

SIEMENS



Product
range
overview

SIMATIC S7-1500 plus TIA Portal

Power + Efficiency

The ultimate plus in automation



Intuitive, efficient, proven –
TIA Portal redefines engineering

Answers for industry.



power

Your plus of power:

- + Outstanding system performance for shortest response times and highest quality of control
- + Technology Integrated for perfect integration of drives through motion control functionalities and PROFIdrive
- + Security Integrated – consistently incorporated for highest investment protection



Totally Integrated Automation Portal – the common engineering framework

Software packages



SIMATIC STEP 7 PROFESSIONAL V13	DVD	6ES7822-1AA03-0YA5
SIMATIC STEP 7 PROFESSIONAL V13	Download	6ES7822-1AE03-0YA5
SIMATIC WinCC COMFORT V13	DVD	6AV2101-0AA03-0AA5
SIMATIC WinCC COMFORT V13	Download	6AV2101-0AA03-0AH5
SIMATIC STEP 7 SAFETY ADVANCED V13	DVD	6ES7833-1FA13-0YA5
SIMATIC STEP 7 SAFETY ADVANCED V13	Download	6ES7833-1FA13-0YH5
SINAMICS STARTDRIVE V13		6SL3072-4DA02-0XG0

Starter Kit

Starter Kit



SIMATIC S7-1500 Starter Kit Contains: STEP 7 Professional V13, 365-day license, SIMATIC S7-1500 CPU 1511-1 PN, SIMATIC Memory Card 4 MB, Digital input DI 16x 24 V DC, digital output DQ 16x 24 V DC/0.5 A ST Mounting rail 160 mm, front connector, power module PM 70 W 120/230 V AC SIMATIC TOP connect: front connector module, push-in SIMATIC TOP connect: connecting cable SIMATIC TOP connect: 3-wire connection module Standard Ethernet CAT 5 cable, screwdriver	6ES7511-1AK01-4YB5
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Communication

PtP



CM PtP, RS232 BA	6ES7540-1AD00-0AA0
CM PtP, RS232 HF	6ES7540-1AD00-0AB0
CM PtP, RS422/485 BA	6ES7541-1AB00-0AA0
CM PtP, RS422/485 HF	6ES7541-1AB00-0AB0
Communication modules for point-to-point or multi-point communication with the protocols Freeport, 3964(R), Modbus RTU, or USS protocol. Transmission rates of up to 115.2 kbit/s are supported.	

PROFIBUS



CM 1542-5, PB DP master (PROFIBUS) The communication module CM 1542-5 extends the SIMATIC S7-1500 control with a PROFIBUS connection for communication with secondary PROFIBUS devices in bandwidths of 9.6 kbit/s to 12 Mbit/s. The CM 1542-5 takes over all communication tasks and offloads the CPU.	6GK7542-5DX00-0XE0
CP 1542-5, communications processor (PROFIBUS) The CP 1542-5 communications processor is a cost-efficient PROFIBUS module for expanding SIMATIC S7-1500s without an integrated PROFIBUS interface. It is especially suited for the integration of smaller PROFIBUS networks.	6GK7542-5FX00-0XE0

Ethernet



CP 1543-1, Ethernet security The SIMATIC CP 1543-1 communications processor securely connects the SIMATIC S7-1500 controller to Industrial Ethernet networks. By combining different security features such as Stateful Packet Inspection firewall, VPN and protocols for data encryption, the communications processor provides protection from unauthorized access and data manipulation.	6GK7543-1AX00-0XE0
CM 1542-1, PROFINET communication module The CM 1542-1 communication module expands the SIMATIC S7-1500 controller to include a PROFINET connection as PROFINET IO controller and additionally offers S7, PG/OP and open communication.	6GK7542-1AX00-0EX0



Central systems

CPUs

Standard CPUs

CPU 1511-1 PN	6ES7511-1AK00-0AB0
CPU 1513-1 PN	6ES7513-1AL00-0AB0
CPU 1515-2 PN	6ES7515-2AM00-0AB0
CPU 1516-3 PN/DP	6ES7516-3AN00-0AB0
CPU 1518-4 PN/DP	6ES7518-4AP00-0AB0

Failsafe CPUs

CPU 1516-3F PN/DP	6ES7516-3FN00-0AB0
CPU 1518-4F PN/DP	6ES7518-4FP00-0AB0



Distributed systems

ET 200MP

PROFINET

IM 155-5 PN ST	6ES7155-5AA00-0AB0
IM 155-5 PN HF	6ES7155-5AA00-0ACO

PROFIBUS

IM 155-5 DP ST	6ES7155-5BA00-0AB0
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Signal modules

