

PC-based Automation

Industrial PC

Box PC

SIMATIC IPC827D**Overview**

IPC827D with opened DVD drive

SIMATIC IPC827D (Box PC): The high-end IPC – with maximum performance, functional scope and expansion capability

It offers:

- Maximum performance and high expandability
- with Intel Xeon technology
- Removable hard disks (RAID1)

Technical specifications

Article number	6AG4132-2....-.... SIMATIC IPC827D (Box PC)
Installation type/mounting	
Mounting	Wall mounting, portrait mounting
Design	Box PC, built-in unit
Supply voltage	
Type of supply voltage	100/240 V AC (autorange); 24 V DC
Line frequency	
• Rated value 50 Hz	Yes
• Rated value 60 Hz	Yes
Mains buffering	
• Mains/voltage failure stored energy time	20 ms
Processor	
Processor type	Celeron G1820TE (2C/2T, 2.2 GHz, 2 MB Cache); Core i3-4330TE (2C/4T, 2.4 GHz, 4 MB Cache); Xeon E3-1268L v3 (4C/8T, 2.3 (3.3) GHz, 8 MB Cache, AMT)
Chipset	Intel DH82C226 PCH
Graphic	
Graphics controller	Intel HD graphics controller P4600 GT2 (Xeon, Core i3); Intel HD graphics controller (Celeron)
Drives	
Optical drives	DVD±R±RW combi-drive, optional
Hard disk	3.5" SATA ≥ 500 GB, optional: 3.5" SATA ≥ 1 TB; RAID1 2x 2.5" SATA ≥ 320 GB; solid-state drive (SSD) ≥ 240 GB; all hard disk drives within the enclosure are vibration-damped; RAID1 2x 2.5" SATA ≥ 320 GB byte in removable drive bay
SSD	Yes; ≥ 240 GB optional
Memory	
Type of memory	DDR3 1600 DIMM
Main memory	2 / 4 / 8 / 16 GB; ECC optional
Data areas and their retentivity	
Retentive data area (incl. timers, counters, flags), max.	2 Mbyte; 128 KB can be stored in the buffer time; optional
Hardware configuration	
Slots	
• free slots	3x PCI, 1x PCIe (x4), 1x PCIe (x16); with card retainer

Technical specifications (continued)

Article number	6AG4132-2....-.... SIMATIC IPC827D (Box PC)
Interfaces	
PROFIBUS/MPI	Optionally onboard, isolated, max. 12 Mbit/s, compatible with CP 5622
Number of industrial Ethernet interfaces	2; 2x RJ45 (independent)
Number of PROFINET interfaces	3; Optional
USB port	4x USB 3.0
Connection for keyboard/mouse serial interface	USB / USB
parallel interface	1x COM1 (RS 232), optional: 1x COM2 (RS 232) optional LPT1
Video interfaces	
• Graphics interface	1x DisplayPort and 1x DVI-I; 1x VGA via adapter cable (optional)
Industrial Ethernet	
• Industrial Ethernet interface	Onboard, 2x 10 / 100 / 1000 Mbit, RJ45
- 100 Mbps/1000 Mbps	Yes/Yes
Integrated Functions	
Monitoring functions	
• Temperature monitoring	Yes
• Watchdog	Yes
• Status LEDs	Yes
• Fan	Yes
• Monitoring function via network	Optional
EMC	
Interference immunity against discharge of static electricity	±6 kV contact discharge acc. to IEC 61000-4-2; ±8 kV air discharge acc. to IEC 61000-4-2
Interference immunity against high-frequency electromagnetic fields	
• Interference immunity against high frequency radiation	10 V/m for 80 - 1000 MHz and 1.4 - 2 GHz, 80% AM acc. to IEC 61000-4-3; 3 V/m for 2 - 2.7 GHz, 80% AM acc. to IEC 61000-4-3; 10 V for 10 kHz - 80 MHz, 80% AM acc. to IEC 61000-4-6
Interference immunity to cable-borne interference	
• Interference immunity on supply cables	±2 kV acc. to IEC 61000-4-4, burst; ±1 kV acc. to IEC 61000-4-5, surge symmetric; ±2 kV acc. to IEC 61000-4-5, surge asymmetric
• Interference immunity on signal cables >30m	±2 kV acc. to IEC 61000-4-5, surge, length > 30 m
• Interference immunity on signal cables < 30m	±1 kV acc. to IEC 61000-4-4; burst; length < 3 m; ±2 kV acc. to IEC 61000-4-4; burst; length > 3 m
Interference immunity against voltage surge	
• asymmetric interference	±2 kV acc. to IEC 61000-4-5, surge asymmetric
• symmetric interference	±1 kV acc. to IEC 61000-4-5, surge symmetric
Interference immunity to magnetic fields	
• Interference immunity to magnetic fields at 50 Hz	100 A/m; to IEC 61000-4-8
Emission of conducted and non-conducted interference	
• Interference emission via line/AC current cables	EN 61000-6-3, EN 61000-6-4, CISPR 22 Class B, FCC Class A

