## SIEMENS

## Data sheet

## 6AV7251-1CA34-0FA0

SIMATIC IPC477E PRO fully protected IP65; 15" multi-touch (1366 x 768); for supporting foot (expandable, flange at bottom), 4 USB (back); without USB (front); Ethernet (10/100/1000 Celeron G3902E; 3x Gbit Ethernet (IE/PN); 4 GB; 2x RS 232/RS 485; without PCIe; Windows7 Ultimate SP1, 64-bit, MUI (de, en, es, fr, it); Without replaceable mass storage; 240 GB solid-state drive SATA Without SIMATIC software 24 V DC industrial power supply

Product type designation         IPC477E PRO           Display         TFT widescreen display_LED backlighting           Screen display         TFT widescreen display_LED backlighting           Screen display         15 in           Display with         344 2 mm           Display with         1365 pixel           • Horocontal image resolution         1 366 pixel           • United image resolution         1 366 pixel           • Outcol almage resolution         1 366 pixel           • Design as brock normen         Yes; Projective-capacitive           Installation byecomventing         Port mounting on stand or supporting bracket           Design         Prevent PC on pedestal and extension components           Mounting in portrait format possible         No           maintain in private format possible         No           Mounting in portrait format possible         No           • Mains/butage failure stored energy time         20 ms           Processor type         Celeron G3902 (2CZT, 1.6 GHz, 2 MB Cache); Core 18-6102E (2C4T, 1.9 GHz, 3 MB Cache); Core 18-6102E (2C	General information	
Display         TFT widescreen display, LED backlighting           Design of display         TFT widescreen display, LED backlighting           Screen display, width         344.2 mm           Display height         333.6 mm           Resolution (pixels)         -                • Horizontal image resolution         1 366 pixel                • Vertical image resolution         788 pixel           Control elements         -                • Design as buch screen         Yes, Projective-capacitive           Installation type/imounting         For mounting on stand or supporting bracket           Design as buch screen         Yes, Projective-capacitive           Display height         No           Stapport arm mounting         No           Mounting in portrait format possible         No           Mounting in portrait format possible         No           Support arm mounting         24 V DC           MaineVoltage failure stored energy time         20 ms           Processor         Celeron G3802 (2C2T, 1.6 GHz, 2 MB Cache); Core (8-8102E (2C4T, 1.9 GHz, 6 MB Cache); Core (8-842E0 (4C4T, 1.9 (27) GHz, 6 MB Cache); Core (8-842E0 (4C4T, 1.9 (27) GHz, 6 MB Cache); Core (8-842E0 (4C4T, 1.9 (27) GHz, 6 MB Cache); Core (8-842E0 (4C4T, 1.9 (27) GHz, 6 MB Cache); Core (8-842E0 (4C4T, 1.9 (27) GHz, 6 MB Cache); Core (8-842E0 (4C4T, 1.9 (27) GHz, 6 MB Cache); Core (8-842E0 (4C4T, 1.9 (27		IPC477E PRO
Design of display         TFT widescreen display, LED backlighting           Screen disponal         15 in           Display width         344.2 mm           Display width         193.5 mm           Resolution (locke)         1386 pixel           • Vertical image resolution         788 pixel           • Obsign as buch screen         Yes; Projective-capacitive           Installation type/mounting         For mounting on stand or supporting bracket           Design         Penel PC on pedestal on supporting bracket           Design in portrait format possible         No           Mounting in portrait format possible         No           maximum permissible installation angle +/-         ±45 "           Stupply voltage         24 V DC           Mainting in portrait format possible         No           • Mainskolfering         20 ms           Processor         Processor           Processor type         Celeron G3022 (2/27.1.6 GHz, 2.0 (2.8) (0.27.1.9 (27.7.1.9 (27.7.9 GHz, 6 MB Cache, 1.407.)           Chapsti         MB Cache, Core is 46102E (2/24.7.1.9 (27.7.9 GHz, 6 MB Cache, 1.407.)           Original drives         possible as external drive via USB           SSD         Yes; 2 128 GB optional           Capabile         possible as external drive via USB           SS		
Screen diagonal       15 in         Display keth       344.2 mm         Display keth       135.6 mm         Resolution (likels)       1366 pixel <ul> <li>Vertical image resolution</li> <li>1366 pixel</li> <li>268 pixel</li> <li>Control elements</li> <li>Touch operation</li> <li>Vertical image resolution</li> <li>768 pixel</li> <li>Control elements</li> <li>Touch operation</li> <li>Vest; Projective-capacitive</li> <li>Installation systemouting</li> <li>For mounting on stand or supporting bracket</li> <li>Design</li> <li>Panel PC on podestal or supporting bracket</li> <li>Design as bouch screen</li> <li>Yes; Propared for pedestal and extension components</li> <li>Mounting in portrait format possible</li> <li>No</li> <li>Stand mounting</li> <li>Yes ; Propared for pedestal and extension components</li> <li>Mounting in portrait format possible</li> <li>No</li> <li>Mains buffering</li> <li>Yes</li> <li>Processor</li> <li>Processor type</li> <li>Celeron G302 (2C/2T, 1.6 CHz, 2 MB Cache); Core i3-6102E (2C/4T, 1.9 CHz, 2</li></ul>		TFT widescreen display, LED backlighting
