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## Data sheet 6ES7647-6CH31-0BB0

***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 I7-610E (2C/4T, 2.53GHz, TB, HT, VT, AMT, 4 MB cache); PROFIBUS/MPI (CP 5611-A2-compatible); 2 MB buffered SRAM 4 GB DDR3 1066 DIMM; AC 110/230V industrial power supply unit with NAMUR; Power supply cable UK 2x PCI free 250 GB HDD SATA; DVD +/-RW Windows 7 Ultimate 32 bit SP1, MUI (en,de,fr,it,es) 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 | | | | | Maritime application |
|---|---|---|---|---|---|
| Miscellaneous | Manufacturer Declaration | UL | | China RoHS | ABS |

| Maritime application | | | | Dangerous goods | |
|---|---|---|---|---|---|
| BUREAU VERITAS | RINA | CCS (China Classification Society) | KR (Korean Register of Shipping) | Dangerous goods information | Test Summary Report UN 38.3 |

| Dangerous goods | |
|---|---|
| Dangerous goods information | Test Summary Report UN 38.3 |

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