

**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 V12	6ES7811-1AA02-0YA5
SIMATIC WinCC COMFORT V12	6AV2101-0AA02-0AA
SIMATIC STEP 7 SAFETY ADVANCED V12	6ES7833-1FA12-0YA5
SINAMICS STARTDRIVE V12	6SL3072-4CA02-1XG0

## Starter Kit

### Starter Kit



<b>Starter Kit SIMATIC S7-1500</b> Contains: CPU 1511-1 PN, 4 MB memory card, digital input 16 DI, digital output 16 DO, mounting rail, front connector, STEP 7 Professional V12 (365 days license), power supply PM 70 W 120/230 V AC, standard Ethernet CAT 5-cable (2 m), screwdriver, documentation	6ES7511-1AK00-4YB5
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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	6ES7541-1AD00-0AB0

### PROFIBUS



<b>CM 1542-5, PB DP master (PROFIBUS)</b> 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
<b>CP 1542-5 communications processor (PROFIBUS)</b> 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	6GK7543-1AX00-0XE0
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## Central modules

### CPUs



CPU 1511-1 PN	6ES7511-1AK00-0AB0
CPU 1513-1 PN	6ES7513-1AL00-0AB0
CPU 1516-3 PN/DP	6ES7516-3AN00-0AB0

### Safety



S7-1511F	6ES7511-1FK00-0AB0
S7-1513F	6ES7513-1FL00-0AB0
S7-1516F	6ES7516-3FN00-0AB0

## Signaling modules

### Interface module

IM 155-5 PN ST	6ES7155-5AA00-0AB0
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### IO modules



DI 16x24 V DC HF	6ES7521-1BH00-0AB0
DI 32x24 V DC HF	6ES7521-1BL00-0AB0
DI 16x24 V DC SRC BA	6ES7521-1BH50-0AA0
DI 16x230 V AC BA	6ES7521-1FH00-0AA0
DQ 16x24 V DC/0.5 A ST	6ES7522-1BH00-0AB0
DQ 32x24 V DC/0.5 A ST	6ES7522-1BL00-0AB0
DQ 8x24 V DC/2 A HF	6ES7522-1BF00-0AB0
DQ 8x230 V AC/2 A ST	6ES7522-5FF00-0AB0
DQ 8x230 V AC/5 A ST	6ES7522-5HF00-0AB0
AI 8xU/RTD/TC ST	6ES7531-7KF00-0AB0
AI 8xU/HS	6ES7531-7NF10-0AB0
AQ 4xU/ST	6ES7532-5HD00-0AB0
AQ 8xU/HS	6ES7532-5HF00-0AB0



## Technology modules

### Technology modules

TM Count 2x24 V	6ES7550-1AA00-0AB0
TM PosInput2	6ES7551-1AB00-0AB0



## Accessories and spare parts

### Accessories

Mounting rail, 160 mm (with drill holes)	6ES7590-1AB60-0AA0
Mounting rail, 482 mm (with drill holes)	6ES7590-1AE80-0AA0
Mounting rail, 530 mm (with drill holes)	6ES7590-1AF30-0AA0
Mounting rail, 830 mm (with drill holes)	6ES7590-1AJ30-0AA0
Mounting rail, 2000 mm (without drill holes) for self-customizing	6ES7590-5AC00-0AA0
PE-connection element for mounting rail 2000 mm (spare), 20 pcs.	6ES7590-5AA00-0AA0
Front connector for 35mm-wide modules; screw terminal, 40-pin	6ES7592-1AM00-0XB0
SIMATIC Memory Card 4 MB	6ES7954-8LC01-0AA0
SIMATIC Memory Card 12 MB	6ES7954-8LE01-0AA0
SIMATIC Memory Card 24 MB	6ES7954-8LF01-0AA0
SIMATIC Memory Card 2 GB	6ES7954-8LP01-0AA0