Display height     193.5 mm       Resolution (bools)     1365 pixel <ul> <li>Vertical image resolution</li> <li>768 pixel</li> </ul> Control elements       Touch operation <ul> <li>Design as buck screen</li> <li>Yes; Projective-capacitive</li> </ul> Installation type/mounting       Mounting           Support arm mounting           No           Stand mounting           Yes; Prepared for pedestal or supporting bracket           Design           Support arm mounting           No           Stand mounting           Yes; Prepared for pedestal and extension components           Mounting in portrait format possible           No           Stand mounting           Yes; Prepared for pedestal and extension components           Mounting in portrait format possible           No           Stand mounting           Value Scalar           Processor type           Celeron GS902 (2027; 16 GHz; 2 MB Cache; Court 1.6 GHZ; 2 (2 CH 1.9 GHZ; 2 GHZ; 1 GHZ; 2 (2 CH 1.9 GHZ; 2 GHZ;	Screen diagonal	15 in
Resolution (pixels)         • I Horizontal image resolution       1 366 pixel         Control lements         Touch operation       788 pixel         Control lements       1         Touch operation       • Design as buch screen         Yes: Projective-capacitive       Installation type/mounting         Mounting       Panel PC on pedestal or supporting bracket         Design       Panel PC on pedestal or supporting bracket         Mounting in portrait format possible       No         Stand mounting       Yes: Prepared for pedestal and extension components         Mounting in portrait format possible       No         Stand mounting       Yes: Prepared for pedestal and extension components         Mounting in portrait format possible       No         Stand mounting       Yes: Yrepared for pedestal and extension components         Mounting in portrait format possible       No         Stand mounting       Yes: Yrepared for pedestal and extension components         Mounting in portrait format possible       No         maximum permissible installation angle */-       445 *         Supply voltage       24 V DC         Mains buffering       -         • Vanishovatage failure stored energy time       20 ms         Processor       - <td>Display width</td> <td>344.2 mm</td>	Display width	344.2 mm
• Horizontal image resolution     1 366 pixel       • Vertical image resolution     768 pixel       Touch operation     • Design as touch screen       Yes; Projective-capacitive       Mounting     For mounting on stand or supporting bracket       Design     Support arm mounting       Support arm mounting     No       Stand mounting in portrait format possible     No       maximum permissible installation angle +/-     ±45 *       Support arm mounting     24 V DC       Mains buffering     -       • Mains Solutions     -       • Mains Solutions     -       Processor     -       Processor     -       Processor     -       Processor     -       Chipset     Intel 1236 / Intel H110       Graphic     -       Graphic     -       Optical drives     possible as external drive via USB       SSD     Yes; 212 GB optional       Mains buffering     -       -     -       Processor     -       Processor     -       Origet     Intel H236 / Intel H110       Graphic     -       Graphic controller     -       Optical drives     -       Optical drives     possible as external drive via USB	Display height	193.5 mm
• Vertical image resolution     768 pixel       Control elements     Vest: Projective-capacitive       Installation type/mounting     For mounting on stand or supporting bracket.       Design as touch screen     Yes: Projective-capacitive       Installation type/mounting     Por mounting on stand or supporting bracket.       Design     Panel PC on pedestal or supporting bracket.       Design     Panel PC on pedestal or supporting bracket.       Design     Panel PC on pedestal and extension components       Stand mounting     Yes: Prepared for pedestal and extension components       Mounting in portrait format possible     No       maximum permissible installation angle +/-     245 °.       Supply voltage     24 V DC       Mains buffering     • VamSvoltage failure stored energy time       • VamSvoltage failure stored energy time     20 ms       Processor     Celeron G3002 (22/27, 1.6 GHz, 2.MB Cache), Core 13.6102E (22/47, 1.9 GHz, 6 MB Cache, IAMT)       Chipset     Intel C230 Intel HT10       Graphic     GHz, 3.MB Cache, IAMT)       Graphic     Intel C230 Intel HT10       Graphic controller     Intel HD graphics controller       Drives     possible as external drive via USB       SSD     Yes; 2128 GB optional       Mamory     4 / 8 / 16 GB, ECC optional       Capacity driva in memory, max.     16 Gbyte; 128 KB can b	Resolution (pixels)	
