

# DA-820C 系列

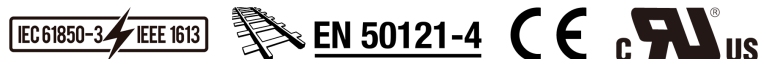
Intel® 第 7 代 Xeon® 和 Core™ 處理器、IEC-61850、3U 機架式電腦支援 PRP/HSR 擴充卡



## 特色與優點

- 符合 IEC 61850-3、IEEE 1613 及 IEC 60255 標準，適用於變電自動化電腦
- 符合 EN 50121-4 標準，適合鐵路軌旁應用
- 第 7 代 Intel® Xeon® 和 Core™ 處理器
- 高達 64 GB RAM (兩個內建 SODIMM ECC DDR4 記憶體插槽)
- 4 個固態硬碟插槽，支援 Intel® RST RAID 0/1/5/10
- 用於網路冗餘的 PRP/HSR 技術 (使用 PRP/HSR 擴充模組)
- 內建 MMS 伺服器，採用 IEC 61850-90-4，可與 Power SCADA 整合
- PTP (IEEE 1588) 和 IRIG-B 時間同步 (使用 IRIG-B 擴充模組)
- 安全選項，例如 TPM 2.0、UEFI 安全啟動和實體安全
- 1 個 PCIe x 16 插槽、1 個 PCIe x 4 插槽、2 個 PCIe x 1 插槽
- 電源備援系統 (100 至 240 VAC/VDC)

## 認證



## 簡介

DA-820C 系列是一款高效 3U 機架式工業電腦，採用第 7 代 Intel® Core™ i3/i5/i7 或 Intel® Xeon® 處理器，並含 3 個顯示器連接埠 (HDMI x 2、VGA x 1)、6 個 USB 連接埠、4 個 gigabit 區域網路連接埠、2 個 RS-232/422/485 三合一的序列埠、6 個 DI 連接埠，以及 2 個 DO 連接埠。DA-820C 還配備 4 個可熱插拔的 2.5 吋硬碟 / 固態硬碟插槽，並支援 Intel® RST RAID 0/1/5/10 功能，以及 PTP/IRIG-B 時間同步。

DA-820C 符合 IEC-61850-3、IEEE 1613、IEC 60255 以及 EN50121-4 標準，可提供穩定可靠的系統運作，適用於電力應用。

IEC 60255 是智慧變電所中繼電器保護最廣泛使用的標準之一。符合該標準可確保 DA-820C 能與 IED 可靠且無縫地作業，作為強大的變電站自動化系統的一部分。

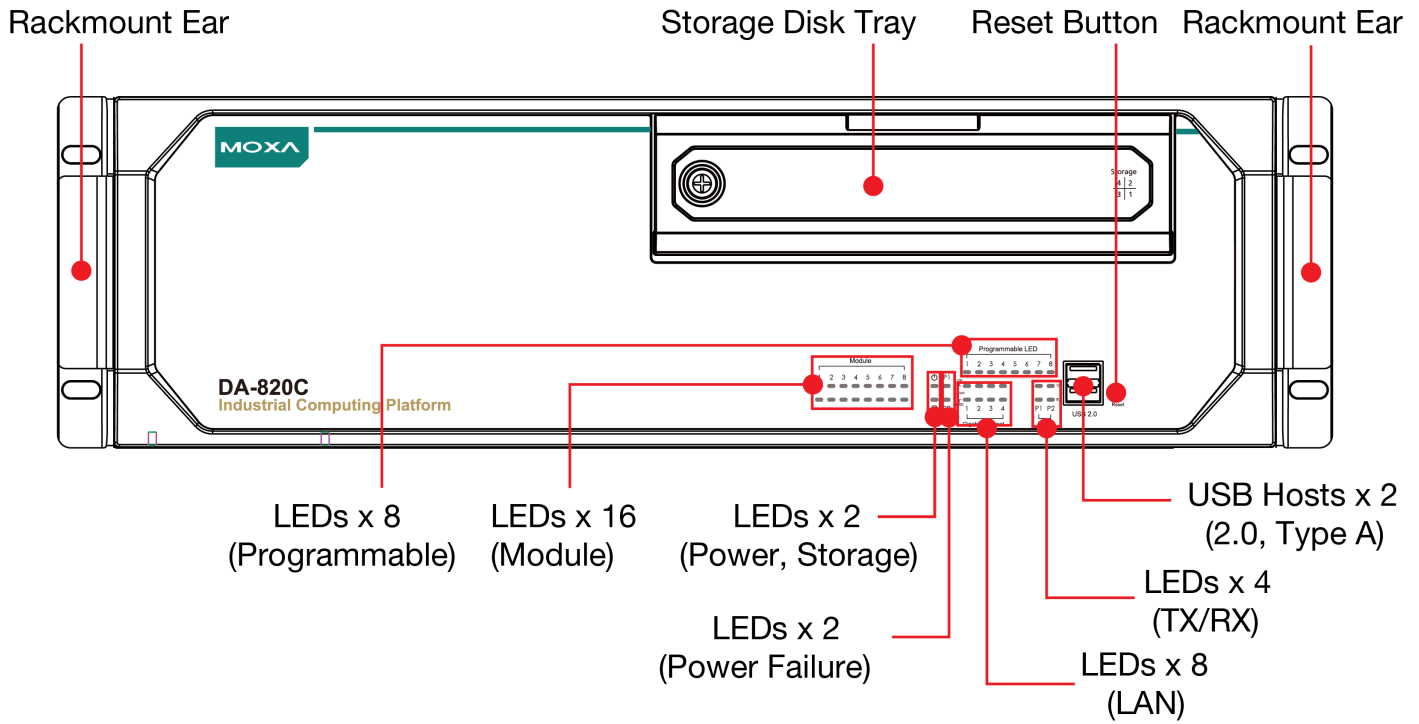
此外，DA-820C 符合 EN 50121-4 標準，因此能夠在鐵軌軌旁應用提供穩定可靠的系統運作，例如車站監控和資料採集 (SCADA) 系統、鐵軌軌旁災難預防、牽引動力、號誌和安全系統，讓您完整掌握智慧型鐵道配置。