### Spare parts

Universal front cover for IM 155-5 PN ST, 5 pcs.	6ES7528-0AA70-7AA0
U-type connector, 5 pcs.	6ES7590-0AA00-0AA0
Plug, 2x2-pin, for 24 V DC power supply, push-in terminal, 10 pcs.	6ES7193-4JB00-0AA0
Universal front cover for IO modules (PU = 5 pcs.)	6ES7528-0AA00-7AA0
Sheets with labeling strips (Al grey) (PU = 10 pcs.)	6ES7592-2AX00-0AA0
Shielding set S7-1500 periphery (PU = 5 pcs.)	6ES7590-5CA00-0AA0
Separate shielding terminal (PU = 10 pcs.)	6ES7590-5BA00-0AA0
Jumper link front connector (PU = 20 pcs.)	6ES7592-3AA00-0AA0
Display for CPU 1511/13	6ES7591-1AA00-0AA0
Display for CPU 1516	6ES7591-1BA00-0AA0



## SIPLUS extreme

### SIPLUS extreme

SIPLUS ET 200MP interface module; IM 155-5 PN	6AG1155-5AA00-7AB0
SIPLUS S7-1500 digital input; 32 DI, 24 V DC, 3 ms, Type 3	6AG1521-1BL00-7AB0
SIPLUS S7-1500 digital output; 32 DQ, 24 V DC, 0.5 A	6AG1522-1BL00-7AB0
SIPLUS S7-1500 analog input; 8 AI, U, I, R, RTD, TC, 14 bit	6AG1531-7KF00-7AB0
SIPLUS S7-1500 analog output; 4 AQ, U, I, 16 bit	6AG1532-5HD00-7AB0
SIPLUS S7-1500 digital input; 16 DI, 24 V DC, 3 ms, Type 3	6AG1521-1BH00-7AB0
SIPLUS S7-1500 digital output; 16 DQ, 24 V DC, 0.5 A	6AG1522-1BH00-7AB0
SIPLUS S7-1500 system power supply; PS1505 25 W, 24 V DC	6AG1505-0KA00-7AB0



## Power supply and system wiring

### 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 through the backplane bus



### 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 actors



### System wiring SIMATIC TOP connect

Fully modular connection for IO modules (modular system for field connection)	
Front plug-in module 4 x 8 E/A, push-in	6ES7921-5AH20-0AA0
Front plug-in module 4 x 8 E/A, screw terminals	6ES7921-5AB20-0AA0
Front plug-in module 1 x 8 DA for 2 A modules, push-in	6ES7921-5AJ00-0AA0
Front plug-in module 1 x 8 DA for 2 A modules, conductor-connection	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 E/A digital 1-conductor-connection, screw terminals without LED	6ES7924-0AA20-0AA0
Connection module 8 E/A digital 1-conductor-connection, screw terminals with LED	6ES7924-0AA20-0BA0
Connection module 8 E/A digital 3-conductor-connection, screw terminals with LED	6ES7924-0CA20-0AA0
Connection module 8 E/A digital 3-conductor-connection, screw terminals without LED	6ES7924-0CA20-0BA0
Connection module E/A for 2 A modules, screw terminals	6ES7924-0BB20-0AA0



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

Front plug with 40 single cores H05V-K (0.5 mm <sup>2</sup> with bolted connections), 2.5 m	6ES7922-5BC50-0AC0
Front plug with 40 single cores halogen-free (0.5 mm <sup>2</sup> with bolted connections), 2.5 m	6ES7922-5BC50-0HC0
Front plug with 40 single cores UL/CSA certified (0.5 mm <sup>2</sup> with bolted connections), 3.2 m	6ES7922-5BD20-0UC0
Front plug with 20 single cores halogen-free (0.5 mm <sup>2</sup> with bolted connections), 2.5 m	6ES7922-5BC50-0AB0
Front plug with 20 single cores halogen-free (0.5 mm <sup>2</sup> with bolted connections), 2.5 m	6ES7922-5BC50-0HB0
Front plug with 20 single cores UL/CSA certified (0.5 mm <sup>2</sup> with bolted connections), 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](http://www.siemens.com/simatic-tc)

## 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](http://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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Industry Sector  
Industry Automation  
P.O. Box 48 48  
90026 NUREMBERG  
GERMANY