Control elements           Touch operation           • Design as buch screen           Yes; Projective-capacitive           Installation type/mounting           Mounting           Design           Panel PC on pedestal or supporting bracket           Design           Support arm mounting           No           Stand mounting           Mounting in portrait format possible           No           maximum permissible installation angle +/-           245 *           Support voltage           Vippe of supply voltage           Vippe of supply voltage           Vippe of supply voltage failure stored energy time           Processor           Processor           Processor           Processor           Processor           Optical drives           Stable           Stable           Optical drives           Stable           Optical drives           Stable           Optical drives area (maint)           Stable           Optical drives area (maint)           Stable           Optical drives           Stable           Stable <td><ul> <li>Horizontal image resolution</li> </ul></td> <td>1 366 pixel</td>	<ul> <li>Horizontal image resolution</li> </ul>	1 366 pixel
Touch operation         Yes; Projective-capacitive           Installation type/mounting         For mounting on stand or supporting bracket           Design         Penel PC on pedestal or supporting arm           Support arm mounting         No           Stand mounting         No           Stand mounting         No           Stand mounting         No           Mounting in portrait format possible         No           maximum permissible installation angle +/-         245 *           Support voltago         Type of supply voltage           Type of supply voltage failure stored energy time         20 ms           Processor         Celeron G3002 (2C/2T, 1.6 GHz, 2 MB Cache); Core i3-6102E (2C/4T, 1.9 GHz, 1.9 (2.7) GHz, 6 MB Cache, IAMT)           Orbigset         Intel HD graphics controller           Orbigset         Intel HD graphics controller           Optical drives         possible as external drive via USB           SSD         Yes; 2 128 GB optional           Menory         20 K4 / 8 16 GB, ECC optional           Optical drives         possible as external drive via USB           SSD         Yes; 2 128 GB optional           Mannory         4 / 8 / 16 GB, ECC optional           Optical drives         possible as external drive via USB           SSD	<ul> <li>Vertical image resolution</li> </ul>	768 pixel
• Design as bouch screen       Yes; Projective-capacitive         Instalation type/mounting       For mounting on stand or supporting bracket         Design       Panel PC on pedestal or supporting arm         Support arm mounting       No         Stand mounting       Yes; Prepared for pedestal and extension components         Mounting in portrait format possible       No         maximum permissible installation angle +/-       #45 *         Supply voltage       24 V DC         Mains buffering       20 ms         • Mains/voltage failure stored energy time       20 ms         Processor       Celeron G3902 (2C/2T, 1.6 GHz, 2.MB Cache); Core i3-6102E (2C/4T, 1.9 GHz, 2.4B Cache, i.6MT)         Chipset       Celeron G3902 (2C/2T, 1.6 GHz, 2.MB Cache, i.6MT)         Chipset       Celeron G3902 (2C/2T, 1.9 GHz, 2.0 MB Cache, i.6MT)         Chipset       Intel C236 / Intel H110         Graphic       Graphics controller         Optical drives       possible as external drive via USB         SSD       Yes; ≥ 128 GB optional         Main merrory       4.18.11 GB, ECC optional         Capacity of main memory, max.       16 Gbyte         Optical drives area (incl. Interes, counters, flags), max.       512 kbyte; 128 KB can be stored in the buffer time         Hardware configuration       Yes at bu	Control elements	
Installation type/mounting         For mounting on stand or supporting bracket           Design         Panel PC on pedestal or supporting arm           Support arm mounting         No           Stand mounting         Yes; Prepared for pedestal and extension components           Mounting in portrait format possible         No           maximum permissible installation angle +/-         445 *           Supply voltage         24 V DC           Mains buffering         e Mains/voltage failure stored energy time           e Mains voltage failure stored energy time         20 ms           Processor         Celeron G3802 (2C/2T, 1.6 GHz, 2.0 MB Cache); Core IS.6102E (2C/4T, 1.9 GHz, 3.6 MB Cache, IAMT); Xeon E3-1605L v5 (4C/6T, 2.0 (2.8) GHz, 6 MB Cache, IAMT);           Chipset         Intel C23 / Intel H110           Graphic         possible as external drive via USB           SSD         Yes; > 128 GB optional           Memory         DPR-2400 SO-DIMM           Main memory         4 / 8 / 16 GB, ECC optional           Capatry of rain memory, max.         16 Gbyte           Optical drive via data their retentivity         Fat areas and their retentivity           Retentive data area (incl. timers, counters, flags), max.         512 kbyte; 128 KB can be stored in the buffer time           Hardware configuration         0; Different to the built-in unit	Touch operation	
