SIEMENS

Engineered with TIA Portal

SIMATIC S7-1200 Basic Controllers, Basic Panels and TIA Portal

The difference is in the combination

Intuitive, efficient, proven:
TIA Portal redefines engineering.

siemens.com/s7-1200

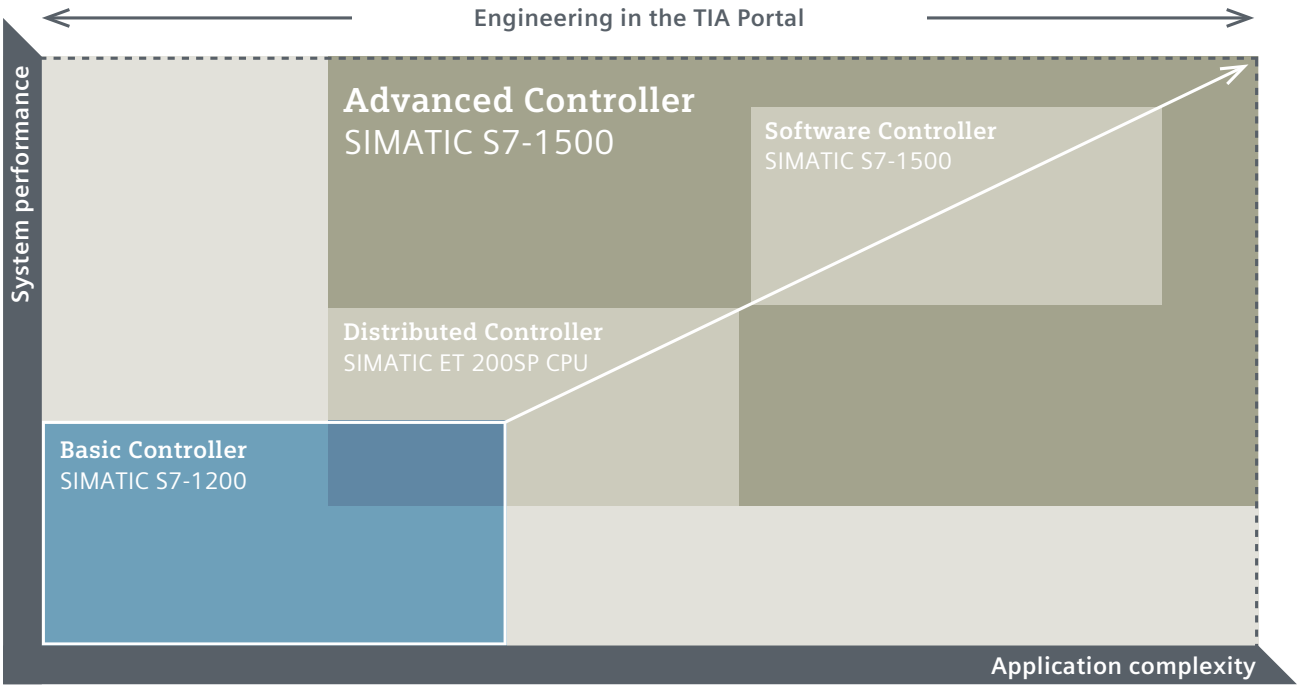
SIMATIC S7-1200 Basic Controllers All-in-one!

Thanks to their wide range of technological functions and integrated IOs, as well as featuring a compact, space-saving design, SIMATIC S7-1200 Basic Controllers are the intelligent choice for everyday automation tasks within the scope of small projects. Thanks to standardized remote control protocols, you can connect SIMATIC S7-1200 controllers directly to your control station without any programming.

A further decisive benefit is the integration of SIMATIC controllers into the Totally Integrated Automation Portal (TIA Portal), with every SIMATIC controller having recourse to a shared database, a standardized operator concept and centralized services. This reduces your engineering overhead and your engineering time.

In addition, the user-friendly and innovative operation of the TIA Portal and integrated system diagnostics also contribute to efficient working.

SIMATIC controllers support automation solutions that are scalable in performance and functionality, and thus cost-efficient for any individual application. For more complex tasks, SIMATIC S7-1500 controllers seamlessly continue the functionality of the SIMATIC S7-1200 series, ensuring uniform sequences and thus maximum efficiency in engineering, operation, and maintenance.