## 預防性監測功能

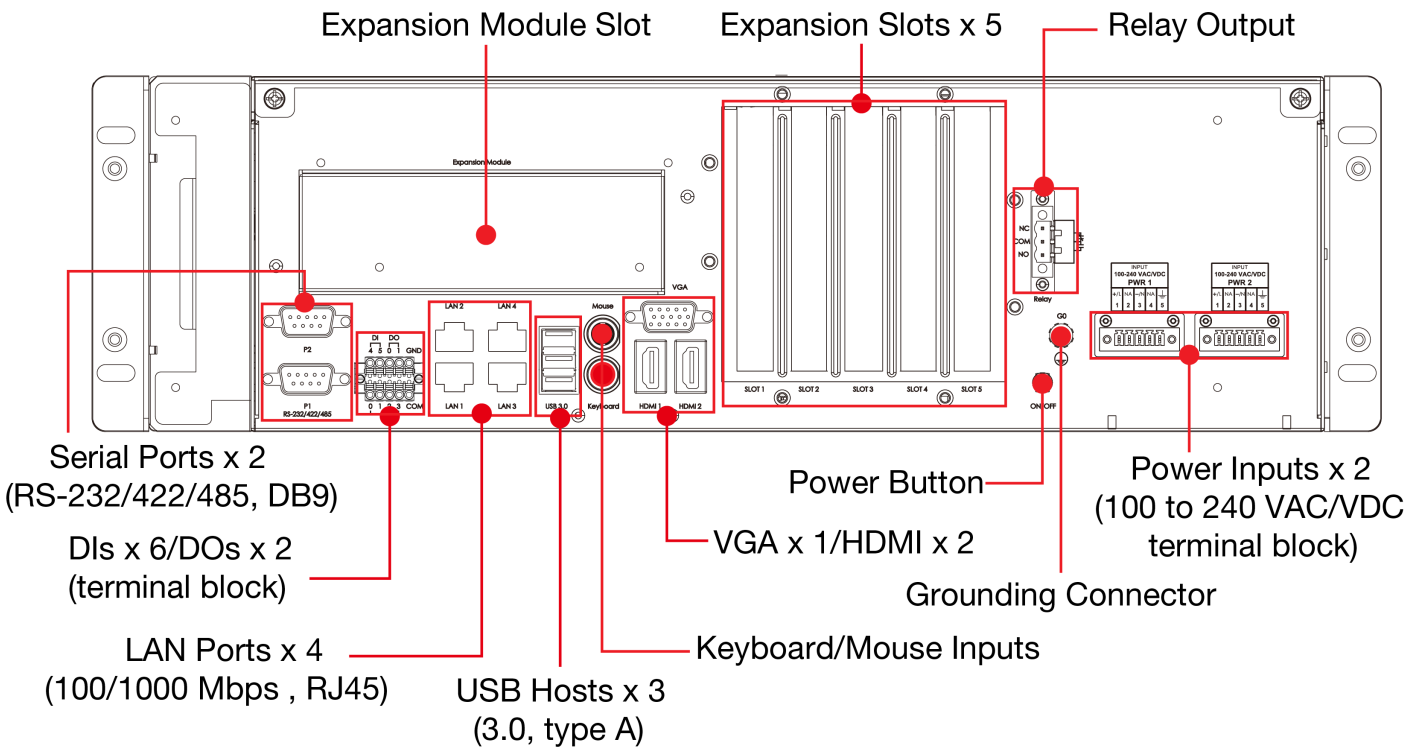
Moxa 主動式監控工具，佔用空間小、不耗用資源、易於使用，適用於部分 Moxa 電腦使用者追蹤許多系統參數。您只需在基於 Windows 的使用者介面中點選參數對應的圖示，即可檢視關鍵元件的目前值。使用者定義的關鍵元件指標 (KPI) 用來監視電腦的關鍵元件。當這些 KPI 超出預設臨界值時，系統會透過繼電器或 SNMP 收集器自動觸發視覺和/或音訊警示，方便操作人員在設定預防性維護任務時，能避免系統停機的風險。

