

Overview



Rack PCs are flexible, high-availability industrial PC systems for powerful yet compact applications using 19" technology.

Four device classes are available for different requirements:

SIMATIC IPC347 – high performance at an optimized price

SIMATIC IPC547 – latest technology and maximum performance

SIMATIC IPC647 – maximum compactness combined with maximum industrial functionality

SIMATIC IPC847 – maximum expandability and industrial functionality

Shared industrial functionality of the IPC series 547, 647 and 847

- Maximum system performance for complex automation tasks and computationally intensive PC tasks in the industrial environment through use of Intel Core processors
- Designed for 24-hour continuous operation
- Monitoring and diagnostics functions (e.g. temperature, fan, watchdog)
- RAID1 configuration (mirrored drives), optionally in hot swap drive bays
- Hard disks with capacities up to 1 TB for large volumes of data
- SSD (solid-state drive), also as RAID1 configuration, optional
- Redundant AC power supply, optional
- Compact dimensions for installation in control cabinets only 500 mm deep
- Dust protection thanks to overpressure ventilation concept with fan on the front and dust filter
- Lockable front door
- Service-friendly equipment design due to prepared telescopic rail mounting
- Service-friendly device design due, for example, to the replacement of filters/fans from the front without the need for tools, or opening of the enclosure with just one screw.
- Universal implementation as an industrial workstation or server
- Operating system pre-installed and activated for fast startup
- Fast restoration of the delivery status of the HDD thanks to restore DVD
- High flexibility and expandability of components
- PCI and PCI Express expansion slots
- Independent industrial product design

SIMATIC IPC347E – high performance at an optimized price

- Intel Pentium and Intel Core i processors, 4th Generation
- Lockable front flap
- Uninterrupted duty at 40 °C ambient temperature without power loss
- Dust protection thanks to overpressure ventilation concept with fan on the front and dust filter
- PCI and PCI Express expansion slots
- 7 configurations available ex stock at short notice
- Availability approx. 3 years
- Guaranteed spare parts availability for at least 3 years

SIMATIC IPC547G – latest technology and maximum performance at an attractive price

- Intel Core i processors 6th Generation and Xeon
- Maximum processor performance in maximum configuration without loss of power (throttling) at ambient temperatures of up to 40 °C
- Optional RAID5 configuration (striping with parity) in hot swap drive bays
- RAID1 and RAID5 configurations with additional hot spare hard disk, optional
- Hard disks with capacities up to 2 TB for large volumes of data
- Low noise output thanks to controlled fans
- Status and alarm LEDs at the front for signaling critical system states
- Availability approx. 3 years
- Guaranteed spare parts availability for at least 3 years

PC-based Automation

Industrial PC

Rack PC

Overview (continued)

SIMATIC IPC647D – maximum compactness combined with maximum industrial functionality

- Maximum compactness due to 4 free PCI/PCI Express slots for installing long expansion cards
- High thermal stability up to 50 °C ambient temperature, even at maximum processor performance
- High vibration/shock resistance thanks to special hard disk holders
- Intel Core i processors 4th Generation and Xeon
- ECC memory, optional
- Hardware RAID PCIe x8 controller incl. ZMM and SAS hard disks in hot-swappable removable drive bay
- Front LED concept for efficient self-diagnostics, e.g. monitoring of hard disks in RAID1 configurations, fans or the status display for Ethernet, PROFINET and PROFIBUS.
- Integrated PROFIBUS DP/MPI or PROFINET interface (optional)
- High component/design continuity
- Motherboard developed and manufactured by Siemens
- Availability for at least 5 years
- Guaranteed spare parts availability for at least 5 years

SIMATIC IPC847D – maximum expandability and industrial functionality

- Maximum expandability due to 11 free PCI/PCI Express slots for installing long expansion cards
- High thermal stability up to 50 °C ambient temperature, even at maximum processor performance
- High vibration/shock resistance thanks to special hard disk holders
- Intel Core i processors 4th Generation and Xeon
- Optional RAID5 configuration (striping with parity) in hot swap drive bay
- RAID1 and RAID5 configurations with additional hot spare hard disk or SSD, optional
- ECC memory, optional
- Hardware RAID PCIe x8 controller incl. ZMM and SAS hard disks in hot-swappable removable drive bay
- AC power supply with UPS (**U**ninterruptible **P**ower **S**upply) functionality incl. maintenance-free lead-tin battery
- Front LED concept for efficient self-diagnostics, e.g. monitoring of hard disks in RAID1 configurations, fans or status displays for Ethernet, PROFINET and PROFIBUS
- Integrated PROFIBUS DP/MPI or PROFINET interface (optional)
- High component/design continuity
- Motherboard developed and manufactured by Siemens
- Availability for at least 5 years
- Guaranteed spare parts availability for at least 5 years

Technical specifications

Rack PC	SIMATIC IPC347E	SIMATIC IPC547G	SIMATIC IPC647D	SIMATIC IPC847D
Design				
19" rack	4 U	4 U	2 U	4 U
Housing depth	463 mm	447 mm or 357 mm	447 mm	447 mm
Prepared for telescopic rails	•	•	•	•
Horizontal/vertical installation	• / -	• / •	• / -	• / •
19" mounting bracket can be removed from outside	•	•	•	•
Tower kit (optional)	-	•	-	•
General features				
Processor	<ul style="list-style-type: none"> Intel Pentium Dual Core G3420 (2C/2T, 3.2 GHz) Intel Core i5-4570S (4C/4T, 2.9 (3.6) GHz) 	<ul style="list-style-type: none"> Intel Xeon E3-1275 v5 ¹⁾ (4C/8T, 3.6 (4.0) GHz) Intel Core i7-6700 (4C/8T, 3.4 (4.0) GHz) Intel Core i5-6500 (4C/4T, 3.2 (3.6) GHz) Intel Pentium G4400 (2C/2T, 3.3 GHz) 	<ul style="list-style-type: none"> Intel Xeon E3-1268L v3 (4C/8T, 2.3 (3.3) GHz) Intel Core i5-4570TE (2C/4T, 2.7 (3.3) GHz) Intel Core i3-4330TE (2C/4T, 2.4 GHz) 	<ul style="list-style-type: none"> Intel Xeon E3-1275 V3 (4C/8T, 3.5 (3.9) GHz) ²⁾ Intel Xeon E3-1268L v3 (4C/8T, 2.3 (3.3) GHz) Intel Core i5-4570TE (2C/4T, 2.7 (3.3) GHz) Intel Core i3-4330TE (2C/4T, 2.4 GHz)
Main memory	<ul style="list-style-type: none"> 2/4/8 GB, expandable up to 16 GB 	<ul style="list-style-type: none"> 4 GB, expandable up to 64 GB ¹⁾ 	<ul style="list-style-type: none"> 2 GB, expandable up to 32 GB ECC optional 	<ul style="list-style-type: none"> 2 GB, expandable up to 32 GB ECC optional
Slots for expansions (all lengths up to 312 mm)	<ul style="list-style-type: none"> 1 x PCI Express x16 (16 lanes) 1 x PCI Express x8 (2 lanes) 1 x PCI x1 (1 lane) 4 x PCI 	<ul style="list-style-type: none"> 1 x PCI Express x16 (16 lanes) 1 x PCI Express x16 (4 lanes) ¹⁾ 1 x PCI Express x8 (1 lane) 1 x PCI Express x4 (4 lanes) ¹⁾ 1 x PCI Express x4 (1 lane) 2 x PCI <p>or</p> <ul style="list-style-type: none"> 1 x PCI Express x16 (16 lanes) 1 x PCI Express x16 (1 lane) 1 x PCI Express x8 (1 lane) 2 x PCI Express x4 (1 lane) 2 x PCI 	<ul style="list-style-type: none"> 2 x PCI 2 x PCI Express x16 (8 lanes) <p>or</p> <ul style="list-style-type: none"> 3 x PCI Express x16 (4 lanes) 1 x PCI Express x16 (8 lanes) <p>or</p> <ul style="list-style-type: none"> 2 x PCI Express x16 (4 lanes) 	<ul style="list-style-type: none"> 7 x PCI 1 x PCI Express x16 (16 lanes) 3 x PCI Express x4 (1 lane) <p>or</p> <ul style="list-style-type: none"> 3 x PCI 1 x PCI Express x16 (8 lanes) 4 x PCI Express x16 (4 lanes) 3 x PCI Express x4
Onboard graphics	<ul style="list-style-type: none"> 1 x DVI-D 1 x VGA 	<ul style="list-style-type: none"> 1 x or 2 x ¹⁾ DisplayPort 1 x DVI-D 1 x VGA (via DP adapter cable, optional) 	<ul style="list-style-type: none"> 2 x DisplayPort 1 x DVI-I 1 x VGA (via adapter cable, optional) 	<ul style="list-style-type: none"> 2 x DisplayPort 1 x DVI-I 1 x VGA (via adapter cable, optional)
Graphics card (optional)	-	PCI Express x16 (2 x VGA or 2 x DVI-D)	PCI Express x16 (2 x VGA or 2 x DVI-D)	PCI Express x 16 (2 x VGA or 2 x DVI-D)
Operating system				
None	•	•	•	•
Preinstalled and activated, supplied on restore DVD	<ul style="list-style-type: none"> Windows 7 Ultimate, multi-language (64-bit) 	<ul style="list-style-type: none"> Windows 7 Ultimate, multi-language (32-bit/64-bit) Windows 10 Enterprise 2016, LTSB, multi-language (64-bit) Windows 10 Enterprise 2015, LTSB, multi-language (64-bit) Windows Server 2008 R2 incl. 5 clients, multi-language (64-bit) Windows Server 2012 R2 incl. 5 clients, multi-language (64-bit) Windows Server 2016 incl. 5 clients, multi-language (64-bit) 	<ul style="list-style-type: none"> Windows 7 Ultimate, multi-language (32/64-bit) Windows 10 Enterprise 2016, LTSB, multi-language (64-bit) Windows 10 Enterprise 2015, LTSB, multi-language (64-bit) Windows Server 2008 R2 incl. 5 clients, multi-language (64-bit) Windows Server 2012 R2 incl. 5 clients, multi-language (64-bit) Windows Server 2016 incl. 5 clients, multi-language (64-bit) 	<ul style="list-style-type: none"> Windows 7 Ultimate, multi-language (32/64-bit) Windows 10 Enterprise 2016, LTSB, multi-language (64-bit) Windows 10 Enterprise 2015, LTSB, multi-language (64-bit) Windows Server 2008 R2 incl. 5 clients, multi-language (64-bit) Windows Server 2012 R2 incl. 5 clients, multi-language (64-bit) Windows Server 2016 incl. 5 clients, multi-language (64-bit)
Project-specific on request	-	<ul style="list-style-type: none"> Linux ³⁾ Other 	<ul style="list-style-type: none"> Linux ³⁾ VxWorks (Support Package) VMware (ESXi) certified ⁴⁾ Other 	<ul style="list-style-type: none"> Linux ³⁾ VxWorks (Support Package) VMware (ESXi) certified ⁴⁾ Other

¹⁾ Only with mainboard with C236 chipset

²⁾ Limitation regarding ambient temperature.

