

SIEMENS



Engineered
with
TIA Portal

SIMATIC S7-1200

It's the interplay that makes the difference

[siemens.com/s7-1200](https://www.siemens.com/s7-1200)

Answers for industry.



Modular. Powerful. Easy to use.

SIMATIC STEP 7 Basic

Features:

- Intuitive engineering software
- Integrated project concept for easy handling
- Global library concept creates Engineering Efficiencies
- Quick programming by intelligent Drag & Drop
- Cross reference between all editors

Siemens has many years of experience in software development and makes certain to take into account future innovations. Explore SIMATIC STEP 7 Basic and save engineering time while reducing your project costs.

SIMATIC S7-1200

Features:

- Attractive functionality for the price
- 40% more compact than S7-200
- Twice as fast as the S7-200
- Perfect for stand-alone applications
- Integrated PROFINET interface
- GPRS communications for remote Telecontrol & Teleservice
- PROFIBUS Master, PROFIBUS Slave & AS-i Master

The SIMATIC S7-1200 controller is an important part of the complete automation solution, because of its scalable and flexible design as well as the comprehensive package of technological functionalities that are integrated. This controller can handle all of your automation tasks and it has an excellent price-performance ratio.

SIMATIC HMI Basic Panels

Features:

- Perfect interplay with S7-1200
- Ideal entry-level series for controlling and monitoring compact machines and plants
- Graphic displays (3–15 inch) with 4 gray scales or 256 colors
- Intuitive operation with touch screen and/or functions keys, with IP65 protection
- PROFINET interface (RJ45)
- Retentive alarm buffer for retaining notifications

Basic Panels are efficiently configured with WinCC Basic by innovative tool sets and direct access to controller variables. The intelligent Drag & Drop between editors saves you a lot of configuration time and engineering costs.

Innovations – with firmware V2.0 & V3.0

SIMATIC S7-1200 (V2.0)

① GPRS

- Machine-to-machine control schemes over cellular network
- Easy implementation of remote machine data acquisition
- Fault annunciation via SMS

Teleservice

- Centralized, remote configuration, programming and diagnostics
- Remote process code updates
- Modem, RS-232, ISDN, GSM, GPRS, and Ethernet available

Telecontrol

- Easy remote monitoring and control through GPRS architecture
- Monitoring and control for up to 5,000 stations
- Local buffering of data

② AS-i Master

- Master acc. to AS-i Spec. 3.0
- Up to 62 AS-i Slaves or 992 I/Os
- AS-i Power24V-capable (separate DCM)

③ PROFIBUS Master and Slave

- DP Master for Distributed I/O and Drives architectures
- DP Slave for integration into existing plant network

④ PROFINET

- Higher Level System interface
- RT Master for I/O and Drives
- No module required

Webserver

- Display of process values and diagnostics on standard web page
- User-defined web page via HTML
- Only requires IP address

Datalogging

- User-defined runtime data values as CSV file in continuous logs
- Easy export via web page

PID controller

- 3-Step instructions for valve's or actuator's positioning

SIMATIC S7-1200 (V3.0)

- S7-1215C; 3 Types: DC/DC/DC; AC/DC/RLY; DC/DC/RLY – 130 mm Width**
- 2 PN Ports – for two connections to HMI, IO or programming
 - Battery Board – one year internal clock time with V3 CPUs
 - 100 KB working memory – larger program process area
 - 4 MB load memory – larger data storage area
 - 85 ns bit performance
 - Firmware update via PN port with V3 CPUs
 - 2 AI/2 AO – integrated on CPU
 - 6 HSC (High-speed counters) – 3 at 100 kHz and 3 at 30 kHz clock rate
 - 4 PTO/PWMs – 100 kHz onboard outputs or 200 kHz with signal board
 - Extended internal clock retention time – upwards of 20 days typical
 - Extended CPU temp rating – for hotter and colder applications

SIMATIC HMI Basic Panels



KP300 Basic mono PN
Key operation, 3" FSTN display, black/white, changeable backlight color (white, red, green, yellow)

6AV6 647-0AH11-3AX0



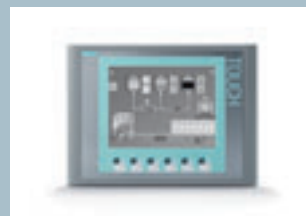
KTP400 Basic color PN NEW
Key touch operation, high-resolution 4" Widescreen TFT display, 256 colors

6AV6 647-0AK11-3AX0



KP400 Basic color PN NEW
Key operation, high-resolution 4" Widescreen TFT display, 256 colors

