SIEMENS

Data sheet

6AV7230-0EA20-2CA0

SIMATIC IPC377E (Basicpanel PC) 19" touch (1366 x 768); Celeron N3160 (4C/4T); 4 GB RAM; 256 GB SSD; 1x display port graphic; 1x VGA port graphic; 2x 10/100/1000 Mbit/s Ethernet RJ45; 2x USB3.0, 2x USB2.0; 4x serial ports (COM); 1x mPCle / 1x mSATA; Windows 10 Enterprise 2016 LTSB, 64 bit, MUI (en,de,fr,it,es); 24 V DC power supply; installation, VESA mounting



Figure similar

General information	
Product type designation	IPC377
Installation type/mounting	
Mounting	Panel mount and VESA, horizontal and vertical
Design	Panel PC, built-in unit
Supply voltage	
Type of supply voltage	24 V DC
Mains buffering	
 Mains/voltage failure stored energy time 	10 ms
Processor	
Processor type	Intel Celeron N3160
Drives	
SSD	Yes; 256 GB SSD
Memory	
Type of memory	DDR3L
	DDR3L

Capacity of main memory, max. 8 Gbyte Hardware configuration Stots • free slots 1x mPCie (half-size), 1x mSATA (full-size) Interfaces 2, 2x RJ45 (independent) USB port 2x USB 2.0, 2x USB 3.0 (high current) Video interfaces - • Graphics interface 1x DisplayPort, 1x VGA Industrial Ethernet - • Industrial Ethernet interface 2x Ethernet (RJ45) - 100 Mbps Yes Protocols (Ethernet) - - TOPIP Yes Protocols (Ethernet) - • Treepreture monitoring Yes • Montoring functions - Integrated Functions - Integrated Functions - • Treepreture monitoring Yes • Status LEDs POWER, HDD • Fan No • Interference immunity against discharge of static electricity 46 KV contact; ±8 KV air (to IEC 1000-4-2; ESD) static electricity • Interference immunity against high-frequency electrometeric fields - • Interference immunity against high frequency electrometeric fields - • Interference immu	Main memory	4 GB (pre-installed)	
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Industrial Ethernet interface2x Ethernet (RJ45)- 100 MbpsYesProtocolsProtocols (Ethernet)• TCP/IPYesIntegrated FunctionsMonitoring functions• Temperature monitoringYes• WatchdogYes• Status LEDsPOWER, HDD• FanNoEtherference immunity against discharge of static electricity• Interference immunity against discharge of static electricity• Interference immunity against high-frequency electorex• Interference immunity against high frequency radiation10 V/m for 80 1 000 MHz, 80 % AM according to IEC 61000-4-3 3 3 V/m for 1.4 6 GHz, 80 % AM according to IEC 61000-4-3 3 3 V/m for 1.4 6 GHz, 80 % AM according to IEC 61000-4-5 surge pulseline to ground)• Interference immunity on signal cables >30m u E2 KV acc. to IEC 61000-4-4, burst; ±1 kV (according to IEC 61000-4-5, surge pulseline to ground)• Interference immunity on signal cables >30m u E2 kV acc. to IEC 61000-4-4, Burst;• Interference immunity on signal cables >30m u E2 kV acc. to IEC 61000-4-4, Burst;• Interference immunity on signal cables >30m u E2 kV acc. to IEC 61000-4-4, Burst;• Interference immunity on signal cables >30m u E1 kV acc. to IEC 61000-4-4, Burst• Interference immunity on signal cables >30m u E1 kV acc. to IEC 61000-4-4, Burst• Interference immunity on signal cables >30m u E1 kV acc. to IEC 61000-4-5, surge asymmetric i tik V acc. to IEC 61000-4-5, surge asymmetric i tik V acc. to IEC 61000-4-5, surge asymmetric	·	1x DisplayPort, 1x VGA	