³⁾ Suitable for specific Linux versions in accordance with the specifications of the Siemens manufacturer's declaration "Suitable for Linux", see: <http://support.automation.siemens.com/WWW/view/en/10805661/134200> (Linux is a trademark owned by Linus Torvald)

⁴⁾ Certified as host system for VMware vSphere Hypervisor (ESXi 6.0 U3), see: <https://support.industry.siemens.com/cs/ww/en/view/109477420>

PC-based Automation

Industrial PC

Rack PC

Technical specifications (continued)

Rack PC	SIMATIC IPC347E	SIMATIC IPC547G	SIMATIC IPC647D	SIMATIC IPC847D
Interfaces				
PROFIBUS/MPI	-	-	12 Mbps (compatible with CP 5622), optional	12 Mbps (compatible with CP 5622), optional
PROFINET	-	-	3 x RJ45 (compatible with CP 1616), optional	3 x RJ45 (compatible with CP 1616), optional
Ethernet	2 x Realtek 10/100/1 000 Mbps (RJ45)	2 x Intel 10/100/1 000 Mbps (RJ45, teaming-capable)	2 x Intel 10/100/1 000 Mbps (RJ45, teaming-capable)	2 x Intel 10/100/1 000 Mbps (RJ45, teaming-capable)
USB 3.0 (high current)	2 x at the rear	6 x ¹⁾ or 4 x, 2 of which at front	4 x, 1 of which at front, 1 x internal, e.g. for USB dongle with optional interlock	4 x, 1 of which at front, 1 x internal, e.g. for USB dongle with optional interlock
USB 2.0 (high current)	5 x, 2 of which at front 1 x internal, 2 x at the rear	4 x rear-mounted, 1 x internal ¹⁾ e.g. for USB dongle (with optional lock)	3 x, 1 of which at front	3 x, 1 of which at front
VGA	•	• optionally via DP adapter cable	• optionally via adapter cable	• optionally via adapter cable
DVI	•	•	•	•
DisplayPort	-	•	•	•
Drives				
SATA hard disks				
• Internal installation	•	•	-	•
• Installation at the front in the removable drive bay	-	•	•	•
• Internal installation in drive cage (shock and vibration-damped)	-	•	•	•
RAID 1/5 configuration with onboard RAID with SATA hard disks	-	• ¹⁾ / • ¹⁾	• / -	• / •
RAID 1/5 configuration with HW-RAID and ZMM with SAS hard disks	-	-	• / -	• / •
RAID configuration with additional hot spare hard disk	-	• ¹⁾	-	•
SSD (solid-state drive)	-	•	•	•
RAID1 configuration with solid-state drive	-	• ¹⁾	•	•
Optical drives				
DVD±R/RW	-	• (Slim)	• (Slim)	• (Slim)
AC power supply				
Redundant (optional)	-	•	•	•
UPS internal (optional)	-	-	-	•
Ambient conditions ⁵⁾				
Vibration/shock load during operation	- / -	0.2 g/1 g	0.5 g/5 g	0.5 g/5 g
Ambient temperature during operation	With maximum configuration: 5 ... 40 °C	With maximum configuration: 0 ... 40 °C	With maximum configuration: 0 ... 50 °C	With maximum configuration: 0 ... 50 °C

• Available

- Not available

¹⁾ Only with mainboard with C236 chipset

²⁾ Limitation regarding ambient temperature.

³⁾ Suitable for specific Linux versions in accordance with the specifications of the Siemens manufacturer's declaration "Suitable for Linux", see: <http://support.automation.siemens.com/WW/view/en/10805661/134200> (Linux is a trademark owned by Linus Torvald)

⁴⁾ Certified as host system for VMware vSphere Hypervisor (ESXi 6.0 U3), see: <https://support.industry.siemens.com/cs/ww/en/view/109477420>

⁵⁾ Restrictions when using DVD±R/RW, SAS HDDs, SATA Enterprise HDDs and hard disks in removable drive bay.

More information

Additional information is available on the Internet at:

<http://www.siemens.com/simatic-pc>

Information material can be ordered or downloaded from the Internet:

<http://www.siemens.com/simatic/printmaterial>

Overview

**SIMATIC IPC347E**

The SIMATIC IPC347E is an industrial PC in 19" rack design (4U).

It offers:

- Optimized price
- High performance
- Intel Core i technology of the 4th Generation

Technical specifications

Article number	6AG4012-1AA10-0XX0	6AG4012-1AA21-0XX0	6AG4012-1CA21-0XX0	6AG4012-1CA21-0BX0	6AG4012-1AA21-0BX0	6AG4012-1CB31-0BX0	6AG4012-1CE31-0BX0	
SIMATIC IPC347E								
Installation type/mounting								
Mounting	For horizontal rack mounting							
Design	Rack PC, 19", 4U							
Rack mounting	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Supply voltage								
Type of supply voltage	100 - 240 V AC	100 - 240 V AC	100 - 240 V AC	100 - 240 V AC	100 - 240 V AC	100 - 240 V AC	100 - 240 V AC	
Line frequency								
• Rated value 50 Hz	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
• Rated value 60 Hz	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Processor								
Processor type	Pentium Dual Core G3420 (2C/2T, 3.2 GHz, 3 MB Cache)		Core i5-4570S (4C/4T, 2.9 (3.6) GHz, 6 MB Cache)		Pentium Dual Core G3420 (2C/2T, 3.2 GHz, 3 MB Cache)		Core i5-4570S (4C/4T, 2.9 (3.6) GHz, 6 MB Cache)	
Drives								
Hard disk	500 GB HDD	500 GB HDD	500 GB HDD	500 GB HDD	500 GB HDD	1 TB HDD		
SSD							Yes; 256 GB	
Memory								
Type of memory	DDR3-SDRAM							
Main memory	2 GB (pre-installed), support up to 16 GB	4 GB (pre-installed), support up to 16 GB	4 GB (pre-installed), support up to 16 GB	4 GB (pre-installed), support up to 16 GB	4 GB (pre-installed), support up to 16 GB	8 GB (Pre-installed), support up to 16 GB	8 GB (Pre-installed), support up to 16 GB	
Hardware configuration								
Slots								
• Free slots	4x PCI, 1x PCIe, 1x PCI (x8) (2 Lanes), 1x PCIe (x16) (16 Lanes)	4x PCI, 1x PCIe, 1x PCI (x8) (2 Lanes), 1x PCIe (x16) (16 Lanes)	4x PCI, 1x PCIe (x1), 1x PCI (x8), 1x PCIe (x16)	4x PCI, 1x PCIe, 1x PCI (x8) (2 Lanes), 1x PCIe (x16) (16 Lanes)	4x PCI, 1x PCIe, 1x PCI (x8) (2 Lanes), 1x PCIe (x16) (16 Lanes)	4x PCI, 1x PCIe, 1x PCI (x8) (2 Lanes), 1x PCIe (x16) (16 Lanes)	4x PCI, 1x PCIe, 1x PCI (x8) (2 Lanes), 1x PCIe (x16) (16 Lanes)	

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SIMATIC IPC347E

Technical specifications (continued)

Article number	6AG4012-1AA10-0XX0	6AG4012-1AA21-0XX0	6AG4012-1CA21-0XX0	6AG4012-1CA21-0BX0	6AG4012-1AA21-0BX0	6AG4012-1CB31-0BX0	6AG4012-1CE31-0BX0
SIMATIC IPC347E							
Interfaces							
Interfaces/bus type	2x Gbit Ethernet (RJ45), 1x DVI-D, 1x VGA, 4x USB 2.0 on rear, 2x USB 2.0 on front, 2x COM, 2x PS/2, Audio (Line in, Line out, Micro)		2x Gbit Ethernet (RJ45)	2x Gbit Ethernet (RJ45), 1x DVI-D, 1x VGA, 4x USB 2.0 on rear, 2x USB 2.0 on front, 2x COM, 2x PS/2, Audio (Line in, Line out, Micro)			
Number of industrial Ethernet interfaces	2	2	2	2	2		
USB port	2x USB 3.0 rear, 2x USB 2.0 rear, 2x USB 2.0 front,			1x USB 2.0 internal			
Connection for keyboard/mouse serial interface	2x PS/2	2x PS/2	2x PS/2		2x PS/2	2x PS/2	2x PS/2
Multimedia	2x COM ports (RS 232, RS 422, RS 485)						
• Audio In/Out	Yes	Yes	Yes	Yes	Yes	Yes	Yes
• Microphone In	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Video interfaces							
• Graphics interface	1x VGA; 1x DVI-D	1x VGA; 1x DVI-D		1x VGA; 1x DVI-D	1x VGA; 1x DVI-D	1x VGA; 1x DVI-D	1x VGA; 1x DVI-D
Industrial Ethernet							
• Industrial Ethernet interface	2 x Ethernet (RJ45)	2 x Ethernet (RJ45)	2 x Ethernet (RJ45)	2 x Ethernet (RJ45)	2 x Ethernet (RJ45)	2 x Ethernet (RJ45)	2 x Ethernet (RJ45)
- 100 Mbps	Yes	Yes	Yes	Yes	Yes	Yes	Yes
- 1000 Mbps	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Integrated Functions							
Monitoring functions							
• Status LEDs	POWER, HDD	POWER, HDD	POWER, HDD	POWER, HDD	POWER, HDD	POWER, HDD	POWER, HDD
EMC							
Interference immunity against discharge of static electricity							
• Interference immunity against discharge of static electricity	±4 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, 80% AM acc. to IEC 61000-4-3; 3 V/m for 1.4 - 2 GHz, 80% AM acc. to IEC 61000-4-3; 1 V/m for 2 - 2.7 GHz, 80% AM acc. to IEC 61000-4-3; 10 V for 150 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 61000-4-4, burst; ±2 kV acc. to IEC 61000-4-5, surge						
• Interference immunity on signal cables < 30m	±1 kV acc. to IEC 61000-4-4, Burst	±1 kV acc. to IEC 61000-4-4, Burst	±1 kV acc. to IEC 61000-4-4, Burst	±1 kV acc. to IEC 61000-4-4, Burst	±1 kV acc. to IEC 61000-4-4, Burst	±1 kV acc. to IEC 61000-4-4, Burst	±1 kV acc. to IEC 61000-4-4, Burst
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	30 A/m; to IEC 61000-4-8	30 A/m; to IEC 61000-4-8	30 A/m; to IEC 61000-4-8	30 A/m; to IEC 61000-4-8	30 A/m; to IEC 61000-4-8	30 A/m; to IEC 61000-4-8	30 A/m; to IEC 61000-4-8

