SIEMENS

Data sheet

6AG4141-5DC57-0FA0

SIMATIC IPC427E (Microbox PC), HD graphic onboard, 4x USB V3.0 (high current), PCIE (optional), Core i5-6442EQ; 3x Gbit Ethernet (IE/PN); Vertical mounting; 16 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 Disign Design Box PC, built-in unit Supply voltage Type of supply voltage Type of supply voltage Type of supply voltage Alians-voltage failure stored energy time Mains buffering Mains description Celeron G3902 (2CZT. 1.6 GHz, 2 MB Cache), Core I3-6102E (2C/4T, 1.9 GHz, 3 MB Cache), IAMT), Xeon E3-5105E, vol (4C/8T, 2.0 (2.8) GHz, 8 MB Cache, IAMT) Chipset Chipset Craphics Graphics controller Dirives West of Mains Ma	General information	
Mounting	Product type designation	IPC427E
Box PC, built-in unit	Installation type/mounting	
Type of supply voltage	Mounting	DIN rail, wall mounting, portrait mounting
Type of supply voltage	Design	Box PC, built-in unit
Mains buffering 20 ms	Supply voltage	
Mains/voltage failure stored energy time 20 ms	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 i3-642EQ (4C/4T, 1.9 (2.7) GHz, 6 MB Cache, i4MT); Xeon E3-1500E (4C/4T, 1.9 (2.7) GHz, 6 MB Cache, i4MT) 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 Graphic Graphics controller Intel HD graphics controller Drives Hard disk 2.5° SATA ≥ 320 GB SSD Yes; 128 / 240 / 480 GB Memory Type of memory DRA-2400 SC-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. 15 Exbyte; 128 KB can be stored in the buffer time; optional Hardware configuration Slots 1 ree slots Number of PCI slots Number of compact flash slots 1; CFast Interfaces Number of compact flash slots 1; CFast Interfaces Number of industrial Ethernet interfaces USB / USB serial interface Without / 2x COM (RS 232 / 485 / 422; switchable) Video interfaces • Graphics interface Industrial Ethernet Industrial Ethernet interface Yes "Yes "Yes "Yes Interpature monitoring Yes Watchdog Yes	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 Retentive data area (incl. timers, counters, flags), max. 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 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 2x DisplayPort Industrial Ethernet interface 3x Ethernet (RJ45) - 100 Mbps Yes - 1000 Mbps Yes - 1000 Mbps Yes	Chipset	Intel C236 / Intel H110
Drives	Graphic	
Hard disk 2.5" SATA ≥ 320 GB	Graphics controller	Intel HD graphics controller
SSD Yes; 128 / 240 / 480 GB Memory	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 1; CFast Interfaces Number of industrial Ethernet interfaces USB port 4x USB 3.0 Connection for keyboard/mouse serial interface Video interface • Graphics interface • Industrial Ethernet • Industrial Ethernet • Industrial Ethernet • Industrial Ethernet • Industrial Ethernet • Industrial Ethernet • Industrial Ethernet • Industrial Ethernet • Industrial Ethernet • Industrial Ethernet • Industrial Ethernet • Industrial Ethernet • Industrial Ethernet • Industrial Ethernet • Industrial Ethernet • Industrial Ethernet interface — 1000 Mbps — 1000 Mbps — Yes Interrupts/diagnostics/status information Bus diagnostics Monitoring functions Monitoring functions Monitoring functions • Temperature monitoring • Yes • Watchdog • Watchdog	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 El slots • Number of industrial Ethernet interfaces Number of industrial Ethernet interfaces USB / USB Seral interface • Graphics interface • Graphics interface Industrial Ethernet interface • Industrial Ethernet interface • Graphics interface • Graphics interface Industrial Ethernet interface • Graphics interface • Graphics interface • Industrial Ethernet interface • Industrial Ethernet interface • Industrial Ethernet interface • Graphics interface • Graphics interface • Industrial Ethernet interface • Interrupts/diagnostics/status information Bus diagnostics • Temperature monitoring • Temperature monitoring • Temperature monitoring • Watchdog • Watchdog • Watchdog	SSD	Yes; 128 / 240 / 480 GB
Main memory Capacity of main memory, max. Data areas and their retentivity Retentive data area (incl. timers, counters, flags), max. 16 Gbyte Pathematical area (incl. timers, counters, flags), max. 17 kbyte; 128 KB can be stored in the buffer time; optional Hardware configuration Siots 1 free slots 1 cy PCIe; optional: 1x PCIe (x4); 2x PCIe (x1, x4), with card retainer Number of PCI slots 1 cy PCast Number of compact flash slots 1; CFast Interfaces Number of industrial Ethernet interfaces 2 size interface Without / 2x COM (RS 232 / 485 / 422; switchable) Video interfaces Graphics interface 2 x DisplayPort Industrial Ethernet Industrial Ethernet interface 3 x Ethernet (RJ45) - 100 Mbps - 100	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 • Industrial Ethernet • Industrial Ethernet • Industrial Ethernet • Industrial Ethernet interface • Sx Ethernet (2x RJ45, optional 3x RJ45) USB yos video interfaces • Graphics interface • UsB / USB serial interface • Graphics interface • Industrial Ethernet • Industrial Ethernet interface • Josephysolate (RJ45) - 100 Mbps - 100 Mbps - 100 Mbps - Yes Interrupts/diagnostics/status information Bus diagnostics/status information Bus diagnostics • Temperature monitoring • Yes • 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 • Output • Output • Output • Output • Number of industrial Ethernet interfaces USB port Connection for keyboard/mouse serial interface • Without / 2x COM (RS 232 / 485 / 422; switchable) Video interfaces • Industrial Ethernet interface • Yes Interrupts/diagnostics/status information Bus diagnostics • Yes Interrupts/Industrial Ethernet interface Industrial Ethernet interface Industrial Ethernet interface Industrial Etherne	Main memory	4 / 8 / 16 GB, ECC optional