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Degree and class of protection	
IP (at the front)	IP20
IP (rear)	IP20
Standards, approvals, certificates	
CE mark	Yes
UL approval	Yes
• UL 508	Yes
cULus	Yes
RCM (formerly C-TICK)	Yes
KC approval	Yes
FCC	Yes
EMC	CE, EN 61000-6-3:2007 +A1:2011, EN 61000-6-2:2005
Marine approval	
• Germanischer Lloyd (GL)	Yes
• American Bureau of Shipping (ABS)	Yes
• Bureau Veritas (BV)	Yes
• Det Norske Veritas (DNV)	Yes
• Lloyds Register of Shipping (LRS)	Yes
• Nippon Kaiji Kyokai (Class NK)	Yes
Ambient conditions	
Ambient temperature during operation	
• Ambient temperature during operation	+5 °C up to 55 °C
Relative humidity	
• Relative humidity	Tested according to IEC 60068-2-78, IEC 60068-2-30: Operation: 5% to 80% at 25 °C (no condens.), Storage: 5% to 95% at 25 °C (no condensation)
Vibrations	
• Vibration resistance during operation acc. to IEC 60068-2-6	Tested according to DIN IEC 60068-2-6: 10 Hz to 58 Hz: 0.075 mm; 58 Hz to 500 Hz 9.8 m/s ² (1g)
Shock testing	
• Shock load during operation	Tested to DIN IEC 60068-2-29: 50 m/s ² (5 g), 30 ms, 100 shocks
Operating systems	
Operating system	Windows 7 Ultimate, 32-bit/64-bit, MUI; Windows Embedded Standard 7 P, 32-bit, MUI; Windows 10 Enterprise 2015 or 2016 LTSB, 64-bit, MUI
pre-installed operating system	Yes
without operating system	Yes
pre-installed operating system	
• Windows 7	Yes; Ultimate 32 bit or 64 bit
• Windows 10 Enterprise	Yes; Windows 10 Enterprise 2015 or 2016 LTSB, 64-bit, MUI
Software	
SIMATIC Software	Optional package with SIMATIC WinCC or WinAC RTX
Dimensions	
Width	312 mm
Height	155 mm; With DVD drive: 179 mm
Depth	301 mm; incl. mounting rail

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Ordering data

Article No.

SIMATIC IPC827D¹⁾

HD graphics onboard
(Xeon, i3: HD4600);
2 x Gigabit Ethernet (IE/PN) RJ45;
4 x USB V3.0; 1 x serial (COM1);
RAID controller onboard;
watchdog, temp./fan monitoring;

Processor:

- Celeron G1820TE (2C/2T, 2.2 GHz, 2 MB cache) **A**
- Celeron G1820TE (2C/2T, 2.2 GHz, 2 MB cache); PROFIBUS/MPI (CP 5622-comp.); 2 MB battery-backed SRAM **B**
- Celeron G1820TE (2C/2T, 2.2 GHz, 2 MB cache); PROFINET (IRT, 3 ports, CP 1616-compatible); 2 MB battery-backed SRAM **C**
- Core i3-4330TE (2C/4T, 2.4 GHz, 4 MB cache, VT-x) **D**
- Core i3-4330TE (2C/4T, 2.4 GHz, 4 MB cache, VT-x); PROFIBUS/MPI (CP 5622-comp.); 2 MB battery-backed SRAM **E**
- Core i3-4330TE (2C/4T, 2.4 GHz, 4 MB cache, VT-x); PROFINET (IRT, 3 ports, CP 1616-compatible); 2 MB battery-backed SRAM **F**
- Xeon E3-1268Lv3 (4C/8T, 2.3 (3.3) GHz, 8 MB cache, VT-d, AMT) **G**
- Xeon E3-1268Lv3 (4C/8T, 2.3 (3.3) GHz, 8 MB cache, VT-d, AMT); PROFIBUS/MPI (CP 5622-comp.); 2 MB battery-backed SRAM **H**
- Xeon E3-1268Lv3 (4C/8T, 2.3 (3.3) GHz, 8 MB cache, VT-d, AMT); PROFINET (IRT, 3 ports, CP 1616-compatible); 2 MB battery-backed SRAM **J**

Drives

- 500 GB HDD SATA **A**
- 500 GB HDD SATA; DVD+/-RW **B**
- 1 TB HDD SATA **D**
- 1 TB HDD SATA; DVD+/-RW **E**
- RAID1 2 x 320 GB SATA (2.5") **G**
- RAID1 2 x 320 GB SATA (2.5"); DVD+/-RW **H**
- Exchangeable SSD RAID1 2x 240 GB solid-state drive **J**
- Exchangeable HDD RAID1 2 x 320 GB SATA (2.5") **K**
- Exchangeable HDD RAID1 2 x 320 GB SATA (2.5"); solid-state drive, 240 GB **L**
- Solid-state drive, 240 GB **M**
- Solid-state drive, 240 GB; 320 GB HDD SATA (2.5") **N**
- Solid-state drive, 240 GB; 320 GB HDD SATA (2.5"); DVD+/-RW **P**
- Solid-state drive, 240 GB; DVD+/-RW **S**

6AG4132-	2	■	■	■	■	-	■	■	■	■	■										
A	B	C	D	E	F	G	H	J	A	B	D	E	G	H	J	K	L	M	N	P	S

Article No.