6AV6 647-0AJ11-3AX0



KTP600 Basic mono PN
Key touch operation, 6" STN display, 4 gray scale

6AV6 647-0AB11-3AX0



KTP600 Basic color PN
Key touch operation, 6" TFT display, 256 colors

6AV6 647-0AD11-3AX0



KTP1000 Basic color PN
Key touch operation, 10" TFT display, 256 colors

6AV6 647-0AF11-3AX0



TP1500 Basic color PN
Touch operation, 15" TFT display, 256 colors

6AV6 647-0AG11-3AX0

For latest information please click:
siemens.com/basic-panels

Compact Switch Module



CSM 1277
4-port unmanaged switch, 4xRJ45 sockets, 10/100 Mbit/s

6GK7 277-1AA10-0AA0

Power Module



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

Communication modules and processor



CM 1241 RS232
6ES7 241-1AH30-0XB0

CM 1241 RS422/485 NEW
6ES7 241-1CH31-0XB0

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

CP 1242-7 GPRS
6GK7 242-7KX30-0XE0

Signal and communication boards



SB 1221 DC 200 kHz
DI 4x5 V DC
DI 4x24 V DC

6ES7 221-3AD30-0XB0
6ES7 221-3BD30-0XB0

SB 1222 DC 200 kHz
DO 4x5 V DC 0.1 A
DO 4x24 V DC 0.1 A

6ES7 222-1AD30-0XB0
6ES7 222-1BD30-0XB0

SB 1223 DC/DC
DI 2x24 V DC / DO 2x24 V DC 0.5 A

6ES7 223-0BD30-0XB0

SB 1223 DC/DC 200 kHz
DI 2x5 V DC / DO 2x5 V DC 0.1 A
DI 2x24 V DC / DO 2x24 V DC 0.1 A

6ES7 223-3AD30-0XB0
6ES7 223-3BD30-0XB0

SB 1232 AO
AO 1x12 Bit ± 10 V DC or 0–20 mA

6ES7 232-4HA30-0XB0

SB 1231 AI
AI 1x12 Bit ± 10 V DC, ± 5 V DC, ± 2.5 V DC or 0–20 mA

6ES7 231-4HA30-0XB0

SB 1231 RTD
AI 1xRTDx16 Bit, Type: Platinum (Pt)

6ES7 231-5PA30-0XB0

SB 1231 TC
AI 1xTCx16 Bit, Types: J, K, voltage range: ± 80 mV

6ES7 231-5QA30-0XB0

CB 1241 RS485
Communication Board

6ES7 241-1CH30-1XB0

BB 1297 NEW
Battery Board (Long-Term Backup of RTC)

6ES7 297-0AX30-0XA0

Signal Modules



SM 1221 DC
DI 8x24 V DC
DI 16x24 V DC

6ES7 221-1BF30-0XB0
6ES7 221-1BH30-0XB0

SM 1222 DC
DO 8x24 V DC 0.5 A
DO 16x24 V DC 0.5 A

6ES7 222-1BF30-0XB0
6ES7 222-1BH30-0XB0

SM 1222 RLY
DO 8xRLY 30 V DC/250 V AC 2 A
DO 16xRLY 30 V DC/250 V AC 2 A
DO 8xRLY Changeover 30 V DC/250 V AC 2 A

6ES7 222-1HF30-0XB0
6ES7 222-1HH30-0XB0
6ES7 222-1XF30-0XB0

SM 1223 DC/DC
DI 8x24 V DC, DO 8x24 V DC 0.5 A
DI 16x24 V DC, DO 16x24 V DC 0.5 A

6ES7 223-1BH30-0XB0
6ES7 223-1BL30-0XB0

SM 1223 DC/RLY
DI 8x24 V DC, DO 8xRLY 30 V DC/250 V AC 2 A
DI 16x24 V DC, DO 16xRLY 30 V DC/250 V AC 2 A

6ES7 223-1PH30-0XB0
6ES7 223-1PL30-0XB0

SM 1223 AC/RLY
DI 8x120/250 V AC, DO 8xRLY 30 V DC/250 V AC 2 A

6ES7 223-1QH30-0XB0

SM 1231 AI
AI 4x13 Bit ± 10 V DC, ± 5 V DC, ± 2.5 V DC or 0–20 mA
AI 8x13 Bit ± 10 V DC, ± 5 V DC, ± 2.5 V DC or 0–20 mA
AI 4x16 Bit ± 10 V DC, ± 5 V DC, ± 2.5 V DC, ± 1.25 V DC or 4–20 mA

6ES7 231-4HD30-0XB0
6ES7 231-4HF30-0XB0
6ES7 231-5ND30-0XB0

SM 1231 RTD
AI 4xRTDx16 Bit
AI 8xRTDx16 Bit
Types: Platinum (Pt), Copper (Cu), Nickel (Ni) or Resistance

6ES7 231-5PD30-0XB0
6ES7 231-5PF30-0XB0

SM 1231 TC
AI 4xTCx16 Bit
AI 8xTCx16 Bit
Types: J, K, T, E, R, S, N, C, TXK/XK(L)
Voltage range: ± 80 mV

6ES7 231-5QD30-0XB0
6ES7 231-5QF30-0XB0

SM 1232 AO
AO 2x14 Bit ± 10 V DC or 0–20 mA
AO 4x14 Bit ± 10 V DC or 0–20 mA

6ES7 232-4HB30-0XB0
6ES7 232-4HD30-0XB0

SM 1234 AI/AO
AI 4x13 Bit ± 10 V DC, ± 5 V DC, ± 2.5 V DC or 0–20 mA,
AO 2x14 Bit ± 10 V DC or 0–20 mA

