SIEMENS

Data sheet

6AG4141-5CB57-0FA0

SIMATIC IPC427E (Microbox PC), HD graphic onboard, 4x USB V3.0 (high current), PCIE (optional), Core i5-6442EQ; 3x Gbit Ethernet (IE/PN); Wall mounting; 8 GB; 2x RS232/485; 2x PCIe (x4 and x1); Windows 10 IoT Enterprise 2016 LTSB (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

Product type designation [Installation type/mounting] Mounting Design Box PC, bull-in unit Supply voltage Type of supply voltage Type of supply voltage All and an analysis of supply voltage Type of supply voltage Mains buffering Mains memory Type of memory Type of memory Main memory Main Main Mains Main	General information	
Mounting	Product type designation	IPC427E
Box PC, built-in unit	Installation type/mounting	
Supply voltage 24 V DC	Mounting	DIN rail, wall mounting, portrait mounting
Type of supply voltage Mains buffering Mains voltage failure stored energy time Mains voltage failure stored energy time Mains voltage failure stored energy time Processor Processor type Celeron G3902 (2C/2T, 1.8 GHz, 2.MB Cache), Core i3.6102E (2C/4T, 1.9 GHz, 3.MB Cache, i3.MB Cac	Design	Box PC, built-in unit
Mains buffering	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); Xiene B3-1505L v5 (4C/8T, 2.0 (2.8) GHz, 8 MB Cache, iAMT) Chipset Intel C386 / Intel H110 Graphic Graphic sontroller Drives Intel HD graphics controller B3SD Yes; 128 / 240 / 480 GB Memory DDR4-2400 SO-DIMM 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 Sitots • Fee slots 2x PCle; optional: 1x PCle (x4); 2x PCle (x1, x4), with card retainer • Number of PCI slots 2; Optional • Number of compact flash slots 1; CFast Interfaces 3; Ethernet (2x RJ45, optional 3x RJ45) Video interfaces 4x USB 3.0 • Craphics interface 2x DisplayPort Industrial Ethernet 4x USB 3.0 • Craphics interface 2x DisplayPort <tr< td=""><td>Type of supply voltage</td><td>24 V DC</td></tr<>	Type of supply voltage	24 V DC
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 GHz, 3 MB Cache); Core i3-642EC0 (4C/4T, 1.9 (2.7) GHz, 6 MB Cache, iAMT); Xeon E3-15005L V5 (4C/8T, 2.0 (2.8) GHz, 8 MB Cache, iAMT) Chipset	Mains buffering	
Processor type	 Mains/voltage failure stored energy time 	20 ms
GHz, 3 MB Cache; Core IF-6442EQ (4C/4T, 1.9 (2.7) GHz, 6 MB Cache, IAMT); Chipset Intel C236 / Intel H110	Processor	
Intel HD graphics controller	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 Hard disk 2.5" SATA ≥ 320 GB SSD Yes; 128 / 240 / 480 GB Memory DR4-2400 SO-DIMM Main memory 4 / 8 / 16 GB, ECC optional Capacity of main memory, max. 16 Gbyte Data areas and their retentivity Fee ECC optional 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 2 x PCIe; optional: 1x PCIe (x4); 2x PCIe (x1, x4), with card retainer § Number of PCI slots 2; Optional § Number of compact flash slots 1; CFast Interfaces 3; Ethernet (2x RJ45, optional 3x RJ45) USB port 4x USB 3.0 Connection for keyboard/mouse USB / USB serial interface Without / 2x COM (RS 232 / 485 / 422; switchable) Video interfaces 3x Ethernet (RJ45) § Graphics interface 3x Ethernet (RJ45) § Free flowing interface 3x Ethernet (RJ45) § Free flowing interface 3x Ethernet (RJ45) § Free flow	Chipset	Intel C236 / Intel H110
Brid disk 2.5° SATA ≥ 320 GB SSD Yes; 128 / 240 / 480 GB Memory Type of memory DDR4-2400 SO-DIMM Main memory 4 / 8 / 16 GB, ECC optional Capacity of main memory, max. 16 Gbyte Data arosa and their rotentivity 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 PCIe; optional: 1x PCIe (x4); 2x PCIe (x1, x4), with card retainer • Number of PCI slots 2; Optional • Number of compact flash slots 1; CFast Interfaces Number of industrial Ethernet interfaces 3; Ethernet (2x RJ45, optional 3x RJ45) USB port 4x USB 3.0 Connection for keyboard/mouse USB / USB serial interface Without / 2x COM (RS 232 / 485 / 422; switchable) Video interfaces • Graphics interface Industrial Ethernet interface 3x Ethernet (RJ45) — 100 Mbps Yes — 100 Mbps Yes Interpretations Monitoring functions Monitoring functions Monitoring functions Ves • Vaschdog Yes	Graphic	
Hard disk 2.5" SATA ≥ 320 GB	Graphics controller	Intel HD graphics controller
SSD Yes; 128 / 240 / 480 GB	Drives	
Type of memory Type of memory 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. 15 12 kbyte; 128 KB can be stored in the buffer time; optional Hardware configuration Slots • free slots • Number of PCI slots • Number of compact flash slots interfaces Number of industrial Ethernet interfaces USB port 4x USB 3.0 Connection for keyboard/mouse serial interface Without / 2x COM (RS 232 / 485 / 422; switchable) Video interface • Industrial Ethernet interface a Xx Ethernet (RJ45) — 100 Mbps — 1000 Mbps — 1000 Mbps — Yes Interrupts/diagnostics/status information Bus diagnostics Fundantian in the buffer time; optional 4 x IS KB can be stored in the buffer time; optional 5 x Ethernet (2x RJ45, 2x PCIe (x1, x4), with card retainer 4 x USB 3.0 2 x PCIe; optional: 1x PCIe (x4); 2x PCIe (x1, x4), with card retainer 4 x USB 3.0 USB / USB Serial interface 9 (3x Ethernet (2x RJ45, optional 3x RJ45) Video interface • Graphics interface 1 x USB 3.0 2 x DisplayPort Industrial Ethernet interface 1 x Ethernet (RJ45) — 100 Mbps — 1000 Mbps — 2 x USB / 485 / 422; switchable Interrupts/diagnostics/status information Bus diagnostics Yes Interrupts/diagnostics/status information Bus diagnostics Yes Interrupts/diagnostics/status information Fundational intervention interventio	Hard disk	2.5" SATA ≥ 320 GB
