

DA-820E 系列

IEC 61850-3 認證的 3U 機架式電腦搭載第 13 代 Intel® Core™ 處理器、可熱插拔電源模組、-40 至 70°C 操作溫度



特色與優點

- 符合 IEC 61850-3、IEEE 1613 及 IEC 60255 標準，適用於電力自動化系統
- 符合 EN 50121-4 標準，適合鐵路軌旁應用
- 第 13 代 Intel® Core™ 處理器
- 4 個 SSD 插槽及支援 SSD 插槽 1 與 2 的 Intel® RST RAID 0/1
- 最高達 64 GB RAM (兩個內建 SODIMM DDR4 記憶體插槽)
- 適用於網路備援的 PRP/HSR 技術 (搭配 PRP/HSR 擴充模組)
- 提供多種安全機制，包括 TPM 2.0、UEFI 安全開機與實體安全防護
- 適用於擴充模組的 1 個 PCIe x8 (4 通道) 與 3 個 PCIe x1
- 電源備援系統 (100 至 240 VAC/VDC 與 48 VDC)，提供可熱插拔電源模組設計

認證



EN 50121-4

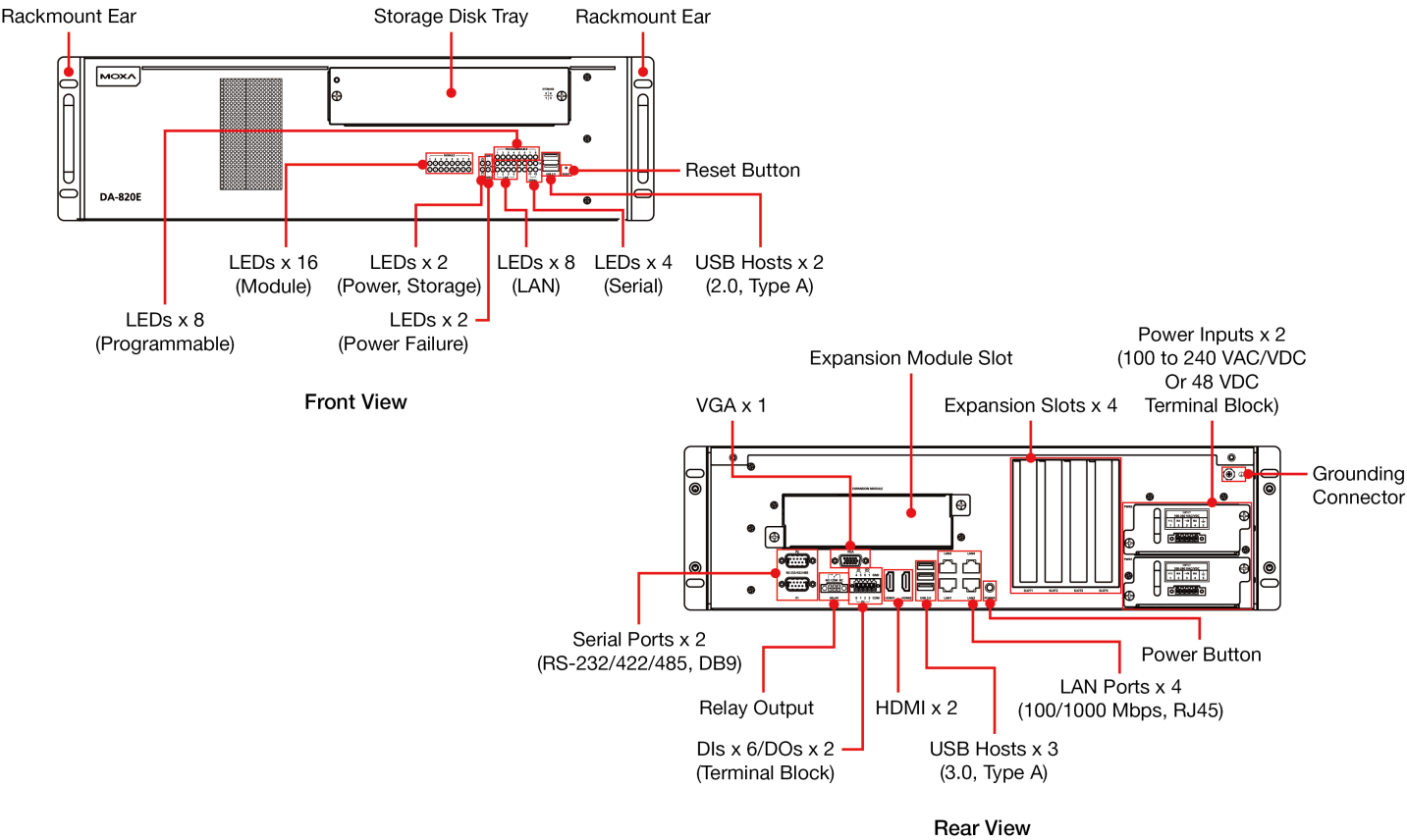


簡介

DA-820E 系列是一款高效能無風扇 3U 機架式工業電腦，搭載第 13 代 Intel® Core™ i3/i5/i7 處理器，提供優異的運算能力。具備多樣化 I/O 設計，包括 3 個顯示埠 (2 個 HDMI 與 1 個 VGA)、6 個 USB 埠、4 個 Gigabit 乙太網路埠、兩個 3 合 1 RS-232/422/485 串列埠、6 個數位輸入埠、2 個數位輸出埠、4 個標準 PCIe 擴充插槽及 1 個專用擴充插槽。此外，它還配備 4 個可熱插拔 2.5" SSD 插槽，在 SSD 插槽 1 與 2 上支援 Intel® RST RAID 0/1 功能，以強化儲存效能與可靠性。

DA-820E 專為變電站應用設計，符合 IEC 61850-3、IEEE 1613 與 IEC 60255 標準，確保在嚴苛環境中提供高度耐用性、穩定性，並可無縫整合智慧型電子設備 (IEDs)，實現高可靠性的變電站自動化。DA-820E 在其第 13 代 Intel® 處理器的輔助之下，除了傳統 OT SCADA 功能外，也能滿足現代虛擬化等複雜軟體系統的高效能需求。

外觀



規格

Computer	
CPU	Intel® Core™ i3-1320PE Intel® Core™ i5-1340PE Intel® Core™ i7-1370PE
System Memory Slot	SODIMM DDR4 slots x 2
DRAM	64 GB max. (SODIMM x 2, each supporting 3200 MHz and 32 GB max. per module)
Graphics Controller	Intel® Core™ i3-1320PE: Intel® UHD Graphics Intel® Core™ i5-1340PE: Intel® Iris® Xe Graphics eligible Intel® Core™ i7-1370PE: Intel® Iris® Xe Graphics eligible
Storage Slot	2.5-inch HDD/SSD slots x 4 M.2 M-key 2280 slot x 1
Supported OS	Windows 10 IoT Enterprise LTSC 2021 Windows 11 IoT Enterprise LTSC 2024 Windows Server 2022 Ubuntu 22.04.3 LTS Debian 12 RHEL 9.4