IO modules

35-mm wide modules (without front connector)

DI 16x 24 V DC HF	6ES7521-1BH00-0AB0
DI 32x 24 V DC HF	6ES7521-1BL00-0AB0
DI 16x 24 V DC SRC BA	6ES7521-1BH50-0AA0
DI 16x 230 V AC BA	6ES7521-1FH00-0AA0
DQ 16x 24 V DC/0.5 A ST	6ES7522-1BH00-0AB0
DQ 32x 24 V DC/0.5 A ST	6ES7522-1BL00-0AB0
DQ 8x 24 V DC/2 A HF	6ES7522-1BF00-0AB0
DQ 8x 230 V AC/2 A ST	6ES7522-5FF00-0AB0
DQ 8x 230 V AC/5 A ST	6ES7522-5HF00-0AB0
AI 8x U/I/RTD/TC ST	6ES7531-7KF00-0AB0
AI 8x U/I HS	6ES7531-7NF10-0AB0
AQ 4x U/I ST	6ES7532-5HD00-0AB0
AQ 8x U/I HS	6ES7532-5HF00-0AB0

25-mm wide modules (incl. front connector)

DI 16x 24 V DC BA	6ES7521-1BH10-0AA0
DI 32x 24 V DC BA	6ES7521-1BL10-0AA0
DQ 16x 24 V DC/0.5 A ST	6ES7522-1BH10-0AA0
DQ 32x 24 V DC/0.5 A ST	6ES7522-1BL10-0AA0
DI 16x 24 V DC/DQ 16x24 V DC/0.5 A BA	6ES7523-1BL00-0AA0
AI 4x U/I/RTD/TC ST	6ES7531-7QD00-0AB0
AQ 2x U/I ST	6ES7532-5NB00-0AB0
AI/AQ 4x U/I/RTD/TC / 2x U/I ST	6ES7534-7QE00-0AB0





Technology modules

Technology modules

TMs

TM Count 2x 24 V	6ES7550-1AA00-0AB0
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TM PosInput2	6ES7551-1AB00-0AB0
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Modules for counter functions up to 200 kHz or 1 MHz, with measuring functions for frequency, period duration or speed, for position detection with incremental or absolute encoders.



Accessories and spare parts

Accessories

Mounting rail, 160 mm (with drill hole)	6ES7590-1AB60-0AA0
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Mounting rail, 482 mm (with drill hole)	6ES7590-1AE80-0AA0
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Mounting rail, 530 mm (with drill hole)	6ES7590-1AF30-0AA0
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Mounting rail, 830 mm (with drill hole)	6ES7590-1AJ30-0AA0
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Mounting rail, 2000 mm (without drill hole) for self-customizing	6ES7590-1BC00-0AA0
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PE connection element for mounting rail 2000 mm (spare part), 20 pcs.	6ES7590-5AA00-0AA0
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Front connector for 35-mm wide modules; screw terminal, 40-pin	6ES7592-1AM00-0XB0
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Front connector for 35-mm wide modules; push-in terminal, 40-pin	6ES7592-1BM00-0XB0
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SIMATIC Memory Card 4 MB	6ES7954-8LC02-0AA0
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SIMATIC Memory Card 12 MB	6ES7954-8LE02-0AA0
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SIMATIC Memory Card 24 MB	6ES7954-8LF02-0AA0
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SIMATIC Memory Card 256 MB	6ES7954-8LL02-0AA0
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SIMATIC Memory Card 2 GB	6ES7954-8LP01-0AA0
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Front cover for DP interface of the CPU 1518-4 PN/DP, 1 unit	6ES7591-8AA00-0AA0
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Spare parts

Display for CPU 1511/13	6ES7591-1AA00-0AA0
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Display for CPU 1515, 1516, and 1518	6ES7591-1BA00-0AA0
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35-mm wide modules

Universal front cover for IM 155-5 PN ST, 5 pcs.	6ES7528-0AA70-7AA0
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U-type connector, 5 pcs.	6ES7590-0AA00-0AA0
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Plug, 2x 2-pin for 24 V DC power supply, push-in terminal, 10 pcs.	6ES7193-4JB00-0AA0
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Universal front cover for IO modules 35 mm (PU = 5 pcs.)	6ES7528-0AA00-7AA0
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Sheets with labeling strips for 35-mm wide modules (Al gray, PU = 10 pcs.)	6ES7592-2AX00-0AA0
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Shielding set S7-1500 periphery for 35-mm wide modules (PU = 5 pcs.)	6ES7590-5CA00-0AA0
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Individual shielding terminal (PU = 10 pcs.)	6ES7590-5BA00-0AA0
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Jumper link front connector (PU = 20 pcs.)	6ES7592-3AA00-0AA0
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25-mm wide modules

Universal front cover for IO modules 25 mm (PU = 5 pcs.)	6ES7528-0AA00-0AA0
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Sheets with labeling strips for 25-mm wide modules (Al gray, PU = 10 pcs.)	6ES7592-1AX00-0AA0
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Front connector for 35-mm wide modules; push-in terminal, 40-pin	6ES7592-1BM00-0XA0
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Shielding set S7-1500 periphery for 35-mm wide modules (PU = 4 pcs.)	6ES7590-5CA10-0XA0
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Power supply and system wiring

PM load current supply

PM 70 W, 120/230 V AC	6EP1332-4BA00
PM 190 W, 120/230 V AC	6EP1333-4BA00

The load current supply (PM) provides 24 V power for SIMATIC S7-1500 modules such as CPU, system power supplies, IO circuits of the peripheral modules and, where required, sensors and actuators



PS system power supply

System power supply 25 W, 24 V DC	6ES7505-0KA00-0AB0
System power supply 60 W, 24/48/60 V DC	6ES7505-0RA00-0AB0
System power supply 60 W, 120/230 V AC/DC	6ES7507-0RA00-0AB0

The system power supply (PS) provides the voltage supply for the S7-1500 modules via the backplane bus



SIMATIC TOP connect system wiring

Fully modular connection for IO modules (modular system for field connection)	
Front plug-in module 4 x 8 I/O, push-in	6ES7921-5AH20-0AA0
Front plug-in module 4 x 8 I/O, screw terminals	6ES7921-5AB20-0AA0
Front plug-in module 1 x 8 DO for 2 A modules, push-in	6ES7921-5AJ00-0AA0
Front plug-in module 1 x 8 DO for 2 A modules, screw terminals	6ES7921-5AD00-0AA0
Connecting cable, 5 m shielded (available lengths: 1 to 10 m)	6ES7923-0BF00-0DB0
Connecting cable, 5 m unshielded (available lengths: 0.5 to 10 m)	6ES7923-0BF00-0CB0
Connection module 8 I/O digital, single-conductor connection, screw terminals without LED	6ES7924-0AA20-0AA0
Connection module 8 I/O digital, single-conductor connection, screw terminals with LED	6ES7924-0AA20-0BA0
Connection module 8 I/O digital, 3-conductor connection, screw terminals without LED	6ES7924-0CA20-0AA0
Connection module 8 I/O digital 3-conductor connection, screw terminals with LED	6ES7924-0CA20-0BA0
Connection module I/O for 2 A modules, screw terminals	6ES7924-0BB20-0AA0



Flexible connection for IO modules (wiring in control cabinet, available lengths up to 10 m)

Front plug with 40 single cores H05V-K (0.5 mm ² with screw connection), 2.5 m	6ES7922-5BC50-0AC0
Front plug with 40 single cores halogen-free (0.5 mm ² with screw connection), 2.5 m	6ES7922-5BC50-0HC0
Front plug with 40 single cores UL/CSA certified (0.5 mm ² with screw connection), 3.2 m	6ES7922-5BD20-0UC0
Front plug with 20 single cores (0.5 mm ² with screw connection), 2.5 m	6ES7922-5BC50-0AB0
Front plug with 20 single cores halogen-free (0.5 mm ² with screw connection), 2.5 m	6ES7922-5BC50-0HB0
Front plug with 20 single cores UL/CSA certified (0.5 mm ² with screw connection), 3.2 m	6ES7922-5BD20-0UB0



More information about system wiring can be found in the Siemens Industry Mall or on www.siemens.com/simatic-tc

SIPLUS extreme

You will find information on SIPLUS extreme in the Siemens Industry Mall or at <http://www.siemens.com/siplus-extreme>



Your plus of efficiency:

- + Innovative design and easy handling for simple usage and commissioning as well as safe operation
- + Integrated system diagnosis for full transparency of the plant status – automatically generated and consistently displayed
- + TIA Portal for highest engineering efficiency to reduce project costs – and with Safety Integrated, of course



efficiency



Discover more

www.siemens.com/s7-1500

Discover everything about SIMATIC S7-1500:

- › in video form: design overview and videos showing the main highlights
- › as 360° animation: experience all benefits directly on the product
- › everything about the outstanding engineering efficiency thanks to TIA Portal

SIMATIC S7-1500 – take a look!



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Please find further information on this subject at: <http://support.automation.siemens.com>.

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Please find further information at: <http://www.siemens.com/industrialsecurity>

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