Type of memory Main memory 4 / 8 / 16 GB, ECC optional Capacity of main memory, max. Data areas and their retentivity Retentive data area (incl. timers, counters, flags), max. Hardware configuration Slots • free slots • Number of PCI slots • Number of compact flash slots Interfaces Number of industrial Ethernet interfaces USB / USB Seral interface • Graphics interface • Graphics interface • Industrial Ethernet interface • Industrial Ethernet interface • Industrial Ethernet interface • Graphics interface • Graphics interface • Industrial Ethernet interface • Industrial Ethernet interface • Graphics interface • Graphics interface • Industrial Ethernet interface • Industrial Ethernet interface • Industrial Ethernet interface • Industrial Ethernet interface • Graphics interface • Industrial Ethernet interface • Yes — 1000 Mbps — Yes Interrupts/diagnostics/status information Bus diagnostics • Temperature monitoring • Yes • Watchdog • Watchdog • Watchdog • Watchdog • Watchdog	SSD	Yes; 128 / 240 / 480 GB
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; optional Hardware configuration Slots • free slots • Number of PCI slots • Number of Compact flash slots 1; CFast Interfaces Number of industrial Ethernet interfaces 3; Ethernet (2x RJ45, optional 3x RJ45) USB port 4x USB 3.0 Connection for keyboard/mouse USB / USB serial interface • Graphics interface • Graphics interface 1 Industrial Ethernet • Industrial Ethernet interface and the first of	Memory	
Capacity of main memory, max. Data areas and their retentivity Retentive data area (incl. timers, counters, flags), max. Hardware configuration Slots • free slots • Number of PCI slots • Number of compact flash slots Interfaces Number of industrial Ethernet interfaces USB port Connection for keyboard/mouse serial interface • Graphics interface • Graphics interface • Industrial Ethernet interface • Graphics interface • Graphics interface • Industrial Ethernet interface • Graphics interface • Graphics interface • Industrial Ethernet interface • Graphics interface • Graphics interface • Industrial Ethernet interface • Graphics interface • Graphics interface • Industrial Ethernet interface • Yes Interrupts/diagnostics/status information Bus diagnostics • Yes Integrated Functions • Temperature monitoring • Yes • Watchdog • Watchdog	Type of memory	DDR4-2400 SO-DIMM
Retentive data area (incl. timers, counters, flags), max. Hardware configuration Slots • free slots • Number of PCI slots • Number of compact flash slots Interfaces Number of industrial Ethernet interfaces USB port Connection for keyboard/mouse serial interface • Graphics interface • Industrial Ethernet interface • JuspyPort Industrial Ethernet interface • Graphics interface • Industrial Ethernet interface • Outpy Symbol Symbol • Graphics interface • Industrial Ethernet inte	Main memory	4 / 8 / 16 GB, ECC optional
Retentive data area (incl. timers, counters, flags), max. Hardware configuration	Capacity of main memory, max.	16 Gbyte
Hardware configuration Slots • free slots • Number of PCI slots • Number of compact flash slots Interfaces Number of industrial Ethernet interfaces USB port Connection for keyboard/mouse serial interface • Graphics interface • Industrial Ethernet interface • Sy Ethernet (2x RJ45, optional 3x RJ45) USB / USB serial interface Without / 2x COM (RS 232 / 485 / 422; switchable) Video interfaces • Graphics interface • Industrial Ethernet • Industrial Ethernet interface - 100 Mbps - Yes - 100 Mbps - 100 Mbps - Yes - 100 Mbps - 100 Mbps - Yes Interrupts/diagnostics/status information Bus diagnostics Integrated Functions Monitoring functions • Temperature monitoring - Yes - Watchdog - Watchdog - Yes - Watchdog - Yes	Data areas and their retentivity	
Slots • free slots • free slots • Number of PCI slots • Number of compact flash slots 1; CFast Interfaces Number of industrial Ethernet interfaces USB port Connection for keyboard/mouse serial interface • Graphics interface • Industrial Ethernet interface • Graphics interface • Industrial Ethernet interface • Industr	Retentive data area (incl. timers, counters, flags), max.	512 kbyte; 128 KB can be stored in the buffer time; optional
free slots	Hardware configuration	
