SIEMENS



Product overview for SIMATIC S7-1500

TIA Selection Tool Web



Advanced Controller SIMATIC S7-1500

Our fastest controller for automation

With the SIMATIC S7-1500 controller, you can rely on maximum performance and built-in future-proofing. The modular controller enables you to implement the most demanding machine concepts and reliably accompanies you on your way through digital transformation.

The SIMATIC S7-1500 has a modular design and is scalable in its functionality. Various central processor units (CPU versions) are available, each in several performance classes. A wide variety of signal modules for input and output as well as technology modules for special technological functions such as counting and communication modules are available for central or distributed configurations as interfaces to the machine or plant. The SIMATIC S7-1500 is approved for IP20 degree of protection and is intended for installation in a control cabinet.

https://www.siemens.com/s7-1500

System overview

Efficient engineering

- The TIA Portal provides complete access to the entire digitized automation: digital planning, integrated engineering, transparent operation. Simulation tools shorten time-to-market, diagnostic and energy management functions increase productivity, and the link to the management level offers more flexibility and transparency.

Functional design

- The SIMATIC S7-1500 offers easy handling and maximum user-friendliness in many new details: integrated potential jumpers, shielding elements that can be mounted without tools, uniform front connectors, ergonomic terminal labeling. Easy expandability, individual assembly and upward compatibility offer the highest cost efficiency and investment security.

Highest performance

- With the SIMATIC S7-1500, you can achieve maximum performance and productivity in your manufacturing process thanks to the fast backplane bus with PROFINET performance, the shortest response times and a command processing time of up to 1 ns in the CPU. The PROFINET connection with deterministic time response ensures reproducibility and precision in the µs range.

Integrated system diagnostics

- The integrated diagnostic functionality enables error messages to be visualized identically as plain text information in TIA Portal, on the HMI, on the Web server and on the CPU display based on a uniform display concept. The configuration and the message paths of the diagnostics are integrated into the system in a user-friendly manner. The trace function is supported on all CPUs.

Safety Integrated

- One system for standard and fail-safe applications: one controller, one communication and one engineering for standard and fail-safe automation. Safety Integrated stands for simple connection of PROFIsafe devices via PROFIBUS and PROFINET, and for data consistency between standard and fail-safe program parts. Mixed operation of fail-safe and standard I/O modules is supported.

Technology Integrated

- One system for standard and fail-safe applications: one controller, one communication and one engineering for standard and fail-safe automation. Safety Integrated stands for simple connection of PROFIsafe devices via PROFIBUS and PROFINET, and for data consistency between standard and fail-safe program parts. Mixed operation of fail-safe and standard I/O modules is supported.

Security Integrated

- The security concept of the SIMATIC S7-1500 includes measures ranging from authorization levels to block protection and communication integrity. Security Integrated protects your investments, prevents machine replication and contributes to high plant availability.

Five steps to the right controller:

Type of structure, system performance, programming, Motion Control, system architecture: Do you already know which functions and performance features your

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controller should have? Then our function check will take you directly to the right SIMATIC controller in five steps.

