

SIMATIC IPC 477E 19" Multitouch (1366 x 768); 4 USB (back), Ethernet (10/100/1000); Core i3-6102E; 3x Gbit Ethernet (IE/PN); 8 GB; without RS 232/RS485; without PCIe; Windows 10 IoT Enterprise 2016 LTSC (64-bit) for Celeron, i3 and i5; Without replaceable mass storage; 240 GB solid-state drive SATA Without SIMATIC software; 24 V DC industrial power supply

| General information                  |                                                     |
|--------------------------------------|-----------------------------------------------------|
| Product type designation             | IPC477E                                             |
| Display                              |                                                     |
| Design of display                    | 19" TFT multi-touch                                 |
| Screen diagonal                      | 18.5 in                                             |
| Resolution (pixels)                  |                                                     |
| • Horizontal image resolution        | 1 366 Pixel                                         |
| • Vertical image resolution          | 768 Pixel                                           |
| Backlighting                         |                                                     |
| • MTBF backlighting (at 25 °C)       | 50 000 h                                            |
| Control elements                     |                                                     |
| Input device                         |                                                     |
| • Mouse, at front                    | No                                                  |
| Keyboard fonts                       |                                                     |
| • Function keys                      | No                                                  |
| • alphanumeric keyboard              | No                                                  |
| Touch operation                      |                                                     |
| • Design as multi-touch screen       | Yes; Projective-capacitive                          |
| Installation type/mounting           |                                                     |
| Mounting                             | For horizontal and vertical mounting                |
| Design                               | Panel PC, built-in unit                             |
| central design                       | Yes                                                 |
| distributed design                   | No                                                  |
| Mounting in portrait format possible | Yes                                                 |
| Supply voltage                       |                                                     |
| Type of supply voltage               | 100/240 V AC (autorange) 50/60 Hz; optional 24 V DC |
| Line frequency                       |                                                     |
| • Rated value 50 Hz                  | Yes                                                 |
| • Rated value 60 Hz                  | Yes                                                 |
| Power loss                           |                                                     |

|                                                                                                                                                                                    |                                                                                                                                                                                                            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| In full configuration                                                                                                                                                              | 24 V DC: max. 82 W, 110 ... 230 V AC                                                                                                                                                                       |
| <b>Processor</b>                                                                                                                                                                   |                                                                                                                                                                                                            |
| Processor type                                                                                                                                                                     | Celeron G3902 (2C/2T, 1.6 GHz, 2 MB Cache); Core i3-6102E (2C/4T, 1.9 GHz, 3 MB Cache); Core i5-6442EQ (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) |
| <b>Graphic</b>                                                                                                                                                                     |                                                                                                                                                                                                            |
| Graphics controller                                                                                                                                                                | Intel HD graphics controller                                                                                                                                                                               |
| <b>Drives</b>                                                                                                                                                                      |                                                                                                                                                                                                            |
| Optical drives                                                                                                                                                                     | possible as external drive via USB                                                                                                                                                                         |
| Hard disk                                                                                                                                                                          | 2.5" SATA hard disk, at least 320 GB                                                                                                                                                                       |
| SSD                                                                                                                                                                                | Yes; 1x 128 GB, 1x 240 GB SSD, 1x 480 GB SSD                                                                                                                                                               |
| <b>Memory</b>                                                                                                                                                                      |                                                                                                                                                                                                            |
| Type of memory                                                                                                                                                                     | DDR4 SO-DIMM                                                                                                                                                                                               |
| Main memory                                                                                                                                                                        | 4 GB to 16 GB, ECC optional                                                                                                                                                                                |
| Capacity of main memory, max.                                                                                                                                                      | 16 Gbyte                                                                                                                                                                                                   |
| <b>Data areas and their retentivity</b>                                                                                                                                            |                                                                                                                                                                                                            |
| Retentive data area (incl. timers, counters, flags), max.                                                                                                                          | 512 kbyte; 128 KB can be stored in the buffer time; optional                                                                                                                                               |
| <b>Hardware configuration</b>                                                                                                                                                      |                                                                                                                                                                                                            |
| <b>Slots</b>                                                                                                                                                                       |                                                                                                                                                                                                            |
| <ul style="list-style-type: none"> <li>• free slots</li> <li>• Number of PCI slots</li> <li>• Number of compact flash slots</li> </ul>                                             | 1x PCIe (slot with card retainer), 1x slot for CFAST card<br>1; Optional<br>1; CFast                                                                                                                       |
| <b>Interfaces</b>                                                                                                                                                                  |                                                                                                                                                                                                            |
| Number of industrial Ethernet interfaces                                                                                                                                           | 3; 3x Ethernet (RJ45)                                                                                                                                                                                      |
| USB port                                                                                                                                                                           | 4x USB 3.0                                                                                                                                                                                                 |
| Connection for keyboard/mouse                                                                                                                                                      | USB / USB                                                                                                                                                                                                  |
| serial interface                                                                                                                                                                   | Without / 2x COM (RS 232 / 422 / 485), selectable in the BIOS                                                                                                                                              |
| <b>Video interfaces</b>                                                                                                                                                            |                                                                                                                                                                                                            |
| <ul style="list-style-type: none"> <li>• Graphics interface</li> </ul>                                                                                                             | 2x DisplayPort                                                                                                                                                                                             |
| <b>Industrial Ethernet</b>                                                                                                                                                         |                                                                                                                                                                                                            |
| <ul style="list-style-type: none"> <li>• Industrial Ethernet interface               <ul style="list-style-type: none"> <li>— 100 Mbps</li> <li>— 1000 Mbps</li> </ul> </li> </ul> | 3x Ethernet (RJ45)<br>Yes<br>Yes                                                                                                                                                                           |
| <b>Interrupts/diagnostics/status information</b>                                                                                                                                   |                                                                                                                                                                                                            |
| Bus diagnostics                                                                                                                                                                    | Yes                                                                                                                                                                                                        |
| <b>Integrated Functions</b>                                                                                                                                                        |                                                                                                                                                                                                            |
| <b>Monitoring functions</b>                                                                                                                                                        |                                                                                                                                                                                                            |
| <ul style="list-style-type: none"> <li>• Temperature monitoring</li> </ul>                                                                                                         | Yes                                                                                                                                                                                                        |