Retentive data area (incl. timers, counters, flags), max. Flace (incl. timers, counters, flags), max. Flace (incl. timers, counters, flags), max. Free slots Free slots Free slots Fire (incl. timers) Fire (incl. t	Capacity of main memory, max.	16 Gbyte
Hardware configuration Slots	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 • Industrial Ethernet interface • Graphics interface • Industrial Ethernet interface • Industrial Ethernet • Industrial Ethernet interface • Industrial Ethernet • Industrial Ethernet interface - 100 Mbps - Yes Interrupts/diagnostics/status information Bus diagnostics Nonitoring functions • Temperature monitoring • Yes • Watchdog • Watchdog	Retentive data area (incl. timers, counters, flags), max.	512 kbyte; 128 KB can be stored in the buffer time; optional
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 serial interface Video interfaces • Graphics interface • Industrial Ethernet • Industrial Ethernet interface - 100 Mbps - 100 Mps Interprated Functions Monitoring functions • Temperature monitoring - Yes - Watchdog - Yes - Yes - Watchdog - Yes - Watchdog - Yes - Watchdog - Yes - Watchdog - Yes - Yes - Watchdog - Yes - Yes - Yes - Yes - Watchdog - Yes - Ye	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 interface Author (RJ45) Yes 100 Mbps Yes 100 Mbps Yes Interrupts/diagnostics/status information Bus diagnostics Yes Integrated Functions Monitoring functions Temperature monitoring Yes Vas Vas Vas Vas Vas Vas Vas V	Slots	
Number of compact flash slots 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 Industrial Ethernet interface Industrial Ethernet interface 100 Mbps Yes 1100 Mbps Yes 1100 Mbps Yes Interrupts/diagnostics/status information Bus diagnostics Monitoring functions Temperature monitoring Yes Vatchdog Yes	• free slots	2x PCle; optional: 1x PCle (x4); 2x PCle (x1, x4), with card retainer
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 1ndustrial Ethernet • Industrial Ethernet interface 1ndustrial Ethernet interface 1ndustrial Ethernet interface 2x DisplayPort Industrial Ethernet (RJ45) - 100 Mbps Yes - 1000 Mbps Yes Interrupts/diagnostics/status information Bus diagnostics Yes Integrated Functions Monitoring functions • Temperature monitoring Yes Vatchdog 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 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	 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 Video interface SubsplayPort Industrial Ethernet Industrial Ethernet Industrial Ethernet interface Industrial Ethernet interface Industrial Ethernet interface Ves 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 1 Industrial Ethernet • Industrial Ethernet interface - 100 Mbps - 100 Mbps Yes Interrupts/diagnostics/status information Bus diagnostics Yes Integrated Functions Monitoring functions • Temperature monitoring • Watchdog • Watchdog Vithout / 2x COM (RS 232 / 485 / 422; switchable) Xithout / 2x COM (RS 232 / 485 / 422; switchable) 2x DisplayPort 2x DisplayPort 2x DisplayPort Yes Yes 1x Ethernet (RJ45) Yes Yes Integrated Functions Yes Yes	Number of industrial Ethernet interfaces	3; Ethernet (2x RJ45, optional 3x RJ45)
serial interface Video interfaces Graphics interface Industrial Ethernet Industrial Ethernet interface Industrial Ethernet (RJ45) Yes Interrupts/diagnostics/status information Bus 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 (RJ45) Yes Yes Interrupts/diagnostics/status information Interrupts/diagnostics/status information Yes Integrated Functions	serial interface	Without / 2x COM (RS 232 / 485 / 422; switchable)
Industrial Ethernet Industrial Ethernet interface Industrial Ethernet interface Interrupts/diagnostics/status information Bus diagnostics Integrated Functions Monitoring functions Integrature monitoring Integratur	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 	Industrial Ethernet	
— 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	— 100 Mbps	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	Bus diagnostics	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	Ориона
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 >30mInterference immunity on signal cables < 30m	±2 kV acc. to IEC 61000-4-5, surge, length > 30 m ±1 kV acc. to IEC 61000-4-4; burst; length < 3 m; ±2 kV acc. to IEC 61000-4-4;
Interference immunity excited vallege cures	burst; length > 3 m
Interference immunity against voltage surge	10 IAV t- IFO 04000 4 F
asymmetric interference	±2 kV acc. to IEC 61000-4-5, surge asymmetric
symmetric interference Interference impunity to magnetic fields	±1 kV acc. to IEC 61000-4-5, surge symmetric
Interference immunity to magnetic fields	400 A /m. to IFC 04000 A 0
Interference immunity to magnetic fields at 50 Hz Emission of conducted and non-conducted interference.	100 A/m; to IEC 61000-4-8
Emission of conducted and non-conducted interference	EN 04000 0 0 EN 04000 0 4 01000 00 01
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	0 °C
• min.	55 °C
max. Ambient temperature during storage/transportation.	
Ambient temperature during storage/transportation	40 °C
• 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% at 25 °C (no condensation), Storage: 5% to 95% at 25 °C (no condensation)
Vibrations	
 Vibration resistance during operation acc. to IEC 60068- 2-6 	tested to DIN IEC 60068-2-6: 10 Hz to 58 Hz: 0.075 mm, 58 Hz to 200 Hz: 9.8 m/s² (1 g)
Shock testing	
Shock load during operation	Tested to DIN IEC 60068-2-29: 50 m/s² (5 g), 30 ms, 100 shocks

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:

3/12/2021