Technical specifications (continued)

Article number	6AG4012-1AA10-0XX0	6AG4012-1AA21-0XX0	6AG4012-1CA21-0XX0	6AG4012-1CA21-0BX0	6AG4012-1AA21-0BX0	6AG4012-1CB31-0BX0	6AG4012-1CE31-0BX0
SIMATIC IPC347E							
Emission of conducted and non-conducted interference							
• Interference emission via line/AC current cables	IEC 61000-6-4, CISPR 22, FCC Class A						
Compliance with line harmonic distortion limits							
• Compliance with line harmonic distortion acc. to IEC 61000-3-2, IEC 61000-3-3	Yes; EN 61000-3-2 Class D; EN 61000-3-3						
Degree and class of protection							
IP (at the front)	IP20	IP20	IP20	IP20	IP20	IP20	IP20
IP (rear)	IP20	IP20	IP20	IP20	IP20	IP20	IP20
Standards, approvals, certificates							
CE mark	Yes	Yes	Yes	Yes	Yes	Yes	Yes
UL approval	Yes	Yes	Yes	Yes	Yes	Yes	Yes
cULus	Yes	Yes	Yes	Yes	Yes	Yes	Yes
KC approval	Yes	Yes	Yes	Yes	Yes	Yes	Yes
FCC	Yes	Yes	Yes	Yes	Yes	Yes	Yes
EMC	CE, IEC 61000-6-4:2011, IEC 61000-6-2:2005	CE, EN 61000-6-4:2007 +A1:2011, EN 61000-6-2:2005					
Ambient conditions							
Ambient temperature during operation							
• Ambient temperature during operation	+5 °C to +40 °C	+5 °C to +40 °C	+5 °C to +40 °C	+5 °C to +40 °C	+5 °C to +40 °C	+5 °C to +40 °C	+5 °C to +40 °C
Relative humidity							
• Relative humidity	Tested according to IEC 60068-2-78, IEC 60068-2-30: Operation: 5% to 80% at 25 °C (no condensation), Storage: 5% to 95% at 25 °C (no condensation)						
Operating systems							
pre-installed operating system without operating system	Yes	Yes	Yes	Yes	Yes	Yes	Yes
pre-installed operating system							
• Windows 7				Yes; Ultimate 64 bit	Yes; Ultimate 64 bit	Yes; Ultimate 64 bit, SP1	Yes; Ultimate 64 bit, SP1
Mechanics/material							
Enclosure material (front)							
• Aluminum	Yes	Yes	Yes	Yes	Yes		
Dimensions							
Width	430 mm	430 mm	430 mm	430 mm	430 mm	430 mm	430 mm
Height	177 mm	177 mm	177 mm	177 mm	177 mm	177 mm	177 mm
Depth	463 mm	463 mm	463 mm	463 mm	463 mm	463 mm	463 mm

PC-based Automation

Rack PC

SIMATIC IPC347E

Ordering data

Configurations

SIMATIC IPC347E

• Configuration 1

Intel Pentium Dual-Core G3420 (2C/2T, 3.2 GHz, 3 MB cache); 500 GB HDD SATA, internal; 2 GB DDR3 SDRAM (1 x 2 GB); without operating system; 100/240 V AC industrial power supply.
Interfaces:
2 x Gbit Ethernet (RJ45),
4 x USB at the rear,
2 x USB at the front,
1 x USB internal, 1 x DVI-D,
1 x VGA, 2 x serial, 2 x PS/2, audio

6AG4012-1AA10-0XX0

• Configuration 2

Intel Pentium Dual-Core G3420 (2C/2T, 3.2 GHz, 3 MB cache); 500 GB HDD SATA, internal; 4 GB DDR3 SDRAM (1 x 4 GB); DVD±RW; without operating system; 100/240 V AC industrial power supply.
Interfaces:
2 x Gbit Ethernet (RJ45),
4 x USB at the rear,
2 x USB at the front,
1 x USB internal, 1 x DVI-D,
1 x VGA, 2 x serial, 2 x PS/2, audio

6AG4012-1AA21-0XX0

• Configuration 3

Intel Core i5-4570S (4C/4T, to 3.6 GHz, 6 MB cache); 500 GB HDD SATA, internal; 4 GB DDR3 SDRAM (1 x 4 GB); DVD±RW; without operating system; 100/240 V AC industrial power supply.
Interfaces:
2 x Gbit Ethernet (RJ45),
4 x USB at the rear,
2 x USB at the front,
1 x USB internal, 1 x DVI-D,
1 x VGA, 2 x serial, 2 x PS/2, audio

6AG4012-1CA21-0XX0

• Configuration 4

Intel Core i5-4570S (4C/4T, to 3.6 GHz, 6 MB cache); 500 GB HDD SATA, internal; 4 GB DDR3 SDRAM (1 x 4 GB); DVD±RW; Windows 7 Ultimate, 64-bit, SP1; 100/240 V AC industrial power supply.
Interfaces:
2 x Gbit Ethernet (RJ45),
4 x USB at the rear,
2 x USB at the front,
1 x USB internal, 1 x DVI-D,
1 x VGA, 2 x serial, 2 x PS/2, audio

6AG4012-1CA21-0BX0

• Configuration 5

Intel Pentium Dual-Core G3420 (2C/2T, 3.2 GHz, 3 MB cache); 500 GB HDD SATA, internal; 4 GB DDR3 SDRAM (1 x 4 GB); DVD±RW; Windows 7 Ultimate, 64-bit, SP1; 100/240 V AC industrial power supply.
Interfaces:
2 x Gbit Ethernet (RJ45),
4 x USB at the rear,
2 x USB at the front,
1 x USB internal, 1 x DVI-D,
1 x VGA, 2 x serial, 2 x PS/2, audio

6AG4012-1AA21-0BX0

• Configuration 6

Intel Core i5-4570S (4C/4T, to 3.6 GHz, 6 MB cache); 1 TB HDD SATA, internal; 8 GB DDR3 SDRAM (1 x 8 GB); DVD±RW; Windows 7 Ultimate, 64-bit, SP1; 100/240 V AC industrial power supply.
Interfaces:
2 x Gbit Ethernet (RJ45),
4 x USB at the rear,
2 x USB at the front,
1 x USB internal, 1 x DVI-D,
1 x VGA, 2 x serial, 2 x PS/2, audio

6AG4012-1CB31-0BX0

• Configuration 7

Intel Core i5-4570S (4C/4T, up to 3.6 GHz, 6 MB cache); 256 GB SSD SATA, internal; 8 GB DDR3 SDRAM (1 x 8 GB); DVD±RW; Windows 7 Ultimate, 64-bit, SP1; 100/240 V AC industrial power supply.
Interfaces:
2 x Gbit Ethernet (RJ45),
4 x USB at the rear,
2 x USB at the front,
1 x USB internal, 1 x DVI-D,
1 x VGA, 2 x serial, 2 x PS/2, audio

6AG4012-1CE31-0BX0

Accessories

Power cable, straight, 3 m long

- Austria, Belgium, Finland, France, Germany, Netherlands, Spain, Sweden
- United Kingdom
- Switzerland
- USA
- Italy
- China

6ES7900-0AA00-0XA0

6ES7900-0BA00-0XA0

6ES7900-0CA00-0XA0

6ES7900-0DA00-0XA0

6ES7900-0EA00-0XA0

6ES7900-0FA00-0XA0

Note:

Software packages with SIMATIC WinCC flexible, SIMATIC WinCC RT Advanced or Professional and SIMATIC WinCC can be ordered together with the SIMATIC IPC at favorable prices.

More information under "Embedded Bundles / Packages for industrial PCs".

More information

Additional information is available on the Internet at:

<http://www.siemens.com/simatic-pc>

Overview

**SIMATIC IPC547G**

The SIMATIC IPC547G is a rugged industrial PC in 19" rack design (4U).

It offers:

- Maximum performance
- Attractive price
- Intel Core i/Xeon technology, 6th Generation

Technical specifications

Article number	6AG4104-4....-.... SIMATIC IPC547G
Installation type/mounting	
Mounting	For horizontal and vertical installation; prepared for telescopic rails; 19" mounting bracket can be removed externally; tower kit (optional)
Design	Rack PC, 19", 4U
Supply voltage	
Type of supply voltage	100/240 V AC (autorange) 50 / 60 Hz; optional redundant 100 - 240 V AC
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	Xeon E3-1275 v5 (4C/8T, 3.6 (4.0) GHz, 8 MB Cache); Core i7-6700 (4C/8T, 3.4 (4.0) GHz, 8 MB Cache); Core i5-6500 (4C/4T, 3.2 (3.6) GHz, 6 MB Cache); Pentium G4400 (2C/2T, 3.3 GHz, 3 MB Cache)
Chipset	Intel C236 / Intel H110
Graphic	
Graphics controller	Onboard Intel HD graphics P530 / 530 /510 integrated in processor; graphics card PCIe (x16) (dual head: 2x VGA or 2x DVI-D) (optional)

Article number	6AG4104-4....-.... SIMATIC IPC547G
Drives	
Optical drives	DVD±R/RW (SlimLine)
Hard disk	Internal installation: 1 TB HDD, 2x 1 TB HDD, RAID1 (2x 1 TB HDD), RAID1 (2x 1 TB HDD (Enterprise)); for front mounting in low-profile removable drive bay trays (hot-swap in RAID configuration): 1 TB HDD, 2x 1 TB HDD, RAID1 (2x 1 TB HDD), RAID1 (2x 1 TB HDD (Enterprise)), RAID1 (2x 2 TB HDD (Enterprise)), RAID1 (2x 2 TB HDD (Enterprise)) + 1x 2 TB HDD (Enterprise) as hot spare, RAID1 (2x 2 TB HDD (Enterprise)) + 1x 480 GB SSD, RAID5 (3x 2 TB HDD (Enterprise)), RAID5 (3x 2 TB HDD (Enterprise)) + 1x 2 TB HDD (Enterprise) as hot spare
SSD	Yes; 1x 240 GB, 1x 480 GB SSD, 2x 480 GB SSD, RAID1 (2x 480 GB SSD)
Slot for drives	Mounted internally in vibration/ shock-absorbing hard disk support, or mounted at the front in the low-profile removable drive bay (hot-swap in RAID configurations)
Memory	
Main memory	4 GB to 64 GB DDR4 2133 SDRAM
Hardware configuration	
Slots	
• free slots	7 spare slots for expansions (all long); mainboard with H110 chipset: 1x PCIe (x16) Gen 3, 1x PCIe (x16) (1 lane) Gen 2, 1x PCIe (x8) (1 lane) Gen 2, 1x PCIe (x4) (1 lane) Gen 2, 1x PCIe (x4) (1 lane) Gen 2, 2x PCI; mainboard with C236 chipset: 1x PCIe (x16) Gen 3, 1x PCIe (x16) (4 lanes) Gen 3, 1x PCIe (x8) (1 lane) Gen 3, 1x PCIe (x4) (4 lane) Gen 3, 1x PCIe (x4) (1 lane) Gen 3, 2x PCI

