SIEMENS

Data sheet 6AG4131-3HJ23-3BA1

SIMATIC IPC627E (Box PC), UHD Graphics onboard; DP/DVI-D; 3x Gigbit Ethernet (IE/PN); 6x USB V3.1 Gen.2; 1x serial (COM 1); RAID controller onboard; Watchdog, temperature and fan monitoring; Core i7-8700 (6C/12T, 3.2(4.6) GHz, 12 MB cache, VT-d, AMT); NVRAM; M.2 SSD NVMe 512 GB; 16 GB DDR4-2666 (2x8); 110/230 V AC industrial power supply unit with NAMUR; Power supply cable USA; Windows 10 Enterprise 2019 LTSC, 64-bit, MUI (en, de, fr, it, es) For Core i7; SIMATIC IPC DiagMonitor supplied; without expansion (HW); 1x PCIe (x16), 1x PCI

Mounting Design Box PC, built-in unit Supply voltage Type of supply voltage 100/240 V AC (autorange); 24 V DC Line frequency Rated value 50 Hz Rated value 50 Hz Rated value 60 Hz Mains buffering Alians buffering Celeron G4900 (2C/2T, 3.1 GHz, 2 MB cache; VT-d); Core i3-8100 (GHz, 6 MB cache, VT-d); Core i7-8700 (6C/12T, 3.2 (4.6) GHz, 12 M VT-d, AMT) Chipset Intel C246 Graphic Graphic SSD Hard disk 2.5" SATA 2 320 GB SSD Yes; SSD M2 NVMe 512 GB; SSD 2.5" SATA 480 / 960 GB; RAID1 2.5" SATA 480 / 960 GB in removable drive bay Memory Type of memory DDR4-2666 DIMM Main memory 4 / 8 / 16 / 32 / 64 GB Capacity of main memory, max. Bata areas and their retentivity Retentive data area (incl. timers, counters, flags), max. Hardware configuration Slots • free slots Well mounting, portrait mounting Box PC, built-in unit 100/240 V AC (autorange); 24 V DC Yes Capacity of main memory, max. 512 kbyte; 128 KB can be stored in the buffer time Lardware configuration Slots 2x PCI; optional: 1x PCI & 1x PCIe (x16; 2x 4, 2x1); with card retainer	
Type of supply voltage Type of supply voltage Line frequency • Rated value 50 Hz • Rated value 60 Hz Mains buffering • Mains/voltage failure stored energy time Processor Processor type Celeron G4900 (2C/2T, 3.1 GHz, 2 MB cache; VT-d); Core i3-8100 (GHz, 6 MB cache, VT-d); Core i7-8700 (6C/12T, 3.2 (4.6) GHz, 12 N VT-d, AMT) Chipset Intel C246 Graphic Graphic controller Drives Hard disk 2.5" SATA ≥ 320 GB SSD Yes; SSD M.2 NVMe 512 GB; SSD 2.5" SATA 480 / 960 GB; RAID1 2.5" SATA 480 / 960 GB in removable drive bay Memory Type of memory Memory Type of memory Main memory 4 / 8 / 16 / 32 / 64 GB Capacity of main memory, max. 64 Gbyte Pateure of the buffer time Hardware configuration Slots • free slots 100/240 V AC (autorange); 24 V DC Celeron 4900 (2C/2T, 3.1 GHz, 2 MB cache; VT-d); Core i3-8100 (GHz, 2 N CHz, 3	
Type of supply voltage Line frequency Rated value 50 Hz Rated value 60 Hz Mains buffering Mains/voltage failure stored energy time Processor Processor type Celeron G4900 (2C/2T, 3.1 GHz, 2 MB cache; VT-d); Core i3-8100 (GHz, 6 MB cache, VT-d); Core i7-8700 (6C/12T, 3.2 (4.6) GHz, 12 M VT-d, AMT) Chipset Intel C246 Graphic Graphics controller Intel UHD Graphics 630 (Core i); Intel UHD Graphics 610 (Celeron) Drives Hard disk 2.5" SATA ≥ 320 GB SSD Yes; SSD M.2 NVMe 512 GB; SSD 2.5" SATA 480 / 960 GB; RAID1 2.5" SATA 480 / 960 GB in removable drive bay Memory Type of memory DDR4-2666 