Scalable performance and functionality for consistent and efficient engineering: SIMATIC S7-1500 devices build on the functionality of the SIMATIC S7-1200 Controllers, making later expansions simpler and more cost-effective.

SIMATIC S7-1200 Basic Controllers are the ideal choice for simple and autonomous tasks in the low to mid performance ranges. These compact devices are characterized by minimal space requirements, telecontrol capability and integrated technology modules for measuring, weighing and counting, so that no other special modules are required.

SIMATIC S7-1200 controllers offer you the following

- **High flexibility and modular design**
  CPU can be expanded with further I/O without additional space requirements
- **Integrated technology**
  Optimized for loop control, weighing, high-speed counting, telecontrol and identification
- **High level of operator convenience in engineering**
- **Networking**
  The integrated PROFINET interface ensures scalability and flexibility
- **Security Integrated**
  Comprehensive access, copy and manipulation protection
- **Integrated diagnostics**
  Diagnostics messages are displayed in plaintext in the TIA Portal, on the CPU Web server, in the SIMATIC app, and on the HMI
- **Safety Integrated**
  Fail-safe CPUs can execute both standard and safety related programs

Block libraries – a secure investment

"I can take program blocks for technological functions that I created for the SIMATIC S7-1200, and also use them for larger projects on the SIMATIC S7-300/400, or in future on the S7-1500. Block libraries are our most important investment today."

Claus Niedermann,
Software specialist at Zebra Elektrotechnik

Compact grab control and intuitive programming in the TIA Portal

"I've had very little space on the control panel and I had to position it directly on the grab. That's one of the reasons why the SIMATIC S7-1200 compact controller with CPU 1214C and three input and output modules was the perfect choice for this task, especially when combined with a SITOP power supply, SIRIUS switching devices, and fuses from Siemens."

Jürgen Schäfer, HSE

Central processing units

Standard modules

CPU 1211C

50 KB, DI 6 x 24 V DC, DO 4 x 24 V DC or 4 x RLY, AI 2 x 10 bit 0 – 10 V DC, expandable up to 3CM

	Article No.
DC/DC/DC	6ES7 211-1AE40-0XB0
AC/DC/RLY	6ES7 211-1BE40-0XB0
DC/DC/RLY	6ES7 211-1HE40-0XB0

CPU 1212C

75 KB, DI 8 x 24 V DC, DO 6 x 24 V DC or 6 x RLY, AI 2 x 10 bit 0 – 10 V DC, expandable up to 3CM + 2SM

	Article No.
DC/DC/DC	6ES7 212-1AE40-0XB0
AC/DC/RLY	6ES7 212-1BE40-0XB0
DC/DC/RLY	6ES7 212-1HE40-0XB0

CPU 1214C

100 KB, DI 14 x 24 V DC, DO 10 x 24 V DC or 10 x RLY, AI 2 x 10 bit 0 – 10 V DC, expandable up to 3CM + 8SM

	Article No.
DC/DC/DC	6ES7 214-1AG40-0XB0
AC/DC/RLY	6ES7 214-1BG40-0XB0
DC/DC/RLY	6ES7 214-1HG40-0XB0

Also for use under extreme ambient conditions as SIPLUS S7-1200
More at siemens.com/siplus-extreme

CPU 1215C

125 KB, DI 14 x 24 V DC, DO 10 x 24 V DC or 10 x RLY, AI 2 x 10 bit 0 – 10 V DC, AO 2 x 10 bit 0 to 20 mA, expandable up to 3CM + 8SM

	Article No.
DC/DC/DC	6ES7 215-1AG40-0XB0
AC/DC/RLY	6ES7 215-1BG40-0XB0
DC/DC/RLY	6ES7 215-1HG40-0XB0

CPU 1217C

150 kB, DI 10 x 24 V DC, 4 x 1.5 V differential, DO 6 x 24 V DC, 4 x 1.5 V differential, AI 2 x 10 bit 0 – 10 V DC, AO 2 x 10 bit 0 – 20 mA cable driver I/O for (1 MHz ±1.5 V), expandable up to 3CM + 8SM