Mounting         For mounting on stand or supporting bracket           Design         Penel PC on pedestal or supporting arm           Support arm mounting         No           Stand mounting         No           Mounting in portrait format possible         No           Mains buffering         24 V DC           Mains buffering         0           • Mains/voltage failure stored energy time         20 ms           Processor         Celeron G3902 (2C/2T, 1.6 GHz, 2 MB Cache); Core i3-6102E (2C/4T, 1.9 GHz, 3 MB Cache); Core i5-6442E (4C/4T, 1.9 (27) GHz, 6 MB Cache, IAMT)           Chipset         Intel C236 / Intel H110           Graphic         Graphics controller           Optical drives         possible as external drive via USB           SSD         Yes; ≥ 128 GB potional           Memory         DDR4-2400 SO-DIMM           Main memory, max.         16 Gbyte           Data areas and their rotentivity         Retentive data area (incl. timers, counters, flags), max.           F12 kbyte; 128 KB can be stored in the buffer time           Hardware configuration         0; Different to the built-in unit	<ul> <li>Design as touch screen</li> </ul>	Yes; Projective-capacitive
Design     Panel PC on pedestal or supporting arm       Support arm mounting     No       Stand mounting     Yes; Prepared for pedestal and extension components       Mounting in portrait format possible     No       maximum permissible installation angle +/-     ±45 *       Supply voltage     24 V DC       Mains buffering     •       • Mains/voltage failure stored energy time     20 ms       Processor     •       Processor     Celeron G3902 (2C/2T, 1.6 GHz, 2 MB Cache); Core i3-6102E (2C/4T, 1.9 (cHz, 3 MB Cache); Core i3-6102E (2C/4T, 1.9 (cHz, 2 MB Cache); Core	Installation type/mounting	
Support arm mounting       No         Stand mounting       Yes; Prepared for pedestal and extension components         Mounting in portrait format possible       No         maximum permissible installation angle +/-       ±45 *         Supply voltage       24 V DC         Mains buffering       20 ms         • Mains/voltage failure stored energy time       20 ms         Processor       Celeron G3902 (2C/2T, 1.6 GHz, 2 MB Cache); Core i3-6102E (2C/4T, 1.9 (2.7) GHz, 6 MB Cache, iAMT); Xeon E3-1505L v5 (4C/8T, 2.0 (2.8) GHz, 8 MB Cache, iAMT)         Chipset       Intel C236 / Intel H110         Graphic       Intel C236 / Intel H110         Graphic       SSD         Optical drives       possible as external drive via USB         SSD       Yes; ≥ 128 GB optional         Momory       DDR4-2400 SO-DIMM         Main memory, max.       16 Gbyte         Data areas and their retentivity       S12 Kbg/e; 128 KB can be stored in the buffer time         Hardware configuration       512 kbg/e; 128 KB can be stored in the buffer time         Hardware configuration       0; Different to the built-in unit         • Number of PCI slots       0; Different to the built-in unit         • Number of PCI slots       0; Different to the built-in unit         • Number of PCI slots       0; Different to the buil	Mounting	For mounting on stand or supporting bracket
Stand mounting       Yes; Prepared for pedestal and extension components         Mounting in portrait format possible       No         maximum permissible installation angle +/-       ±45 °         Supply voltage       24 V DC         Mains buffering       20 ms         Processor       Celeron G3902 (2C/2T, 1.6 GHz, 2.MB Cache); Core i3-6102E (2C/4T, 1.9 GHz, 3.MB Cache); Markor or Core i3-6102E (2C/4T, 1.9 GHz, 3.MB Cache); Core i3-6102E (2C/4T, 1.9 GHZ, 3.MB Ca	Design	Panel PC on pedestal or supporting arm
Mounting in portrait format possible     No       maximum permissible installation angle +/-     ±45 °       Supply voltage     24 V DC       Mains buffering     20 ms       Processor     20 ms       Processor type     Celeron G3902 (2C/2T, 1.6 GHz, 2 MB Cache); Core i3-6102E (2C/4T, 1.9 (2.7) GHz, 6 MB Cache, iMT); Xeon E3-6402E (4C/4T, 1.9 (2.7) GHz, 6 MB Cache, iMT); Xeon E3-6402E (4C/4T, 1.9 (2.7) GHz, 6 MB Cache, iMT); Xeon E3-6402E (4C/4T, 1.9 (2.7) GHz, 6 MB Cache, iMT); Xeon E3-6402E (4C/4T, 1.9 (2.7) GHz, 6 MB Cache, iMT); Xeon E3-6402E (4C/4T, 1.9 (2.7) GHz, 6 MB Cache, iMT); Xeon E3-6402E (4C/4T, 1.9 (2.7) GHz, 6 MB Cache, iAMT)       Chipset     Intel C238 / Intel H110       Graphics     Intel HD graphics controller       Drives     Opsicial drives       SSD     Yes; ≥ 128 GB optional       Memory     UPR-2400 SO-DIMM       Main memory     4 / 8 / 16 GB, ECC optional       Capacity of main memory, max.     16 Gbyte       Data areas and their retentivity       Retentive data area (incl. timers, counters, flags), max.     512 kbyte; 128 KB can be stored in the buffer time       Hardware configuration     512 kbyte; 128 KB can be stored in the buffer time       Stofs     0; Different to the built-in unit       • Number of PCI slots     0; Different to the built-in unit       • Number of PCI slots     0; Different to the built-in unit       • Number of PCI slots     0; Different to the built-in unit </td <td>Support arm mounting</td> <td>No</td>	Support arm mounting	No
maximum permissible installation angle +/-       ±45 °         Supply voltage       24 V DC         Mains buffering       20 ms         Processor       20 ms         Processor type       Celeron G3902 (2C/2T, 1.6 GHz, 2 MB Cache); Core I3-6102E (2C/4T, 1.9 GHz, 6 MB Cache, 127) GHz, 6 MB Cache, 14MT); Xeon E3-1505L v5 (4C/4T, 1.9 GHz, 6 MB Cache, 14MT)         Chipset       Intel C236 / Intel H110         Graphic       Graphics controller         Optical drives       possible as external drive via USB         SSD       Yes; ≥ 128 GB optional         Memory       DDR4-2400 SO-DIMM         Main memory       4 / 8 / 16 GB, ECC optional         Capacity of main memory, max.       16 Gbyte         Data areas and their retentivity       512 kbyte; 128 KB can be stored in the buffer time         Hardware configuration       512 kbyte; 128 KB can be stored in the buffer time         Stots       0; Different to the built-in unit         • Number of PCI slots       0; Different to the built-in unit         • Number of PCI slots       1; GFast         Interfaces       3; 3x Ethernet (RJ45)	Stand mounting	Yes; Prepared for pedestal and extension components
Supply voltage       24 V DC         Mains buffering       20 ms         Processor       Celeron G3002 (2C/2T, 1.6 GHz, 2 MB Cache); Core I3.6102E (2C/4T, 1.9 GHz, 3 MB Cache); Core I3.6102E (2C/4T, 1.9 (2 /) GHz, 6 MB Cache, IAMT); Xeon E3-1505L V5 (4C/4T, 1.9 (2 /) GHz, 6 MB Cache, IAMT); Xeon E3-1505L V5 (4C/4T, 2.0 (2.8) GHz, 8 MB Cache, IAMT)         Chipset       Intel C236 / Intel H110         Graphic       Graphics controller         Drives       Optical drives         Optical drives       possible as external drive via USB         SSD       Yes; ≥ 128 GB optional         Memory       DDR4-2400 SO-DIMM         Main memory       4 / 8 / 16 GB, ECC optional         Capacity of main memory, max.       16 Gbyte         Data areas and their retentivity       512 kbyte; 128 KB can be stored in the buffer time         Hardware configuration       512 kbyte; 128 KB can be stored in the buffer time         Stots       0; Different to the built-in unit         Number of PCI slots       0; Different to the built-in unit         Number of foci slas slots       1; CFast         Interfaces       3; 3x Ethernet (RJ45)	Mounting in portrait format possible	No
Type of supply voltage       24 V DC         Mains buffering       • Mains/voltage failure stored energy time       20 ms         Processor       Processor         Processor type       Celeron G3902 (2C/2T, 1.6 GHz, 2 MB Cache); Core i3-6102E (2C/4T, 1.9 GHz, 3 MB Cache); Core i5-6442E0 (4C/4T, 1.9 (2.7) GHz, 6 MB Cache, iAMT); Xeon E3-1505L v5 (4C/8T, 2.0 (2.8) GHz, 8 MB Cache, iAMT)         Chipset       Intel C236 / Intel H110         Graphic       Intel C236 / Intel H110         Graphics       Intel C36 / Intel H110         Optical drives       possible as external drive via USB         SSD       Yes; ≥ 128 GB optional         Memory       DDR4-2400 SO-DIMM         Main memory       4 / 8 / 16 GB, ECC optional         Capacity of main memory, max.       16 Gbyte         Data areas and their retentivity       Retentive data area (incl. timers, counters, flags), max.         Hardware configuration       0; Different to the built-in unit         Number of PCI slots       0; Different to the built-in unit         Number of industrial Ethernet interfaces       3; 3x Ethernet (RJ45)	maximum permissible installation angle +/-	±45 °
Mains buffering       20 ms         Processor       Celeron G3902 (2C/2T, 1.6 GHz, 2 MB Cache); Core i3-6102E (2C/4T, 1.9 GHz, 3 MB Cache); Core i5-6442EQ (4C/4T, 1.9 (2.7) GHz, 6 MB Cache, iAMT); Xeon E3-1505L v5 (4C/8T, 2.0 (2.8) GHz, 8 MB Cache, iAMT)         Chipset       Intel C236 / Intel H110         Graphic       Graphics controller         Optical drives       possible as external drive via USB         SSD       Yes; ≥ 128 GB optional         Memory       DDR4-2400 SO-DIMM         Main memory       4 / 8 / 16 GB, ECC optional         Capatity of main memory, max.       16 Gbyte         Data areas and their retentivity       S12 kbyte; 128 KB can be stored in the buffer time         Hardware configuration       0; Different to the built-in unit         Number of PCI slots       0; Different to the built-in unit         Number of industrial Ethernet interfaces       3; 3x Ethernet (RJ45)	Supply voltage	
• Mains/voltage failure stored energy time     20 ms       Processor     Celeron G3902 (2C/2T, 1.6 GHz, 2 MB Cache); Core i3-6102E (2C/4T, 1.9 GHz, 3 MB Cache,; Core i3-6442EQ (4C/4T, 1.9 (2.7) GHz, 6 MB Cache, iAMT)       Chipset     Intel C236 / Intel H110       Graphic     Intel C236 / Intel H110       Graphic sontroller     Intel HD graphics controller       Drives     Optical drives       SSD     Yes; ≥ 128 GB optional       Memory     DDR4-2400 SO-DIMM       Main memory, max.     16 Gbyte       Data area (incl. timers, counters, flags), max.     512 kbyte; 128 KB can be stored in the buffer time       Hardware configuration     0; Different to the built-in unit       • Number of PCI slots     0; Different to the built-in unit       • Number of industrial Ethernet interfaces     3; 3x Ethernet (RJ45)	Type of supply voltage	24 V DC