PC-based Automation

Rack PC

SIMATIC IPC547G

Technical specifications (continued)

Article number	6AG4104-4....-.... SIMATIC IPC547G
Interfaces	
Interfaces/bus type	Interfaces mainboard (H110 chipset): 2x Intel Gigabit Ethernet (RJ45, teaming-capable), 4x USB 3.0: 2x on rear, 2x on front, 4x USB 2.0: 4x on rear, 1x DisplayPort V1.2, 1x DVI-D, 2x PS/2, audio: Line in, line out, micro; interfaces mainboard (C236 chip set): 2x Intel Gigabit Ethernet (RJ45, teaming-capable), 6x USB 3.0: 4x on rear, 2x on front, 5x USB 2.0: 4x on rear, 1x internal e.g. for software dongle with optional interlock, 2x DisplayPort V1.2, 1x DVI-D, 1x COM1, 2x PS/2, audio: line in, line out, micro
USB port	Mainboard (H110 chipset): 4x USB 3.0: 2x on rear, 2x on front, 4x USB 2.0: 4x on rear; mainboard (C236 chipset): 6x USB 3.0: 4x on rear, 2x on front, 5x USB 2.0: 4x on rear, 1x internal e.g. for software dongle with optional interlock
Connection for keyboard/mouse serial interface	2x PS/2 COM1: 1x RS 232, COM2 (optional): 1x RS 232
parallel interface	optional LPT1
Multimedia	
• Audio In/Out	Yes
• Microphone In	Yes
Video interfaces	
• Graphics interface	2x DisplayPort and 1x DVI-D onboard; 1x VGA via DP-VGA adapter cable (optional); graphics card PCIe (x16), Dual Head (2x VGA or 2x DVI-D), 1 GB graphics memory (optional)
Industrial Ethernet	
• Industrial Ethernet interface	2 x Ethernet (RJ45)
- 100 Mbps	Yes
- 1000 Mbps	Yes
Integrated Functions	
Monitoring functions	
• Temperature monitoring	Yes
• Watchdog	Yes
• Status LEDs	POWER, HDD, TEMP, FAN, HDD0 ALARM, HDD1 ALARM, HDD2 ALARM, HDD3 ALARM
• Fan	Yes
• Monitoring function via network	Optional

Article number	6AG4104-4....-.... SIMATIC IPC547G
EMC	
Interference immunity against discharge of static electricity	
• Interference immunity against discharge of static electricity	±4 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, 80% AM acc. to IEC 61000-4-3; 3 V/m for 1.4 - 2 GHz, 80% AM acc. to IEC 61000-4-3; 1 V/m for 2 - 2.7 GHz, 80% AM acc. to IEC 61000-4-3; 10 V for 150 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 61000-4-4, burst; ±2 kV acc. to IEC 61000-4-5, surge
• Interference immunity on signal cables < 30m	±1 kV acc. to IEC 61000-4-4, Burst
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	30 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, FCC Class A, EN 61000-6-4, CISPR 22, EN 55022 Class B, EN 61000-3-2 Class D, EN 61000-3-3
Degree and class of protection	
IP (at the front)	IP30
IP (rear)	IP20

Technical specifications (continued)

Article number	6AG4104-4....-.... SIMATIC IPC547G
Standards, approvals, certificates	
Approval	CE, cULus 60950, KCC
CE mark	Yes; For use in industrial areas as well as domestic, business and commercial environments (emitted interference: EN 61000-6-3:2007 +A1:2011, noise immunity: EN 61000-6-2:2005)
CSA approval	Yes; Included in cULus
UL approval	Yes
cULus	Yes; UL 60950-1, file number E115352
RCM (formerly C-TICK)	Yes
KC approval	Yes
EAC (formerly Gost-R)	Yes
EMC	CE, EN 61000-6-3:2007 +A1:2011, EN 61000-6-2:2005
Dust protection	With front door closed: G2 EN 779, 99% of particles > 0.5 mm are filtered
Ambient conditions	
Ambient temperature during operation	
• Ambient temperature during operation	0 °C to +40 °C in full configuration (no burner mode), at +5 °C to +35 °C without limitation
Relative humidity	
• Relative humidity	Tested according to IEC 60068-2-78, IEC 60068-2-30: Operation: 5 % to 85 % at 30 °C (no condensation), storage / transport: 5 % to 95 % at 25 / 55 °C (no condensation)
Vibrations	
• Vibration resistance during operation acc. to IEC 60068-2-6	Tested according to IEC 60068-2-6, 10 cycles; 20 to 58 Hz: 0.015 mm; 58 to 200 Hz: 2 m/s ² (0.2 g)
Shock testing	
• Shock load during operation	Tested according to IEC 60068-2-27; half-sine: 9.8 m/s ² (1 g), 20 ms, 100 shocks per axis

Article number	6AG4104-4....-.... SIMATIC IPC547G
Operating systems	
Operating system	Windows 7 Ultimate, multi-language (32-bit/64-bit), Windows 10 Enterprise 2015 LTSB, multi-language (64-bit), Windows 10 Enterprise 2016 LTSB, multi-language (64-bit), Windows Server 2008 R2 Standard Edition incl. 5 clients, multi-language (64-bit); Windows Server 2012 R2 Standard Edition incl. 5 clients, multi-language (64-bit); Windows Server 2016 Standard Edition incl. 5 clients, multi-language (64-bit)
pre-installed operating system	Yes
Additional info on operating system	Multi-Language User Interface (MUI): 5 languages (English, German, French, Spanish, Italian)
without operating system	Yes
Software	
SIMATIC Software	Optionally in package with SIMATIC WinCC or WinCC flexible
Dimensions	
Width	430 mm
Height	177 mm; 4U
Depth	446 mm; Device with short enclosure: 356 mm

PC-based Automation

Rack PC

SIMATIC IPC547G

Ordering data

Article No.

SIMATIC IPC547G

Rack PC, 19", 4 U

Interfaces:

2 x USB 3.0 at the front,
2 x Gbit Ethernet, 2 x PS/2, audio;
slots: 5 x PCI Express, 2 x PCI;
temperature and fan monitoring;
watchdog; card retainer

Processors and mainboards

- Pentium G4400
(2C/2T, 3.3 GHz, 3 MB cache);
mainboard (chipset H110,
1 x DVI-D, 1 x DisplayPort V1.2,
2 x USB 3.0 & 4 x USB 2.0
at the rear)
- Core i5-6500
(4C/4T, 3.2 (3.6) GHz,
6 MB cache);
mainboard (chipset H110,
1 x DVI-D, 1 x DisplayPort V1.2,
2 x USB 3.0 & 4 x USB 2.0
at the rear)
- Core i7-6700
(4C/8T, 3.4 (4.0) GHz,
8 MB cache);
mainboard (chipset H110,
1 x DVI-D, 1 x DisplayPort V1.2,
2 x USB 3.0 & 4 x USB 2.0
at the rear)
- Pentium G4400
(2C/2T, 3.3 GHz, 3 MB cache);
mainboard (chipset C236,
1 x DVI-D, 2 x DisplayPort V1.2,
4 x USB 3.0 & 4 x USB 2.0
at the rear, 1 x USB 2.0 internal,
1 x COM1; RAID onboard)
- Core i5-6500
(4C/4T, 3.2 (3.6) GHz,
6 MB cache, iAMT);
mainboard (chipset C236,
1 x DVI-D, 2 x DisplayPort V1.2,
4 x USB 3.0 & 4 x USB 2.0
at the rear, 1 x USB 2.0 internal,
1 x COM1; RAID onboard)
- Core i7-6700
(4C/8T, 3.4 (4.0) GHz,
8 MB cache, iAMT);
mainboard (chipset C236,
1 x DVI-D, 2 x DisplayPort V1.2,
4 x USB 3.0 & 4 x USB 2.0
at the rear, 1 x USB 2.0 internal,
1 x COM1; RAID onboard)
- Xeon E3-1275 v5
(4C/8T, 3.6 (4.0) GHz,
8 MB cache, iAMT);
mainboard (chipset C236,
1 x DVI-D, 2 x DisplayPort V1.2,
4 x USB 3.0 & 4 x USB 2.0
at the rear, 1 x USB 2.0 internal,
1 x COM1; RAID onboard)

Article No.	Ordering data
6AG4104-	4 ■ ■ ■ ■ - ■ ■ ■ ■
A	
C	
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Article No.

SIMATIC IPC547G

Drives (SATA)

- 1 x 1 TB HDD, internal
(0.2 g vibration, 1 g shock)
- 2 x 1 TB HDD, internal
(0.2 g vibration, 1 g shock)
- 1 x 240 GB SSD, internal
- 1 x 480 GB SSD, internal
- 2 x 480 GB SSD, internal
- RAID1, 1 TB (2 x 1 TB HDD),
internal (0.2 g vibration,
1 g shock)¹⁾
- RAID1, 1 TB
(2 x 1 TB HDD [Enterprise]),
internal (0.2 g vibration,
1 g shock)¹⁾
- 1 x 1 TB HDD in removable drive
bay, on the front ²⁾
- 2 x 1 TB HDD in removable drive
bay, on the front ²⁾
- 1 x 480 GB SSD in removable
drive bay, on the front ²⁾
- 2 x 480 GB SSD in removable
drive bay, on the front ²⁾
- RAID1, 480 GB (2 x 480 GB SSD)
in removable drive bay,
hot-swappable, front-mounted ¹⁾²⁾
- RAID1, 1 TB (2 x 1 TB HDD)
in removable drive bay,
hot-swappable, front-mounted ¹⁾²⁾
- RAID1, 1 TB
(2 x 1 TB HDD [Enterprise])
in removable drive bay,
hot-swappable, front-mounted ¹⁾²⁾
- RAID1, 2 TB
(2 x 2 TB HDD [Enterprise])
in removable drive bay,
hot-swappable, front-mounted ¹⁾²⁾
- RAID1, 2 TB
(2 x 2 TB HDD [Enterprise])
in removable drive bay,
hot-swappable + 1 x 2 TB HDD
[Enterprise] as hot spare
in removable drive bay,
front-mounted ¹⁾²⁾
- RAID1, 2 TB (2 x 2 TB HDD
[Enterprise]) in removable drive
bay, hot-swappable + 1 x 480 GB
SSD in removable drive bay,
front-mounted (operating system
installed on SSD if configured) ¹⁾²⁾
- RAID5, 4 TB (3 x 2 TB HDD
[Enterprise]) in rem. drive bay,
hot-swappable, front-mounted ¹⁾²⁾
- RAID5, 4 TB (3 x 2 TB HDD
[Enterprise]) in removable drive
bay, hot-swappable +
1 x 2 TB HDD [Enterprise] as
hot spare in removable drive bay,
front-mounted; (up to +35°C) ¹⁾²⁾

Article No.	Ordering data
6AG4104-	4 ■ ■ ■ ■ - ■ ■ ■ ■
A	
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PC-based Automation

Rack PC

SIMATIC IPC547G

Ordering data

Article No.

