SIEMENS

Data sheet

6AG4141-3BC05-0GA0

SIMATIC IPC427E (Microbox PC), HD graphic onboard, 4x USB V3.0 (high current), PCIE (optional), Core i3-6102E; 3x Gbit Ethernet (IE/PN) Mounting onto standard rail; 16 GB; Without RS232/485, without PCIe; Windows 10 Enterprise 2019 LTSC (64-bit), MUI (en,de,fr,it,es), for Celeron, i3 and i5, Without replaceable mass storage; 480 GB solid-state drive SATA Without SIMATIC software; 24 V DC industrial power supply

Product type designation IPC427E Installation type/mounting DiN rail, wall mounting, portrait mounting Design Box PC, built-in unit Supply voltage Type of supply voltage 24 V DC Mains buffering Mains/voltage failure stored energy time 20 ms Processor Processor Processor ype Celeron G3902 (2C/27, 1.6 GHz, 2 MB Cache); Core i3-6102E (2C/4T, 1.9 GHz, 3 MB Cache); Core i5-6442/EQ (4C/4T, 1.9 (2.7) GHz, 5 MB Cache, iAMT); Xeon E3-1505L v5 (4C/8T, 2.0 (2.8) GHz, 8 MB Cache, iAMT) Chipset Intel C2367 Intel H110 Graphic Graphic Graphic controller Intel HD graphics controller Drives SSD Yes; 28 / 24 / J 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 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 industrial Ethernet interfaces 3; Ethernet (2x RJ45, optional 3x RJ45) USB port 4x USB 3.0 Connection for keyboard/mouse USB / USB Serial interface 2x DisplayPort Industrial Ethernet • Industrial Ethernet	General information	
Din Fail, wall mounting Din Fail, wall mounting, portrait mounting Design Box PC, built-in unit	Product type designation	IPC427E
Box PC, built-in unit	Installation type/mounting	
Box PC, built-in unit	Mounting	DIN rail, wall mounting, portrait mounting
Type of supply voltage	Design	Box PC, built-in unit
Mains buffering • Mains/voltage failure stored energy time	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 i5-6442EQ (4C/4T, 1.9 (2.7) GHz, 6 MB Cache, IAMT); Xeon E3-1505L v5 (4C/8T, 2.0 (2.8) GHz, 8 MB Cache, IAMT) Chipset Intel C236 / Intel H110 Graphic Graphics controller Drives Optical drives Alard 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 areas and their retentivity Retentive data area (incl. timers, counters, flags), max. Hardware configuration Siots • 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 Without / 2x COM (RS 232 / 485 / 422; switchable) Video interfaces • Craphics interface Industrial Ethernet • Industrial Ethernet interface — 100 Mbps — 100 Mbps — Yes Interrupts/diagnostics/status information Bus diagnostics	Mains buffering	
Processor type	Mains/voltage failure stored energy time	20 ms
1.9 GHz, 3 MB Cache); Core is-6442EQ (4C/AT, 1.9 (2.7) GHz, 6 MB Cache, IAMT); Xeon E3-1505L v5 (4C/8T, 2.0 (2.8) GHz, 8 MB Cache, IAMT)	Processor	
Graphic Graphics controller Drives Optical drives Hard disk 2.5° SATA ≥ 320 GB SSD Yes; 128 / 240 / 480 GB Memory Type of memory A / 8 / 16 GB, ECC optional Capacity of main memory, max. Data areas and their retentivity Retentive data area (incl. timers, counters, flags), max. If Gobyte Slots • free slots • Number of PCI slots • Number of compact flash slots 1; CFast Interfaces Number of industrial Ethernet interface Serial interface Without / 2x COM (RS 232 / 485 / 422; switchable) Video interfaces • Industrial Ethernet • Industrial Ethernet interface • Sx Ethernet (RJ45) Yes Interrupts/diagnostics/status information Bus diagnostics Yes		1.9 GHz, 3 MB Cache); Core i5-6442EQ (4C/4T, 1.9 (2.7) GHz, 6 MB Cache, iAMT); Xeon E3-1505L v5 (4C/8T, 2.0 (2.8) GHz, 8 MB Cache,
Graphics controller Intel HD graphics controller Drives possible as external drive via USB Hard disk 2.5" SATA ≥ 320 GB SSD Yes; 128 / 240 / 480 GB 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 State of the buffer time; 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 2x PCle; optional: 1x PCle (x4); 2x PCle (x1, x4), with card retainer • Number of PCl 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 2x DisplayPort Industrial Ethernet 4 USB 3.0 • Industrial Ethernet interface 3x Ethernet (RJ45) • Industrial Et	Chipset	Intel C236 / Intel H110
Optical drives	Graphic	
Optical drives Hard 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 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 Capacity of main memory, max. 16 Gbyte 2x PCIe; optional: 1x PCIe (x4); 2x PCIe (x1, x4), with card retainer 2; Optional 1; CFast Interfaces Number of industrial Ethernet interfaces USB port 4x USB 3.0 Connection for keyboard/mouse serial interface • Graphics interface • Graphics interface 1x Ethernet (RJ45) Yes Interrupts/diagnostics/status information Bus diagnostics Yes	Graphics controller	Intel HD graphics controller
Hard disk SSD Yes; 128 / 240 / 480 GB Memory Type of memory Main memory Capacity of main memory, max. 16 Gbyte 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 Video interfaces • Graphics interface Industrial Ethernet • Industrial Ethernet • Industrial Ethernet • Industrial Ethernet interface 3x Ethernet (RJ45) Yes Interrupts/diagnostics/status information Bus diagnostics Yes	Drives	
SSD Yes; 128 / 240 / 480 GB Memory Type of memory Main 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 • Industrial Ethernet interface - 100 Mbps - 10	Optical drives	possible as external drive via USB