Processor         Processor type       Celeron G3902 (2C/2T, 1.6 GHz, 2 MB Cache); Core i3-6102E (2C/4T, 1.9 GHz, 5 MB Cache, iAMT)         Chipset       Intel C236 / Intel H110         Graphic       Graphics controller         Optical drives       possible as external drive via USB         SSD       Yes; ≥ 128 GB optional         Memory       DDR4-2400 SO-DIMM         Main memory       DDR4-2400 SO-DIMM         Gapacity of main memory, max.       16 Gbyte         Data areas and their retentivity       S12 kbyte; 128 KB can be stored in the buffer time         Hardware configuration       0; Different to the built-in unit         Number of PCI slots       0; Different to the built-in unit         Number of industrial Ethernet interfaces       3; 3x Ethernet (RJ45)	Mains buffering	
Processor type       Celeron G3902 (2C/2T, 1.6 GHz, 2 MB Cache); Core i3-6102E (2C/4T, 1.9 GHz, 3 MB Cache); Core i3-6102E (2C/4T, 1.9 (2.7) GHz, 6 MB Cache, iAMT); Xeon E3-1505L v5 (4C/8T, 2.0 (2.8) GHz, 8 MB Cache, iAMT)         Chipset       Intel C236 / Intel H110         Graphic       Graphics controller         Drives       possible as external drive via USB         SSD       Yes; ≥ 128 GB optional         Memory       DDR4-2400 SO-DIMM         Main memory       4 / 8 / 16 GB, ECC optional         Capacity of main memory, max.       16 Gbyte         Data areas and their retentivity       512 kbyte; 128 KB can be stored in the buffer time         Hardware configuration       0; Different to the built-in unit         Number of PCI slots       0; Different to the built-in unit         Number of industrial Ethernet interfaces       3; 3x Ethernet (RJ45)	<ul> <li>Mains/voltage failure stored energy time</li> </ul>	20 ms
GHz, 3 MB Cache): Core i5-6442EQ (4C/4T, 1.9 (2.7) GHz, 6 MB Cache, iAMT):         iAMT): Xeon E3-1505L v5 (4C/8T, 2.0 (2.8) GHz, 8 MB Cache, iAMT)         Intel C236 / Intel H110         Graphic         Graphics controller         Intel AD graphics controller         Optical drives         possible as external drive via USB         SSD         Yes; ≥ 128 GB optional         Memory         Type of memory         DDR4-2400 SO-DIMM         Main memory         4 / 8 / 16 GB, ECC optional         Capacity of main memory, max.         16 Gbyte         Data areas and their retentivity         Retentive data area (incl. timers, counters, flags), max.       512 kbyte; 128 KB can be stored in the buffer time         Hardware configuration         Slots       0; Different to the built-in unit         • Number of PCI slots       0; Different to the built-in unit         • Number of PCI slots       0; Different to the built-in unit         • Number of industrial Ethernet interfaces       3; 3x Ethernet (RJ45)	Processor	
Graphic         Graphics controller       Intel HD graphics controller         Drives       possible as external drive via USB         SSD       Yes; ≥ 128 GB optional         Memory       DDR4-2400 SO-DIMM         Main memory       4 / 8 / 16 GB, ECC optional         Capacity of main memory, max.       16 Gbyte         Data areas and their retentivity       Retentive data area (incl. timers, counters, flags), max.         Slots       0; Different to the built-in unit         Number of PCI slots       0; Different to the built-in unit         Number of compact flash slots       1; CFast         Interfaces       3; 3x Ethernet (RJ45)	Processor type	GHz, 3 MB Cache); Core i5-6442EQ (4C/4T, 1.9 (2.7) GHz, 6 MB Cache,
Graphics controller       Intel HD graphics controller         Drives       possible as external drive via USB         SSD       Yes; ≥ 128 GB optional         Memory       DDR4-2400 SO-DIMM         Main memory       4 / 8 / 16 GB, ECC optional         Capacity of main memory, max.       16 Gbyte         Data areas and their retentivity       S12 kbyte; 128 KB can be stored in the buffer time         Hardware configuration       O; Different to the built-in unit         Slots       0; Different to the built-in unit         Number of PCI slots       0; Different to the built-in unit         Number of compact flash slots       1; CFast         Interfaces       Number of industrial Ethernet interfaces       3; 3x Ethernet (RJ45)	Chipset	Intel C236 / Intel H110
Drives         Optical drives       possible as external drive via USB         SSD       Yes; ≥ 128 GB optional         Memory       DDR4-2400 SO-DIMM         Main memory       D A4 / 16 GB, ECC optional         Capacity of main memory, max.       16 Gbyte         Data areas and their retentivity       Retentive data area (incl. timers, counters, flags), max.         Slots       0; Different to the built-in unit         Number of PCI slots       0; Different to the built-in unit         • Number of compact flash slots       1; CFast         Interfaces       3; 3x Ethernet (RJ45)	Graphic	
