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## Data sheet 6AV6645-0CA01-0AX0

| | |
|---|---|
| | *** spare part *** SIMATIC Mobile Panel 277 with integrated acknowledgment button, configurable with WinCC flexible Standard Version 2005 SP1 or higher or TIA Portal V11 to V14 |
| **General information** | |
| Product type designation | Mobile Panel 277 |
| Customer-specific configuration | Yes |
| **Display** | |
| Design of display | TFT |
| Screen diagonal | 7.5 in |
| Color display | Yes |
| Number of colors | 65 536 |
| Resolution (pixels) | |
| ● Horizontal image resolution | 640 pixel |
| ● Vertical image resolution | 480 pixel |
| Backlighting | |
| ● MTBF backlighting (at 25 °C) | 50 000 h |
| **Control elements** | |
| Control elements | Keys and touch |
| Keyboard | |
| ● Membrane keyboard | |
| — user-definable label membrane keys | Yes |
| ● Function keys | |
| — Number of function keys | 18 |
| — Number of function keys with LEDs | 18 |
| ● Keys with LED | Yes |
| ● Numeric keyboard | Yes |
| ● alphanumeric keyboard | Yes |
| ● hexadecimal keyboard | Yes |
| ● Multi-key operation | Yes |
| — Number of multi-key operations | 2 |
| Touch operation | |
| ● Design as touch screen | Yes; analog, resistive |
| Connection type | |
| ● Type of connection for mouse/keyboard/barcode reader | USB / USB / USB |
| Special operator controls | |
| ● Stop button | No |
| ● Acknowledgement button | Yes |
| ● Key-operated switch | No |
| ● Illuminated pushbutton | No |
| ● Handwheel | No |
| **Supply voltage** | |
| Design of the power supply | via connection box |
| Type of supply voltage | DC |
| **Processor** | |
| Processor type | ARM, 520 MHz |
| **Storage** | |
| Type of memory | Flash / RAM |
| Memory available for user data | 6 Mbyte |
| Capacity of main memory, max. | 128 Mbyte |
| **Accumulator** | |
| Buffer battery | Yes; maximum buffer time 10 min |


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| **Time of day** | |
| Clock | |
| ● Hardware clock (real-time) | Yes |
| ● retentive | Yes |
| ● synchronizable | Yes |
| **Interfaces** | |
| Interfaces/bus type | 1x RS 422, 1x RS 485, 1x Ethernet (RJ45) (max. 12 Mbit/s) |
| Number of industrial Ethernet interfaces | 1 |
| Number of RS 485 interfaces | 1 |
| Number of RS 422 interfaces | 1 |
| Number of USB interfaces | 1 |
| Number of wireless interfaces | 0 |
| Multimedia card/SD card slot | 1 MMC/SD card slot |
| **Protocols** | |
| Supports protocol for PROFINET IO | Yes |
| PROFIsafe | No |
| PROFIBUS | Yes |
| EtherNet/IP | Yes |
| AS-Interface | No |
| Protocols (Ethernet) | |
| ● TCP/IP | Yes |
| Further protocols | |
| ● MODBUS | Yes |
| ● other bus systems | Yes |
| **Communication functions** | |
| Wireless communication | |
| ● supported standards | |
| — Radio standard WLAN 802.11 | No |
| **Standards, approvals, certificates** | |
| Certificate of suitability | CE, cULus, C-TICK, SIBE |
| CE mark | Yes |
| cULus | Yes |
| RCM (formerly C-TICK) | Yes |
| Suitable for safety functions | Yes |
| Highest safety class achievable in safety mode | |
| ● Performance level according to ISO 13849-1 | d |
| **Ambient conditions** | |
| Free fall | |
| ● Fall height, max. | 1.2 m |
| Ambient temperature during operation | |
| ● min. | 0 °C |
| ● max. | 40 °C |
| Ambient temperature during storage/transportation | |
| ● min. | -20 °C |
| ● max. | 60 °C |
| Relative humidity | |
| ● Operation, max. | 80 % |
| **Operating systems** | |
| pre-installed operating system | Windows CE |
| **Configuration** | |
| Message indicator | Yes |
| Alarm system (incl. buffer and acknowledgment) | Yes |
| Process value display (output) | Yes |
| Process value default (input) possible | Yes |
| Recipe management | Yes |
| Configuration software | |
| ● Configuration tool | WinCC flexible Standard Version 2005 SP1 or higher (to be ordered separately) |
| ● WinCC flexible Compact | No |