	Article No.
DC/DC/DC	6ES7 217-1AG40-0XB0

Fail-safe modules

CPU 1214FC

125 KB, DI 14 x 24 V DC, DO 10 x 24 V DC or 10 x RLY, AI 2 x 10 Bits 0 – 10 V DC

	Article No.
DC/DC/DC	6ES7 214-1AF40-0XB0
DC/DC/RLY	6ES7 214-1HF40-0XB0

CPU 1215FC

150 KB, DI 14 x 24 V DC, DO 10 x 24 V DC or 10 x RLY, AI 2 x 10 bit 0 – 10 V DC, AO 2 x 10 bit, 0 – 20 mA

	Article No.
DC/DC/DC	6ES7 215-1AF40-0XB0
DC/DC/RLY	6ES7 215-1HF40-0XB0

Communication

Communication modules

	Article No.
CM 1241 RS232	6ES7 241-1AH32-0XB0
CM 1241 RS422/485	6ES7 241-1CH32-0XB0
CM 1243-2 AS-i master	3RK7 243-2AA30-0XB0
DCM 1271 AS-i Data decoupling	3RK7 271-1AA30-0AA0
CM 1242-5 PROFIBUS DP slave	6GK7 242-5DX30-0XE0
CM 1243-5 PROFIBUS DP master	6GK7 243-5DX30-0XE0

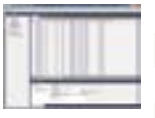
Communications processors

	Article No.
CP 1242-7 GPRS	6GK7 242-7KX30-0XE0
CP 1243-7 LTE	6GK7 243-7KX30-0XE0
CP 1243-1 Security	6GK7 243-1BX30-0XE0
CP 1243-1 DNP3 DNP3 protocol	6GK7 243-1JX30-0XE0
CP 1243-1 IEC IEC 60870-5-104 protocol	6GK7 243-1PX30-0XE0
RF120C RFID/code reader	6GT2 002-0LA00

Telecontrol

	Article No.
TS Adapter IE Basic	6ES7 972-0EB00-0XA0
TS Module	
TS module modem	6ES7 972-0MM00-0XA0
TS module ISDN	6ES7 972-0MD00-0XA0
TS module RS232	6ES7 972-0MS00-0XA0
TS module GSM	6GK7 972-0MG00-0XA0