DIMM Main memory 4 / 8 / 16 / 32 / 64 GB Capacity of main memory, max. Data areas and their retentivity Retentive data area (incl. timers, counters, flags), max. Hardware configuration Slots • free slots 100/240 V AC (autorange); 24 V DC Yes SED Yes A Rated value 50 Hz Yes A Namory Type of memory DDR4-2666 DIMM 512 kbyte; 128 KB can be stored in the buffer time 4 / 8 / 16 / 32 / 64 GB Solts • free slots 2x PCI; optional: 1x PCI & 1x PCIe (x16); 2x PCIe (x4, x16); 3x PCIe	
Line frequency • Rated value 50 Hz • Rated value 60 Hz Mains buffering • Mains/voltage failure stored energy time 20 ms Processor Processor type Celeron G4900 (2C/2T, 3.1 GHz, 2 MB cache; VT-d); Core i3-8100 (GHz, 6 MB cache, VT-d); Core i7-8700 (6C/12T, 3.2 (4.6) GHz, 12 N VT-d, AMT) Chipset Intel C246 Graphic Graphic Graphic scontroller Intel UHD Graphics 630 (Core i); Intel UHD Graphics 610 (Celeron) Drives Hard disk 2.5" SATA ≥ 320 GB SSD Yes; SSD M; 2NVMe 512 GB; SSD 2.5" SATA 480 / 960 GB; RAID1 2.5" SATA 480 / 960 GB in removable drive bay Memory Type of memory DDR4-2666 DIMM Main memory 4 / 8 / 16 / 32 / 64 GB Capacity of main memory, max. 64 Gbyte Data areas and their retentivity Retentive data area (incl. timers, counters, flags), max. Hardware configuration Slots • free slots 2x PCI; optional: 1x PCI & 1x PCIe (x16); 2x PCIe (x4, x16); 3x PCI	
 Rated value 50 Hz Rated value 60 Hz Rated value 60 Hz Mains buffering Mains/voltage failure stored energy time Processor Processor type Celeron G4900 (2C/2T, 3.1 GHz, 2 MB cache; VT-d); Core i3-8100 (GHz, 6 MB cache, VT-d); Core i7-8700 (6C/12T, 3.2 (4.6) GHz, 12 M VT-d, AMT) Chipset Intel C246 Graphic Graphic scontroller Intel UHD Graphics 630 (Core i); Intel UHD Graphics 610 (Celeron) Drives Hard disk 2.5" SATA ≥ 320 GB SSD Yes; SSD M.2 NVMe 512 GB; SSD 2.5" SATA 480 / 960 GB in removable drive bay Memory Type of memory DDR4-2666 DIMM Main memory 4 / 8 / 16 / 32 / 64 GB Capacity of main memory, max. G4 Gbyte Data areas and their retentivity Retentive data area (incl. timers, counters, flags), max. Hardware configuration Slots • free slots 2x PCI; optional: 1x PCI & 1x PCIe (x16); 2x PCIe (x4, x16); 3x PCI 	
 Rated value 60 Hz Mains buffering Mains/voltage failure stored energy time Processor Processor type Celeron G4900 (2C/2T, 3.1 GHz, 2 MB cache; VT-d); Core i3-8100 (GHz, 6 MB cache, VT-d); Core i7-8700 (6C/12T, 3.2 (4.6) GHz, 12 N VT-d, AMT) Chipset Intel C246 Graphic Graphics controller Intel UHD Graphics 630 (Core i); Intel UHD Graphics 610 (Celeron) Drives Hard disk 2.5" SATA ≥ 320 GB SSD Yes; SSD M.2 NVMe 512 GB; SSD 2.5" SATA 480 / 960 GB; RAID1 2.5" SATA 480 / 960 GB in removable drive bay Memory Type of memory DDR4-2666 DIMM Main memory 4 / 8 / 16 / 32 / 64 GB Capacity of main memory, max. 64 Gbyte Data areas and their retentivity Retentive data area (incl. timers, counters, flags), max. Hardware configuration Slots • free slots 2x PCI; optional: 1x PCI & 1x PCI & 1x PCIe (x16); 2x PCIe (x4, x16); 3x PCI 	