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| ● WinCC flexible Standard | Yes |
| ● WinCC flexible Advanced | Yes |
| ● WinCC Basic (TIA Portal) | No |
| ● WinCC Comfort (TIA Portal) | Yes |
| ● WinCC Advanced (TIA Portal) | Yes |
| ● WinCC Professional (TIA Portal) | Yes |
| **Languages** | |
| Online languages | |
| ● Number of online/runtime languages | 16 |
| Project languages | |
| ● Languages per project | 32 |
| **Functionality under WinCC (TIA Portal)** | |
| Libraries | Yes |
| Applications/options | Internet Explorer, Sm@rtService, Sm@rtAccess |
| ● Web browser | Yes |
| ● SIMATIC WinCC Sm@rtServer | Yes |
| ● Connection point identification | Yes |
| Number of Visual Basic Scripts | Yes |
| Task planner | Yes |
| Help system | Yes |
| ● Number of characters per info text | 70 |
| Message system | |
| ● Number of alarm classes | 32 |
| ● Bit messages | Yes |
| — Number of bit messages | 4 000 |
| ● Analog messages | Yes |
| — Number of analog messages | 4 000 |
| ● System messages HMI | Yes |
| ● System messages PLC | Yes |
| ● System event, more (SIMATIC S7, SINUMERIK, SIMOTION, ... ) | Yes |
| ● Lines | 1 |
| ● Number of characters per message | 80 |
| ● Number of process values per message | 8 |
| ● Acknowledgment groups | |
| — Number of acknowledgement groups | 99 |
| ● Message indicator | Yes |
| ● First/last value | Yes |
| Recipe management | |
| ● Number of recipes | 300 |
| ● Data records per recipe | 500 |
| ● Entries per data record | 1 000 |
| ● Recipe memory | 64 KB integrated Flash, expandable |
| Variables | |
| ● Number of variables per device | 2 048 |
| ● Number of variables per screen | 200 |
| ● Number of variables | 1 000 |
| ● Initial values | 2 048 |
| ● Type Date & Time | 2 048 |
| ● Limit values | Yes |
| ● Multiplexing | Yes |
| ● Structures | Yes |
| Images | |
| ● Number of configurable images | 500 |
| ● Permanent window/default | Yes |
| ● Start screen configurable | Yes |
| ● Image selection by PLC | Yes |
| ● Image number in the PLC | Yes |
| Image objects | |


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| ● Text objects | 10 000 text elements |
| ● Number of I/O fields per image | 200 |
| ● Number of date/time fields | 200 |
| ● Return | Yes |
| ● Graphics object | Bit maps, icons, vector graphics |
| — Icons | 1 000 |
| **Complex image objects** | |
| ● Status/control | Yes; With SIMATIC S7 |
| ● dynamic objects | Diagrams, bar graphs, sliders, analog display, invisible buttons |
| — Number of objects per project | 1 000 |
| — Number of curve diagrams per image | 10 |
| ● Methods | Trend / profile |
| ● Bar graphs | |
| — Number of bars per chart | 10 |
| ● Sliders | |
| — Number of slides per image | 10 |
| ● Pointer instruments | |
| — Number of analog indicators per image | 10 |
| ● Limit value lines | Yes |
| ● Number of alphanumerical fields | 300 |
| — alphanumeric fields per image | 200 |
| ● Number of numerical fields | 2 048 |
| — numerical fields per image | 200 |
| ● Number of password fields | 2 048 |
| ● Number of visible switches per project | 200 |
| — visible switches per image | 200 |
| — hidden switches per image | 200 |
| ● Number of status switches per project | 200 |
| — Number of status switches per image | 200 |
| ● Number of selector switches per project | 200 |
| — Selector switches per image | 200 |
| ● Number of decade switches per project | 200 |
| — Decade switches per image | 200 |
| ● Number of signal lamps per project | 200 |
| — Signal lamps per image | 200 |
| **Attributes for dynamic objects** | |
| ● Color change | Yes |
| ● X/Y movement | Yes |
| ● Hide | Yes |
| **Lists** | |
| ● Number of text lists per project | 500 |
| ● Number of text lists per image | 200 |
| ● Number of entries per text list | 256 |
| ● Number of graphics lists per project | 400 |
| ● Number of graphic lists per image | 200 |
| ● Number of entries per graphics list | 256 |
| **Archiving** | |
| ● Number of archives per device | 20 |
| ● Number of measuring points per project | 20 |
| ● Number of entries per archive | 10 000 |
| ● Message archive | Yes |
| ● Process value archive | Yes |
| ● Archiving methods | |
| — Sequential archive | Yes |
| — Short-term archive | Yes |
| ● Memory location | MultiMediaCard |
| ● Data storage format | |
| — CSV | Yes |
| ● Online evaluation | |