Computer Interface	
Ethernet Ports	Auto-sensing 10/100/1000 Mbps ports (RJ45 connector) x 4
Serial Ports	RS-232/422/485 ports x 2 (software-selectable, DB9 male connector)
Digital Input	DIs x 6
Digital Output	DOs x 2

USB 2.0	USB 2.0 hosts x 3, type-A connectors 2 ports on the front panel, 1 port inside the computer for USB dongle-based security
USB 3.0	USB 3.0 hosts x 3, type-A connectors 3 ports on the rear panel
Expansion Slots	PCIe x8 (4-lane) slot x 1 PCIe x1 slots x 3 Proprietary slot x 1
Video Output	HDMI x 2, HDMI connector (type A) (up to 3840 x 2160 resolution at 60Hz) VGA x 1, 15-pin D-sub connector (female) (up to 1920 x 1200 resolution at 60 Hz)
TPM	TPM v2.0
Secure Boot	UEFI

LED Indicators

System	Power x 1 Storage x 1 Power failure detection x 2 Programmable x 8
Serial	2 per port (Tx, Rx)
LAN	8 per port (10/100/1000 Mbps)

Serial Interface

Baudrate	300 bps to 115.2 kbps
Connector	DB9 male
Isolation	2 kV
Serial Standards	RS-232/422/485

Serial Signals

RS-232	TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND
RS-422	Tx+, Tx-, Rx+, Rx-, GND
RS-485-2w	Data+, Data-, GND
RS-485-4w	Tx+, Tx-, Rx+, Rx-, GND

Digital Inputs

Digital Input Channels	DI s x 6
Connector	Screw-fastened Euroblock terminal
I/O Mode	DI
Isolation	3k VDC
Sensor Type	Dry contact Wet contact (NPN)
Dry Contact	Logic 0: Close to GND Logic 1: Open
Wet Contact (COM to DI)	Logic 0: 10 to 30 VDC Logic 1: 0 to 3 VDC

Digital Outputs

Digital Output Channels	DOs x 2
Connector	Screw-fastened Euroblock terminal
Current Rating	200 mA per channel
I/O Type	Sink
Voltage	0 to 30 VDC
Isolation	3k VDC

