## **SIEMENS**

Data sheet	6AG4140-5BL14-4PN0
	SIMATIC IPC427D (Microbox PC), HD graphic onboard, 2x10/100/1000 Mbit/s Ethernet RJ45, 4xUSB V3.0 (high current), PCIe (optional), 24 V DC power supply Core I3-3217UE; 1x Gbit Ethernet (IE/PN); 1x PROFINET (IRT, 3 ports); DIN rail mounting; 4 GB with NVRAM; 1x RS-232; 1x PCIE; WIN Embedded Standard 7, 32-bit CFast 16 GB, (possible with SW, if no internal mass storage); SSD 240 GB Standard (MLC); WinAC RTX F 2010 SP2
Installation type/mounting	
Mounting	DIN rail, wall mounting, portrait mounting
Design	Box PC, built-in unit
Supply voltage	
Type of supply voltage	24 V DC
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)
Graphic	
Graphics controller	Intel HD Graphics, Intel HD Graphics 4000
Drives	
Hard disk	2.5" SATA ≥ 320 GB
SSD	Yes; 1x 240 GB SSD, 1x 480 GB SSD
Memory	
Type of memory	DDR3 SO-DIMM
Main memory	2 / 4 / 8 GB; ECC optional
Capacity of main memory, max.	8 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; optional
Hardware configuration	
Slots	
• free slots	2x PCle; optional: 1x PCle (x4); 2x PCle (x1, x4), with card retainer
<ul> <li>Number of PCI slots</li> </ul>	2; Optional
<ul> <li>Number of compact flash slots</li> </ul>	2; CFast
Interfaces	
Number of PROFINET interfaces	1; 3 ports (incl. switch)

Connection for keyboard/mouse  serial interface  COM1: 1x RS 232, COM2 (optional): 1x RS 232  Video interfaces  • Graphics interface  1x DisplayPort and 1x DVI-I; 1x VGA via adapter cable (optional)  Industrial Ethernet  • Industrial Ethernet interface  Interface  Onboard, 2x 10/100/1 000 Mbit, RJ45, no plug-in card necessary  Yes  1000 Mbps  Yes  Interrupts/diagnostics/status information  Bus diagnostics  • Temperature monitoring  • Temperature monitoring  • Watchdog  • Status LEDs  • Fan  • Monitoring function via network  Optional  EMC  Interference immunity against discharge of static electricity  • Interference immunity against discharge of static electricity  • Interference immunity against high-frequency radiation  • Interference immunity against high frequency radiation  Interference immunity ocable-borne interference  • Interference immunity to cable-borne interference  • Interference immunity to supply cables  ± 2k V acc. to IEC 61000-4-4, burst; ±1 kV acc. to IEC 61000-4-5,	•	4x USB 3.0
Video interfaces  ● Graphics interface	Connection for keyboard/mouse	USB / USB
• Graphics interface  Ix DisplayPort and 1x DVI-I; 1x VGA via adapter cable (optional)  Industrial Ethernet  Industrial Ethernet interface  Industrial Ethernet interface inmunity adaption and incus interface industrial industrial necessary  Industrial Ethernet interface indus	·	COM1: 1x RS 232, COM2 (optional): 1x RS 232
Industrial Ethernet  Industrial Ethernet interface Industrial Ethernet interface Industrial Ethernet interface Interrupts/diagnostics/status information  Bus diagnostics  Integrated Functions  Monitoring functions  Integrated Functions  Monitoring functions  Interrupts/diagnostics/status information  Interrupts/diagnostics/status information  Bus diagnostics  Yes  Integrated Functions  Monitoring functions  Integrated Functions  Monitoring functions  Interpretature monitoring Yes  Yes  Interpretature monitoring Yes  Interpretative monitoring Int	Video interfaces	
Interrupts/diagnostics/status information  Bus diagnostics  Integrated Functions  Monitoring function via network  Interference immunity against high-frequency radiation  EMC  Interference immunity against high frequency radiation  Interference immunity against high frequency radiation  Interference immunity to cable-borne interference  Interference immunity to cable-borne interference  Interference immunity to signal cables < 30m  Interference immunity against labus < 30m  Interference immunity against cabus < 3 m; ±2 kV acc. to IEC 61000-4-3; surge, length > 3 m; ±2 kV acc. to IEC 61000-4-3; surge, length > 3 m; ±2 kV acc. to IEC 61000-4-3; surge, length > 3 m; ±2 kV acc. to IEC 61000-4-4; burst; length < 3 m; ±2 kV acc. to IEC 61000-4-4; burst; length < 3 m; ±2 kV acc. to IEC 61000-4-4; burst; length < 3 m; ±2 kV acc. to IEC 61000-4-4; burst; length < 3 m; ±2 kV acc. to IEC 61000-4-4; burst; length < 3 m; ±2 kV acc. to IEC 