https://www.siemens.com/controller

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Central processing units



	Article no.: *
Standard CPUs	
CPU 1511-1 PN	6ES7511-1AK02-0AB0
CPU 1511F-1 PN	6ES7511-1FK02-0AB0
CPU 1513-1 PN	6ES7513-1AL02-0AB0
CPU 1513F-1 PN	6ES7513-1FL02-0AB0
CPU 1515-2 PN	6ES7515-2AM02-0AB0
CPU 1515F-2 PN	6ES7515-2FM02-0AB0
CPU 1516-3 PN/DP	6ES7516-3AN02-0AB0
CPU 1516F-3 PN/DP	6ES7516-3FN02-0AB0
CPU 1517-3 PN/DP	6ES7517-3AP00-0AB0
CPU 1517F-3 PN/DP	6ES7517-3FP00-0AB0
CPU 1518-4 PN/DP	6ES7518-4AP00-0AB0
CPU 1518F-4 PN/DP	6ES7518-4FP00-0AB0
CPU 1518-4 PN/DP MFP, bundle	6ES7518-4AX00-1AC0
CPU 1518F-4 PN/DP MFP, bundle	6ES7518-4FX00-1AC0
SIPLUS S7-1500 CPU 1511-1 PN	6AG1511-1AK02-2AB0
SIPLUS S7-1500 CPU 1511-1 PN	6AG1511-1AK02-7AB0
SIPLUS S7-1500 CPU 1511-1 PN T1 RAIL	6AG2511-1AK02-1AB0
SIPLUS S7-1500 CPU 1511F-1 PN	6AG1511-1FK02-2AB0
SIPLUS S7-1500 CPU 1513-1 PN	6AG1513-1AL02-7AB0
SIPLUS S7-1500 CPU 1513-1 PN	6AG1513-1AL02-2AB0
SIPLUS S7-1500 CPU 1513F-1 PN	6AG1513-1FL02-2AB0
SIPLUS S7-1500 CPU 1518-4 PN/DP	6AG1518-4AP00-4AB0
SIPLUS S7-1500 CPU 1518-4 PN/DP MFP	6AG1518-4AX00-4AC0
SIPLUS S7-1500 CPU 1518F-4 PN/DP	6AG1518-4FP00-4AB0
Compact CPUs	
CPU 1511C-1 PN	6ES7511-1CK01-0AB0
CPU 1512C-1 PN	6ES7512-1CK01-0AB0
Technology CPUs	
CPU 1511T-1 PN	6ES7511-1TK01-0AB0
CPU 1511TF-1 PN	6ES7511-1UK01-0AB0
CPU 1515T-2 PN	6ES7515-2TM01-0AB0
CPU 1515TF-2 PN	6ES7515-2UM01-0AB0
CPU 1516T-3 PN/DP	6ES7516-3TN00-0AB0
CPU 1516TF-3 PN/DP	6ES7516-3UN00-0AB0
CPU 1517T-3 PN/DP	6ES7517-3TP00-0AB0
CPU 1517TF-3 PN/DP	6ES7517-3UP00-0AB0
Fault-tolerant and redundant CPUs	
CPU 1513R-1 PN	6ES7513-1RL00-0AB0
CPU 1515R-2 PN	6ES7515-2RM00-0AB0
CPU 1517H-3 PN	6ES7517-3HP00-0AB0
SIPLUS S7-1500 CPU 1515R-2 PN	6AG1515-2RM00-7AB0
SIPLUS S7-1500 CPU 1515R-2 PN TX RAIL	6AG2515-2RM00-4AB0
SIPLUS S7-1500 CPU 1517H-3 PN	6AG1517-3HP00-4AB0

: Safety-related component

* By clicking on the article number, you will be taken to the product in the TIA Selection Tool cloud.

Digital modules



	Article no.: *
Digital input	
Digital input, DI 32x24VDC HF	6ES7521-1BL00-0AB0
Digital input, DI 16x24VDC HF	6ES7521-1BH00-0AB0
Digital input, DI 16x230VAC BA	6ES7521-1FH00-0AA0
Digital input, DI 16x24VDC SRC BA	6ES7521-1BH50-0AA0
Digital input, DI 16x24VDC BA; incl. front connector push-in	6ES7521-1BH10-0AA0
Digital input, DI 32x24VDC BA; incl. front connector push-in	6ES7521-1BL10-0AA0
Digital input, DI 16x24...125VUC HF	6ES7521-7EH00-0AB0
Digital input, DI 64x24VDC SNC/SRC BA	6ES7521-1BP00-0AA0
SIPLUS S7-1500 DI 16X230VAC BA	6AG1521-1FH00-7AA0
SIPLUS S7-1500 DI 16X24VDC HF	6AG1521-1BH00-7AB0
SIPLUS S7-1500 DI 16X24VDC SRC BA	6AG1521-1BH50-7AA0
SIPLUS S7-1500 DI 16x110VDC HF TX RAIL	6AG2521-7EH00-4AB0
SIPLUS S7-1500 DI 16x24VDC HF TX RAIL	6AG2521-1BH00-4AB0
SIPLUS S7-1500 DI 32X24VDC HF	6AG1521-1BL00-7AB0
SIPLUS S7-1500 DI 48VUC/125VDC HF	6AG1521-7EH00-7AB0
Digital output	
Digital output, DQ 32x24VDC/0.5A HF	6ES7522-1BL01-0AB0
Digital output, DQ 16x24VDC/0.5A HF	6ES7522-1BH01-0AB0
Digital output, DQ 8x24VDC/2A HF	6ES7522-1BF00-0AB0
Digital output, DQ 8x230VAC/2A ST Triac	6ES7522-5FF00-0AB0
Digital output, DQ 8x230VAC/5A ST relay	6ES7522-5HF00-0AB0
Digital output, DQ 16x230VAC/1A Triac	6ES7522-5FH00-0AB0
Digital output, DQ 16x230VAC/2A relay	6ES7522-5HH00-0AB0
Digital output, DQ 16x24VDC/0.5A BA; incl. front connector push-in	6ES7522-1BH10-0AA0
Digital output, DQ 32x24VDC/0.5A BA; incl. front connector push-in	6ES7522-1BL10-0AA0
Digital output, DQ 16x24...48VUC/125VDC/0.5A ST	6ES7522-5EH00-0AB0
Digital output, DQ 64x24VDC/0.3A BA	6ES7522-1BP00-0AA0
Digital output, DQ 64x24VDC/0.3A SNK BA	6ES7522-1BP50-0AA0
SIPLUS S7-1500 16DQ 230VAC 1A ST TRIAC	6AG1522-5FH00-7AB0
SIPLUS S7-1500 16DQ 230VAC 2A RLY	6AG1522-5HH00-7AB0
SIPLUS S7-1500 DQ 16X24VDC/0.5A HF	6AG1522-1BH01-7AB0
SIPLUS S7-1500 DQ 16x110VDC ST TX RAIL	6AG2522-5EH00-4AB0
SIPLUS S7-1500 DQ 16x24VDC HF TX RAIL	6AG2522-1BH01-4AB0
SIPLUS S7-1500 DQ 16x48VUC/125VDC ST	6AG1522-5EH00-7AB0
SIPLUS S7-1500 DQ 32X24VDC/0.5A HF	6AG1522-1BL01-7AB0
SIPLUS S7-1500 DQ 8X230VAC/2A ST (TRIAC)	6AG1522-5FF00-7AB0
SIPLUS S7-1500 DQ 8X230VAC/5A ST (RELAY)	6AG1522-5HF00-2AB0
SIPLUS S7-1500 DQ 8X24VDC/2A HF	6AG1522-1BF00-7AB0
SIPLUS S7-1500 DQ 8x230VAC ST 5A T1 RAIL	6AG2522-5HF00-1AB0
Digital inputs/outputs	
Digital input/digital output DI/DQ 16x24VDC/16xDC24V/0.5A BA; incl. front connector push-in	6ES7523-1BL00-0AA0
Digital input/output DI 32/DQ 32 x24VDC/0.3A SNK BA	6ES7523-1BP50-0AA0
Fail-safe digital modules	
Digital input, F-DI 16x24VDC	6ES7526-1BH00-0AB0
Digital output, F-DQ 8x24VDC/2A PPM	6ES7526-2BF00-0AB0
SIPLUS S7-1500 F-DI 16x24VDC	6AG1526-1BH00-2AB0
SIPLUS S7-1500 F-DI 16x24VDC T1 RAIL	6AG2526-1BH00-1AB0
SIPLUS S7-1500 F-DQ 8x24VDC/2A	6AG1526-2BF00-2AB0
SIPLUS S7-1500 F-DQ 8x24VDC 2A T1 RAIL	6AG2526-2BF00-1AB0

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Analog modules



	Article no.: *
Analog input	
Analog input, AI 8xU/I/R/RTD BA	6ES7531-7QF00-0AB0
Analog input, AI 8xU/I/RTD/TC ST	6ES7531-7KF00-0AB0
Analog input, AI 8xU/I HS	6ES7531-7NF10-0AB0
Analog input, AI 8xU/R/RTD/TC HF	6ES7531-7PF00-0AB0
Analog input, AI 8xU/I HF	6ES7531-7NF00-0AB0
Analog input, AI 4xU/I/RTD/TC ST; incl. front connector push-in	6ES7531-7QD00-0AB0
SIPLUS S7-1500 AI 8XU/I/RTD/TC ST	6AG1531-7KF00-7AB0
SIPLUS S7-1500 AI 8XU/I HF	6AG1531-7NF00-7AB0
SIPLUS S7-1500 AI 8XU/I HS	6AG1531-7NF10-7AB0
SIPLUS S7-1500 AI 8 X U/R/RTD/TC HF	6AG1531-7PF00-4AB0
SIPLUS S7-1500 AI 8xU/I/RTD/TC TX RAIL	6AG2531-7KF00-4AB0
SIPLUS S7-1500 AI 8xU/I HS TX RAIL	6AG2531-7NF10-4AB0
Analog output	
Analog output, AQ 8xU/I HS	6ES7532-5HF00-0AB0
Analog output, AQ 4xU/I ST	6ES7532-5HD00-0AB0
Analog output, AQ 4xU/I HF	6ES7532-5ND00-0AB0
Analog output, AQ 2xU/I ST; incl. front connector push-in	6ES7532-5NB00-0AB0
SIPLUS S7-1500 AQ 4XU/I ST	6AG1532-5HD00-7AB0
SIPLUS S7-1500 AQ 4xU/I ST TX RAIL	6AG2532-5HD00-4AB0
SIPLUS S7-1500 AQ 8XU/I HS	6AG1532-5HF00-7AB0
Analog inputs/outputs	
Analog input/analog output AI/AQ 4xU/I/RTD/TC 2xU/I ST; incl. front connector push-in	6ES7534-7QE00-0AB0

