

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"> <li>FW update possible</li> </ul>	Yes
Number of MtM communication relationships/connections, max.	16
Product function	
<ul style="list-style-type: none"> <li>I&amp;M data</li> </ul>	Yes; I&M0 to I&M3
<ul style="list-style-type: none"> <li>Module swapping during operation (hot swapping)</li> </ul>	Yes; Multi-hot swapping
<ul style="list-style-type: none"> <li>Isochronous mode</li> </ul>	Yes
<ul style="list-style-type: none"> <li>Tool changer</li> </ul>	Yes; Docking station and docking unit
<ul style="list-style-type: none"> <li>Local coupling, IO data</li> </ul>	Yes
<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>Number of coupling modules</li> </ul> </li> </ul>	16
<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>Number of coupling submodules per module</li> </ul> </li> </ul>	4
<ul style="list-style-type: none"> <li>Local coupling, data records</li> </ul>	No
Engineering with	

- STEP 7 TIA Portal configurable/integrated from version V15.1
- 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 (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<sup>2</sup>t 0.34 A<sup>2</sup>·s

### Power loss

Power loss, typ. 4.9 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

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

#### Submodules

- Number of submodules per station, max. 256

### Interfaces

Number of PROFINET interfaces 1; 3 ports (switch)

### 1. Interface

#### Interface types

- Number of ports 3; Via 2 BusAdapter slots
- 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
- 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  $\mu$ s, 500  $\mu$ s, 1 ms, 2 ms, 4 ms additionally with IRT with high performance: 250  $\mu$ s to 4 ms in 125  $\mu$ s frame  
Yes  
Yes  
Yes  
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#### 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  $\mu$ s  
4 ms  
250  $\mu$ s  
1  $\mu$ 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
<b>last modified:</b>	06/09/2020