61000-4-4; burst; length < 3 m; ±2 kV acc. to IEC 61000-4-4; burst; length < 3 m; ±2 kV acc. to IEC 61000-4-4; burst; length < 3 m; ±2 kV acc. to IEC 61000-4-4; burst; length < 3 m; ±2 kV acc. to IEC 61000-4-4; burst; length < 3 m; ±2 kV acc. to IEC 61000-4-4; burst; length < 3 m; ±2 kV acc. to IEC 61000-4-4; burst; length < 3 m; ±2 kV acc. to IEC 61000-4-5; burst; length < 3 m; ±2 kV acc. to IEC 61000-4-4; burst; length < 3 m; ±2 kV acc. to IEC 61000-4-4; burst; length < 3 m; ±2 kV acc. to IEC 61000-4-4; burst; length < 3 m; ±2 kV acc. to IEC 61000-4-4; burst; length < 3 m; ±2 kV acc. to IEC 61000-4-4; burst; length < 3 m; ±2 kV acc. to IEC 61000-4-4; burst; length < 3 m; ±2 kV acc. to IEC 61000-4-4; burst; length < 3 m; ±2 kV acc. to IEC 61000-4-4; burst; length < 3 m; ±2 kV acc. to IEC 61000-4-4; burst; length < 3 m; ±2 kV acc. to IEC 61000-4-4; burst; length < 3 m; ±2 kV acc. to IEC 61000-4-4; burst; length < 3 m; ±2 kV acc. to IEC 61000-4-4; burst; length < 3 m; ±2 kV acc. to IEC 61000-4-4; burst; length < 3 m; ±2 kV acc. to IEC 61000-4-4; burst; length < 3 m; ±2 kV acc. to IEC 61000	Graphics interface	1x DisplayPort and 1x DVI-I; 1x VGA via adapter cable (optional)
	Industrial Ethernet	
Interrupts/diagnostics/status information  Bus diagnostics Yes  Integrated Functions  Monitoring functions  • Temperature monitoring • Watchdog • Status LEDs • Fan • Monitoring function via network  • Monitoring function via network  • Optional  EMC  Interference immunity against discharge of static electricity • Interference immunity against discharge of static electricity  • Interference immunity against discharge of static electricity  • Interference immunity against high-frequency electromagnetic fields • Interference immunity on supply cables  • Interference immunity to cable-borne interference • Interference immunity on supply cables  12 kV acc. to IEC 61000-4-5, surge, length > 30 m  12 kV acc. to IEC 61000-4-5, surge, length > 30 m  14 kV acc. to IEC 61000-4-4; burst; length < 3 m; ±2 kV acc. to	Industrial Ethernet interface	Onboard, 2x 10/100/1 000 Mbit, RJ45, no plug-in card necessary
Integrated Functions  Monitoring functions  • Temperature monitoring • Watchdog • Status LEDs • Fan • Monitoring function via network   Pem  Interference immunity against discharge of static electricity • Interference immunity against high-frequency electromagnetic fields • Interference immunity against high-frequency electromagnetic fields • Interference immunity against high frequency radiation  Interference immunity to cable-borne interference • Interference immunity to supply cables  Interference immunity on signal cables > 30m • Interference immunity on signal cables < 30m	— 100 Mbps	Yes
Bus diagnostics    Nonitoring functions	— 1000 Mbps	Yes
Integrated Functions  Monitoring functions  • Temperature monitoring • Watchdog • Status LEDs • Fan • Monitoring function via network  Pres • Fan • Monitoring function via network  Doptional  EMC  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 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 61000-4-5 Interference immunity on supply cables  12 kV acc. to IEC 61000-4-4, burst; ±1 kV acc. to IEC 61000-4-5, surge asymmetric; ±2 kV acc. to IEC 61000-4-5, surge asymmetric; ±2 kV acc. to IEC 61000-4-5, surge, length > 30 m  • Interference immunity on signal cables < 30m  • Interference immunity on signal cables < 30m		
<ul> <li>◆ Temperature monitoring</li> <li>◆ Watchdog</li> <li>◆ Status LEDs</li> <li>◆ Fan</li> <li>◆ Monitoring function via network</li> <li>◆ Optional</li> <li>EMC</li> <li>Interference immunity against discharge of static electricity</li> <li>◆ Interference immunity against discharge of static electricity</li> <li>◆ Interference immunity against high-frequency electromagnetic fields</li> <li>◆ Interference immunity against high frequency radiation</li> <li>Interference immunity to cable-borne interference</li> <li>◆ Interference immunity to signal cables &gt; 30m</li> <li>◆ Interference immunity on signal cables &lt; 30m</li> <li>◆ Interference immunity on signal cables &lt; 30m</li> <li>★ Ves</li> <li>★ Ves</li></ul>	Bus diagnostics	Yes