|                                   |          |
|-----------------------------------|----------|
| • Watchdog                        | Yes      |
| • Fan                             | No       |
| • 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, 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                   |                                                                                                                                 |
| • 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 |
| IP (rear)         | IP20 |

## Standards, approvals, certificates

|                                    |                                                      |
|------------------------------------|------------------------------------------------------|
| CE mark                            | Yes; CE marking / EC Declaration of Conformity       |
| CSA approval                       | 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; CISPR 22:2004 Class A; FCC Class A |
| Use in hazardous areas             |                                                      |
| • ATEX Zone 2                      | Yes                                                  |
| • IECEx Zone 2                     | Yes                                                  |
| • cULus Class I Zone 2, Division 2 | Yes                                                  |

|                                                                           |                                                                                                                                                                             |
|---------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Marine approval</b>                                                    |                                                                                                                                                                             |
| • Germanischer Lloyd (GL)                                                 | Yes                                                                                                                                                                         |
| • American Bureau of Shipping (ABS)                                       | Yes                                                                                                                                                                         |
| • Det Norske Veritas (DNV)                                                | Yes                                                                                                                                                                         |
| • Korean Register of Shipping (KRS)                                       | Yes                                                                                                                                                                         |
| • Lloyds Register of Shipping (LRS)                                       | Yes                                                                                                                                                                         |
| <b>Ambient conditions</b>                                                 |                                                                                                                                                                             |
| <b>Ambient temperature during operation</b>                               |                                                                                                                                                                             |
| • Ambient temperature during operation                                    | 0 °C to 50 °C                                                                                                                                                               |
| <b>Ambient temperature during storage/transportation</b>                  |                                                                                                                                                                             |
| • min.                                                                    | -20 °C                                                                                                                                                                      |
| • max.                                                                    | 60 °C                                                                                                                                                                       |
| <b>Relative humidity</b>                                                  |                                                                                                                                                                             |
| • Relative humidity                                                       | Tested according to IEC 60068-2-78, IEC 60068-2-30: 5% to 80% at 25 °C (no condensation)                                                                                    |
| <b>Vibrations</b>                                                         |                                                                                                                                                                             |
| • Vibration resistance during operation acc. to IEC 60068-2-6             | IEC 60068-2-6; 5 Hz to 9 Hz: 3.5 mm; 9 Hz to 500 Hz: 9.8 m/s <sup>2</sup> (with SSD or CFast); 10 Hz to 58 Hz: 0.0375 mm; 58 Hz to 200 Hz: 4.9 m/s <sup>2</sup> (hard disk) |
| <b>Shock testing</b>                                                      |                                                                                                                                                                             |
| • Shock load during operation                                             | IEC 60068-2-27; 150 m/s <sup>2</sup> , 11 ms (without hard disk); 50 m/s <sup>2</sup> , 30 ms (with hard disk)                                                              |
| <b>Operating systems</b>                                                  |                                                                                                                                                                             |
| Operating system                                                          | Windows 7 Ultimate (Multi-Language) 64-bit, Windows Embedded Standard 7 E/P 32-bit / 64-bit, Windows 10                                                                     |
| pre-installed operating system                                            | Yes                                                                                                                                                                         |
| without operating system                                                  | Yes; Optional                                                                                                                                                               |
| <b>pre-installed operating system</b>                                     |                                                                                                                                                                             |
| • Windows 7                                                               | Yes; Ultimate 64 bit                                                                                                                                                        |
| • Windows 10 Enterprise                                                   | Yes; Windows 10 Enterprise LTSC 2016, 64-bit, MUI                                                                                                                           |
| <b>Software</b>                                                           |                                                                                                                                                                             |
| SIMATIC Software                                                          | Optionally with pre-installed SIMATIC WinCC RT Advanced / Software Controller CPU 1500S software bundle                                                                     |
| <b>Dimensions</b>                                                         |                                                                                                                                                                             |
| <b>Operator control unit (W x H) in mm</b>                                |                                                                                                                                                                             |
| • Operator panel width                                                    | 464 mm                                                                                                                                                                      |
| • Operator panel height                                                   | 294 mm                                                                                                                                                                      |
| <b>Mounting dimensions in centralized configuration (W x H x D) in mm</b> |                                                                                                                                                                             |
| • Width                                                                   | 448 mm                                                                                                                                                                      |
| • Height                                                                  | 278 mm                                                                                                                                                                      |
| • Depth                                                                   | 76 mm                                                                                                                                                                       |

|                                          |                                         |
|------------------------------------------|-----------------------------------------|
| Mounting cutout/device depth (W x H x T) | 448 mm x 278 mm / 76 mm enclosure depth |
| <b>Weights</b>                           |                                         |
| Panel PC in central design, approx.      | 6.6 kg                                  |
| <b>last modified:</b>                    | 11/29/2018                              |