

SIMATIC ET 200SP, PROFINET, 3-port interface module, IM 155-6PN/3 High Feature, 2 slots 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/3 HF
HW functional status	From FS02
Firmware version	V4.2
<ul style="list-style-type: none"> <li>FW update possible</li> </ul>	Yes
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	
<ul style="list-style-type: none"> <li>STEP 7 TIA Portal configurable/integrated from version</li> </ul>	V15.1

- STEP 7 configurable/integrated from version
- PROFINET from GSD version/GSD revision

Configurable via GSD file  
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

- Quantity of operable ET 200SP modules, max. 64
- Quantity of operable ET 200AL modules, max. 16

### 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 Yes

- Open IE communication
- Media redundancy

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

### Number of connections

- Number of MtM communication relationships/connections, max.

16

### 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

Yes

Alarms	Yes
Diagnostics function	Yes
<b>Diagnostics indication LED</b>	
• 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
<b>Potential separation</b>	
between backplane bus and electronics	No
between PROFINET and all other circuits	Yes
between supply and all other circuits	No
<b>Isolation</b>	
Isolation tested with	707 V DC (type test)
<b>Standards, approvals, certificates</b>	
Network loading class	3
Security level	According to Security Level 1 Test Cases V1.1.1
<b>Ambient conditions</b>	
<b>Ambient temperature during operation</b>	
• horizontal installation, min.	-30 °C
• horizontal installation, max.	60 °C
• vertical installation, min.	-30 °C
• vertical installation, max.	50 °C
<b>Altitude during operation relating to sea level</b>	
• Installation altitude above sea level, max.	5 000 m; Restrictions for installation altitudes > 2 000 m, see manual
<b>Connection method</b>	
<b>ET-Connection</b>	
• via BU/BA Send	Yes; + 16 ET 200AL modules
<b>Mechanics/material</b>	
Strain relief	Yes; Optional
<b>Dimensions</b>	
Width	100 mm
Height	117 mm
Depth	74 mm
<b>Weights</b>	
Weight, approx.	220 g; without BusAdapter
<b>last modified:</b>	11/28/2020