## **SIEMENS**

Data sheet	6AV7240N
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SIMATIC IPC 477D, 19" MULTITOUCH DISPLAY; WITH SHIPBUILDING CERTIFICATE; 4USB (BACK); W/O USB (FRONT); ETHERNET (10/100/1000):

	ETHERNET (10/100/1000);
General information	
Product type designation	IPC477D
Display	
Design of display	19" TFT touch
Resolution (pixels)	
Horizontal image resolution	1 366 Pixel
<ul> <li>Vertical image resolution</li> </ul>	768 Pixel
Backlighting	
<ul> <li>MTBF backlighting (at 25 °C)</li> </ul>	50 000 h
Control elements	
Input device	
<ul><li>Mouse, at front</li></ul>	No
Keyboard fonts	
<ul><li>alphanumeric keyboard</li></ul>	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
Mains buffering	
Mains/voltage failure stored energy time	10 ms
Power loss	
In full configuration	24 V DC: max. 65 W, PCIe APCB additionally 5 W
Processor	

Processor type	Celeron 827E (1C/1T, 1.40 GHz, 1.5 MB Cache); Core i3-3217UE
	(2C/4T, 1.60 GHz, 3 MB Cache); Core i7-3517UE (2C/4T, 1.70 (2.80) GHz, 4 MB Cache, iAMT)
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Graphic	latel LID annulaire controller
Graphics controller	Intel HD graphics controller
Drives	
Optical drives	Optional: DVD±R±RW combi drive; on rear, can be operated from side
Diskette drive	No
Hard disk	2.5" SATA hard disk, at least 320 GB
SSD	Yes; 1x 80 GB, 1x 240 GB SSD, 1x 480 GB SSD
Memory	
Type of memory	DDR3-SDRAM
Main memory	1 GB to 8 GB, ECC optional
Capacity of main memory, max.	8 Gbyte
Data areas and their retentivity	
Retentive data area (incl. timers, counters, flags),	512 kbyte; 128 KB can be stored in the buffer time; optional
max.	
Hardware configuration	
Slots	
• free slots	1x PCIe (slot with card retainer), 1x slot for CFAST card
<ul> <li>Number of PCI slots</li> </ul>	1; Optional
<ul> <li>Number of compact flash slots</li> </ul>	2; CFast
Interfaces	
PROFIBUS/MPI	Optionally onboard, isolated, max. 12 Mbit/s, no plug-in card
	necessary, CP 5622-compatible
Number of PROFINET interfaces	3; 3 ports (incl. switch)
USB port	4x USB 3.0 high speed/high current
Connection for keyboard/mouse	USB / USB
serial interface	COM1: 1x RS 232, COM2 (optional): 1x RS 232
Video interfaces	
Graphics interface	DVI VGA / DVI integrated
Industrial Ethernet	
Industrial Ethernet interface	Onboard, 2 x 10/100 Mbit/s, RJ45, no plug-in card necessary
Integrated Functions	
Monitoring functions	
Temperature monitoring	Yes
Watchdog	Yes
Status LEDs	Yes
<ul> <li>Monitoring function via network</li> </ul>	Optional

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Interference immunity against discharge of static electric	
<ul> <li>Interference immunity against discharge of static electricity</li> </ul>	± 6 KV contact discharge at the front in accordance with IEC 61000-4-2; ±4 kV, housing contact discharge at the back in accordance with IEC 61000-4-2; ± 8 kV air discharge in accordance with IEC 61000-4-2
Interference immunity against high-frequency electroma	gnetic fields
<ul> <li>Interference immunity against high frequency radiation</li> </ul>	10 V/m for 80 - 1000 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 (to IEC 1000-4-4; 1995; burst); ±1 kV (to IEC 1000-4-5; 1995; surge symm); ±2 kV (to IEC 1000-4-5; 1995; surge asymm)
<ul> <li>Interference immunity on signal cables &gt;30m</li> </ul>	$\pm 2$ kV acc. to IEC 61000-4-4, burst; length > 30 m; $\pm 2$ 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  Thissies of conducted and non-conducted interference.	100 A/m; to IEC 61000-4-8
<ul> <li>Emission of conducted and non-conducted interference</li> <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	
IP (at the front)	IP65
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; CISPR 22:2004 Class A; FCC Class A
Marine approval	
Germanischer Lloyd (GL)	Yes
<ul> <li>American Bureau of Shipping (ABS)</li> </ul>	Yes
Bureau Veritas (BV)	Yes

• Det Norske Veritas (DNV)

Yes

<ul> <li>Lloyds Register of Shipping (LRS)</li> </ul>	Yes	
<ul> <li>Nippon Kaiji Kyokai (Class NK)</li> </ul>	Yes	
Ambient conditions		
Ambient temperature during operation		
Ambient temperature during operation	0 °C to +50 °C with full configuration	
• min.	0 °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 $25~^{\circ}\text{C}$ (no condensation)	
Vibrations		
<ul> <li>Vibration resistance during operation acc. to IEC 60068-2-6</li> </ul>	IEC 60068-2-6; 5 Hz to 9 Hz: 3.5 mm; 9 Hz to 500 Hz: 9.8 m/s² (with SSD or CFast); 10 Hz to 58 Hz: 0.0375 mm; 58 Hz to 200 Hz: 4.9 m/s² (hard disk)	
Shock testing		
Shock load during operation	IEC 60068-2-27; 150 m/s², 11 ms (without hard disk); 50 m/s², 30 ms (with hard disk)	
Operating systems		
Operating system	Windows 7 Ultimate 32-bit / 64-bit, MUI; Windows Embedded Standard 7 P, 32-bit, MUI	
pre-installed operating system	Yes	
without operating system	Yes	
pre-installed operating system		
• Windows 7	Yes; Ultimate 32 bits or 64 bits	
Software		
SIMATIC Software	Optionally with pre-installed software bundle SIMATIC WinCC RT Advanced / WinAC RTX	
Dimensions		
Overall depth		
<ul> <li>additional mounting depth (optical drive)</li> </ul>	26 mm	
Operator control unit (W x H) in mm		
Operator panel width	483 mm	
Operator panel height	337 mm	
Install. dimensions, centralized design (W x H x D without optical drive) in mm		
• Width	464 mm	
● Height	318 mm	
• Depth	76 mm	
Mounting cutout/device depth (W x H x T)	464 mm x 318 mm / 82 mm device depth	

Weights	
Panel PC in central design, approx.	6 700 g
Other	
Warranty period	36 mo; Warranty period
last modified:	11/28/2017