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## Data sheet 6AV7890-0AA20-1AA0

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| | ***no longer available*** SIMATIC HMI IPC677C (Panel PC), 2x10/100/1000 Mbit/s Ethernet; 4x USB V2.0, 1x serial (COM1); Watchdog, temperature and Fan monitoring; RAID controller onboard; 12" Touch; 800x 600 with front-side USB-Schnittstelle 24 V DC power supply Celeron P4505 (2C/2T, 1.86 GHz, 2 MB cache) 3 GB DDR3 1066 DIMM; 250 GB HDD SATA DVD+-R+-RW; 2x PCI free without operating system without expansion (software) |
| **General information** | |
| Product type designation | IPC677C |
| **Display** | |
| Design of display | 12" TFT touch |
| Screen diagonal | 12 in |
| Resolution (pixels) | |
| ● Horizontal image resolution | 800 pixel |
| ● Vertical image resolution | 600 pixel |
| Backlighting | |
| ● MTBF backlighting (at 25 °C) | 50 000 h |
| **Control elements** | |
| Keyboard | |
| ● Function keys | No |
| Touch operation | |
| ● Design as touch screen | Yes |
| **Installation type/mounting** | |
| Mounting | For horizontal and vertical mounting |
| Design | Panel PC, built-in unit |
| central design | Yes |
| distributed design | No |
| maximum permissible installation angle +/- | 20° |
| **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 |
| **Power loss** | |
| In full configuration | 140W max. (15W included per slot) |
| **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 | Optional: DVD±R±RW combi drive; on rear, can be operated from side |
| 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; ≥ 160 GB optional |
| **Storage** | |
| Type of memory | DDR3-1066 DIMM |
| Main memory | 1 GB to 8 GB DDR3 1066-DIMM, ECC optional |
| Capacity of main memory, max. | 8 Gbyte |
| **Data areas and their retentivity** | |


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| 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 Mbps, no plug-in card necessary, CP 5611-A2-compatible |
| Number of PROFINET interfaces | 3; Optional |
| USB port | 1x at front, 4x at rear, USB 2.0 (500 mA) |
| parallel interface | optional LPT1 |
| Video interfaces | |
| ● Graphics interface | DVI-I usable for additional display unit (VGA via adapter); color depth 32 bit, 8 to 128 MB Shared Memory |
| Industrial Ethernet | |
| ● Industrial Ethernet interface | Onboard, 2x 10 / 100 / 1000 Mbit, RJ45 |
| — 100 Mbps | Yes |
| — 1000 Mbps | 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 (at the front) | IP65 (on front) to EN60529 and NEMA4 |
| 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 61000-6-4:2007, EN 61000-6-2:2005 |
| Marine approval | |
| ● Germanischer Lloyd (GL) | Yes |
| ● American Bureau of Shipping (ABS) | Yes |


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|---|---|
| ● 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. | 50 °C |
| Ambient temperature during storage/transportation | |
| ● min. | -20 °C |
| ● max. | 60 °C |
| Relative humidity | |
| ● Relative humidity | Tested according to IEC 60068-2-78, IEC 60068-2-30: 5% to 80% 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 |
| **Accessories** | |
| Accessory components | Touch protective foil |
| **Dimensions** | |
| Width of the housing front | 400 mm |
| Height of housing front | 310.3 mm |
| Mounting cutout, width | 368 mm |
| Mounting cutout, height | 290 mm |
| mounting depth | 126 mm |
| ● additional mounting depth (optical drive) | 21 mm |
| **Weights** | |
| Weight, approx. | 13 kg |

**Approvals / Certificates**

| General Product Approval | | | EMV | For use in hazard-ous locations | Maritime application |
|---|---|---|---|---|---|
| Miscellaneous | | China RoHS | | | |

| Maritime application | | | Dangerous goods | | |
|---|---|---|---|---|---|
| | CCS (China Classifica-tion Society) | KR (Korean Register of Shipping) | Dangerous goods in-formation | Test Summary Report UN 38.3 | Dangerous goods in-formation |

| Dangerous goods |
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| Test Summary Report UN 38.3 |


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