



SIMATIC ET 200SP, PROFINET, 2-port interface module IM 155-6PN/2 High Feature, 1 slot 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/2 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
Engineering with	
<ul style="list-style-type: none"> <li>STEP 7 TIA Portal configurable/integrated from version</li> </ul>	V15.1
<ul style="list-style-type: none"> <li>STEP 7 configurable/integrated from version</li> </ul>	use GSD file
<ul style="list-style-type: none"> <li>PROFINET from GSD version/GSD revision</li> </ul>	GSDML V2.43
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
Short-circuit protection	Yes
Mains buffering	
<ul style="list-style-type: none"> <li>Mains/voltage failure stored energy time</li> </ul>	10 ms
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
Address area	
Address space per module	
<ul style="list-style-type: none"> <li>Address space per module, max.</li> </ul>	288 byte; For input and output data respectively
Address space per station	
<ul style="list-style-type: none"> <li>Address space per station, max.</li> </ul>	1 440 byte
Hardware configuration	
Rack	
<ul style="list-style-type: none"> <li>Quantity of operable ET 200SP modules, max.</li> </ul>	64
<ul style="list-style-type: none"> <li>Quantity of operable ET 200AL modules, max.</li> </ul>	16

<b>Submodules</b>	
• Number of submodules per station, max.	256
<b>Interfaces</b>	
Transmission procedure	100BASE-TX
Number of PROFINET interfaces	1; 2 ports (switch)
<b>1. Interface</b>	
<b>Interface types</b>	
• RJ 45 (Ethernet)	Yes; with BusAdapter
• Number of ports	2; with BusAdapter
• integrated switch	Yes
• BusAdapter (PROFINET)	Yes; BA 2x RJ45, BA 2x FC, BA 2x M12, BA 2x SCRJ, BA SCRJ/RJ45, BA SCRJ/FC, BA 2x LC, BA LC/RJ45, BA LC/FC
<b>Protocols</b>	
• PROFINET IO Device	Yes
• Open IE communication	Yes
• Media redundancy	Yes; PROFINET MRP client
<b>PROFINET IO Device</b>	
<b>Services</b>	
— IRT	Yes; 250 µs to 4 ms in 125 µs frame
— Dynamic Frame Packing (DFP)	No
— PROFlenergy	Yes
— Prioritized startup	Yes
— Shared device	Yes
— Number of IO Controllers with shared device, max.	4
<b>Interface types</b>	
<b>RJ 45 (Ethernet)</b>	
• Transmission procedure	PROFINET with 100 Mbit/s full duplex (100BASE-TX)
• 100 Mbps	Yes
• Autonegotiation	Yes
• Autocrossing	Yes
<b>Protocols</b>	
Supports protocol for PROFINET IO	Yes
PROFIsafe	Yes
PROFIBUS	No
EtherNet/IP	No
Modbus TCP	No
<b>Number of connections</b>	
• Number of MtM communication relationships/connections, max.	16
<b>Redundancy mode</b>	
• PROFINET system redundancy (S2)	Yes; NAP S2
• PROFINET system redundancy (R1)	No
• H-Sync forwarding	Yes
<b>Media redundancy</b>	
— MRP	Yes
— MRPD	No
<b>Open IE communication</b>	
• TCP/IP	Yes
• SNMP	Yes
• LLDP	Yes
<b>Isochronous mode</b>	
Equidistance	Yes
shortest clock pulse	250 µs
max. cycle	4 ms
Bus cycle time (TDP), min.	250 µs
Jitter, max.	1 µs
<b>Interrupts/diagnostics/status information</b>	
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; 1500 V AC (type test)	
between supply and all other circuits	No	
<b>Permissible potential difference</b>		
between different circuits	Safety extra low voltage SELV	
<b>Isolation</b>		
Isolation tested with	707 V DC (type test)	
<b>Standards, approvals, certificates</b>		
Network loading class	3	
<b>Ecological footprint</b>		
• environmental product declaration	Yes	
<b>Global warming potential</b>		
— global warming potential, (total) [CO2 eq]	105 kg	
— global warming potential, (during production) [CO2 eq]	13.7 kg	
— global warming potential, (during operation) [CO2 eq]	91.9 kg	
— global warming potential, (after end of life cycle) [CO2 eq]	-0.617 kg	
<b>Security</b>		
PROFINET Security Class	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>Absolute humidity</b>		
• dew point, min.	-60 °C; suitable for dry room applications	
<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>Classifications</b>		
	<b>Version</b>	<b>Classification</b>
eClass	14	27-24-26-08
eClass	12	27-24-26-08
eClass	9.1	27-24-26-08
eClass	9	27-24-26-08
eClass	8	27-24-26-08
eClass	7.1	27-24-26-08

eClass	6	27-24-26-08
ETIM	10	EC001604
ETIM	9	EC001604
ETIM	8	EC001604
ETIM	7	EC001604
IDEA	4	3564
UNSPSC	15	32-15-17-05

**Approvals / Certificates**

**General Product Approval**

[Miscellaneous](#)



[Manufacturer Declaration](#)

[PROFINET](#)



**General Product Approval**



[China RoHS](#)



**For use in hazardous locations**



[FM](#)

[CCC-Ex](#)



[Miscellaneous](#)

**For use in hazardous locations**

**Maritime application**

[Type Examination Certificate](#)

[CCC-Ex](#)



**Maritime application**

**Environment**

[NK / Nippon Kaiji Kyokai](#)



[CCS \(China Classification Society\)](#)

[KR \(Korean Register of Shipping\)](#)



**Industrial Communication**

[PROFINET](#)

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