Power Parameters

Input Current	100 to 240 VAC, 50/60 Hz, 1.75 to 0.66 A (max) 100 to 240 VDC, 1.65 to 0.66 A (max) 48 VDC, 3.12 A
Input Voltage	100 to 240 VAC 100 to 240 VDC 48 VDC
Power Consumption	DA-PWR-150-HV: 140 W (max.) DA-PWR-120-LV: 130 W (max.)
Power Button	Reset button (front panel) ON/OFF (rear panel)

Physical Characteristics

Housing	Metal
IP Rating	IP30
Dimensions (without ears)	440 x 301 x 132.55 mm (17.32 x 11.85 x 5.22 in)
Weight	11,860 g (26.15 lb)
Installation	19-inch rack mounting

Environmental Limits

Operating Temperature	-40 to 70°C (-40 to 158°F)
Storage Temperature (package included)	-40 to 85°C (-40 to 185°F)
Ambient Relative Humidity	5 to 95% (non-condensing)

Standards and Certifications

EMC	EN 61000-6-2/-6-4 EN 55032/35
EMI	CISPR 32, FCC Part 15B Class A
EMS	IEC 61000-4-2 ESD: Contact: 8 kV; Air: 15 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 10 V/m IEC 61000-4-4 EFT: Power: 4 kV; Signal: 4 kV IEC 61000-4-5 Surge: Power: 4 kV; Signal: 4 kV IEC 61000-4-6 CS: 10 V IEC 61000-4-8: 20 A/m IEC 61000-4-11
Power Substation	IEC 61850-3 IEEE 1613
Protection Relay	IEC 60255

Safety	IEC 62368-1 UL 62368-1
Shock	IEC 61850-3 Edition 2.0, IEC 60068-2-27, IEC 60255-21-2

Declaration

Green Product	RoHS, CRoHS, WEEE
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MTBF

Time	293,786 hrs
Standards	Telcordia Standard SR-332

Warranty

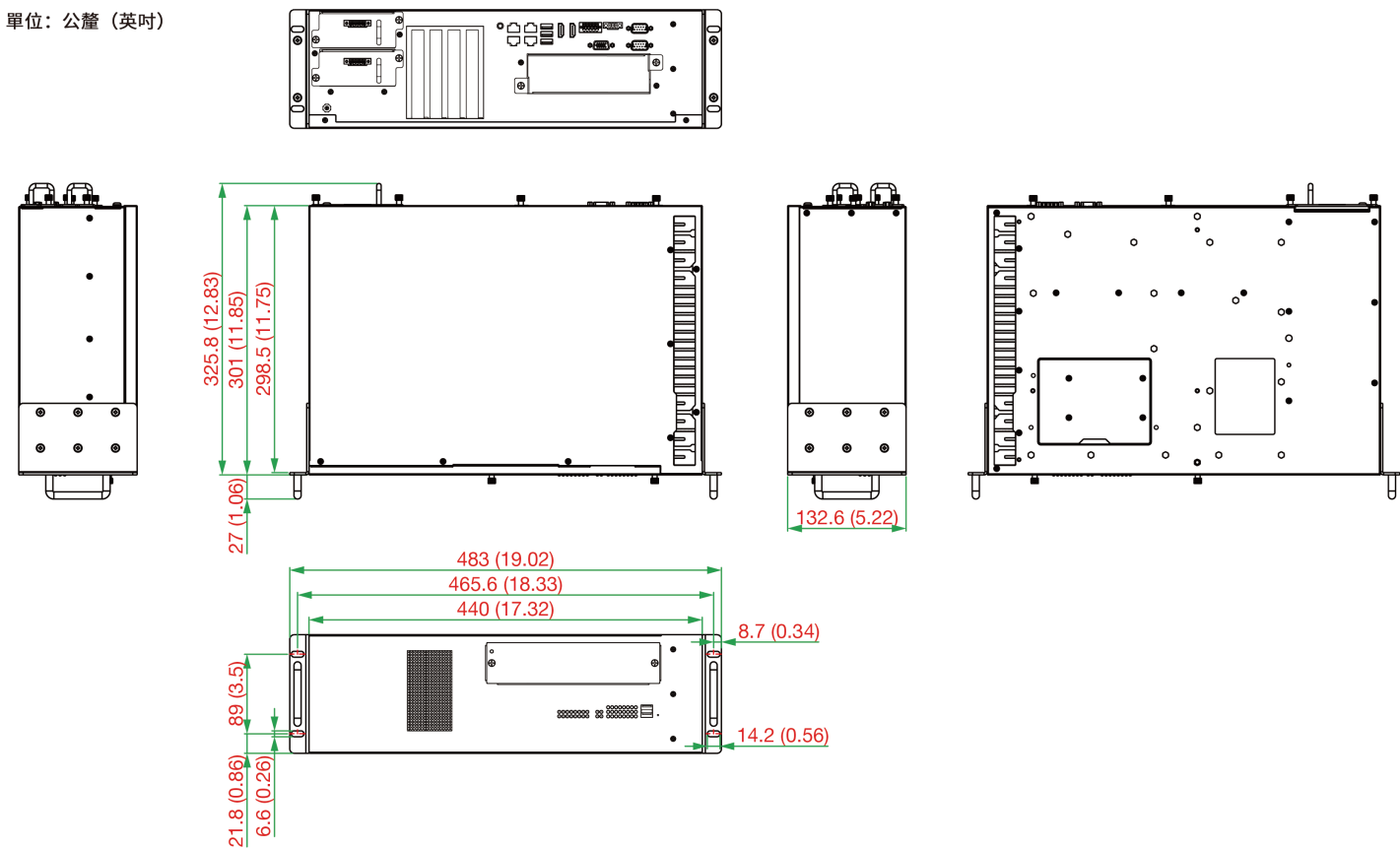
Warranty Period	3 years
Details	See www.moxa.com/tw/warranty