Mains buffering Mains/voltage failure stored energy time Processor Processor type Celeron G4900 (2C/2T, 3.1 GHz, 2 MB cache; VT-d); Core i3-8100 (GHz, 6 MB cache, VT-d); Core i7-8700 (6C/12T, 3.2 (4.6) GHz, 12 M VT-d, AMT) Chipset Intel C246 Graphic Graphic Graphics controller Intel UHD Graphics 630 (Core i); Intel UHD Graphics 610 (Celeron) Drives Hard disk 2.5" SATA ≥ 320 GB SSD Yes; SSD M.2 NVMe 512 GB; SSD 2.5" SATA 480 / 960 GB; RAID1 2.5" SATA 480 / 960 GB in removable drive bay Memory Type of memory DDR4-2666 DIMM 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 2x PCI; optional: 1x PCI & 1x PCIe (x16); 2x PCIe (x4, x16); 3x PCII	
Processor Processor type Celeron G4900 (2C/2T, 3.1 GHz, 2 MB cache; VT-d); Core i3-8100 (GHz, 6 MB cache, VT-d); Core i7-8700 (6C/12T, 3.2 (4.6) GHz, 12 M VT-d, AMT) Chipset Graphic Graphic Graphic Sontroller Intel UHD Graphics 630 (Core i); Intel UHD Graphics 610 (Celeron) Drives Hard disk 2.5" SATA ≥ 320 GB SSD Yes; SSD M.2 NVMe 512 GB; SSD 2.5" SATA 480 / 960 GB; RAID1 2.5" SATA 480 / 960 GB in removable drive bay Memory Type of memory DDR4-2666 DIMM Main memory 4 / 8 / 16 / 32 / 64 GB Capacity of main memory, max. 64 Gbyte Data areas and their retentivity Retentive data area (incl. timers, counters, flags), max. Hardware configuration Slots • free slots 2x PCI; optional: 1x PCI & 1x PCIe (x16); 2x PCIe (x4, x16); 3x PCI	
Processor type Celeron G4900 (2C/2T, 3.1 GHz, 2 MB cache; VT-d); Core i3-8100 (GHz, 6 MB cache, VT-d); Core i7-8700 (6C/12T, 3.2 (4.6) GHz, 12 M VT-d, AMT) Chipset Graphic Graphic Graphics controller Intel UHD Graphics 630 (Core i); Intel UHD Graphics 610 (Celeron) Drives Hard disk 2.5" SATA ≥ 320 GB SSD Yes; SSD M.2 NVMe 512 GB; SSD 2.5" SATA 480 / 960 GB in removable drive bay Memory Type of memory DDR4-2666 DIMM Main memory 4 / 8 / 16 / 32 / 64 GB Capacity of main memory, max. Data areas and their retentivity Retentive data area (incl. timers, counters, flags), max. 4 / 8 / 16 / 32 / 84 CB	
Processor type	
GHz, 6 MB cache, VT-d); Core i7-8700 (6C/12T, 3.2 (4.6) GHz, 12 N VT-d, AMT) Chipset Intel C246 Graphic Graphic Intel UHD Graphics 630 (Core i); Intel UHD Graphics 610 (Celeron) Drives Hard disk 2.5" SATA ≥ 320 GB SSD Yes; SSD M.2 NVMe 512 GB; SSD 2.5" SATA 480 / 960 GB; RAID1 2.5" SATA 480 / 960 GB in removable drive bay Memory Type of memory DDR4-2666 DIMM Main memory 4 / 8 / 16 / 32 / 64 GB Capacity of main memory, max. 64 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 Hardware configuration Slots • free slots 2x PCI; optional: 1x PCI & 1x PCIe (x16); 2x PCIe (x4, x16); 3x PCI	
Graphic Graphics controller Intel UHD Graphics 630 (Core i); Intel UHD Graphics 610 (Celeron) Drives Hard disk 2.5" SATA ≥ 320 GB SSD Yes; SSD M.2 NVMe 512 GB; SSD 2.5" SATA 480 / 960 GB; RAID1 2.5" SATA 480 / 960 GB in removable drive bay Memory Type of memory DDR4-2666 DIMM Main memory 4 / 8 / 16 / 32 / 64 GB Capacity of main memory, max. Data areas and their retentivity Retentive data area (incl. timers, counters, flags), max. 512 kbyte; 128 KB can be stored in the buffer time Hardware configuration Slots • free slots 2x PCI; optional: 1x PCI & 1x PCIe (x16); 2x PCIe (x4, x16); 3x PCIe	