Preferred types (available at short notice from stock)

SIMATIC IPC547G (Rack PC, 19", 4 U)

- Pentium G4400 (2C/2T, 3.3 GHz, 3 MB cache)
- Mainboard with chipset H110
- 1x 1 TB HDD, internal
- 4 GB DDR4 SDRAM (1x 4 GB)
- Painted enclosure
- 100/240 V AC industrial power supply
- Serial (COM2) + Parallel (LPT)
- Without power supply cord

6AG4104-4AA05-3XX0

SIMATIC IPC547G (Rack PC, 19", 4 U)

- Core i5-6500 (4C/4T, 3.2 (3.6) GHz, 6 MB Cache, iAMT)
- Mainboard with C236 chipset
- RAID1, 1 TB (2x 1 TB HDD) in removable tray, hot-swappable, front-mounted
- 8 GB DDR4 SDRAM (2 x 4 GB), dual channel
- Painted enclosure
- 100/240 V AC industrial power supply
- DVD +/-RW (slim)
- Serial (COM2) + Parallel (LPT)
- Adapter cable DP to VGA for onboard graphics
- Windows 7 Ultimate, MUI (en, de, fr, it, es), 64-bit, SP1
- Without power supply cord

6AG4104-4GN16-4BX0

SIMATIC IPC547G (Rack PC, 19", 4 U)

- Core i7-6700 (4C/8T, 3.4 (4.0) GHz, 8 MB cache, iAMT)
- Mainboard with C236 chipset
- RAID1, 1 TB (2x 1 TB HDD Enterprise), in removable tray, hot-swappable, front-mounted
- 8 GB DDR4 SDRAM (2x 4 GB), dual channel
- Painted enclosure
- 2x 100/240V AC redundant industrial power supply
- DVD +/-RW (slim)
- Serial (COM2) + Parallel (LPT)
- PCIe x16 graphics card (dual head: 2x VGA/2x DVI-D), 1 GB
- Windows 7 Ultimate, MUI (en, de, fr, it, es), 64-bit, SP1
- Without power supply cord

6AG4104-4HP18-5BX0

Article No.

Accessories

Memory expansions

- 4 GB DDR4-2133 SDRAM
- 8 GB DDR4-2133 SDRAM
- 16 GB, DDR4-2133 SDRAM

6ES7648-2AL60-0PA0

6ES7648-2AL70-0PA0

6ES7648-2AL80-0PA0

Removable drive bay

for 3.5" hard disk or 2.5" solid-state drive, SATA (without hard disk drive/solid-state drive)

6ES7648-0EH00-1BA0

Tower Kit IPC547G

To convert the computer into an industrial tower PC

- Standard enclosure version
- Short enclosure version

6ES7648-1AA01-0XC0

6ES7648-1AA01-0XE0

Adapter cable

- DisplayPort to DVI-D for onboard graphics
- DisplayPort to VGA for onboard graphics

6ES7648-3AF00-0XA0

6ES7648-3AG00-0XA0

Retainer

For mechanically interlocking the internal USB port

6ES7648-1AA00-0XK0

Additional information is available on the Internet at:

<http://www.siemens.com/ipc547g>

Overview

**SIMATIC IPC647D**

The SIMATIC IPC647D is a very rugged, high-performance industrial PC in 19" rack design (2 U) with excellent industrial functionality.

It offers:

- Extreme compactness
- Extreme ruggedness
- Intel® Core® i/Xeon technology 4th Generation

Technical specifications

Article number	6AG4112-2....-.... SIMATIC IPC647D (RACK PC)
Installation type/mounting	
Mounting	For horizontal installation; prepared for telescopic rails; 19" mounting bracket can be removed externally
Design	Rack PC, 19", 2U
Supply voltage	
Type of supply voltage	100/240 V AC (autorange) 50 / 60 Hz; optional redundant 100 - 240 V AC
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	Xeon E3-1268L v3 (4C/8T, 2.3 (3.3) GHz, 8 MB cache); Core i5-4570TE (2C/4T, 2.7 (3.3) GHz, 4 MB cache); Core i3-4330TE (2C/4T, 2.4 GHz, 4 MB cache)
Chipset	Intel DH82C226 PCH
Graphic	
Graphics controller	Onboard graphics controller Intel HD 4600 Graphics integrated into the processor / PCI-Express graphics card (Dual Head: 2x VGA or 2x DVI-D) in the PCIe (x16) slot (optional)
Drives	
Optical drives	DVD±R/RW (SlimLine)
Hard disk	500 GB HDD, 1 TB HDD, 2x 1 TB HDD, RAID1 (2x 1 TB HDD, mirror disks); RAID1 (2x 1 TB HDD SAS, mirror disks) with PCIe (x8) RAID controller incl. ZMCP module
SSD	Yes; 240 GB SSD; RAID1(2x 240 GB SSD, mirror disks)
Slot for drives	Mounted internally on the fixed hard disk support, or mounted internally in vibration/shock-absorbing hard disk support, or mounted at the front in the low-profile removable drive bay (hot-swap in RAID configurations)

Article number	6AG4112-2....-.... SIMATIC IPC647D (RACK PC)
Memory	
Main memory	2 GB to 32 GB DDR3 1600 DIMM, ECC optional
Hardware configuration	
Slots	
• free slots	2x PCIe mech. (x16) (4 lanes) or 4x PCIe mech. (x16) (4 lanes / 8 lanes depending on slot) or 2x PCI, 2x PCIe mech. (x16) (8 lanes); all modules to a length of 312 mm can be used
Interfaces	
Interfaces/bus type	1x COM1, 1x COM2 (optional), 1x LPT (optional), 2x DisplayPort, 1x DVI-I, 2x PS/2, audio (Microphone In, Line Out), 7x USB, 2x Gigabit Ethernet, PROFIBUS or PROFINET optional
PROFIBUS/MPI	Optionally onboard, isolated, max. 12 Mbit/s, no plug-in card necessary, CP 5622-compatible
USB port	2x USB 3.0, 2x USB 2.0 rear, 1x USB 3.0, 1x USB 2.0 front, 1x USB 3.0 internal
Connection for keyboard/mouse	2x PS/2
serial interface	COM1: 1x RS 232, COM2 (optional): 1x RS 232
parallel interface	optional LPT1
Multimedia	
• Audio In/Out	Yes
• Microphone In	Yes
Video interfaces	
• Graphics interface	2x DisplayPort and 1x DVI-I onboard; 1x VGA via DVI-VGA adapter cable (optional); graphics card PCIe (x16), Dual Head (2x VGA or 2x DVI-D), 1 GB graphics memory (optional)
Industrial Ethernet	
• Industrial Ethernet interface	2 x Ethernet (RJ45)
- 100 Mbps	Yes
- 1000 Mbps	Yes

PC-based Automation

Rack PC

SIMATIC IPC647D

Technical specifications (continued)

Article number	6AG4112-2....-.... SIMATIC IPC647D (RACK PC)
Integrated Functions	
Monitoring functions	
• Temperature monitoring	Yes
• Watchdog	Yes
• Status LEDs	POWER, HDD, ETHERNET 1, ETHERNET 2, PROFIBUS / MPI, SF PROFINET, WATCHDOG, TEMP, FAN, HDD0 ALARM, HDD1 ALARM
• Fan	Yes
• Monitoring function via network	Optional
EMC	
Interference immunity against discharge of static electricity	
• 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 61000-4-4, burst; ±2 kV acc. to IEC 61000-4-5, surge
• Interference immunity on signal cables < 30m	±1 kV acc. to IEC 61000-4-4, Burst
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, FCC Class A, EN 61000-6-4, CISPR 22, EN 55022 Class B, EN 61000-3-2 Class D, EN 61000-3-3
Degree and class of protection	
IP (at the front)	IP41
IP (rear)	IP20
Standards, approvals, certificates	
Approval	CE, cULus 60950, KCC
CE mark	Yes; For use in industrial areas as well as domestic, business and commercial environments (emitted interference: EN 61000-6-3:2007 +A1:2011, noise immunity: EN 61000-6-2:2005)
CSA approval	Yes; Included in cULus
UL approval	Yes
cULus	Yes; UL 60950-1, file number E115352
RCM (formerly C-TICK)	Yes
KC approval	Yes

Article number	6AG4112-2....-.... SIMATIC IPC647D (RACK PC)
Standards, approvals, certificates (continued)	
EAC (formerly Gost-R)	Yes
EMC	CE, EN 61000-6-3:2007 +A1:2011, EN 61000-6-2:2005
Dust protection	With front door closed: G2 EN 779, 99% of particles > 0.5 mm are filtered
Marine approval	
• Germanischer Lloyd (GL)	Yes; Only with SSD
• American Bureau of Shipping (ABS)	Yes; Only with SSD
• Bureau Veritas (BV)	Yes; Only with SSD
• Det Norske Veritas (DNV)	Yes; Only with SSD
• Lloyds Register of Shipping (LRS)	Yes; Only with SSD
Ambient conditions	
Ambient temperature during operation	
• Ambient temperature during operation	0 ... 50 °C no ODD operation, no HDD operation in swap frame, no hardware RAID controller; 0 ... 45 °C no ODD operation, no hardware RAID controller, power loss of expansion cards in total < 55 W; 0 ... 40 °C no hardware RAID controller, power loss of the expansion cards in total < 55 W; 0 ... 35 °C no restrictions
Relative humidity	
• Relative humidity	Tested to IEC 60068-78, DIN IEC 68-2-30: 5% to 80% at 25 °C (no condensation)
Vibrations	
• Vibration resistance during operation acc. to IEC 60068-2-6	Tested according to IEC 60068-2-6: 10 cycles, 10 Hz to 58 Hz: 0.0375 mm, 58 Hz to 500 Hz: 4.9 m/s ² (0.5 g)
Shock testing	
• Shock load during operation	Tested according to IEC 60068-2-27, IEC 60068-2-29: half-sine: 50 m/s ² (5 g), 30 ms, 100 shocks per axis
Operating systems	
Operating system	Windows 7 Ultimate, multi-language (32-bit/64-bit), Windows 10 Enterprise 2015 LTSC, multi-language (64-bit), Windows 10 Enterprise 2016 LTSC, multi-language (64-bit), Windows Server 2008 R2 Standard Edition incl. 5 clients, multi-language (64-bit); Windows Server 2012 R2 Standard Edition incl. 5 clients, multi-language (64-bit); Windows Server 2016 Standard Edition incl. 5 clients, multi-language (64-bit)
pre-installed operating system	Yes
Additional info on operating system	Multi-Language User Interface (MUI): 5 languages (English, German, French, Spanish, Italian)
without operating system	Yes
Software	
SIMATIC Software	Optionally in package with SIMATIC WinCC or WinCC flexible
Dimensions	
Width	430 mm
Height	88 mm; 2U
Depth	444 mm

Ordering data

Article No.