Communication modules



	Article no.: *
Communication module, CM PtP, RS232, Basic	6ES7540-1AD00-0AA0
Communication module, CM PtP, RS422/485, Basic	6ES7540-1AB00-0AA0
Communication module, CM PtP, RS232, High Feature	6ES7541-1AD00-0AB0
Communication module, CM PtP, RS422/485, High Feature	6ES7541-1AB00-0AB0
Communication Module, CM 1542-5, PROFIBUS DP Master/Slave	6GK7542-5DX00-0XE0
Communication Module, CM 1542-1, PROFINET Controller	6GK7542-1AX00-0XE0
Communication module, CM 8xIO-Link	6ES7547-1JF00-0AB0
Communication processor, CP 1543-1, Industrial Ethernet	6GK7543-1AX00-0XE0
Communication Processor, CP 1542-5, PROFIBUS DP Master/Slave	6GK7542-5FX00-0XE0
Communications processor, CP 1545-1, Industrial Ethernet	6GK7545-1GX00-0XE0
SIPLUS	
SIPLUS NET CP 1543-1	6AG1543-1AX00-2XE0
SIPLUS S7-1500 CM 1542-5	6AG1542-5DX00-7XE0
SIPLUS S7-1500 CM PTP RS422/485 TX RAIL	6AG2541-1AB00-4AB0
SIPLUS S7-1500 CM PtP RS232 BA	6AG1540-1AD00-7AA0
SIPLUS S7-1500 CM PtP RS232 HF	6AG1541-1AD00-7AB0
SIPLUS S7-1500 CM PtP RS232 HF TX RAIL	6AG2541-1AD00-4AB0
SIPLUS S7-1500 CM PtP RS422/485 BA	6AG1540-1AB00-7AA0
SIPLUS S7-1500 CM PtP RS422/485 HF	6AG1541-1AB00-7AB0

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Technology modules



	Article no.: *
Technology module, TM PosInput 2	6ES7551-1AB00-0AB0
Technology module, TM Count 2x24V	6ES7550-1AA00-0AB0
Technology module, TM Timer DIDQ 16x24V	6ES7552-1AA00-0AB0
TM PTO 4	6ES7553-1AA00-0AB0
Technology module, SIWAREX WP521 ST	7MH4980-1AA01
Technology module, SIWAREX WP522 ST	7MH4980-2AA01
SIPLUS	
SIPLUS S7-1500 TM COUNT 2X24V	6AG1550-1AA00-7AB0
SIPLUS S7-1500 TM POSINPUT 2	6AG1551-1AB00-7AB0

System power supplies



	Article no.: *
System power supply, PS 25W 24V DC	6ES7505-0KA00-0AB0
System power supply, PS 60W 24/48/60V DC	6ES7505-0RA00-0AB0
System power supply for data retentivity, PS 60W 24/48/60V DC HF	6ES7505-0RB00-0AB0
System power supply, PS 60W 120/230V AC/DC	6ES7507-0RA00-0AB0
SIPLUS	
SIPLUS S7-1500 PS 25W 24V DC	6AG1505-0KA00-7AB0
SIPLUS S7-1500 PS 60W 120/230V AC/DC	6AG1507-0RA00-7AB0
SIPLUS S7-1500 PS 60W 24/48/60V DC	6AG1505-0RA00-7AB0

