

# SIMATIC S7-1500 plus TIA Portal

Power + Efficiency

The ultimate plus in automation



Intuitive, efficient, proven – TIA Portal redefines engineering

Answers for industry.



### 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	6ES7822-1AA02-0YA5
	SIMATIC WinCC COMFORT V12	6AV2101-0AA02-0AA
i.	SIMATIC STEP 7 SAFETY ADVANCED V12	6ES7833-1FA12-0YA5
	SINAMICS STARTDRIVE V12	6SL3072-4CA02-1XG0

6ES7511-1AK00-4YB5

\* In the next quarter the software packages are planned in the new version V13.

### Starter Kit



Starter Kit

Starter Kit SIMATIC S7-1500
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

### Communication



PtP	
CM PtP, RS232 BA	6ES7540-1AD00-0AA0
CM PtP, RS232 HF	6ES7541-1AD00-0AB0
CM PtP, RS422/485 BA	6ES7540-1AB00-0AA0
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. Transmission rates 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 band- widths 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	6GK7543-1AX00-0XE0
CM 1542-1, PROFINET communication module	6GK7542-1AX00-0EX0





6ES7511-1AK00-0AB0

6ES7513-1AL00-0AB0

6ES7516-3AN00-0AB0

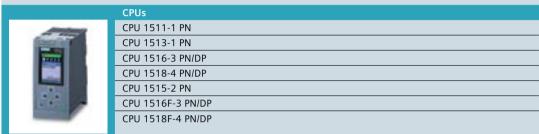
6ES7518-4AP00-0AB0

6ES7515-2AM00-0AB0

6ES7516-3FN00-0AB0

6ES7518-4FP00-0AB0

### **Central systems**



### **Distributed systems**

	ET 200MP interface modules	
7	IM 155-5 PN ST	6ES7155-5AA00-0AB0
	IM 155-5 DP ST	6ES7155-5BA00-0AB0



### Signaling modules





## Technology modules

Technology modules				
TM Count 2x24 V	6ES7550-1AA00-0AB0			
TM PosInput2	6ES7551-1AB00-0AB0			
Modules for counting up to 200kHz/1MHz, measuring of frequency, period duration or speed, position				
input for incremental or absolute encoders.				

## 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	No. of Concession, Name
Mounting rail, 530 mm (with drill holes)	6ES7590-1AF30-0AA0	Emanc
Mounting rail, 830 mm (with drill holes)	6ES7590-1AJ30-0AA0	· POR ACHLINA
Mounting rail, 2000 mm (without drill holes) for self-customizing	6ES7590-1BC00-0AA0	
PE-connection element for mounting rail 2000 mm (spare), 20 pcs.	6ES7590-5AA00-0AA0	ADD THE ADD TO ADD TO ADD
Front connector for 35mm-wide modules; screw terminal, 40-pin	6ES7592-1AM00-0XB0	Concession of the local division of the loca
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	1225
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	1
Separate shielding terminal (PU = 10 pcs.)	6ES7590-5BA00-0AA0	- W
Jumper link front connector (PU = 20 pcs.)	6ES7592-3AA00-0AA0	
Display for CPU 1511/13	6ES7591-1AA00-0AA0	
Display for CPU 1515, 1516 and 1518	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

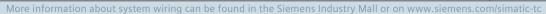
The system power supply (PS) provides the voltage supply for the S7-1500 modules through the backplane bus



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 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, 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 I/O digital 1-conductor-connection, screw terminals without LED	6ES7924-0AA20-0AA0
Connection module 8 I/O digital 1-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 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 (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



### 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





#### **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





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