Ordering data	Article No.
SIMATIC IPC647D	6AG4112- 2
Interfaces: RACK PC, 19", 2 U Interfaces: 2 x GBIT LAN (RJ45); 1 x DVI-I; 2 x DisplayPort; 1 x COM; 2 x PS/2; audio; 2 x USB 3.0, 2 x USB 2.0 at rear; 1 x USB 3.0, 1 x USB 2.0 at front, 1 x USB 3.0 internal; temperature and fan monitoring, watchdog, card retainer	
<u>Processor/main board</u>	
• Core i3-4330TE (2C/4T, 2.4 GHz, 4 MB cache); mainboard without fieldbus	D
• Core i3-4330TE (2C/4T, 2.4 GHz, 4 MB, VT-x); mainboard with PROFIBUS/MPI (CP 5622-compatible)	E
• Core i3-4330TE (2C/4T, 2.4 GHz, 4 MB cache); mainboard with PROFINET (3 x RJ45, CP 1616-compatible)	F
• Core i5-4570TE (2C/4T, 2.7 (3.3) GHz, 4 MB Cache, TB, VT-d, AMT); mainboard without fieldbus	G
• Core i5-4570TE (2C/4T, 2.7 (3.3) GHz, 4 MB cache, TB, VT-x, VT-d, AMT); mainboard with PROFIBUS/MPI (CP 5622-compatible)	H
• Core i5-4570TE (2C/4T, 2.7 (3.3) GHz, 4 MB cache, TB, VT-d, AMT); mainboard with PROFINET (3 x RJ45, CP 1616-compatible)	J
• Xeon E3-1268L v3 (4C/8T, 2.3 (3.3) GHz, 8 MB cache, TB, VT-d, AMT); mainboard without fieldbus	K
• Xeon E3-1268L v3 (4C/8T, 2.3 (3.3) GHz, 8 MB cache, TB, VT-x, VT-d, AMT); mainboard with PROFIBUS/MPI (CP 5622-compatible)	L
• Xeon E3-1268L v3 (4C/8T, 2.3 (3.3) GHz, 8 MB cache, TB, VT-d, AMT); mainboard with PROFINET (3 x RJ45, CP 1616-compatible)	M
<u>Hard disks/SSD</u>	
• 500 GB HDD SATA, internal (0.5 g vibration, 5 g shock)	A
• 1 TB HDD SATA, internal (0.5 g vibration, 5 g shock)	B
• 2 x 1 TB HDD SATA, internal (0.5 g vibration, 5 g shock)	C
• RAID1, 1 TB (2 x 1 TB HDD SATA, mirror disks), internal (0.5 g vibration, 5 g shock)	D
• 500 GB HDD SATA in removable drive bay; front	H
• 1 TB HDD SATA in removable drive bay; front	K
• 2 x 1 TB HDD SATA in removable drive bay; front-mounted	M
• RAID1, 1 TB (2 x 1 TB HDD SATA, mirror disks) in removable drive bay, hot-swappable, front	P
• 240 GB SSD SATA, internal	S
• 240 GB SSD SATA in removable drive bay; front	T
• RAID1, 1 TB (2 x 1 TB HDD SAS, mirror disks) in removable drive bay, hot-swappable, front-mounted; PCIe x8 RAID controller including ZCMP module (2 slots occupied)	U
• RAID1, 240 GB (2 x 240 GB SSD SATA, mirror disks), in removable drive bay, hot swap, at the front	W

Article No.

Article No.	Ordering data
6AG4112- 2	SIMATIC IPC647D
	<u>Memory configuration</u>
1	• 2 GB DDR3 SDRAM (1 x 2 GB), single channel
2	• 4 GB DDR3 SDRAM (2 x 2 GB), dual channel
3	• 8 GB DDR3 SDRAM (2 x 4 GB), dual channel
4	• 16 GB DDR3 SDRAM (2 x 8 GB), dual channel
5	• 32 GB DDR3 SDRAM (4 x 8 GB), dual channel
6	• 8 GB DDR3 SDRAM, (2 x 4 GB), ECC, dual channel
7	• 16 GB DDR3 SDRAM, (2 x 8 GB), ECC, dual channel
8	• 32 GB DDR3 SDRAM, (4 x 8 GB), ECC, dual channel
	<u>Bus module/removable data storage media/SSD:</u>
0	• Bus module 2-slot: 2 x PCIe x16; without drives
1	• Bus module 4-slot: 2 x PCI, 2 x PCIe x16; without drives
2	• Bus module 4-slot: 4 x PCIe x16; without drives
3	• Bus module 2-slot: 2 x PCIe x16; DVD±RW (slim)
4	• Bus module 4-slot: 2 x PCI, 2 x PCIe x16; DVD±RW (slim)
5	• Bus module 4-slot: 4 x PCIe x16; DVD±RW (slim)
6	• Bus module 2-slot: 2 x PCIe x16/1 x 240 GB SSD (for operating system), internal
7	• Bus module 4-slot: 2 x PCI, 2 x PCIe x16/1 x 240 GB SSD (for operating system), internal
8	• Bus module 4-slot: 4 x PCIe x16/1 x 240 GB SSD (for operating system), internal
	<u>Expansion hardware</u>
0	• Without expansions (hardware), onboard graphics;
1	• Without expansions (hardware), onboard graphics, DVI-I adapter cable, VGA-compliant for onboard graphics;
2	• Serial (COM2) + parallel (LPT, 1 slot reserved), onboard graphics;
3	• Serial (COM2) + parallel (LPT, 1 slot reserved), onboard graphics; DVI-I adapter cable, VGA-compliant for onboard graphics;
4	• Serial (COM2) + parallel (LPT, 1 slot reserved) + PCIe x16 Graphics Card (Dual-Head: 2 x VGA or 2 x DVI-D), 1 GB, (1 slot occupied);
5	• PCIe x16 graphics card (dual head: 2 x VGA or 2 x DVI-D), 1 GB, (1 slot occupied)

PC-based Automation

Rack PC

SIMATIC IPC647D

Ordering data

SIMATIC IPC647D

Operating system

(pre-installed and activated)

- Windows 7 Ultimate, 32-bit, SP1, MUI (en, de, fr, it, es)
- Windows 7 Ultimate, 64-bit, SP1, MUI (en, de, fr, it, es)
- Windows 10 Enterprise 2015 LTSB, multi-language (en, de, fr, it, es), 64-bit
- Windows 10 Enterprise 2016 LTSB, multi-language (en, de, fr, it, es), 64-bit (for Core i3/i5)
- Windows 10 Enterprise 2016 LTSB, multi-language (en, de, fr, it, es), 64-bit (for Xeon)
- Windows Server 2008 R2 Standard Edition, 64-bit SP1 incl. 5 clients, multi-language (en, de, fr, it, es)
- Windows Server 2012 R2 Standard Edition incl. 5 clients, MUI (en, de, fr, it, es), 64-bit
- Windows Server 2016 Standard Edition incl. 5 clients, MUI (en, de, fr, it, es), 64-bit
- Without operating system

Expansions (software)/Security

- SIMATIC IPC DiagMonitor software included
- SIMATIC IPC Image Creator software included
- SIMATIC IPC DiagMonitor and Image Creator software included
- Without software
- Without expansions (software)/TPM 1.2¹⁾ (not for China or Russia)

Power supply,

with country-specific cable

- 110/240 V AC industrial power supply with NAMUR; power cable for Europe
- 110/240 V AC industrial power supply with NAMUR; power cable for United Kingdom
- 110/240 V AC industrial power supply with NAMUR; power cable for Switzerland
- 110/240 V AC industrial power supply with NAMUR; power cable for the USA
- 110/240 V AC industrial power supply with NAMUR; power cable for Italy
- 110/240 V AC industrial power supply with NAMUR; power cable for China
- 2 x 110/240 V AC redundant power supply; without power cable
- 110/240 V AC industrial power supply with NAMUR; without power cable

Article No.

Article No.	Ordering data
6AG4112-	2 ■ ■ ■ ■ ■ - ■ ■ ■ ■ ■
	A
	B
	C
	D
	E
	F
	G
	H
	X
	A
	B
	C
	X
	Y
	0
	1
	2
	3
	4
	5
	6
	8

Article No.

Article No.	Accessories
	Memory expansions <ul style="list-style-type: none"> • 2 GB DDR3 1600 DIMM • 4 GB DDR3 1600 DIMM • 8 GB DDR3 1600 DIMM • 8 GB DDR3 1600 DIMM, ECC
	Hardware accessories
	Tray for low-profile removable drive bay For 3.5" hard drive (SATA/SAS) and 2.5" SSD (SATA), without drive
	Filter mats for SIMATIC IPC647D (packing unit: 10 units)
	Adapter cable <ul style="list-style-type: none"> • Adapter cable DisplayPort to DVI-D for onboard graphics • Adapter cable DisplayPort to VGA for onboard graphics
	Power cable, straight, 3 m long <ul style="list-style-type: none"> • Austria, Belgium, Finland, France, Germany, Netherlands, Spain, Sweden • United Kingdom • Switzerland • USA • Italy • China
	USB retainer For interlocking the internal USB port
	Expansion components See Expansion components
	Communication products See Expansion components
	VxWorks real-time operating system See Expansion components

4

¹⁾ TPM = Trusted Platform Module

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.