Number of PCI slots Number of compact flash slots 1; CFast Interfaces Number of industrial Ethernet interfaces 3; Ethernet (2x RJ45, optional 3x RJ45) USB port 4x USB 3.0 Connection for keyboard/mouse USB / USB serial interface Without / 2x COM (RS 232 / 485 / 422; switchable) Video interfaces Graphics interface 2x DisplayPort Industrial Ethernet Industrial Ethernet Industrial Ethernet interface A 3x Ethernet (RJ45) Yes — 100 Mbps Yes — 100 Mbps Yes Interrupts/diagnostics/status information Bus diagnostics Yes Integrated Functions Monitoring functions Temperature monitoring Yes Watchdog Yes	Slots	
Interfaces Number of industrial Ethernet interfaces Serial interface Oraphics interface Oraphics interface Industrial Ethernet Industrial Ethernet interface Industrial Ethernet Industrial Ethernet interface Interrupts/diagnostics/status information Bus diagnostics Yes Integrated Functions Monitoring functions I remperature monitoring Yes Valchdog Yes	• free slots	2x PCle; optional: 1x PCle (x4); 2x PCle (x1, x4), with card retainer
Interfaces Number of industrial Ethernet interfaces USB port 4x USB 3.0 Connection for keyboard/mouse USB / USB serial interface Without / 2x COM (RS 232 / 485 / 422; switchable) Video interfaces Graphics interface Industrial Ethernet Industrial Ethernet interface Industrial Ethernet interface Industrial Ethernet interface - 100 Mbps - 100 Mbps Yes - 1000 Mbps Yes Interrupts/diagnostics/status information Bus diagnostics Yes Integrated Functions Monitoring functions Temperature monitoring Yes Without / 2x COM (RS 232 / 485 / 422; switchable) Video interface 2x DisplayPort Ax Ethernet (RJ45) Yes Yes Interrupts/diagnostics/status information Yes Yes Integrated Functions Yes Valchdog Yes	 Number of PCI slots 	2; Optional
Number of industrial Ethernet interfaces USB port 4x USB 3.0 Connection for keyboard/mouse USB / USB serial interface Without / 2x COM (RS 232 / 485 / 422; switchable) Video interfaces • Graphics interface Industrial Ethernet • Industrial Ethernet interface - 100 Mbps - 100 Mbps Yes - 100 Mbps Yes Interrupts/diagnostics/status information Bus diagnostics Yes Integrated Functions Monitoring functions • Temperature monitoring • Watchdog Yes • Watchdog	Number of compact flash slots	1; CFast
USB port Connection for keyboard/mouse USB / USB serial interface Without / 2x COM (RS 232 / 485 / 422; switchable) Video interfaces Graphics interface Industrial Ethernet Industrial Ethernet interface Industrial Ethernet interface Industrial Ethernet interface Industrial Ethernet interface Yes - 100 Mbps Yes Interrupts/diagnostics/status information Bus diagnostics Yes Integrated Functions Monitoring functions Temperature monitoring Yes Watchdog Yes	Interfaces	
Connection for keyboard/mouse serial interface Without / 2x COM (RS 232 / 485 / 422; switchable) Video interfaces Graphics interface Industrial Ethernet Industrial Ethernet interface Industrial Ethernet interface - 100 Mbps - 100 Mbps Yes Interrupts/diagnostics/status information Bus diagnostics Yes Integrated Functions Monitoring functions Temperature monitoring Watchdog Yes	Number of industrial Ethernet interfaces	3; Ethernet (2x RJ45, optional 3x RJ45)
serial interface Video interfaces Graphics interface Industrial Ethernet Industrial Ethernet interface Yes Interrupts/diagnostics/status information Bus diagnostics Yes Integrated Functions Monitoring functions Temperature monitoring Yes Watchdog Yes	USB port	4x USB 3.0
Video interfaces ● Graphics interface 2x DisplayPort Industrial Ethernet ● Industrial Ethernet interface 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	Connection for keyboard/mouse	USB / USB
Graphics interface Industrial Ethernet Industrial Ethernet interface Industrial Ethernet Industrial	serial interface	Without / 2x COM (RS 232 / 485 / 422; switchable)
Industrial Ethernet Industrial Ethernet interface Industrial Ethernet I	Video interfaces	
 Industrial Ethernet interface 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 	Graphics interface	2x DisplayPort
 — 100 Mbps — 1000 Mbps Yes Interrupts/diagnostics/status information Bus diagnostics Integrated Functions Monitoring functions ● Temperature monitoring ● Watchdog Yes 		
— 1000 Mbps Yes Interrupts/diagnostics/status information Bus diagnostics Yes Integrated Functions Monitoring functions ● Temperature monitoring Yes ● Watchdog Yes	Industrial Ethernet interface	3x Ethernet (RJ45)
Interrupts/diagnostics/status information Bus diagnostics Yes Integrated Functions Monitoring functions • Temperature monitoring Yes • Watchdog Yes	•	Yes
Bus diagnostics Integrated Functions Monitoring functions • Temperature monitoring • Watchdog Yes	·	Yes
Integrated Functions Monitoring functions • Temperature monitoring Yes • Watchdog Yes	Interrupts/diagnostics/status information	
Monitoring functions • Temperature monitoring Yes • Watchdog Yes		Yes
 Temperature monitoring Watchdog Yes 	Integrated Functions	
• Watchdog Yes	Monitoring functions	
	Temperature monitoring	Yes
• Status LEDs 1x power, 3x user	Watchdog	Yes
	Status LEDs	1x power, 3x user