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• Status LEDsPOWER, HDD• FanNoEMCInterference immunity against discharge of static electricity±6 kV contact; ±8 kV air (to IEC 1000-4-2; ESD)• Interference immunity against discharge of static electricity±6 kV contact; ±8 kV air (to IEC 1000-4-2; ESD)Interference immunity against high-frequency electromunity against high-frequency electromunity against high frequency10 V/m for 80 1 000 MHz, 80 % AM according to IEC 61000-4-3Interference immunity against high frequency10 V/m for 80 1 000 MHz, 80 % AM according to IEC 61000-4-3Interference immunity to cable-borne interference10 V/m for 80 1 000 MHz, 80 % AM according to IEC 61000-4-3Interference immunity on supply cables±2 kV (according to IEC 61000-4-4, burst); ±1 kV (according to IEC 61000-4-5, surge pulse/line to line); ±2 kV (according to IEC 61000-4-5, surge pulse/line to ground)• Interference immunity on signal cables >30m±2 kV acc. to IEC 61000-4-4, Burst; ±2 kV acc. to IEC 61000-4-4, BurstInterference immunity on signal cables <30m	Temperature monitoring	Yes	
• FanNoEMCInterference immunity against discharge of static electricity±6 kV contact; ±8 kV air (to IEC 1000-4-2; ESD)• Interference immunity against high-frequency electrometric fields±6 kV contact; ±8 kV air (to IEC 1000-4-2; ESD)• Interference immunity against high-frequency electrometric fields10 V/m for 80 1 000 MHz, 80 % AM according to IEC 61000-4-3• Interference immunity against high frequency10 V/m for 80 1 000 MHz, 80 % AM according to IEC 61000-4-3• Interference immunity to cable-borne interference10 V/m for 80 1 000 MHz, 80 % AM according to IEC 61000-4-3• Interference immunity to cable-borne interference10 V/m for 80 1 000 MHz, 80 % AM according to IEC 61000-4-3• Interference immunity on supply cables±2 kV (according to IEC 61000-4-4, burst); ±1 kV (according to IEC 61000-4-5, surge pulse/line to ground)• Interference immunity on signal cables >30m±2 kV acc. to IEC 61000-4-4, burst; ±2 kV acc. to IEC 61000-4-5, surge• Interference immunity on signal cables < 30m	Watchdog	Yes	
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Interference immunity against discharge of static electricity • Interference immunity against discharge of static electricity Interference immunity against high-frequency electromagnetic fields • Interference immunity against high frequency radiation 10 V/m for 80 1 000 MHz, 80 % AM according to IEC 61000-4- 3; 3 V/m for 1.4 6 GHz, 80 % AM according to IEC 61000-4- 3; 3 V/m for 1.4 6 GHz, 80 % AM according to IEC 61000-4- 3; 2 kV (according to IEC 61000-4-4, burst); ±1 kV (according to IEC 61000-4-5, surge pulse/line to line); ±2 kV (according to IEC 61000-4-5, surge • Interference immunity on signal cables >30m ±2 kV acc. to IEC 61000-4-4, burst; ±2 kV acc. to IEC 61000-4-5, surge • Interference immunity on signal cables >30m ±1 kV acc. to IEC 61000-4-4, Burst Interference immunity against voltage surge ±2 kV acc. to IEC 61000-4-4, Burst	● Fan	No	
Interference immunity against discharge of static electricity • Interference immunity against discharge of static electricity Interference immunity against high-frequency electromagnetic fields • Interference immunity against high frequency radiation 10 V/m for 80 1 000 MHz, 80 % AM according to IEC 61000-4- 3; 3 V/m for 1.4 6 GHz, 80 % AM according to IEC 61000-4- 3; 3 V/m for 1.4 6 GHz, 80 % AM according to IEC 61000-4- 3; 2 kV (according to IEC 61000-4-4, burst); ±1 kV (according to IEC 61000-4-5, surge pulse/line to line); ±2 kV (according to IEC 61000-4-5, surge • Interference immunity on signal cables >30m ±2 kV acc. to IEC 61000-4-4, burst; ±2 kV acc. to IEC 61000-4-5, surge • Interference immunity on signal cables >30m ±1 kV acc. to IEC 61000-4-4, Burst Interference immunity against voltage surge ±2 kV acc. to IEC 61000-4-4, Burst	EMC		
• Interference immunity against discharge of static electricity ±6 kV contact; ±8 kV air (to IEC 1000-4-2; ESD) Interference immunity against high-frequency electromagnetic fields 10 V/m for 80 1 000 MHz, 80 % AM according to IEC 61000-4- 3; 3 V/m for 1.4 6 GHz, 80 % AM according to IEC 61000-4- 3; 3 V/m for 1.4 6 GHz, 80 % AM according to IEC 61000-4- 3; 3 V/m for 1.4 6 GHz, 80 % AM according to IEC 61000-4- 3; 3 V/m for 1.4 6 GHz, 80 % AM according to IEC 61000-4- 3; 3 V/m for 1.4 6 GHz, 80 % AM according to IEC 61000-4- 3; 3 V/m for 1.4 6 GHz, 80 % AM according to IEC 61000-4- 3; 3 V/m for 1.4 6 GHz, 80 % AM according to IEC 61000-4-3; 3; 2 kV (according to IEC 61000-4-5, surge pulse/line to line); ±2 kV (according to IEC 61000-4-5, surge pulse/line to ground) • Interference immunity on signal cables >30m ±2 kV acc. to IEC 61000-4-4, Burst; ±2 kV acc. to IEC 61000-4-5, surge • Interference immunity on signal cables < 30m		city	
static electricityInterference immunity against high-frequency electromagnetic fields• Interference immunity against high frequency radiation10 V/m for 80 1 000 MHz, 80 % AM according to IEC 61000-4- 3; 3 V/m for 1.4 6 GHz, 80 % AM according to IEC 61000-4-3Interference immunity to cable-borne interference±2 kV (according to IEC 61000-4-4, burst); ±1 kV (according to IEC 61000-4-5, surge pulse/line to line); ±2 kV (according to IEC 61000-4-5, surge pulse/line to ground)• Interference immunity on signal cables >30m±2 kV acc. to IEC 61000-4-4, burst; ±2 kV acc. to IEC 61000-4-5, surge urge• Interference immunity on signal cables >30m±1 kV acc. to IEC 61000-4-4, BurstInterference immunity against voltage surge±2 kV acc. to IEC 61000-4-5, surge asymmetric interference• symmetric interference±2 kV acc. to IEC 61000-4-5, surge asymmetric ±1 kV acc. to IEC 61000-4-5, surge symmetric		•	
 Interference immunity against high frequency radiation 10 V/m for 80 1 000 MHz, 80 % AM according to IEC 61000-4-3; 3 V/m for 1.4 6 GHz, 80 % AM according to IEC 61000-4-3 Interference immunity to cable-borne interference Interference immunity on supply cables ±2 kV (according to IEC 61000-4-4, burst); ±1 kV (according to IEC 61000-4-5, surge pulse/line to line); ±2 kV (according to IEC 61000-4-5, surge pulse/line to ground) Interference immunity on signal cables >30m ±2 kV acc. to IEC 61000-4-4, burst; ±2 kV acc. to IEC 61000-4-5, surge Interference immunity on signal cables < 30m ±1 kV acc. to IEC 61000-4-4, Burst Interference immunity against voltage surge asymmetric interference ±2 kV acc. to IEC 61000-4-5, surge asymmetric ±1 kV acc. to IEC 61000-4-5, surge symmetric 			
