MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

Reference package for procurement and maintenance review

SIEMENS

6AG4140-3DM07-0KA0

FANLESS INDUSTRIAL MICROBOX COMPUTER

Used with the applicable SIMATIC IPC427D Core i3 Execution configuration.

REFERENCE PACKAGE

OFFICIAL DOCUMENT

Selected official manufacturer pages follow this cover.

Source: Exact Core i3 identity from Ram Automations; common hardware from Siemens IPC427D manual, 05/2017; installed options unconfirmed

8.5 Technical specifications

8.5.1 General technical specifications

General technical specifications

Order numbers	See order documents
Dimensions	262 × 133 × 50.5 (W × H × D in mm)
Weight	Approximately 2 kg
Supply voltage (DC) [1]	24 V DC [1] (-20%/+20%)
Short-term voltage interruption in accordance with Namur	Min. 15 ms (at 20.4 V) Max. 10 events/h; recovery time min. 1 s
Max. power consumption	64.8 W (at 24 V)
Degree of protection	IP 20 to IEC 60529
Protection class	Protection class I to IEC 61140
Safety specifications	EN 60950-1; UL 60950-1; CAN/CSA-C22.2 No. 60950-1; UL 508; CAN/CSA-C22.2 No. 142
Noise emission	<40dB (A) to DIN 45635-1
Quality assurance	In accordance with ISO 9001

[1] The upstream power supply must generate a safety extra-low voltage with safe electrical isolation to IEC 60364-4-41 or an NEC Class 2 SELV and LPS to IEC/UL/EN/ DIN-EN 60950-1 (see chapter "Connecting the power supply (Page 45)").

Electromagnetic compatibility

Interference emission	EN 61000-6-3, EN 61000-6-4, CISPR22 class B; FCC class A
Immunity with regard to conducted interference on the supply lines	± 2 kV according to IEC 61000-4-4; burst ± 1 kV according to IEC 61000-4-5; symmetrical surge ± 2 kV according to IEC 61000-4-5; asymmetrical surge
Noise immunity on signal lines	± 1 kV to IEC 61000-4-4; Burst; Length < 3 m ± 2 kV in accordance with IEC 61000-4-4; Burst; length > 3 m ± 2 kV in accordance with IEC 61000-4-5; Surge; length > 30 m
Immunity to electrostatic discharge	± 6 kV contact discharge in accordance with IEC 61000-4-2 ± 8 kV air discharge in accordance with IEC 61000-4-2
Immunity to RF interference	10 V/m 80–1000 MHz and 1.4–2 GHz, 80% AM according to IEC 61000-4-3 3 V/m 2–2.7 GHz, 80% AM according to IEC 61000-4-3 10 V 10 kHz to 80 MHz, 80% AM according to IEC 61000-4-6
Immunity to magnetic fields	100 A/m, 50/60 Hz according to IEC 61000-4-8

Motherboard

Processor	• Intel Celeron 827E 1.4 GHz, 1.5 MB SLC • Intel Core i3-3217UE 1.6 GHz, 3 MB SLC • Intel Core i7-3517UE 1.7 GHz, 4 MB SLC
Main memory	SO-DIMM modules; 1024/2048/4096/8192 MB DDR3 SDRAM, 4096/8192 MB DDR3 ECC
Buffer memory[2]	512 kB MRAM
Expansion card slots	up to 2 x PCIe cards can be used max. permitted power losses: 5 W per PCIe card, 10 W in total max. permitted length of PCI cards: 175 mm

[2] For devices with retentivity

Drive and memory media

Hard disk drive	1 × 2.5" SATA-HD
Solid State Disk	1 × 2.5" SATA SSD, ≥ 80 GB Standard, ≥ 50 GB High-Endurance
CFast card	• 2 GB or • 4 GB or • 8 GB or • 16 GB

Graphics

Graphics controller	Integrated Intel HD2000 or HD4000
Graphics memory	32 - 512 MB Shared Memory
Resolutions, frequencies, color depth	DVI-I: 640 × 480 to 1920 × 1200 / 60 Hz Display port: max. 1920 ×1200 / 60 Hz

Ports

COM1; COM2 (optional)	RS232, 115 kbps max., 9-pin SUB-D, male
DVI	Connection of display devices with DVI connector
Display port (DPP)	Connection of display devices with DPP connector
Keyboard	USB support
Mouse	USB support
USB	4 × USB 3.0, a maximum of 2 can be operated in high-current mode at the same time
PROFIBUS / MPI interface, isolated - Transmission speed - Operating modes	9-pin Cannon socket, 2-row 9.6 kbps to 12 Mbps DP master: DP-V0, DP-V1 with SOFTNET-DP DP slave: DP-V0, DP-V1 with SOFTNET-DP slave
PROFINET	3 × RJ45 connector, CP1616 compatible, on-board interface on ERTEC 400 basis, 10/100 Mbps electrically isolated
Ethernet [3]	2 × Ethernet port (RJ45) Intel 82579LM and Intel 82574L 10/100/1000 Mbps, electrically isolated, teaming-capable [4] or 1 x Ethernet port for PROFINET device
CAN (optional)	NXP SJA1000
Free slots for expansion cards	Up to 2 × PCIe cards, depending on enclosure version

[3] For unique labeling, the Ethernet ports are numbered on the enclosure. The numbering by the operating system can differ.

[4] No teaming with AMT.

8.5.2 Ambient conditions

Climatic Conditions

Temperature	Tested to IEC 60068-2-1, IEC 60068-2-2, IEC 60068-2-14
- During operation	**Horizontal mounting position:** Operation with hard disk: • with up to two expansion cards (max. load 10 W): +5 to +40 °C [1] Operation with CFast card and/or SSD: • with up to 2 expansion cards (max. load 10 W): 0 to +40° C • with up to 2 expansion cards (max. load 10 W) in RAL [2]: 0 to +50° C [1] Operation with CFast card: • Without expansion cards in RAL [2]: 0 to +55 °C [1] **Vertical / portrait mounting position:** Operation with hard disk: • without expansion cards: +5 to +35 °C [1] Operation with CFast card and/or SSD: • Without expansion cards: 0 to +40° C Operation with SSD: • with up to 2 expansion cards (max. load 10 W) in RAL [2]: 0 to +45° C [1] Operation with CFast card: • Without expansion cards in RAL [2]: 0 to +50° C [1] • with up to 2 expansion cards (max. load 10 W): 0 to +40° C • with up to 2 expansion cards (max. load 10 W) in RAL [2]: 0 to +50° C [1] **Horizontal mounting position:** Operation with CFast card • Without expansion cards in RAL [2]: 0 to +35° C [1]for versions with i7 processor you must set "Turbo Mode Level" to "Temperature optimized" in the "Power" menu of the BIOS Setup; otherwise you have to reduce the maximum ambient temperature by 5 °C. [2] **RAL** = Restricted Access Location Installation of the device in operating facilities with restricted access, for example, locked control cabinet.
- During storage/shipping	-40°C to +60°C (for device with HDD) or -40°C to +70°C (for devices with CFast or SSD)
- Gradient	Operating mode: Max. 10°C/h; Storage: 20°C/h; no condensation