Temperature monitoring  Watchdog  Status LEDs  Fan  Mo  Optional   EMC  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  Interference immunity against high frequency  Interference immunity or able-borne interference  Interference immunity to cable-borne interference  Interference immunity on signal cables > 30m  Interference immunity on signal cables < 30m	Integrated Functions	
Watchdog Status LEDs Status LEDs Fan No Optional   EMC  Interference immunity against discharge of static electricity 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 electromagnetic fields Interference immunity against high frequency In	Monitoring functions	
<ul> <li>Status LEDs</li> <li>Fan</li> <li>Monitoring function via network</li> <li>Optional</li> <li>EMC</li> <li>Interference immunity against discharge of static electricity</li> <li>Interference immunity against discharge of static electricity</li> <li>Interference immunity against discharge of static electricity</li> <li>Interference immunity against high-frequency electromagnetic fields</li> <li>Interference immunity against high-frequency electromagnetic fields</li> <li>Interference immunity against high frequency radiation</li> <li>Interference immunity to cable-borne interference</li> <li>Interference immunity to cable-borne interference</li> <li>Interference immunity on supply cables</li> <li>Interference immunity on signal cables &gt; 30m</li> <li>Interference immunity on signal cables &lt; 30m</li> <li>Interference immunity on signal cables &lt; 30m</li> <li>Interference immunity on signal cables &lt; 30m</li> </ul>	Temperature monitoring	Yes
Fan     Monitoring function via network      Optional  EMC  Interference immunity against discharge of static electricity      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      Interference immunity against high frequency radiation      Interference immunity to cable-borne interference      Interference immunity on supply cables      Interference immunity on signal cables > 30m      Interference immunity on signal cables < 30m  Interference immunity on signal cables < 30m  Interference immunity on signal cables < 30m  Interference immunity on signal cables < 30m  Interference immunity on signal cables < 30m  Interference immunity on signal cables < 30m  Interference immunity on signal cables < 30m	Watchdog	Yes
Monitoring function via network  Optional  Interference immunity against discharge of static electricity  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  Interference immunity to cable-borne interference  Interference immunity to cable-borne interference  Interference immunity on supply cables  Interference immunity on signal cables > 30m  Interference immunity on signal cables < 30m	Status LEDs	Yes
Interference immunity against discharge of static electricity  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  Interference immunity to cable-borne interference  Interference immunity to cable-borne interference  Interference immunity on supply cables  Interference immunity on signal cables > 30m  Interference immunity on signal cables < 30m	• Fan	No
Interference immunity against discharge of static electricity  Interference immunity against discharge of static electricity  ### Ed 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  Interference immunity against high frequency against high frequency radiation  Interference immunity to cable-borne interference  Interference immunity to cable-borne interference  Interference immunity on supply cables  Interference immunity on signal cables > 30m  Interference immunity on signal cables < 30m	Monitoring function via network	Optional
<ul> <li>Interference immunity against discharge of static electricity</li> <li>Interference immunity against high-frequency electromagnetic fields</li> <li>Interference immunity against high frequency radiation</li> <li>Interference immunity against high frequency radiation</li> <li>Interference immunity to cable-borne interference</li> <li>Interference immunity to cable-borne interference</li> <li>Interference immunity on supply cables</li> <li>Interference immunity on signal cables &gt; 30m</li> <li>Interference immunity on signal cables &lt; 30m</li> </ul>	EMC	