Quad-band GSM/UMTS/LTE antenna ANT794-4MR — 6NH9 860-1AA00



Telecontrol server

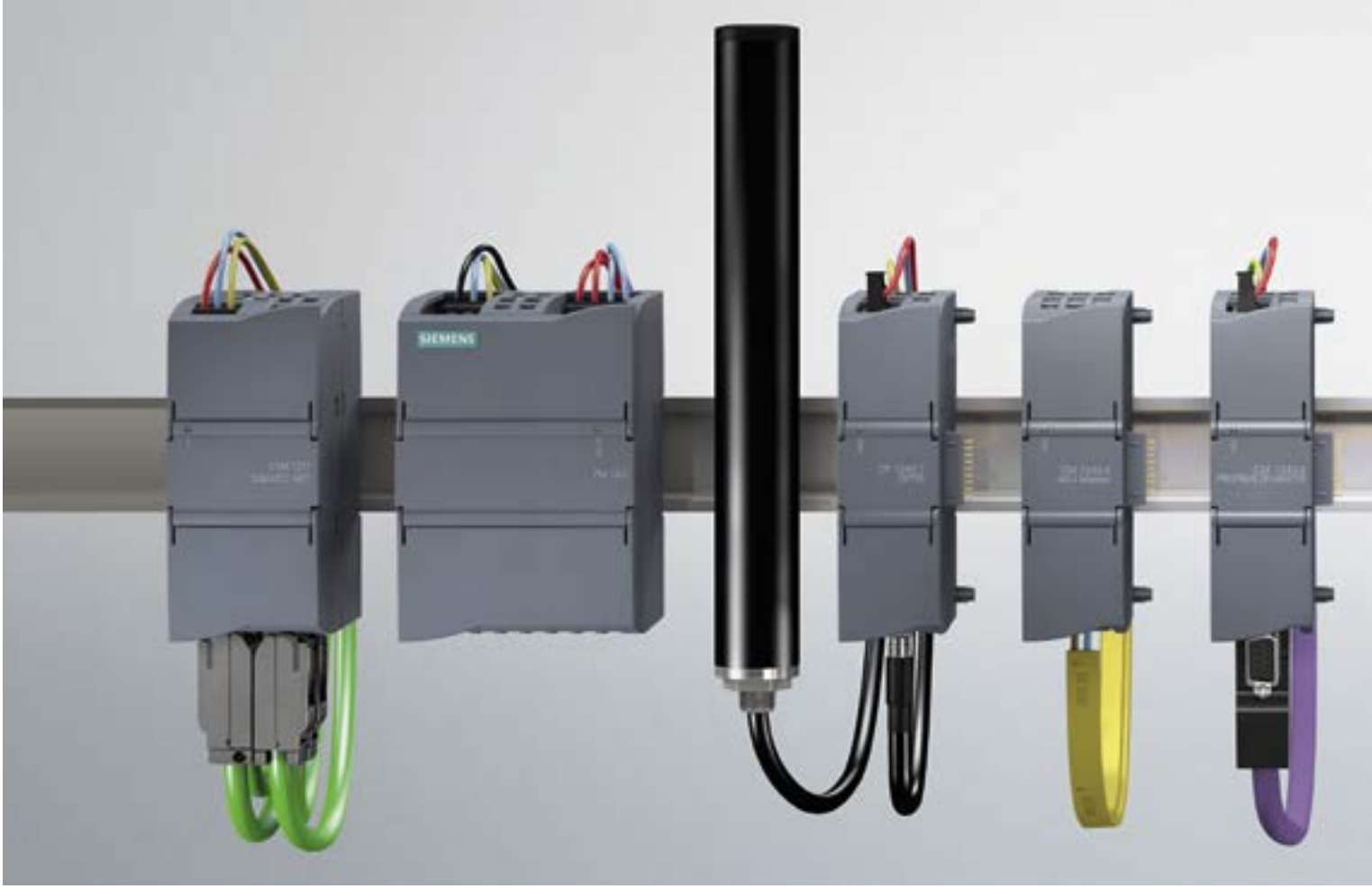
	Article No.
Telecontrol Server Basic 8	6NH9 910-0AA21-0AA0
Telecontrol Server Basic 64	6NH9 910-0AA21-0AB0
Telecontrol Server Basic 256	6NH9 910-0AA21-0AC0

CM CANopen

	Article No.
This product can be ordered directly from HMS Anybus	21620

Communications board

	Article No.
CB 1241 RS485	6ES7 241-1CH30-1XB0



Signaling modules

Signal modules – digital

	Article No.
SM 1221 DC	
DI 8 x 24 V DC	6ES7 221-1BF32-0XB0
DI 16 x 24 V DC	6ES7 221-1BH32-0XB0
SM 1222 DC	
DO 8 x 24 V DC 0.5 A	6ES7 222-1BF32-0XB0
DO 16 x 24 V DC 0.5 A	6ES7 222-1BH32-0XB0
SM 1222 RLY	
DO 8 x RLY 30 V DC/250 V AC 2 A	6ES7 222-1HF32-0XB0
DO 16 x RLY 30 V DC/250 V AC 2 A	6ES7 222-1HH32-0XB0
DO 8 x RLY switchover 30 V DC/250 V AC 2 A	6ES7 222-1XF32-0XB0
SM 1223 DC/DC	
DI 8 x 24 V DC, DO 8 x 24 V DC 0.5 A	6ES7 223-1BH32-0XB0
DI 16 x 24 V DC, DO 16 x 24 V DC 0.5 A	6ES7 223-1BL32-0XB0
SM 1223 DC/RLY	
DI 8 x 24 V DC, DO 8 x RLY 30 V DC/250 V AC 2 A	6ES7 223-1PH32-0XB0
DI 16 x 24 V DC, DO 16 x RLY 30 V DC/250 V AC 2 A	6ES7 223-1PL32-0XB0
SM 1223 AC/RLY	
DI 8 x 120/250 V AC, DO 8 x RLY 30 V DC/250 V AC 2 A	6ES7 223-1QH32-0XB0