SIMATIC IPC827D¹⁾

Memory configuration

- 2 GB DDR3 1600 DIMM **1**
- 4 GB DDR3 1600 DIMM **2**
- 8 GB DDR3 1600 DIMM **3**
- 16 GB DDR3 1600 DIMM **4**
- 8 GB DDR3 1600 DIMM; ECC **5**
- 16 GB DDR3 1600 DIMM; ECC **6**

Expansions (HW)

- 1 x PCIe (x16); 1 x PCIe (x4); 3 x PCI **0**

Expansion 2 (HW)

- Without expansion (HW) **0**
- 2 x USB in addition (1 slot occupied) **1**
- COM2: LPT (1 slot occupied) **2**
- 2 x USB in addition; COM2; LPT (2 slots occupied) **3**

Operating system

- Windows 7 Ultimate, 32-bit SP1, MUI (en, de, fr, it, es) **A**
- Windows 7 Ultimate, 64-bit SP1, MUI (en, de, fr, it, es) **B**
- Windows 10 Enterprise 2015 LTSB, 64-bit, MUI (en, de, fr, it, es) **C**
- Windows Embedded Standard 7 P, 32-bit, SP1, MUI (en, de, fr, it, es) with SSD 240 GB option (without RAID) **D**
- Windows 10 Enterprise 2016 LTSB, 64-bit, MUI (en, de, fr, it, es), for Celeron and i3 processors **E**
- Windows 10 Enterprise 2016 LTSB, 64-bit, MUI (en, de, fr, it, es) for Xeon processors **F**
- Without **X**

Expansion (SW)

- SIMATIC IPC DiagMonitor incl. **A**
- SIMATIC IPC Image & Partition Creator included **B**
- SIMATIC IPC DiagMonitor, Image & Partition Creator incl. **C**
- Without **X**
- TPM²⁾ (not for China or Russia) **Y**

Country-specific version / power supply

- 110/230 V AC industrial power supply with NAMUR; power cable for Europe **0**
- 110/230 V AC industrial power supply with NAMUR; power cable for UK **1**
- 110/230 V AC industrial power supply with NAMUR; power cable for CH **2**
- 110/230 V AC industrial power supply with NAMUR; power cable for the USA **3**
- 110/230 V AC industrial power supply NAMUR; power cable for Italy **4**
- 110/230 V AC industrial power supply with NAMUR; power cable for China **5**
- 24 V DC industrial power supply **6**
- 110/230 V AC industrial power supply with NAMUR; without power cable **8**

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1	2	3	4	5	6	0	1	2	3	A	B	C	X	Y	0	1	2	3	4	5	6	8

¹⁾ For an up-to-date overview, see the SIMATIC PC Online Configurator at: <http://www.siemens.com/ipc-configurator>

²⁾ TPM = Trusted Platform Module

Ordering data	Article No.	More information
Accessories Memory expansion <ul style="list-style-type: none"> • 2 GB DDR3 1600 SDRAM, DIMM • 4 GB DDR3 1600 SDRAM, DIMM • 8 GB DDR3 1600 SDRAM, DIMM • 8 GB DDR3 1600 SDRAM, DIMM, ECC 	6ES7648-2AJ50-0MA0 6ES7648-2AJ60-0MA0 6ES7648-2AJ70-0MA0 6ES7648-2AJ70-1MA0	Additional information is available on the Internet at: http://www.siemens.com/simatic-pc
Assembly kit for portrait mounting <ul style="list-style-type: none"> • Upward or downward interface outlet • Interface outlet to the front 	6ES7648-1AA30-1YA0 6ES7648-1AA30-1YB0	
SIMATIC PC graphics adapter cable DVI-I acc. to VGA, 250 mm long	6ES7648-3AB00-0XA0	
SIMATIC PC power cable For Box PC and Panel PC, 230 V AC, angled, 3 m <ul style="list-style-type: none"> • For Germany, France, Spain, the Netherlands, Belgium, Sweden, Austria, Finland • For United Kingdom • For Switzerland • For the USA • For Italy • For China 	6ES7900-1AA00-0XA0 6ES7900-1BA00-0XA0 6ES7900-1CA00-0XA0 6ES7900-1DA00-0XA0 6ES7900-1EA00-0XA0 6ES7900-1FA00-0XA0	

Note:

Please assemble the required IPC configuration using the TIA Selection Tool or the configurator in the Industry Mall in order to ensure suitability; we do not accept any liability for configurations compiled by users themselves.