Optical drives       possible as external drive via USB         SSD       Yes; ≥ 128 GB optional         Memory       DDR4-2400 SO-DIMM         Type of memory       DDR4-2400 SO-DIMM         Main memory       4 / 8 / 16 GB, ECC optional         Capacity of main memory, max.       16 Gbyte         Data areas and their retentivity       Etentive data area (incl. timers, counters, flags), max.       512 kbyte; 128 KB can be stored in the buffer time         Hardware configuration       Slots       0; Different to the built-in unit       0; Different to the built-in unit         • Number of PCI slots       0; Different to the built-in unit       • Number of compact flash slots       1; CFast         Interfaces       Number of industrial Ethernet interfaces       3; 3x Ethernet (RJ45)	Graphics controller	Intel HD graphics controller
SSD       Yes; ≥ 128 GB optional         Memory       DDR4-2400 SO-DIMM         Main memory       4 / 8 / 16 GB, ECC optional         Capacity of main memory, max.       16 Gbyte         Data areas and their retentivity       Retentive data area (incl. timers, counters, flags), max.       512 kbyte; 128 KB can be stored in the buffer time         Hardware configuration       O; Different to the built-in unit       O; Different to the built-in unit         • Number of PCI slots       0; Different to the built-in unit       0; Different to the built-in unit         • Number of PCI slots       1; CFast       1; CFast         Interfaces       3; 3x Ethernet (RJ45)	Drives	
Memory         Type of memory       DDR4-2400 SO-DIMM         Main memory       4 / 8 / 16 GB, ECC optional         Capacity of main memory, max.       16 Gbyte         Data areas and their retentivity       Retentive data area (incl. timers, counters, flags), max.         Fatemative data area (incl. timers, counters, flags), max.       512 kbyte; 128 KB can be stored in the buffer time         Hardware configuration       Slots         • Number of PCI slots       0; Different to the built-in unit         • Number of PCI slots       0; Different to the built-in unit         • Number of compact flash slots       1; CFast         Interfaces       3; 3x Ethernet (RJ45)	Optical drives	possible as external drive via USB
Type of memory       DDR4-2400 SO-DIMM         Main memory       4 / 8 / 16 GB, ECC optional         Capacity of main memory, max.       16 Gbyte         Data areas and their retentivity       Retentive data area (incl. timers, counters, flags), max.         Retentive data area (incl. timers, counters, flags), max.       512 kbyte; 128 KB can be stored in the buffer time         Hardware configuration       Slots         • Number of PCI slots       0; Different to the built-in unit         • Number of PCI slots       0; Different to the built-in unit         • Number of compact flash slots       1; CFast         Interfaces       3; 3x Ethernet (RJ45)	SSD	Yes; ≥ 128 GB optional
Main memory       4 / 8 / 16 GB, ECC optional         Capacity of main memory, max.       16 Gbyte         Data areas and their retentivity       16 Gbyte         Retentive data area (incl. timers, counters, flags), max.       512 kbyte; 128 KB can be stored in the buffer time         Hardware configuration       512 kbyte; 128 KB can be stored in the buffer time         Slots       0; Different to the built-in unit         • Number of PCI slots       0; Different to the built-in unit         • Number of compact flash slots       1; CFast         Interfaces       3; 3x Ethernet (RJ45)	Memory	
Capacity of main memory, max.       16 Gbyte         Data areas and their retentivity         Retentive data area (incl. timers, counters, flags), max.       512 kbyte; 128 KB can be stored in the buffer time         Hardware configuration         Slots         • Number of PCI slots       0; Different to the built-in unit         • Number of PCI slots       0; Different to the built-in unit         • Number of compact flash slots       1; CFast         Interfaces         Number of industrial Ethernet interfaces       3; 3x Ethernet (RJ45)	Type of memory	DDR4-2400 SO-DIMM
Data areas and their retentivity         Retentive data area (incl. timers, counters, flags), max.       512 kbyte; 128 KB can be stored in the buffer time         Hardware configuration         Slots       0; Different to the built-in unit         • Number of PCI slots       0; Different to the built-in unit         • Number of PCI slots       0; Different to the built-in unit         • Number of compact flash slots       1; CFast         Interfaces       3; 3x Ethernet (RJ45)	Main memory	4 / 8 / 16 GB, ECC optional
Retentive data area (incl. timers, counters, flags), max.       512 kbyte; 128 KB can be stored in the buffer time         Hardware configuration       Slots         • Number of PCI slots       0; Different to the built-in unit         • Number of PCI slots       0; Different to the built-in unit         • Number of PCI slots       0; Different to the built-in unit         • Number of compact flash slots       1; CFast         Interfaces       3; 3x Ethernet (RJ45)	Capacity of main memory, max.	16 Gbyte