Type of memory Type of memory Main memory Capacity of main memory, max. 16 Gbyte Data areas and their retentivity Retentive data area (incl. timers, counters, flags), max. 1512 kbyte; 128 KB can be stored in the buffer time; optional Hardware configuration Slots • free 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 • Industrial Ethernet • Industrial Ethernet • Industrial Ethernet interface 1	Hard disk	2.5" SATA ≥ 320 GB
Type of memory Main memory A / 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 • 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 • Industrial Ethernet interface 1 Industrial Ethernet interface - 100 Mbps - 1000 Mbp	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. Hardware configuration Slots • free slots • Number of PCI slots • Number of compact flash slots Interfaces Number of industrial Ethernet interfaces Serial interface • Graphics interface • Industrial Ethernet • Industrial Ethernet • Industrial Ethernet • Industrial Ethernet interface • Capacity of main memory, max. 16 Gbyte 512 kbyte; 128 KB can be stored in the buffer time; optional 2x PCIe; optional: 1x PCIe (x4); 2x PCIe (x1, x4), with card retainer 2; Optional 1; CFast 2x USB 3.0 Connection for keyboard/mouse 4x USB 3.0 Connection for keyboard/mouse 5y USB / USB 5y US	Memory	
Capacity of main memory, max. Data areas and their retentivity Retentive data area (incl. timers, counters, flags), max. Hardware configuration Slots • free 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 • Industrial Ethernet • Industrial Ethernet • Industrial Ethernet interface - 100 Mbps - 1000 Mbps -	Type of memory	DDR4-2400 SO-DIMM
Retentive data area (incl. timers, counters, flags), max. 512 kbyte; 128 KB can be stored in the buffer time; optional	Main memory	4 / 8 / 16 GB, ECC optional
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 Serial interface • Graphics interface • Industrial Ethernet interface — 100 Mbps — 1000 Mbps — Yes Interrupts/diagnostics/status information Bus diagnostics Yes	Capacity of main memory, max.	16 Gbyte
Slots	Data areas and their retentivity	
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 interfaces • Graphics interface Industrial Ethernet • Industrial Ethernet • Industrial Ethernet interface Industrial Ethernet • Industrial Ethernet interface Industrial Ethernet • Industrial Ethernet interface Industrial Ethernet Industrial Ethernet Industrial Ethernet interface Industrial Ethernet Industrial Ethernet interface Industrial	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 USB port Connection for keyboard/mouse serial interfaces Graphics interface Without / 2x COM (RS 232 / 485 / 422; switchable) Video interfaces Graphics interface Industrial Ethernet Industrial Ethernet interface Interrupts/diagnostics/status information Bus diagnostics Yes 	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 Sx DisplayPort Industrial Ethernet Industrial Ethernet interface Ax Ethernet (RJ45) Yes — 100 Mbps Yes Interrupts/diagnostics/status information Bus diagnostics Yes 	Slots	
 Number of compact flash slots Interfaces Number of industrial Ethernet interfaces USB port 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 - 1000 Mbps Yes Interrupts/diagnostics/status information Bus diagnostics 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 - 100 Mbps - 1000 Mbps Yes Interrupts/diagnostics/status information Bus diagnostics 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 - 1000 Mbps Yes Interrupts/diagnostics/status information Bus diagnostics 3; Ethernet (2x RJ45, optional 3x RJ45) 4x USB 3.0 USB / USB Without / 2x COM (RS 232 / 485 / 422; switchable) Video interface 2x DisplayPort 3x Ethernet (RJ45) Yes Interrupts/diagnostics/status information	 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 Yes Interrupts/diagnostics/status information Bus diagnostics 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 Industrial Ethernet interface Industrial Ethernet interface Yes Interrupts/diagnostics/status information Bus diagnostics 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 Ether	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	Connection for keyboard/mouse	USB / USB
● 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 2x DisplayPort Yes	serial interface	Without / 2x COM (RS 232 / 485 / 422; switchable)
Industrial Ethernet Industrial Ethernet interface Industrial Ethernet Industrial Eth	Video interfaces	
● Industrial Ethernet interface 3x Ethernet (RJ45) — 100 Mbps Yes — 1000 Mbps Yes Interrupts/diagnostics/status information Bus diagnostics Yes	·	2x DisplayPort
100 Mbps Yes 1000 Mbps Yes Interrupts/diagnostics/status information Bus diagnostics Yes	Industrial Ethernet	
— 1000 Mbps Yes Interrupts/diagnostics/status information Bus diagnostics Yes		3x Ethernet (RJ45)
Interrupts/diagnostics/status information Bus diagnostics Yes	— 100 Mbps	Yes
Bus diagnostics Yes	— 1000 Mbps	Yes
	Interrupts/diagnostics/status information	
Integrated Functions	Bus diagnostics	Yes
	Integrated Functions	

Manufaction Counties	
Monitoring functions	Von
Temperature monitoring	Yes
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	ic 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 	±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	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
• •	Yes
• UL 508	Yes
CULus 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	
Ambient temperature during operation	0 °C to 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% 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:

4/23/2021