Graphics controller Drives Hard disk SSD Yes; SSD M.2 NVMe 512 GB; SSD 2.5" SATA 480 / 960 GB; RAID1 2.5" SATA 480 / 960 GB in removable drive bay Memory Type of memory DDR4-2666 DIMM Main memory 4 / 8 / 16 / 32 / 64 GB Capacity of main memory, max. Data areas and their retentivity Retentive data area (incl. timers, counters, flags), max. 512 kbyte; 128 KB can be stored in the buffer time Hardware configuration Slots • free slots Intel UHD Graphics 630 (Core i); Intel UHD Graphics 610 (Celeron) DR4-2666 DIMM 4 / 8 / 16 / 32 / 64 GB 64 Gbyte 2x PCI; optional: 1x PCI & 1x PCIe (x16); 2x PCIe (x4, x16); 3x PCIe	
Drives Hard disk SSD Yes; SSD M.2 NVMe 512 GB; SSD 2.5" SATA 480 / 960 GB; RAID1 2.5" SATA 480 / 960 GB in removable drive bay Memory Type of memory DDR4-2666 DIMM Main memory 4 / 8 / 16 / 32 / 64 GB Capacity of main memory, max. 64 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 Hardware configuration Slots • free slots 2x PCI; optional: 1x PCI & 1x PCIe (x16); 2x PCIe (x4, x16); 3x PCIe	
Hard disk SSD Yes; SSD M.2 NVMe 512 GB; SSD 2.5" SATA 480 / 960 GB; RAID1 2.5" SATA 480 / 960 GB in removable drive bay Memory Type of memory DDR4-2666 DIMM Main memory 4 / 8 / 16 / 32 / 64 GB Capacity of main memory, max. 64 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 Hardware configuration Slots • free slots 2x PCI; optional: 1x PCI & 1x PCIe (x16); 2x PCIe (x4, x16); 3x PCIe	
SSD Yes; SSD M.2 NVMe 512 GB; SSD 2.5" SATA 480 / 960 GB; RAID1 2.5" SATA 480 / 960 GB in removable drive bay Memory Type of memory DDR4-2666 DIMM Main memory 4 / 8 / 16 / 32 / 64 GB Capacity of main memory, max. 64 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 Hardware configuration Slots • free slots 2x PCI; optional: 1x PCI & 1x PCIe (x16); 2x PCIe (x4, x16); 3x PCIe	
Memory Type of memory DDR4-2666 DIMM Main memory 4 / 8 / 16 / 32 / 64 GB Capacity of main memory, max. 64 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 Hardware configuration Slots • free slots 2x PCI; optional: 1x PCI & 1x PCIe (x16); 2x PCIe (x4, x16); 3x PCIe	
Type of memory Main memory 4 / 8 / 16 / 32 / 64 GB Capacity of main memory, max. 64 Gbyte Data areas and their retentivity Retentive data area (incl. timers, counters, flags), max. Hardware configuration Slots • free slots DDR4-2666 DIMM 4 / 8 / 16 / 32 / 64 GB 64 Gbyte 512 kbyte; 128 KB can be stored in the buffer time 2x PCI; optional: 1x PCI & 1x PCIe (x16); 2x PCIe (x4, x16); 3x PCIe	2x SSD
Main memory 4 / 8 / 16 / 32 / 64 GB Capacity of main memory, max. 64 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 Hardware configuration Slots • free slots 2x PCI; optional: 1x PCI & 1x PCIe (x16); 2x PCIe (x4, x16); 3x PCIe	
Capacity of main memory, max. Data areas and their retentivity Retentive data area (incl. timers, counters, flags), max. Hardware configuration Slots • free slots 64 Gbyte 512 kbyte; 128 KB can be stored in the buffer time 2x PCI; optional: 1x PCI & 1x PCIe (x16); 2x PCIe (x4, x16); 3x PCIe	
