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Data sheet 6AG4133-0AD21-0DP0

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SIMATIC IPC BX-59A (box PC); mainboard (chipset R680E); 4x Gigabit Ethernet (IE/PN) RJ45; 6x USB 3.1 Gen. 2; 1x USB-C, 2x serial (COM); 2x DP; audio; 2x SIM slots; 2xM.2 flex module slots internal; RAID controller onboard; watchdog,temperature/fan monitoring; Core i5-13500E, 65 W; 14C(6P+8E)/20T; 2.4(4.6) GHz; with 24 V DC, 400 W power supply 512 GB M.2 NVME SSD [Eco] internal 16 GB DDR5(1*16) NVRAM (M.2) no power supply unit cable Windows 10 Enterprise LTSC 2021, 64-bit, MUI for Core i5 (with USB-Stick restore image; D&D) EM2: PCIe x 16 gen4 + graphics card NVIDIA RTX A4000 and PCIe x 4 EM without storage

General information	
Product type designation	BX-59A
Installation type/mounting	
Mounting	Wall mounting, book mounting, desk mounting, tower mounting
Design	Box PC, built-in unit
Supply voltage	
Type of supply voltage	400 W / 24 V / 19.2 - 28.8 VDC; 220 W / 12-24 V / 9 - 36 VDC
Rated value (DC)	24 V; 12...24 V DC on 220 W
Rated value (AC)	240 V
Line frequency	
● Rated value 50 Hz	Yes
● Rated value 60 Hz	Yes
Mains buffering	
● Mains/voltage failure stored energy time	20 ms
Processor	
Processor type	Core i9-13900E 24C (8P+16E)/32T, 1.8 (5.2) GHz, 36 MB cache; Core i7-13700E 16C (8P+8E)/24T, 1.9 (5.1) GHz, 30 MB cache; Core i7-13700TE 16C (8P+8E)/24T, 1.1 (4.8) GHz, 30 MB cache; Core i5-13500E 14C (6P+8E)/20T, 2.4 (4.6) GHz, 24 MB cache
Chipset	Intel R680E
Graphic	
Graphics controller	Intel UHD Graphics 770 (Core i5, Core i7, Core i9)
Graphics card	Yes; Optional
Drives	
SSD	Yes; base module: 480 GB 2.5" SATA SSD (PLP); 960 GB 2.5" SATA SSD (PLP); 512 GB 2.5" SATA SSD; 1 TB 2.5" SATA SSD; 512 GB M.2 NVME onboard SSD; 1 TB M.2 NVME onboard SSD; 512 GB M.2 NVME onboard SSD with 1* 512 GB M.2 NVME on 1 exchangeable SSD slider; 512 GB M.2 NVME onboard SSD with 1* 1 TB M.2 NVME on 1 exchangeable SSD slider; RAID1 2* 512 GB M.2 NVME on 2 exchangeable SSD slider; RAID1 2* 1 TB M.2 NVME on 2 exchangeable SSD slider; 512 GB M.2 NVME onboard SSD with RAID1 2* 512 GB M.2 NVME on 2 exchangeable SSD slider
Memory	
Type of memory	DDR5-4800 SO-DIMM
Main memory	8 / 16 / 32 / 64 GB; ECC optional
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
Interfaces	
Number of industrial Ethernet interfaces	4; 4x Gigabit Ethernet (RJ45)
USB port	1x USB 3.2 Gen2 10G Type C, 6x USB 3.2 Gen 2 10G Type A
Connection for keyboard/mouse	USB / USB
serial interface version	2x / 4x (optional) COM (RS 232 / 485 / 422; selectable)
Multimedia	
● Audio In/Out	Yes
Video interfaces	
● Graphics interface	2x DisplayPort
Industrial Ethernet	
● Industrial Ethernet interface	4x Gigabit Ethernet (RJ45)

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— 100 Mbps	Yes
— 1000 Mbps	Yes
Integrated Functions	
Monitoring functions	
● Temperature monitoring	Yes
● Watchdog	Yes
● Fan	Yes
● Monitoring function via network	Optional
EMC	
Interference immunity against discharge of static electricity	
● Interference immunity against discharge of static electricity	±6 kV contact; ±8 kV air (to IEC 1000-4-2; ESD)
Interference immunity against high-frequency electromagnetic fields	
● Interference immunity against high frequency radiation	10 V/m, 80 MHz to 2 700 MHz, 80 % AM acc. to IEC 61000-4-3; 3 V/m, 2.7 GHz to 6 GHz, 80 % AM acc. to IEC 61000-4-3; 10 V, 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 (according to IEC 61000-4-4, burst); ±1 kV (according to IEC 61000-4-5, surge pulse/line to line); ±2 kV (according to IEC 61000-4-5, surge pulse/line to ground)
● Interference immunity on signal cables >30m	burst: ±2 kV (5 kHz / 100 kHz) in accordance with IEC 61000-4-4; length of signal port extension cable ≥ 30 m; surge: ±2 kV line-to-earth in accordance with IEC 61000-4-5; length of signal port extension cable ≥ 10 m
● Interference immunity on signal cables < 30m	burst: ±1 kV (5 kHz / 100 kHz) in accordance with IEC 61000-4-4; length of signal port extension cable < 30 m; surge: ±2 kV line-to-earth in accordance with IEC 61000-4-5; length of signal port extension cable ≥ 10 m
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
Compliance with line harmonic distortion limits	
● Compliance with line harmonic distortion acc. to IEC 61000-3-2, IEC 61000-3-3	Yes; EN 61000-3-2 Class D; EN 61000-3-3
Standards, approvals, certificates	
Siemens Eco Profile (SEP)	Siemens EcoTech
CE mark	Yes; also UKCA
cULus	Yes
RCM (formerly C-TICK)	Yes
FCC	Yes
BIS	Yes
EMC	EMC EN 61000-6-1, EN IEC 61000-6-1, EN 61000-6-2, EN IEC 61000-6-3, EN IEC 61000-6-4
Ecological footprint	
● environmental product declaration	Yes
Global warming potential	
— global warming potential, (total) [CO2 eq]	1 480 kg
— global warming potential, (during production) [CO2 eq]	113 kg
— global warming potential, (during operation) [CO2 eq]	1 380 kg
— global warming potential, (after end of life cycle) [CO2 eq]	-16.9 kg
Ambient conditions	
Ambient temperature during operation	
● min.	0 °C
● max.	55 °C; base module only: 40 °C at fanless and 2.5" non power loss protection SSD configuration; 50 °C at fanless and M.2 SSD configuration; with exenstion module: 40°C
Ambient temperature during storage/transportation	
● min.	-20 °C
● max.	60 °C
Operating systems	
pre-installed operating system	Windows 10 Enterprise 2021 LTSC 64-bit, MUI
without operating system	Yes; Optional
pre-installed operating system	

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● Windows 10 Enterprise	Yes; Windows 10 Enterprise 2021 LTSC 64-bit, MUI
Software	
SIMATIC Software	optionally with pre-installed Industrial Edge - SIMATIC
Dimensions	
Width	79 mm
Height	194 mm
Depth	237 mm
Approvals / Certificates	

General Product Approval				Environment
RCM	CE EG-Konf.	UK CA	Miscellaneous	UL	EPD

Environment
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