Signal modules – analog

	Article No.
SM 1231 AI	
AI 4 x 13 bits ±10 V DC, ±5 V DC, ±2.5 V DC or 4 – 20 mA	6ES7 231-4HD32-0XB0
AI 8 x 13 bits ±10 V DC, ±5 V DC, ±2.5 V DC or 4 – 20 mA	6ES7 231-4HF32-0XB0
AI 4 x 16 bits ±10 V DC, ±5 V DC, ±2.5 V DC, ±1.25 V DC or 4 – 20 mA	6ES7 231-5ND32-0XB0
SM 1231 RTD	
AI 4 x RTD x 16 bits	6ES7 231-5PD32-0XB0
AI 8 x RTD x 16 bits	6ES7 231-5PF32-0XB0
Types: Platinum (Pt), copper (Cu), nickel (Ni) or resistance element	
SM 1231 TC	
AI 4 x TC x 16 bits	6ES7 231-5QD32-0XB0
AI 8 x TC x 16 bits	6ES7 231-5QF32-0XB0
Types: J, K, T, E, R, S, N, C, TXK/XK(L); voltage range: ± 80 mV	
SM 1232 AO	
AO 2 x 14 bits ±10 V DC or 4 – 20 mA	6ES7 232-4HB32-0XB0
AO 4 x 14 bits ±10 V DC or 4 – 20 mA	6ES7 232-4HD32-0XB0
SM 1234 AI/AO	
AI 4 x 13 bits ±10 V DC, ±5 V DC, ±2.5 V DC or 4 – 20 mA, AO 2 x 14 bits ±10 V DC or 4 – 20 mA	6ES7 234-4HE32-0XB0

Signal boards

	Article No.
SB 1221 DC* 200 kHz	
DI 4 x 5 V DC*	6ES7 221-3AD30-0XB0
DI 4 x 24 V DC*	6ES7 221-3BD30-0XB0
SB 1222 DC 200 kHz	
DO 4 x 5 V DC 0.1 A	6ES7 222-1AD30-0XB0
DO 4 x 24 V DC 0.1 A	6ES7 222-1BD30-0XB0
SB 1223 DC*/DC	
DI 2 x 24 V DC*/DA 2 x 24 V DC 0.5 A	6ES7 223-0BD30-0XB0
SB 1223 DC*/DC 200 kHz	
DI 2 x 5 V DC*/DA 2 x 5 V DC 0.1 A	6ES7 223-3AD30-0XB0
DI 2 x 24 V DC*/DA 2 x 24 V DC 0.1 A	6ES7 223-3BD30-0XB0
SB 1232 AO	
AO 1 x 12 bits ±10 V DC or 0 – 20 mA	6ES7 232-4HA30-0XB0
SB 1231 AI	
AI 1 x 12 bits ±10 V DC, ±5 V DC, ±2.5 V DC or 0 – 20 mA	6ES7 231-4HA30-0XB0
SB 1231 RTD	
AI 1 x RTD x 16 bits, type: platinum (Pt)	6ES7 231-5PA30-0XB0
SB 1231 TC	
AI 1 x TC x 16 bits, types: J, K voltage range: ± 80 mV	6ES7 231-5QA30-0XB0

*sourcing input

Signal modules – fail-safe

	Article No.
SM 1226 F-DO 2 x Relay	
F-DO 2 x 5 A 30 V DC/250 V AC	6ES7 226-6RA32-0XB0
SM 1226 F-DO 4 x 24 V DC	
F-DO 4 x 2 A 24 V DC	6ES7 226-6DA32-0XB0
SM 1226 F-DI 16 x 24 V DC	
F-DI 16 x 24 VDC	6ES7 226-6BA32-0XB0

Engineering framework

Software SIMATIC STEP 7

	Article No.
SIMATIC STEP 7 Basic V13	6ES7 822-0AA03-0YA5
SIMATIC STEP 7 Professional V13	6ES7 822-1AA03-0YA5
SIMATIC STEP 7 Safety Basic V13 SP1	6ES7833-1FB13-0YA5
Software Update Service SIMATIC STEP 7 Basic	6ES7 822-0AA00-0YL0
Upgrade SIMATIC STEP 7 Basic V11–V12 to V13 Floating License	6ES7 822-0AA03-0YE5