For an up-to-date overview, see the SIMATIC IPC online configurator at:

<https://www.siemens.com/ipc-configurator>

Note:

Software Packages with SIMATIC WinCC flexible, WinCC RT Advanced, SIMATIC WinCC, and SIMATIC WinAC RTX (F) can be ordered together with the SIMATIC IPC at a price advantage. More information under "Embedded Bundles/Packages for industrial PCs".

Additional information is available on the Internet at:

<http://www.siemens.com/simatic-pc>

Overview

SIMATIC IPC847D

The SIMATIC IPC847D is an extremely robust, high-performance industrial PC in 19" rack design (4 U) with excellent industrial functionality.

It offers:

- Maximum expandability
- Extreme ruggedness
- Intel® Core® i / Xeon technology 4th Generation

Technical specifications

Article number	6AG4114-2....-.... SIMATIC IPC847D (RACK PC)
Installation type/mounting	
Mounting	For horizontal and vertical installation; prepared for telescopic rails; 19" mounting bracket can be removed externally; tower kit (optional)
Design	Rack PC, 19", 4U
Supply voltage	
Type of supply voltage	100/240 V AC (autorange) 50 / 60 Hz; optional redundant 100/240 V AC; optional 100/240 V AC with UPS functionality incl. maintenance-free lead-tin battery
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	Xeon E3-1275 v3 (4C/8T, 3.5 (3.9) GHz, 8 MB cache); Xeon E3-1268L v3 (4C/8T, 2.3 (3.3) GHz, 8 MB cache); Core i5-4570TE (2C/4T, 2.7 (3.3) GHz, 4 MB cache); Core i3-4330TE (2C/4T, 2.4 GHz, 4 MB cache)
Chipset	Intel DH82C226 PCH
Graphic	
Graphics controller	Onboard graphics controller Intel HD 4600 Graphics integrated into the processor / PCI-Express graphics card (Dual Head: 2x VGA or 2x DVI-D) in the PCIe (x16) slot (optional)

Article number	6AG4114-2....-.... SIMATIC IPC847D (RACK PC)
Drives	
Optical drives	DVD±R/RW (SlimLine)
Hard disk	500 GB HDD, 1 TB HDD, 2x 1 TB HDD, RAID1 (2x 1 TB HDD, mirror disks), RAID1 (2x 1 TB HDD, mirror disks) + 1x 1 TB HDD as hot spare, RAID5 (3x 1 TB HDD, striping with parity), RAID5 (3x 1 TB HDD, striping with parity) + 1x 1 TB HDD as hot spare; RAID1 (2x 1 TB HDD SAS, mirror disks), RAID5 (3x 1 TB HDD SAS, striping with parity), RAID5 (3x 1 TB HDD SAS, striping with parity) + 1x 1 TB HDD SAS as hot spare incl. PCIe (x8) RAID SAS controller incl. ZMCP module
SSD	Yes; 240 GB SSD; RAID1 (2x 240 GB SSD, mirror disks)
Slot for drives	Mounted internally on the fixed hard disk support, or mounted internally in vibration/shock-absorbing hard disk support, or mounted at the front in the low-profile removable drive bay (hot-swap in RAID configurations)
Memory	
Main memory	2 GB to 32 GB DDR3 1600 DIMM, ECC optional

PC-based Automation

Rack PC

SIMATIC IPC847D

Technical specifications (continued)

Article number	6AG4114-2....-.... SIMATIC IPC847D (RACK PC)
Hardware configuration	
Slots	
• free slots	11 slots: 7x PCI, 3x PCIe (x4) (1 lane), 1x PCIe (x16) or 3x PCI, 5x PCIe mech. (x16) (4x 4 lanes, 1x 8 lanes), 3x PCIe (x4); all modules to a length of 312 mm can be used
Interfaces	
Interfaces/bus type	1x COM1, 1x COM2 (optional), 1x LPT (optional), 2x DisplayPort, 1x DVI-I, 2x PS/2, audio (Microphone In, Line Out), 7x USB, 2x Gigabit Ethernet, PROFIBUS or PROFINET optional
PROFIBUS/MPI	Optionally onboard, isolated, max. 12 Mbit/s, no plug-in card necessary, CP 5622-compatible
USB port	2x USB 3.0, 2x USB 2.0 rear, 1x USB 3.0, 1x USB 2.0 front, 1x USB 3.0 internal
Connection for keyboard/mouse serial interface	2x PS/2 COM1: 1x RS 232, COM2 (optional): 1x RS 232
parallel interface	optional LPT1
Multimedia	
• Audio In/Out	Yes
• Microphone In	Yes
Video interfaces	
• Graphics interface	2x DisplayPort and 1x DVI-I onboard; 1x VGA via DVI-VGA adapter cable (optional); graphics card PCIe (x16), Dual Head (2x VGA or 2x DVI-D), 1 GB graphics memory (optional)
Industrial Ethernet	
• Industrial Ethernet interface	2 x Ethernet (RJ45)
- 100 Mbps	Yes
- 1000 Mbps	Yes
Integrated Functions	
Monitoring functions	
• Temperature monitoring	Yes
• Watchdog	Yes
• Status LEDs	POWER, ETHERNET 1, ETHERNET 2, PN MPI / DP, WATCHDOG, TEMP, FAN, HDD0 ALARM, HDD1 ALARM, HDD2 ALARM, HDD HDD3 ALARM
• Fan	Yes
• Monitoring function via network	Optional

Article number	6AG4114-2....-.... SIMATIC IPC847D (RACK PC)
EMC	
Interference immunity against discharge of static electricity	
• 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 61000-4-4, burst; ±2 kV acc. to IEC 61000-4-5, surge
• Interference immunity on signal cables < 30m	±1 kV acc. to IEC 61000-4-4, Burst
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, FCC Class A, EN 61000-6-4, CISPR 22, EN 55022 Class B, EN 61000-3-2 Class D, EN 61000-3-3
Degree and class of protection	
IP (at the front)	IP41
IP (rear)	IP20

Technical specifications (continued)

Article number	6AG4114-2....-.... SIMATIC IPC847D (RACK PC)
Standards, approvals, certificates	
Approval	CE, cULus 60950, KCC
CE mark	Yes; For use in industrial areas as well as domestic, business and commercial environments (emitted interference: EN 61000-6-3:2007 +A1:2011, noise immunity: EN 61000-6-2:2005)
CSA approval	Yes; Included in cULus
UL approval	Yes
cULus	Yes; UL 60950-1, file number E115352
RCM (formerly C-TICK)	Yes
KC approval	Yes
EAC (formerly Gost-R)	Yes
EMC	CE, EN 61000-6-3:2007 +A1:2011, EN 61000-6-2:2005
Dust protection	With front door closed: G2 EN 779, 99% of particles > 0.5 mm are filtered
Ambient conditions	
Ambient temperature during operation	
<ul style="list-style-type: none"> Ambient temperature during operation 	0 °C to +45 °C, no burner operation, 0 °C to +50 °C, no operation of optical drive, power dissipation of the expansion cards in total < 30 W, maximum 3 removable drive bays, 0 °C to +40 °C with AC UPS, 0 °C to +35 °C with hardware RAID controller
Relative humidity	
<ul style="list-style-type: none"> Relative humidity 	Tested according to IEC 60068-2-78, IEC 60068-2-30: Operation: 5% to 80% at 25 °C (no condensation), Storage: 5% to 95% at 25 °C (no condensation)
Vibrations	
<ul style="list-style-type: none"> Vibration resistance during operation acc. to IEC 60068-2-6 	Tested according to DIN IEC 60068-2-6: 10 Hz to 58 Hz: 0.0375 mm, 58 Hz to 500 Hz: 4.9 m/s ² (0.5 g)
Shock testing	
<ul style="list-style-type: none"> Shock load during operation 	Tested according to IEC 60068-2-27, IEC 60068-2-29: half-sine: 50 m/s ² (5 g), 30 ms, 100 shocks per axis

Article number	6AG4114-2....-.... SIMATIC IPC847D (RACK PC)
Operating systems	
Operating system	Windows 7 Ultimate, multi-language (32-bit/64-bit), Windows 10 Enterprise 2015 LTSB, multi-language (64-bit), Windows 10 Enterprise 2016 LTSB, multi-language (64-bit), Windows Server 2008 R2 Standard Edition incl. 5 clients, multi-language (64-bit); Windows Server 2012 R2 Standard Edition incl. 5 clients, multi-language (64-bit); Windows Server 2016 Standard Edition incl. 5 clients, multi-language (64-bit)
pre-installed operating system	Yes
Additional info on operating system	Multi-Language User Interface (MUI): 5 languages (English, German, French, Spanish, Italian)
without operating system	Yes
Software	
SIMATIC Software	Optionally in package with SIMATIC WinCC or WinCC flexible
Dimensions	
Width	430 mm
Height	177 mm; 4U
Depth	444 mm

PC-based Automation

Rack PC

SIMATIC IPC847D

Ordering data

Article No.

SIMATIC IPC847D

6AG4114- 2 ■ ■ ■ ■ - ■ ■ ■ ■ ■ ■

Interfaces:

RACK PC, 19", 4 U
 Interfaces: 2 x GBIT LAN (RJ45);
 1 x DVI-I; 2 x DisplayPort;
 1 x COM; 2 x PS/2; audio;
 2 x USB 3.0, 2 x USB 2.0 at rear;
 1 x USB 3.0, 1 x USB 2.0 at front,
 1 x USB 3.0 internal;
 temperature and fan monitoring,
 watchdog, card retainer

Processor/main board

- Core i3-4330TE (2C/4T, 2.4 GHz, 4 MB cache); mainboard without fieldbus **D**
- Core i3-4330TE (2C/4T, 2.4 GHz, 4 MB cache, VT-x); mainboard with PROFIBUS/MPI (CP 5622-compatible) **E**
- Core i3-4330TE (2C/4T, 2.4 GHz, 4 MB cache); mainboard with PROFINET 3 x RJ45, CP 1616-compatible) **F**
- Core i5-4570TE (2C/4T, 2.7 (3.3) GHz, 4 MB cache, TB, VT-d, AMT); mainboard without fieldbus **G**
- Core i5-4570TE (2C/4T, 2.7 (3.3) GHz, 4 MB cache, TB, VT-x, VT-d, AMT); mainboard with PROFIBUS/MPI (CP 5622-compatible) **H**
- Core i5-4570TE (2C/4T, 2.7 (3.3) GHz, 4 MB cache, TB, VT-d, AMT); mainboard with PROFINET (3 x RJ45, CP 1616-compatible) **J**
- Xeon E3-1268L v3 (4C/8T, 2.3 (3.3) GHz, 8 MB cache, TB, VT-d, AMT); mainboard without fieldbus **K**
- Xeon E3-1268L v3 (4C/8T, 2.3 (3.3) GHz, 8 MB cache, TB, VT-x, VT-d, AMT); mainboard with PROFIBUS/MPI (CP 5622-compatible) **L**
- Xeon E3-1268L v3 (4C/8T, 2.3 (3.3) GHz, 8 MB cache, TB, VT-d, AMT); mainboard with PROFINET (3 x RJ45, CP 1616-compatible) **M**
- Xeon E3-1275 v3 (4C/8T, 3.5 (3.9) GHz, 8 MB cache, TB, VT-d, AMT); mainboard without fieldbus **N**
- Xeon E3-1275 v3 (4C/8T, 3.5 (3.9) GHz, 8 MB cache, TB, VT-x, VT-d, AMT); mainboard with PROFIBUS/MPI (CP 5622-compatible) **P**
- Xeon E3-1275 v3 (4C/8T, 3.5 (3.9) GHz, 8 MB cache, TB, VT-d, AMT); mainboard with PROFINET (3 x RJ45, CP 1616-compatible) **Q**

Article No.

