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Data sheet 6ES7647-6CE16-1GA0

No longer available SIMATIC IPC627C (Box PC), HD graphic onboard, 2x10/100/1000 Mbit/s Ethernet RJ45; 4 x USB V2.0 (high current); 1x serial (COM 1); RAID controller onboard; CompactFlash Drive No. 1 on front; Watchdog, temp./fan monitoring Core I3-330E (2C/4T, 2.13 GHz, HT, VT, 3 MB cache); PROFIBUS/MPI (CP 5611-A2-compatible); 2 MB buffered RAM 2 GB DDR3 1066 DIMM; 24 V DC industrial Power supply 1x PCI, 1x PCIE (X16) Free RAID1 2x 320 GB SATA (2.5") Windows XP Prof. SP3 MUI (de, en, fr, es, it) without expansion (software)

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	Core i7-610E (2C/4T, 2.53 GHz, TB, HT, VT, AMT, 4MB cache); Core i3-330E (2C/4T, 2.13 GHz, HT, VT, 3MB cache); Celeron P4505 (2C/2T, 1.86 GHz, VT, 2MB cache);
Chipset	Intel QM57 Express Chipset
Graphic	
Graphics controller	Intel HD graphics controller
Drives	
Optical drives	DVD±R±RW combi-drive, optional
Hard disk	3.5" SATA ≥ 250 GB, optional ≥ 500 GB; RAID1 2x 2.5" SATA ≥ 320 GB; all internal drives are vibration-damped
SSD	Yes; ≥ 240 GB optional
Storage	
Type of memory	DDR3-1066 DIMM
Main memory	1 / 2 / 4 / 8 GB; ECC optional
Capacity of main memory, max.	8 Gbyte
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	
● Number of PCI slots	2
● Number of PCI slots	1
● Number of compact flash slots	1
Interfaces	
PROFIBUS/MPI	Optionally onboard, isolated, max. 12 Mbit/s, compatible with CP 5611-A2
Number of industrial Ethernet interfaces	2; onboard
Number of PROFINET interfaces	3; Optional
USB port	4x USB 2.0 high speed/high current
parallel interface	optional LPT1
Video interfaces	
● Graphics interface	DVI-I: VGA / DVI combined
Industrial Ethernet	
● Industrial Ethernet interface	onboard, 2x 10 / 100 / 1 000 Mbit, RJ45
— 100 Mbps	Yes
— 1000 Mbps	Yes

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Protocols	
Protocols (Ethernet)	
● TCP/IP	Yes
Interrupts/diagnostics/status information	
Bus diagnostics	Yes
Integrated Functions	
Monitoring functions	
● Temperature monitoring	Yes
● Watchdog	Yes
● 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 - 1 000 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
Degree and class of protection	
IP degree of protection	IP20
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	
● min.	5 °C
● max.	55 °C
Ambient temperature during storage/transportation	
● min.	-20 °C
● max.	60 °C
Relative humidity	

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● 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	
● Vibration resistance during operation acc. to IEC 60068-2-6	tested to DIN IEC 60068-2-6: 10 Hz to 58 Hz: 0.075 mm, 58 Hz to 200 Hz: 9.8 m/s² (1 g)
Shock testing	
● Shock load during operation	Tested to DIN IEC 60068-2-29: 50 m/s² (5 g), 30 ms, 100 shocks
Operating systems	
pre-installed operating system	Windows XP Prof. SP3, MUI; Windows 7 Ultimate 32-bit / 64-bit, MUI; Windows Embedded Standard 2009 English on 8 GB CompactFlash; without operating system
without operating system	Yes
pre-installed operating system	
● Windows XP Professional	Yes
● Windows 7	Yes; Ultimate 32 bit or 64 bit
Dimensions	
Width	312 mm
Height	80 mm; with DVD drive: 100 mm
Depth	301 mm; incl. mounting rail

Approvals / Certificates

General Product Approval

Miscellaneous | Manufacturer Declaration | UL | KC | China RoHS

Maritime application

ABS

Maritime application

BUREAU VERITAS | RINA | CCS (China Classification Society) | KR (Korean Register of Shipping)

Dangerous goods

Dangerous goods information | Test Summary Report UN 38.3

Dangerous goods

Dangerous goods information | Test Summary Report UN 38.3

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