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|---|---|
| — using trend curves | Yes |
| Filters | |
| ● cyclic | Yes |
| ● Tolerance | Yes |
| ● Change | Yes |
| Security | |
| ● Number of user groups | 50 |
| ● Number of user rights | 32 |
| ● Password export/import | Yes |
| Logging through printer | |
| ● Recording/Printing | Alarms, report (shift report), color print, hardcopy |
| Transfer (upload/download) | |
| ● Transfer of configuration | MPI/PROFIBUS DP, USB, Ethernet, automatic transfer recognition |
| Process coupling | |
| ● Connection to controller | S5, S7-200, S7-300/400, TI 505, Win AC, PC (TCP/IP), SINUMERIK, SIMOTION, Allen Bradley (DF1), Allen Bradley (DF485), Mitsubishi (FX), OMRON (LINK/Multilink), Modicon (Modbus), further non-Siemens drivers, see chapter "System interfaces" |
| ● S7-1200 | Yes |
| ● S7-1500 | Yes |
| ● S7-200 | Yes |
| — PPI (point-to-point) | Yes |
| — PPI network | Yes |
| — MPI | Yes |
| — PROFIBUS DP | Yes |
| — Ethernet | Yes |
| ● S7-300/400 | Yes |
| — MPI | Yes |
| — PROFIBUS DP | Yes |
| — PROFINET | Yes |
| ● WinAC | Yes |
| ● SINUMERIK | Yes |
| ● SIMOTION | Yes |
| ● S5 | Yes |
| — serial | Yes |
| — PROFIBUS DP | Yes |
| ● TI 505 | Yes |
| ● Allen Bradley (DF1) | Yes |
| ● Allen Bradley (DF485) | Yes |
| ● Mitsubishi (FX) | Yes |
| ● Mitsubishi (MP4) | Yes |
| ● OMRON (Host Link) | Yes |
| ● Modicon (Modbus RTU) | Yes |
| ● GE-Fanuc (SNP) | Yes |
| Functions | |
| ● TAB sequence | Yes |
| ● Calculating functions | Yes |
| ● Animate | Yes |
| Service tools/configuration aids | |
| ● Clean screen | Yes |
| ● Touch calibration | Yes |
| ● Backup/Restore manually | Yes |
| ● Simulation | Yes |
| ● Device switchover | Yes |
| ● Delta transfer | Yes |
| **Peripherals/Options** | |
| Peripherals | Printer, barcode reader |
| Printer | Yes |
| SIMATIC HMI MM memory card: Multi Media Card | Yes |
| SIMATIC HMI SD memory card: Secure Digital memory card | Yes |


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| USB memory | Yes |
| Additional software components loadable | Yes |
| **Mechanics/material** | |
| Enclosure material (front) | plastic |
| **Dimensions** | |
| Enclosure diameter | 290 mm |
| Depth of housing | 103 mm |
| **Weights** | |
| Weight (without packaging) | 1.7 kg |

**Classifications**

| | Version | Classification |
|---|---|---|
| eClass | 16 | 27-33-02-02 |
| eClass | 14 | 27-33-02-02 |
| eClass | 12 | 27-33-02-02 |
| eClass | 9.1 | 27-33-02-02 |
| eClass | 9 | 27-33-02-02 |
| eClass | 8 | 27-24-23-03 |
| eClass | 7.1 | 27-24-23-03 |
| eClass | 6 | 27-24-23-03 |
| ETIM | 10 | EC001427 |
| ETIM | 9 | EC001427 |
| ETIM | 8 | EC001427 |
| ETIM | 7 | EC001427 |
| IDEA | 4 | 6607 |
| UNSPSC | 15 | 43-21-15-06 |

**Approvals / Certificates**

**General Product Approval**

Manufacturer Declaration

Miscellaneous

| General Product Approval | EMV | Functional Saftey |
|---|---|---|
| China RoHS | | Type Examination Certificate |

**last modified:** 4/4/2025


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