Load current supplies



	Article no.: *
Load current supply PM 70W, 120/230 V AC, 24 V DC, 3 A	6EP1332-4BA00
Load current supply PM 190W, 120/230 V AC, 24 V DC, 8 A	6EP1333-4BA00
SIPLUS	
SIPLUS S7-1500 PM 1507 24V/3A	6AG1332-4BA00-7AA0
SIPLUS S7-1500 PM 1507 24V/8A	6AG1333-4BA00-7AA0

Accessories



	Article no.: *
Memory card	
SIPLUS RIC memory cards	
SIPLUS RIC library for SIMATIC S7-15xx, SMC 12MB	6AG6003-7CF00-0LE0
SIPLUS RIC library for SIMATIC S7-15xx, SMC 24MB	6AG6003-7CF00-0LF0
SIPLUS RIC library for SIMATIC S7-15xx, SMC 256MB	6AG6003-7CF00-0LL0
SIPLUS RIC library for SIMATIC S7-15xx, SMC 2GB	6AG6003-7CF00-0LP0
Front connector	
Front connector, screw-type terminal for 35mm modules, 40-pin	6ES7592-1AM00-0XB0
Front connector, push-in system for 35mm modules, 40-pin	6ES7592-1BM00-0XB0
Front connector, push-in system for 25mm modules, 40-pin (spare part only)	6ES7592-1BM00-0XA0
Front connector potential bridges, 20 pcs.	6ES7592-3AA00-0AA0
STEP7 Software & SUS	

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Accessories

	Article no.: *
CPU display	
Display, CPU1511/1513, 35mm	6ES7591-1AA00-0AA0
Display, CPU1511(F)/1512C/1513(F)	6ES7591-1AA01-0AA0
Display, CPU1515/1516/1517/1518, 70mm	6ES7591-1BA00-0AA0
Display, CPU1515/1516/1517/1518	6ES7591-1BA01-0AA0
SIPLUS S7-1500 FRONTKLAPPE V2 CPU 35MM	6AG1591-1AA01-2AA0
SIPLUS S7-1500 FRONTKLAPPE V2 CPU 70MM	6AG1591-1BA01-2AA0
Front door	
Universal front door for I/O modules (35mm), 5 pcs.	6ES7528-0AA00-7AA0
Universal front door for I/O modules (25mm), 5 pcs.	6ES7528-0AA00-0AA0
Universal front door for S7-1500 PS modules (70 mm), 5 pieces	6ES7528-0AA60-7AA0
Universal front door for S7-1500 PS/CP modules (35 mm), 5 pieces	6ES7528-0AA80-7AA0
Universal front door for S7-1500 F-IO modules, 5 pieces	6ES7528-0AA10-7AA0
Labeling sheets	
Sheet with labeling strips for modules 35mm wide (Al grey)	6ES7592-2AX00-0AA0
Sheet with labeling strips for modules 25mm wide (Al grey)	6ES7592-1AX00-0AA0
Sheets with labeling strips (yellow)	6ES7592-2CX00-0AA0
Miscellaneous	
PE connection DIN rail	6ES7590-5AA00-0AA0
U connector	6ES7590-0AA00-0AA0
Shielding set for S7-1500 25mm modules	6ES7590-5CA10-0XA0
Shielding set for S7-1500 35mm modules	6ES7590-5CA00-0AA0
Power supply connector, DC/AC	6ES7590-8AA00-0AA0
Shield terminal element	6ES7590-5BA00-0AA0
SIMATIC PD, RS485 repeater for connecting PROFIBUS DP/MPI bus systems with max. 31 nodes. Max. baud rate 12 Mbps, IP20 degree of protection, improved user handling	6ES7972-0AA02-0XA0
SIMATIC S7, diagnostic repeater for PROFIBUS DP, for online diagnostics of the PROFIBUS line, DP-NORM SLAVE up to 12 Mbps, IP20 degree of protection, FAST-CONNECT connection system	6ES7972-0AB01-0XA0
E coding elements type F for ET 200MP modules F-DI, F-DQ, 5 pieces	6ES7592-6EF00-1AA0
SIPLUS DP diagnostic repeater	6AG1972-0AB01-4XA0
SIPLUS DP RS485-Repeater	6AG1972-0AA02-7XA0
SIPLUS S7-1500 E-CODING ELEMENTS TYPE F	6AG1592-6EF00-2AA0
SIPLUS S7-1500 U connector	6AG1590-0AA00-7AA0

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