radiation3; 3 V/m for 1.4 6 GHz, 80 % AM according to IEC 61000-4-3Interference immunity to cable-borne interference±2 kV (according to IEC 61000-4-4, burst); ±1 kV (according to IEC 61000-4-5, surge pulse/line to line); ±2 kV (according to IEC 61000-4-5, surge pulse/line to line); ±2 kV (according to IEC 61000-4-5, surge pulse/line to ground)• Interference immunity on signal cables >30m±2 kV acc. to IEC 61000-4-4, burst; ±2 kV acc. to IEC 61000-4-5, surge• Interference immunity on signal cables >30m±1 kV acc. to IEC 61000-4-4, Burst; ±2 kV acc. to IEC 61000-4-5, surge• Interference immunity on signal cables < 30m	Interference immunity against high-frequency electromagnetic fields		
Interference immunity to cable-borne interference • Interference immunity on supply cables ±2 kV (according to IEC 61000-4-4, burst); ±1 kV (according to IEC 61000-4-5, surge pulse/line to line); ±2 kV (according to IEC 61000-4-5, surge pulse/line to ground) • Interference immunity on signal cables >30m ±2 kV acc. to IEC 61000-4-4, burst; ±2 kV acc. to IEC 61000-4-5, surge • Interference immunity on signal cables < 30m	 Interference immunity against high frequency 	10 V/m for 80 1 000 MHz, 80 % AM according to IEC 61000-4-	
 Interference immunity on supply cables ±2 kV (according to IEC 61000-4-4, burst); ±1 kV (according to IEC 61000-4-5, surge pulse/line to line); ±2 kV (according to IEC 61000-4-5, surge pulse/line to ground) Interference immunity on signal cables >30m ±2 kV acc. to IEC 61000-4-4, burst; ±2 kV acc. to IEC 61000-4-5, surge Interference immunity on signal cables < 30m ±1 kV acc. to IEC 61000-4-4, Burst Interference immunity against voltage surge asymmetric interference ±2 kV acc. to IEC 61000-4-5, surge asymmetric the vacc. to IEC 61000-4-5, surge symmetric the vacc. to IEC 61000-4-5, surge symmetric 	radiation	3; 3 V/m for 1.4 6 GHz, 80 % AM according to IEC 61000-4-3	
IEC 61000-4-5, surge pulse/line to line); ±2 kV (according to IEC 61000-4-5, surge pulse/line to ground)• Interference immunity on signal cables >30m±2 kV acc. to IEC 61000-4-4, burst; ±2 kV acc. to IEC 61000-4-5, surge• Interference immunity on signal cables < 30m	Interference immunity to cable-borne interference		
surge • Interference immunity on signal cables < 30m	 Interference immunity on supply cables 	IEC 61000-4-5, surge pulse/line to line); ±2 kV (according to IEC	
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 on signal cables >30m 		
• 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 on signal cables < 30m	±1 kV acc. to IEC 61000-4-4, Burst	
• symmetric interference ±1 kV acc. to IEC 61000-4-5, surge symmetric	Interference immunity against voltage surge		
	asymmetric interference	±2 kV acc. to IEC 61000-4-5, surge asymmetric	
Interference immunity to magnetic fields	symmetric interference	±1 kV acc. to IEC 61000-4-5, surge symmetric	

• Interference immunity to magnetic fields at 50

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Degree and class of protection	
IP (at the front)	IP65
IP (rear)	IP40
Standards, approvals, certificates	
CE mark	Yes
UL approval	Yes
cULus	Yes
RCM (formerly C-TICK)	Yes
EAC (formerly Gost-R)	Yes
FCC	Yes
Dust protection	Protection against foreign bodies > 1 mm
Ambient conditions	
Ambient temperature during operation	
 Ambient temperature during operation 	0 to +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)
Operating systems	
pre-installed operating system	Windows 10 Enterprise 2016 LTSB, 64 bit, MUI
pre-installed operating system	
 Windows 10 Enterprise 	Yes; Windows 10 IoT Enterprise 2016 LTSB, 64bit, MUI
Dimensions	
Width	472.6 mm
Height	296.8 mm
Depth	103 mm
last modified:	05/28/2020