Data areas and their retentivity Retentive data area (incl. timers, counters, flags), max. 512 kbyte; 128 KB can be stored in the buffer time Hardware configuration Slots • free slots 2x PCI; optional: 1x PCI & 1x PCIe (x16); 2x PCIe (x4, x16); 3x PCIe	
Retentive data area (incl. timers, counters, flags), max. 512 kbyte; 128 KB can be stored in the buffer time Hardware configuration Slots • free slots 2x PCI; optional: 1x PCI & 1x PCIe (x16); 2x PCIe (x4, x16); 3x PCIe	
Hardware configuration Slots • free slots 2x PCI; optional: 1x PCI & 1x PCIe (x16); 2x PCIe (x4, x16); 3x PCIe	
Slots • free slots 2x PCI; optional: 1x PCI & 1x PCIe (x16); 2x PCIe (x4, x16); 3x PCIe	
• free slots 2x PCI; optional: 1x PCI & 1x PCIe (x16); 2x PCIe (x4, x16); 3x PCI	
	§ 2x PCle
Number of PCI slots 5; Optional	
Number of PCI slots 5; Optional	
Interfaces	
Number of industrial Ethernet interfaces 3; 3x Ethernet (RJ45)	
USB port 6x USB 3.1 Gen. 2 (2x type C)	
Connection for keyboard/mouse USB / USB	
serial interface 1x COM	
Video interfaces	
Graphics interface 2x DisplayPort; 1x DVI-D	
Industrial Ethernet	
• Industrial Ethernet interface 3x Ethernet (RJ45)	
— 100 Mbps Yes	
— 1000 Mbps Yes	
Integrated Functions	
Monitoring functions	
• Temperature monitoring Yes	

• Watchdog	Yes
Watchdog Status LEDs	
Status LEDs Fan	1x power, 3x user Yes
•	
Monitoring function via network EMC	Optional
Interference immunity against discharge of static electricity	IC IV contect discharge and to IFC 04000 4 20 10 IV six discharge and to IFC
 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	ds
Interference immunity against high frequency radiation	10 V/m for 80 2 700 MHz, 80% AM acc. to IEC 61000-4-3; 3 V/m for 2.7 to 6
	GHz, 80% AM acc. to IEC 61000-4-3; 10 V for 10 kHz to 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
cULus	Yes
RCM (formerly C-TICK)	Yes
KC approval	Yes
EAC (formerly Gost-R)	Yes
FCC	Yes
EMC	CE, EN 61000-6-3:2007 +A1:2011, EN 61000-6-2:2005
Marine approval	
American Bureau of Shipping (ABS)	Yes
Det Norske Veritas (DNV)	Yes
Nippon Kaiji Kyokai (Class NK)	Yes
Ambient conditions	
Ambient temperature during operation	
• min.	5 °C
• max.	55 °C
Ambient temperature during storage/transportation	
min.	-20 °C
• max.	-20 °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	tosted according to DIN IEC 60069 2 6: 40 Hz to 50 Hz; 0.075 mm; 50 Hz to
 Vibration resistance during operation acc. to IEC 60068- 2-6 	tested according to DIN IEC 60068-2-6: 10 Hz to 58 Hz: 0.075 mm; 58 Hz to 500 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 10 Enterprise 2016 LTSB or 2019 LTSC 64-bit, MUI
without operating system	Yes; Optional
pre-installed operating system	
Windows 10 Enterprise	Yes; Windows 10 Enterprise 2016 LTSB or 2019 LTSC 64-bit, MUI
Software	
SIMATIC Software	Optional package with SIMATIC WinCC

Dimensions	
Width	314 mm
Height	93 mm; For variant 5x PCI(e): 155 mm
Depth	301 mm; incl. mounting rail

last modified:

1/31/2021