6ES7 234-4HE30-0XB0

Engineering System



SIMATIC STEP 7 Basic V11
6ES7 822-0AA01-0YA0

SIMATIC STEP 7 Professional V11
6ES7 822-1AA01-0YA5

Software Update Service
6ES7 822-0AA00-0YL0



CPU 1215C NEW
100 KB, DI 14x24 V DC, DO 10x24 V DC or 10xRLY, AI 2x10 Bit 0–10 V DC, AO 2x10 Bit 0 to 20 mA
DC/DC/DC 6ES7 215-1AG31-0XB0
AC/DC/RLY 6ES7 215-1BG31-0XB0
DC/DC/RLY 6ES7 215-1HG31-0XB0

SIMATIC S7-1200 Compact Controllers



CPU 1211C
30 KB, DI 6x24 V DC, DO 4x24 V DC or 4xRLY, AI 2x10 Bit 0–10 V DC
DC/DC/DC 6ES7 211-1AE31-0XB0
AC/DC/RLY 6ES7 211-1BE31-0XB0
DC/DC/RLY 6ES7 211-1HE31-0XB0



CPU 1212C
50 KB, DI 8x24 V DC, DO 6x24 V DC or 6xRLY, AI 2x10 Bit 0–10 V DC
DC/DC/DC 6ES7 212-1AE31-0XB0
AC/DC/RLY 6ES7 212-1BE31-0XB0
DC/DC/RLY 6ES7 212-1HE31-0XB0



CPU 1214C
75 KB, DI 14x24 V DC, DO 10x24 V DC or 10xRLY, AI 2x10 Bit 0–10 V DC
DC/DC/DC 6ES7 214-1AG31-0XB0
AC/DC/RLY 6ES7 214-1BG31-0XB0
DC/DC/RLY 6ES7 214-1HG31-0XB0

Accessories



SIMATIC Memory Card
2 MB (optional)
6ES7 954-8LB01-0AA0
12 MB (optional) NEW
6ES7 954-8LE01-0AA0
24 MB (optional)
6ES7 954-8LF01-0AA0



SIM 1274 Input Simulator
8 positions for CPU 1211C/CPU 1212C
6ES7 274-1XF30-0XA0
14 positions for CPU 1214C/CPU 1215C
6ES7 274-1XH30-0XA0



Signal Module Expansion Cable
2.0 m
6ES7 290-6AA30-0XA0

TS-Adapter IE Basic
6ES7 972-0EB00-0XA0



TS-Module Modem
6ES7 972-0MM00-0XA0



TS-Module ISDN
6ES7 972-0MD00-0XA0



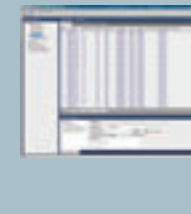
TS-Module RS232
6ES7 972-0MS00-0XA0



TS-Module GSM
6GK7 972-0MG00-0XA0



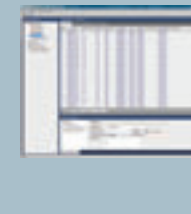
Quad-Band GSM Antenna
ANT794-4MR
6NH9 860-1AA00



Telecontrol Server Basic 8
6NH9 910-0AA20-0AA0



Telecontrol Server Basic 64
6NH9 910-0AA20-0AB0



Telecontrol Server Basic 256
6NH9 910-0AA20-0AC0

and more.

SIMATIC S7-1200 Starter Kits



Package 1: SIMATIC S7-1200 Starter Kit

CPU 1212C AC/DC/RLY
Input Simulator
SIMATIC STEP 7 Basic in the TIA Portal
IE TP Cord 2 m
Documentation Collection CD
and more ...

6ES7 212-1BD32-4YB0



Package 2: SIMATIC S7-1200 + KP300 Basic Starter Kit

CPU 1212C AC/DC/RLY
Input Simulator
KP300 Basic mono PN
SIMATIC STEP 7 Basic in the TIA Portal
IE TP Cord 2 m
Documentation Collection CD
and more ...

6AV6 651-7HA01-3AA2



Package 3: SIMATIC S7-1200 + KTP400 Basic Starter Kit

CPU 1212C AC/DC/RLY
Input Simulator
KTP400 Basic color PN
SIMATIC STEP 7 Basic in the TIA Portal
IE TP Cord 2 m
Documentation Collection CD
and more ...

6AV6 651-7KA01-3AA2



Package 4: SIMATIC S7-1200 + KTP600 Basic Starter Kit

CPU 1212C AC/DC/RLY
Input Simulator
KTP600 Basic color PN
SIMATIC STEP 7 Basic in the TIA Portal
IE TP Cord 2 m
Documentation Collection CD
and more ...

6AV6 651-7DA01-3AA2

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Learn more

siemens.com/s7-1200

You will learn about:

- 3D S7-1215C module
- S7-1200: Automation Tasks in 10 minutes or less
- New Reference Videos for S7-1200

SIMATIC
S7-1200 –
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