● 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 field	s
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 	±2 kV acc. to IEC 61000-4-5, surge, length > 30 m
● Interference immunity on signal cables < 30m	\pm 1 kV acc. to IEC 61000-4-4; burst; length < 3 m; \pm 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 degree of protection	IP20
Standards, approvals, certificates	
CE mark	Yes
UL approval	Yes
• UL 508	Yes
cULus	Yes
RCM (formerly C-TICK)	Yes
KC approval	Yes
EAC (formerly Gost-R)	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
 American Bureau of Shipping (ABS) 	Yes
Bureau Veritas (BV)	Yes
 Det Norske Veritas (DNV) 	Yes
 Korean Register of Shipping (KRS) 	Yes
 Lloyds Register of Shipping (LRS) 	Yes
 Nippon Kaiji Kyokai (Class NK) 	Yes
Ambient conditions	
Ambient temperature during operation	
• min.	0 °C
• max.	55 °C
Ambient temperature during storage/transportation	
• min.	-40 °C
• max.	70 °C
Relative humidity	
Relative humidity	Tested according to IEC 60068-2-78, IEC 60068-2-30: Operation: 5% to 80% a 25 $^{\circ}$ C (no condensation), Storage: 5% to 95% at 25 $^{\circ}$ C (no condensation)
Vibrations	
Vibration resistance during operation acc. to IEC 60068-	tested to DIN IEC 60068-2-6: 10 Hz to 58 Hz: 0.075 mm, 58 Hz to 200 Hz: 9.8
2-6	m/s^2 (1 g)
	m/s² (1 g)

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 32 bit or 64 bit
 Windows 10 Enterprise 	Yes; Windows 10 Enterprise 2016 LTSB, 64 bit, MUI
Software	
SIMATIC Software	Optionally with pre-installed SIMATIC WinCC RT Advanced / Software Controller CPU 1500S software bundle
Dimensions	
Width	262 mm
Height	139.7 mm
Depth	55.5 mm

last modified: