

APTER POWER PRODUCT MANUAL

6ES7288-1ST20-0AA1

SIMATIC S7-200 SMART CPU ST20

The Siemens 6ES7288-1ST20-0AA1 is a SIMATIC S7-200 SMART ST20 standard CPU with 12 integrated 24 V DC digital inputs, 8 24 V DC transistor outputs, and 20 KB of program/data memory.

It executes the STEP 7 Micro/WIN SMART user program, reads the 12 onboard binary input signals, and commands 8 field outputs for fast solid-state switching and pulse-train motion on a compact DC-powered controller. Its transistor channels also support the high-speed pulse-output functions documented by Siemens. The standard CPU exchanges engineering, process, and diagnostic data over Industrial Ethernet/PROFINET and RS485, and can use compatible S7-200 SMART expansion components. It is suited to labeling, indexing, and compact motion machines.

Manufacturer	Siemens
Prepared by	Apter Power
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APTER POWER SALES TEAM

INDUSTRIAL AUTOMATION PRODUCT SUPPORT

8 solid-state outputs for verified high-speed SMART control.

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SCAN FOR PRODUCT & QUOTE
6ES7288-1ST20-0AA1

1. Product Overview and Identity

The Siemens 6ES7288-1ST20-0AA1 is a SIMATIC S7-200 SMART ST20 standard CPU with 12 integrated 24 V DC digital inputs, 8 24 V DC transistor outputs, and 20 KB of program/data memory.

It executes the STEP 7 Micro/WIN SMART user program, reads the 12 onboard binary input signals, and commands 8 field outputs for fast solid-state switching and pulse-train motion on a compact DC-powered controller. Its transistor channels also support the high-speed pulse-output functions documented by Siemens. The standard CPU exchanges engineering, process, and diagnostic data over Industrial Ethernet/PROFINET and RS485, and can use compatible S7-200 SMART expansion components. It is suited to labeling, indexing, and compact motion machines.

Model Configuration

Field	Verified information
Complete model	6ES7288-1ST20-0AA1
Manufacturer	Siemens
Product description	SIMATIC S7-200 SMART CPU ST20

Key Features

- Exact Siemens MLFB 6ES7288-1ST20-0AA1
- SIMATIC S7-200 SMART CPU ST20
- 12 DI 24 V DC; 8 transistor DQ
- 20 KB program/data memory
- 1 x Industrial Ethernet/PROFINET and 1 x RS485

2. Technical Specifications

Only manufacturer-confirmed information is stated. Values absent from the named Siemens source are marked for nameplate or document verification.

Parameter	Verified value
Product type	SIMATIC S7-200 SMART CPU ST20
CPU design	Standard expandable CPU
Onboard digital inputs	12 inputs, 24 V DC
Onboard digital outputs	8; 24 V DC transistor, 0.5 A
Power supply	24 V DC nominal; 20.4 to 28.8 V DC permissible
Program/data memory	20 KB
Engineering software	STEP 7 Micro/WIN SMART
Communication	1 x Industrial Ethernet/PROFINET and 1 x RS485
Mounting	Standard DIN rail
Degree of protection	IP20
Ambient operation	-20 to 60 deg C for horizontal installation; follow orientation-specific limits in Siemens data
Device dimensions	90 x 100 x 81 mm (W x H x D)
Approximate device weight	0.32 kg
Country of origin	China
Lifecycle	Current 0AA1 standard CPU article documented by Siemens; confirm regional ordering status at quotation.

Verification Note

Use the complete 6ES7288-1ST20-0AA1 identifier. Current 0AA1 standard CPU article documented by Siemens; confirm regional ordering status at quotation. Values not published in the cited Siemens sources are intentionally not inferred.

3. Functions, Applications and Components

Core Functions

- It executes the STEP 7 Micro/WIN SMART user program, reads the 12 onboard binary input signals, and commands 8 field outputs for fast solid-state switching and pulse-train motion on a compact DC-powered controller. Its transistor channels also support the high-speed pulse-output functions documented by Siemens. The standard CPU exchanges engineering, process, and diagnostic data over Industrial Ethernet/PROFINET and RS485, and can use compatible S7-200 SMART expansion components. It is suited to labeling, indexing, and compact motion machines.
- Maintains the documented CPU ST20 role for the complete 6ES7288-1ST20-0AA1 article number.
- Provides a verified basis for wiring, programming, commissioning, diagnostics, and replacement planning.

Application Areas

Application	System role
High-speed machine I/O	Reads 12 digital states and switches 8 transistor outputs without relay contact wear
Pulse-train positioning	Generates configured PTO signals for compatible motion components
Packaging and labeling	Coordinates sensors, actuators, and indexed motion in labeling, indexing, and compact motion machines
Networked compact control	Exchanges commands, process values, and diagnostics over the documented interfaces

Compatible Components

- S7-200 SMART project configured for CPU ST20 and complete MLFB 6ES7288-1ST20-0AA1
- 24 V DC sensors and field loads matched to the documented input and output circuits
- Industrial Ethernet/PROFINET and RS485 devices defined in the STEP 7 Micro/WIN SMART project
- S7-200 SMART expansion modules, signal boards, memory card, and cabling approved for the exact CPU

Lifecycle Status

Current 0AA1 standard CPU article documented by Siemens; confirm regional ordering status at quotation.

4. Installation Precautions

- Identity: Match the complete 6ES7288-1ST20-0AA1 MLFB, CPU ST20 marking, hardware, and firmware
- Power: Verify 24 V DC nominal; 20.4 to 28.8 V DC permissible and isolate all sources before wiring or removal
- I/O: Observe every channel voltage, current, group common, polarity, and protective-device limit
- Project: Back up and match the STEP 7 Micro/WIN SMART configuration, addresses, communications, and retentive data
- Panel: Use DIN-rail mounting, protective earth, segregation, ventilation, and orientation limits from Siemens

STOP - Verify before installation

Use the complete 6ES7288-1ST20-0AA1 identifier. Current 0AA1 standard CPU article documented by Siemens; confirm regional ordering status at quotation. Values not published in the cited Siemens sources are intentionally not inferred.

Use the physical nameplate and current Siemens documents as the controlling records.

5. Official Source and Use Notice

Official source

Siemens official technical data sheet for 6ES7288-1ST20-0AA1: <https://support.industry.siemens.com/teddatasheet/?caller=SIOS&format=pdf&language=en&mlfbs=6ES7288-1ST20-0AA1>; Siemens S7-200 SMART System Manual: https://support.industry.siemens.com/cs/attachments/109745610/s7-200_SMART_system_manual_en-US.pdf

Apter Power product page

<https://www.apterpower.com/Siemens/6es7288-1st20-0aa1>

Use Notice

This is an original Apter Power product-specific reference prepared from the Siemens source named above. It is not a Siemens publication and does not replace the original data sheet, nameplate, certificate, installation drawing, safety instructions, or machine-builder documentation.

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