SIMATIC IPC847D

6AG4114- 2 ■ ■ ■ ■ - ■ ■ ■ ■ ■ ■

Drives

- 500 GB HDD SATA, internal (0.3 g vibration, 3 g shock) **A**
- 500 GB HDD SATA, internal (0.5 g vibration, 5 g shock) **B**
- 1 TB HDD SATA, internal (0.5 g vibration, 5 g shock) **C**
- 2 x 1 TB HDD SATA, internal (0.5 g vibration, 5 g shock) **D**
- RAID1, 1 TB (2 x 1 TB HDD SATA, mirror disks), internal (0.5 g vibration, 5 g shock) **E**
- 500 GB HDD SATA in removable drive bay; front **F**
- 1 TB HDD SATA in removable drive bay; front **G**
- 2 x 1 TB HDD SAT in removable drive bay; front **H**
- RAID1, 1 TB (2 x 1 TB HDD SATA, mirror disks) in removable drive bay, hot-swappable, front; **J**
- RAID5, 2 TB (3 x 1 TB HDD, SATA, striping with parity) in removable drive bay, hot-swappable, front **K**
- RAID5, 2 TB (3 x 1 TB HDD, SATA, striping with parity) in removable drive bay, hot-swappable + 1 TB SATA HDD as hot spare in removable drive bay, front-mounted **L**
- 240 GB SSD SATA, internal **M**
- 240 GB SSD SATA in removable drive bay; front **N**
- RAID1, 1 TB (2 x 1 TB HDD SATA, mirror disks), internal (0.5 g vibration, 5 g shock) + 240 GB SSD SATA (for operating system) in removable drive bay **P**
- RAID1, 1 TB (2 x 1 TB HDD, SATA, mirror disks) in removable drive bay, hot swap + 1 TB HDD SATA as hot spare in removable drive bay, front; **Q**
- RAID1, 1 TB (2 x 1 TB HDD SATA, mirror disks) + 240 GB SSD SATA (for operating system) in removable drive bay, hot-swappable; front **R**
- RAID1, 1 TB (2 x 1 TB HDD SAS, mirror disks) in removable drive bay, hot-swappable, front-mounted; PCIe x8 RAID controller incl. ZCMP module (2 slots occupied) **S**
- RAID1, 1 TB (2 x 1 TB HDD SAS, mirror disks) in removable drive bay; PCIe x8 RAID controller including ZCMP module (2 slots occupied) + 240 GB SATA HDD (for operating system) in removable drive bay, front-mounted **T**
- RAID5, 2 TB (3 x 1 TB HDD SAS, striping with parity) in removable drive bay, hot-swappable, front-mounted; PCIe x8 RAID controller including ZCMP module (2 slots occupied) **U**
- RAID5, 2 TB (3 x 1 TB HDD SAS, striping with parity) in removable drive bay, hot-swappable; PCIe x8 RAID controller including ZCMP module (2 slots occupied) + 1 TB SATA HDD as hot-spare in removable drive bay, front-mounted **V**
- RAID1, 240 GB (2 x 240 GB SSD SATA, mirror disks), in removable drive bay, hot swap, at the front **W**

Ordering data	Article No.	Article No.
SIMATIC IPC847D	6AG4114- 2	6AG4114- 2
<u>Memory configuration</u>		
• 2 GB DDR3 SDRAM (1 x 2 GB), single channel	1	A
• 4 GB DDR3 SDRAM (2 x 2 GB), dual channel	2	B
• 8 GB DDR3 SDRAM (2 x 4 GB), dual channel	3	C
• 16 GB DDR3 SDRAM (2 x 8 GB), dual channel	4	D
• 32 GB DDR3 SDRAM (4 x 8 GB), dual channel	5	E
• 8 GB DDR3 SDRAM, (2 x 4 GB), ECC, dual channel	6	F
• 16 GB DDR3 SDRAM, (2 x 8 GB), ECC, dual channel	7	G
• 32 GB DDR3 SDRAM, (4 x 8 GB), ECC, dual channel	8	H
<u>Bus module/removable data storage media</u>		
• Bus module 11-slot: 7 x PCI, 3 x PCIe x4, 1 x PCIe x16; without removable data storage media	0	X
• Bus module 11-slot: 3 x PCI, 3 x PCIe x4, 5 x PCIe x16; without removable data storage media	1	
• Bus module 11-slot: 7 x PCI, 3 x PCIe x4, 1 x PCIe x16; DVD±RW (slim)	2	
• Bus module 11-slot: 3 x PCI, 3 x PCIe x4, 5 x PCIe x16; DVD±RW (slim)	3	
<u>Expansion hardware</u>		
• Without expansions (hardware), onboard graphics	0	A
• Without expansions (hardware), onboard graphics, DVI-I to VGA adapter cable for onboard graphics;	1	B
• Serial (COM2) + parallel (LPT) (1 slot reserved), onboard graphics	2	C
• Serial (COM2) + parallel (LPT) (1 slot reserved), onboard graphics, DVI-I to VGA adapter cable for onboard graphics	3	X
• Serial (COM2) + parallel (LPT, 1 slot reserved) + PCIe x16 Graphics Card (Dual-Head: 2 x VGA or 2 x DVI-D), 1 GB, (1 slot occupied)	4	Y
SIMATIC IPC847D	6AG4114- 2	6AG4114- 2
<u>Operating system (pre-installed and activated)</u>		
• 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 10 Enterprise 2016 LTSB, 64-bit, MUI (en, de, fr, it, es) (for Core i3/i5)		D
• Windows 10 Enterprise 2016 LTSB, 64-bit, MUI (en, de, fr, it, es) (for Xeon)		E
• Windows Server 2008 R2 Standard Edition, 64-bit SP1 incl. 5 clients, multi-language (en, de, fr, it, es)		F
• Windows Server 2012 R2 Standard Edition incl. 5 clients, MUI (en, de, fr, it, es), 64-bit		G
• Windows Server 2016 Standard Edition incl. 5 clients, MUI (en, de, fr, it, es), 64-bit language		H
• Without operating system		X
<u>Expansions (software)/Security</u>		
• SIMATIC IPC DiagMonitor software included		A
• SIMATIC IPC Image Creator software included		B
• SIMATIC IPC DiagMonitor and Image Creator software included		C
• Without software (software)		X
• Without expansions (software)/TPM ¹⁾ (not for China or Russia)		Y
<u>Power supply, with country-specific cable</u>		
• 110/240 V AC industrial power supply with NAMUR; power cable for Europe		0
• 110/240 V AC industrial power supply with NAMUR; power cable for United Kingdom		1
• 110/240 V AC industrial power supply with NAMUR; power cable for Switzerland		2
• 110/240 V AC industrial power supply with NAMUR; power cable for the USA		3
• 110/240 V AC industrial power supply with NAMUR; power cable for Italy		4
• 110/240 V AC industrial power supply with NAMUR; power cable for China		5
• 2 x 110/240 V AC redundant power supply; without power cable		6
• 110/240 V AC industrial UPS including maintenance-free lead-tin battery; without network cable		7
• 110/240 V AC industrial power supply with NAMUR; without power cable		8

¹⁾ TPM = Trusted Platform Module

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.

For an up-to-date overview, see the SIMATIC IPC online configurator at:
<https://www.siemens.com/ipc-configurator>

PC-based Automation

Rack PC

SIMATIC IPC847D

Ordering data	Article No.		Article No.
Accessories			
Memory expansions			
• 2 GB DDR3 1600 DIMM	6ES7648-2AJ50-0MA0		6ES7900-0AA00-0XA0
• 4 GB DDR3 1600 DIMM	6ES7648-2AJ60-0MA0		6ES7900-0BA00-0XA0
• 8 GB DDR3 1600 DIMM	6ES7648-2AJ70-0MA0		6ES7900-0CA00-0XA0
• 8 GB DDR3 1600 DIMM, ECC	6ES7648-2AJ70-1MA0		6ES7900-0DA00-0XA0
Hardware accessories			
Tray for low-profile removable drive bay			
For 3.5" hard drive (SATA/SAS) and 2.5" SSD (SATA), without drive	6ES7648-0EG01-1BA0		6ES7900-0EA00-0XA0
Filter mats			
for SIMATIC IPC847D (packing unit: 10 units)	A5E01064980		6ES7900-0FA00-0XA0
Adapter cable			
• DisplayPort to DVI-D for onboard graphics	6ES7648-3AF00-0XA0		
• DisplayPort to VGA for onboard graphics	6ES7648-3AG00-0XA0		
Power cable, straight, 3 m long			
• Austria, Belgium, Finland, France, Germany, Netherlands, Spain, Sweden			6ES7900-0AA00-0XA0
• United Kingdom			6ES7900-0BA00-0XA0
• Switzerland			6ES7900-0CA00-0XA0
• USA			6ES7900-0DA00-0XA0
• Italy			6ES7900-0EA00-0XA0
• China			6ES7900-0FA00-0XA0
Tower Kit			
For converting the computer into an industrial tower PC			6ES7648-1AA00-0XD0
USB retainer			
For interlocking the internal USB port			6ES7648-1AA00-0XK0
Expansion components			
			See Expansion components
Communication products			
			See Expansion components
VxWorks real-time operating system			
			See Expansion components

Note:

Software Packages with SIMATIC WinCC flexible, WinCC RT Advanced, SIMATIC WinCC, and SIMATIC WinAC RTX (F) can be ordered together with the SIMATIC IPC at a price advantage. More information under "Embedded Bundles/Packages for industrial PCs".

Additional information is available on the Internet at:

<http://www.siemens.com/simatic-pc>