Interference immunity against high-frequency electromagnetic fields  • Interference immunity against high frequency radiation  10 V/m for 80 - 1 000 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 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  • Interference immunity on signal cables < 30m  ±1 kV acc. to IEC 61000-4-4; burst; length < 3 m; ±2 kV acc. to	Interference immunity against discharge of static electric	city
<ul> <li>Interference immunity against high frequency radiation</li> <li>10 V/m for 80 - 1 000 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</li> <li>Interference immunity to cable-borne interference</li> <li>Interference immunity on supply cables</li> <li>±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</li> <li>Interference immunity on signal cables &gt; 30m</li> <li>Interference immunity on signal cables &lt; 30m</li> <li>±1 kV acc. to IEC 61000-4-4; burst; length &lt; 3 m; ±2 kV acc. to</li> </ul>		
radiation  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 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  • Interference immunity on signal cables < 30m  ±1 kV acc. to IEC 61000-4-4; burst; length < 3 m; ±2 kV acc. to	Interference immunity against high-frequency electroma	agnetic fields
<ul> <li>Interference immunity on supply cables</li> <li>±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</li> <li>Interference immunity on signal cables &gt; 30m</li> <li>Interference immunity on signal cables &lt; 30m</li> <li>±1 kV acc. to IEC 61000-4-4; burst; length &lt; 3 m; ±2 kV acc. to</li> </ul>		61000-4-3; 3 V/m for 2 - 2.7 GHz, 80% AM acc. to IEC 61000-4-3;
<ul> <li>surge symmetric; ±2 kV acc. to IEC 61000-4-5, surge asymmetric</li> <li>Interference immunity on signal cables &gt;30m</li> <li>Interference immunity on signal cables &lt; 30m</li> <li>±2 kV acc. to IEC 61000-4-5, surge, length &gt; 30 m</li> <li>±1 kV acc. to IEC 61000-4-4; burst; length &lt; 3 m; ±2 kV acc. to</li> </ul>	Interference immunity to cable-borne interference	
• Interference immunity on signal cables < 30m ±1 kV acc. to IEC 61000-4-4; burst; length < 3 m; ±2 kV acc. to	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
	<ul><li>Interference immunity on signal cables &gt;30m</li></ul>	±2 kV acc. to IEC 61000-4-5, surge, length > 30 m
	<ul> <li>Interference immunity on signal cables &lt; 30m</li> </ul>	
Interference immunity against voltage surge	Interference immunity against voltage surge	
asymmetric interference	asymmetric interference	±2 kV acc. to IEC 61000-4-5, surge asymmetric
• symmetric interference ±1 kV acc. to IEC 61000-4-5, surge symmetric	• symmetric interference	±1 kV acc. to IEC 61000-4-5, surge symmetric
Interference immunity to magnetic fields	Interference immunity to magnetic fields	
<ul> <li>Interference immunity to magnetic fields at 50</li> <li>Hz</li> <li>100 A/m; to IEC 61000-4-8</li> </ul>		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	Emission of conducted and non-conducted interference	
Degree and class of protection	Interference emission via line/AC current	EN 61000-6-3, EN 61000-6-4, CISPR 22 Class B, FCC Class A

IP (at the front)	IP20
IP (rear)	IP20
Standards, approvals, certificates	
CE mark	Yes; CE marking / EC Declaration of Conformity
UL approval	Yes
• UL 508	Yes
cULus	Yes
RCM (formerly C-TICK)	Yes
KC approval	Yes
FCC	Yes
EMC	CE, EN 55022A, EN 61000-6-4, EN 61000-6-2
Use in hazardous areas	
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
<ul><li>American Bureau of Shipping (ABS)</li></ul>	Yes
Bureau Veritas (BV)	Yes
<ul><li>Det Norske Veritas (DNV)</li></ul>	Yes
<ul> <li>Korean Register of Shipping (KRS)</li> </ul>	Yes
<ul> <li>Lloyds Register of Shipping (LRS)</li> </ul>	Yes
• Nippon Kaiji Kyokai (Class NK)	Yes
Ambient conditions	
Ambient temperature during operation	
Ambient temperature during operation	0 °C up to 55 °C
Ambient temperature during storage/transportation	
• min.	-40 °C
• max.	70 °C
Operating systems	
pre-installed operating system	Windows 7 Ultimate (Multi-Language) 32-bit / 64-bit, Windows Embedded Standard 7 E/P 32-bit / 64-bit
without operating system	Yes; Optional
pre-installed operating system	
• Windows 7	Yes; Ultimate 32 bit or 64 bit
Dimensions	
Width	262 mm
Height	139.7 mm
Depth	50.5 mm
last modified:	03/17/2020