Package Contents

Device	1 x DA-820E Series computer
Installation Kit	1 x rack-mounting kit 1 x pack of thermal pads for optional M.2 storage and memory modules 1 x pack of 16 screws for mounting the SSD 1 x pack of 4 backup screws for M.2 storage and memory modules 1 x USB dongle kit
Documentation	1 x quick installation guide 1 x warranty card
Note	This product requires additional modules (sold separately) to function.

尺寸

單位：公釐（英吋）



Model Name	CPU	Power Modules Included	Operating Temperature
DA-820E-C3-H-T	Intel® Core™ i3-1320PE	1 x DA-PWR-150-HV	-40 to 70°C
DA-820E-C3-HH-T	Intel® Core™ i3-1320PE	2 x DA-PWR-150-HV	-40 to 70°C
DA-820E-C5-H-T	Intel® Core™ i5-1340PE	1 x DA-PWR-150-HV	-40 to 70°C
DA-820E-C5-HH-T	Intel® Core™ i5-1340PE	2 x DA-PWR-150-HV	-40 to 70°C
DA-820E-C7-H-T	Intel® Core™ i7-1370PE	1 x DA-PWR-150-HV	-40 to 70°C
DA-820E-C7-HH-T	Intel® Core™ i7-1370PE	2 x DA-PWR-150-HV	-40 to 70°C
DA-820E-C3-L-T	Intel® Core™ i3-1320PE	1 x DA-PWR-120-LV	-40 to 70°C
DA-820E-C3-LL-T	Intel® Core™ i3-1320PE	2 x DA-PWR-120-LV	-40 to 70°C
DA-820E-C5-L-T	Intel® Core™ i5-1340PE	1 x DA-PWR-120-LV	-40 to 70°C
DA-820E-C5-LL-T	Intel® Core™ i5-1340PE	2 x DA-PWR-120-LV	-40 to 70°C
DA-820E-C7-L-T	Intel® Core™ i7-1370PE	1 x DA-PWR-120-LV	-40 to 70°C
DA-820E-C7-LL-T	Intel® Core™ i7-1370PE	2 x DA-PWR-120-LV	-40 to 70°C

配件（選購）

Power Modules

DA-PWR-150-HV	Hot-swappable power-supply module (100 to 240 VAC/VDC) with system power input and terminal block for DA-820E computers
DA-PWR-120-LV	Hot-swappable power-supply module (48 VDC) with system power input and terminal block for DA-820E computers

Expansion Modules

DA-GX02-SFP-T	2-port 100/1000 Mbps fiber card with 2 SFP slots, 1 PCIe interface
DA-PRP-HSR-I210	PRP/HSR expansion card with RJ45 and SFP combo port
DN-FX04	4-port 100M/1000M SFP Ethernet module
DN-LN04-RJ	4-port 10/100/1000 Mbps PCIe LAN module with RJ45 connectors
DN-SP08-I-DB	8-port software-selectable RS-232/422/485 PCIe serial module with DB9 connector
DN-SP08-I-TB	8-port software-selectable RS-232/422/485 PCIe serial module with terminal-block connector
DN-PRP-HSR-I210	PRP/HSR expansion module with RJ45 and SFP combo port

Connectors

Mini DB9F-to-TB	DB9 female to terminal block connector
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