Accessories

	Article No.
BB 1297	
Battery board (long-term backup of the real-time clock (RTC))	**6ES7 297-0AX30-0XA0**
SIMATIC memory card	
 4 MB (optional)	**6ES7 954-8LC02-0AA0**
12 MB (optional)	**6ES7 954-8LE02-0AA0**
24 MB (optional)	**6ES7 954-8LF02-0AA0**
256 MB (optional)	**6ES7 954-8LL02-0AA0**
2 GB (optional)	**6ES7 954-8LP01-0AA0**
Digital input simulators	
 Simulator (8 positions for CPU 1211C/1212C)	**6ES7 274-1XF30-0XA0**
Simulator (14 positions for CPU 1214C/1215C)	**6ES7 274-1XH30-0XA0**
Simulator (14 positions for CPU 1217C)	**6ES7 274-1XK30-0XA0**
Analog input simulators	
Potentiometer: for all CPUs	**6ES7 274-1XA30-0XA0**
Expansion cable for signal module	
 2.0 m	**6ES7 290-6AA30-0XA0**
CSM 1277	
 4-port unmanaged switch, 4 x RJ45 sockets, 10/100 Mbit/s	**6GK7 277-1AA10-0AA0**

Technology

	Article No.
IO-Link	
SM 1278 IO-Link master	**6ES7 278-4BD32-0XB0**
SIWAREX weigh beams WP 231 SIWAREX	
 WP 231 SIWAREX, static scales	**7MH4 960-2AA01**
WP 241 SIWAREX, conveyor scale	**7MH4 960-4AA01**

Power modules

	Article No.
PM 1207	
 Input: 120/230 V AC, 50/60 Hz, 1.2 A/0.67 A, output: 24 V DC/2.5 A	**6EP1 332-1SH71**

HMI

	Article No.
KP300 Basic mono PN	
 Operation using keys, 3" FSTN display, monochrome, modifiable backlighting color (white, red, green, yellow)	**6AV6 647-0AH11-3AX0**
KP400 Basic color PN	
 Operation using touch screen + keys, 4" TFT LCD display, 65536 colors	**6AV6 647-0AJ11-3AX0**
KTP400 Basic	
 Operation using touch screen + keys, 9" TFT LCD display, 65536 colors	**6AV2 123-2DB03-0AX0**
KTP700 Basic	
 Operation using touch screen + keys, 7" TFT LCD display, 65536 colors, PROFINET or PROFIBUS	PROFINET **6AV2 123-2GB03-0AX0**
	PROFIBUS **6AV2 123-2GA03-0AX0**
KTP900 Basic	
 Operation using touch screen + keys, 9" TFT LCD display, 65536 colors	**6AV2 123-2JB03-0AX0**
KTP1200 Basic	
 Operation using touch screen + keys, 12" TFT LCD display, 65536 colors, PROFINET or PROFIBUS	PROFINET **6AV2 123-2MB03-0AX0**
	PROFIBUS **6AV2 123-2MA03-0AX0**

Current information can be found at: **siemens.com/basic-panels**

Identification

	Article No.
SIMATIC RF200	
 RFID system in the HF range, compact and cost-effective, simple connection to automation system	**6GT2821-**
	More product information available at www.siemens.com/rf200
SIMATIC RF300	
 RFID system in the HF range, large data memory and fast acquisition, simple connection to automation system	**6GT2801-**
	More product information available at www.siemens.com/rf300
SIMATIC RF600	
 RFID system in the UHF range, reliable and flexible SIMATIC integration and connection to PC/IT	**6GT2811-**
	More product information available at www.siemens.com/rf600

Find out more:

siemens.com/s7-1200

Discover the benefits of SIMATIC S7-1200:

- The new CPU 1217C
- SIMATIC S7-1200 automation tasks in less than 10 minutes
- Reference videos
- New firmware 4.1
- New: Safety Integrated for S7-1200

SIMATIC S7-1200 – see for yourself!

Subject to change without prior notice
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