

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"> <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>	No
<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 as of version</li> </ul>	STEP 7 V15.1 or higher
<ul style="list-style-type: none"> <li>STEP 7 configurable/integrated as of version</li> </ul>	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 <sup>2</sup> ·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
- 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

### PROFINET IO Device

#### Services

- Isochronous mode
- Open IE communication
- IRT
- PROFINergy
- Prioritized startup
- Shared device
- Number of IO Controllers with shared device, max.

Yes; Bus cycle time: min. 250  $\mu$ s  
Yes  
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

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

Yes  
No  
Yes; NAP S2  
No  
Yes

#### Open IE communication

- TCP/IP
- SNMP
- LLDP

Yes  
Yes  
Yes

## Isochronous mode

- Isynchronous operation (application synchronized up to terminal)
- Equidistance
- shortest clock pulse
- max. cycle
- Bus cycle time (TDP), min.
- Jitter, max.

Yes  
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 to network LINK (green)	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; No condensation
• horizontal installation, max.	60 °C
• vertical installation, min.	-30 °C; No condensation
• 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	50 mm
Height	117 mm
Depth	74 mm

<b>Weights</b>	
Weight, approx.	120 g; without BusAdapter
<b>last modified:</b>	03/03/2020