Hardware configuration         Slots       0; Different to the built-in unit         • Number of PCI slots       0; Different to the built-in unit         • Number of PCI slots       0; Different to the built-in unit         • Number of compact flash slots       1; CFast         Interfaces       3; 3x Ethernet (RJ45)	Data areas and their retentivity	
Slots       0; Different to the built-in unit         • Number of PCI slots       0; Different to the built-in unit         • Number of PCI slots       0; Different to the built-in unit         • Number of compact flash slots       1; CFast         Interfaces       3; 3x Ethernet (RJ45)	Retentive data area (incl. timers, counters, flags), max.	512 kbyte; 128 KB can be stored in the buffer time
• Number of PCI slots       0; Different to the built-in unit         • Number of PCI slots       0; Different to the built-in unit         • Number of compact flash slots       1; CFast         Interfaces       3; 3x Ethernet (RJ45)	Hardware configuration	
Number of PCI slots     O; Different to the built-in unit     Number of compact flash slots     1; CFast  Interfaces  Number of industrial Ethernet interfaces     3; 3x Ethernet (RJ45)	Slots	
Number of compact flash slots     1; CFast Interfaces Number of industrial Ethernet interfaces     3; 3x Ethernet (RJ45)	Number of PCI slots	0; Different to the built-in unit
Interfaces           Number of industrial Ethernet interfaces         3; 3x Ethernet (RJ45)	Number of PCI slots	0; Different to the built-in unit
Number of industrial Ethernet interfaces     3; 3x Ethernet (RJ45)	<ul> <li>Number of compact flash slots</li> </ul>	1; CFast
	Interfaces	
USB port 4x USB 3.0 onboard (rear)	Number of industrial Ethernet interfaces	3; 3x Ethernet (RJ45)
	USB port	4x USB 3.0 onboard (rear)

Connection for keyboard/mouse	USB / USB
serial interface	Without / 2x COM (RS 232 / 422 / 485), selectable in the BIOS
Video interfaces	
Graphics interface	2x DisplayPort
Industrial Ethernet	
<ul> <li>Industrial Ethernet interface</li> </ul>	3x Ethernet (RJ45)
— 100 Mbps	Yes
— 1000 Mbps	Yes
Interrupts/diagnostics/status information	
Bus diagnostics	Yes
Integrated Functions	
Monitoring functions	
Temperature monitoring	Yes
Watchdog	Yes
• Fan	No
Monitoring function via network	Optional
EMC	
Interference immunity against discharge of static electricity	
<ul> <li>Interference immunity against discharge of static electricity</li> </ul>	±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-nequency electromagnetic relation	10 V/m, 80 2 000 MHz, 80 % AM acc. to IEC 61000-4-3; 3 V/m, 2 2.7
	GHz; 10 V, 10 kHz 80 MHz acc. to IEC 61000-4-6
Interference immunity to cable-borne interference	
<ul> <li>Interference immunity on supply cables</li> </ul>	±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
<ul> <li>Interference immunity on signal cables &gt;30m</li> </ul>	$\pm$ 2 kV acc. to IEC 61000-4-5, surge, length > 30 m
<ul> <li>Interference immunity on signal cables &lt; 30m</li> </ul>	±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	
<ul> <li>asymmetric interference</li> </ul>	±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	
<ul> <li>Interference immunity to magnetic fields at 50 Hz</li> </ul>	100 A/m; to IEC 61000-4-8
Emission of conducted and non-conducted interference	
<ul> <li>Interference emission via line/AC current cables</li> </ul>	EN 61000-6-3, EN 61000-6-4, CISPR 22 Class B, FCC Class A
Degree and class of protection	
IP65 (all-round)	Yes; IP65 fully enclosed
IP (at the front)	IP65
IP (rear)	IP65
Standards, approvals, certificates	
CE mark	Yes
CSA approval	Yes
UL approval	Yes
• UL 508	Yes
cULus	Yes
RCM (formerly C-TICK)	Yes
KC approval	Yes
EAC (formerly Gost-R)	Yes
EAC (IOITIENY GOST-R)	CE, EN 61000-6-4; CISPR 22 Class A; FCC Class A
Use in hazardous areas	0L, LIN 01000-0-1, 0101 11 22 01055 A, FOO 01055 A
	Voc: Optional
ATEX Zone 2	Yes; Optional
IECEx Zone 2	Yes; Optional
cULus Class I Zone 2, Division 2	Yes; Optional
Marine approval	
Germanischer Lloyd (GL)	Yes
American Bureau of Shipping (ABS)	Yes
Det Norske Veritas (DNV)	Yes
<ul> <li>Korean Register of Shipping (KRS)</li> </ul>	Yes
Lloyds Register of Shipping (LRS)	Yes
Ambient conditions	
Ambient temperature during operation	

• min.	0 °C
• max.	45 °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: Operation: 5 % to 85 % at 30 $^\circ C$ (no condensation), storage / transport: 5 % to 95 % at 25 / 55 $^\circ C$ (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 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	
pre-installed operating system	Windows 7 Ultimate (Multi-Language) 64-bit, Windows Embedded Standard 7 E/P 32-bit / 64-bit, Windows 10
without operating system	Yes; Optional
pre-installed operating system	
• Windows 7	Yes; Ultimate 64 bit
Windows 10 Enterprise	Yes; Windows 10 Enterprise 2016 LTSB, 64 bit, MUI
Dimensions	
Width of the housing front	396 mm
Height of housing front	255 mm; Without basic adapter
Weights	
Weight, approx.	6.8 kg
last modified:	6/25/2021