLDP

Yes
Yes
Yes

Isochronous mode

- Equidistance
- shortest clock pulse
- max. cycle
- Bus cycle time (TDP), min.
- Jitter, max.

Yes
250 μ s
4 ms
250 μ s
1 μ s

Interrupts/diagnostics/status information

- Status indicator
- Alarms
- Diagnostics function

Yes
Yes
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
• horizontal installation, max.	60 °C
• vertical installation, min.	-30 °C
• 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	100 mm
Height	117 mm
Depth	74 mm

Weights	
Weight, approx.	220 g; without BusAdapter
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