# 外觀

## 前視圖



## 後視圖



## 規格

### Computer

CPU	Intel® Xeon® Processor E3-1505M v6 (8M Cache, 3.00 GHz) Intel® Xeon® Processor E3-1505L v6 (8M Cache, 2.20 GHz) Intel® Core™ i7-7820EQ Processor (8M Cache, up to 3.70 GHz) Intel® Core™ i5-7442EQ Processor (6M Cache, up to 2.90 GHz) Intel® Core™ i3-7102E Processor (3M Cache, 2.10 GHz)
System Memory Slot	SODIMM DDR4 slots x 2
DRAM	64 GB max. capacity (SODIMM x 2, each supporting 2400 MHz and 32 GB maximum per module) ECC RAM only supports i3 CPU and Xeon CPU models
Graphics Controller	Intel® Xeon® E3-1505MV6: Intel® HD Graphics P630 Intel® Xeon® E3-1505LV6: Intel® HD Graphics P630 Intel® Core™ i7-7820EQ: Intel® HD Graphics 630 Intel® Core™ i5-7442EQ: Intel® HD Graphics 630 Intel® Core™ i3-7102E: Intel® HD Graphics 630
Storage Slot	2.5-inch HDD/SSD slots x 4 mSATA slots x 1, internal mini-PCIe socket
Supported OS	Windows 10 IoT Enterprise LTSC 2021 64-bit Windows 10 IoT Enterprise LTSC 2019 64-bit Windows Server 2019 Linux Debian 11 Linux Debian 9 Linux drivers can be downloaded from <a href="https://docs.moxa.online/mil/manuals/">https://docs.moxa.online/mil/manuals/</a>
MMS	IEC 61850-90-4 MMS Server for power SCADA IEC 61850-90-4 MMS ICD file

### 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)
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
USB 3.0	USB 3.0 hosts x 3, type-A connectors 3 ports on the rear panel
Expansion Slots	PCIe x16 slot x 1 PCIe x4 slots x 1 PCIe x1 slots x 2 PCI slots x 1
Video Output	HDMI x 2, HDMI connector (type A) VGA x 1, 15-pin D-sub connector (female)
Time Synchronization	PTP, IRIG-B (with an expansion module)
TPM	TPM v2.0
Secure Boot	UEFI

## LED Indicators

System	Power x 1 Storage x 1 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
ESD	8 kV (level 4)
Isolation	2 kV
Serial Standards	RS-232/422/485
Surge	2 kV

## 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	DIs x 6
Voltage	0 to 30 VDC at 25 Hz
Wet Contact (DI to COM)	On: 10 to 30 VDC

## Digital Outputs

Digital Output Channels	DOs x 2
Current Rating	Max. 200 mA per channel
Voltage	24 to 30 VDC
I/O Type	Sink

## Power Parameters

Input Current	100 to 240 VAC, 50/60 Hz, 1.15 A (max) 100 to 240 VDC, 1.15 A (max)
Input Voltage	100 to 240 VAC 100 to 240 VDC
Power Button	Reset button (front panel) ON/OFF (rear panel)

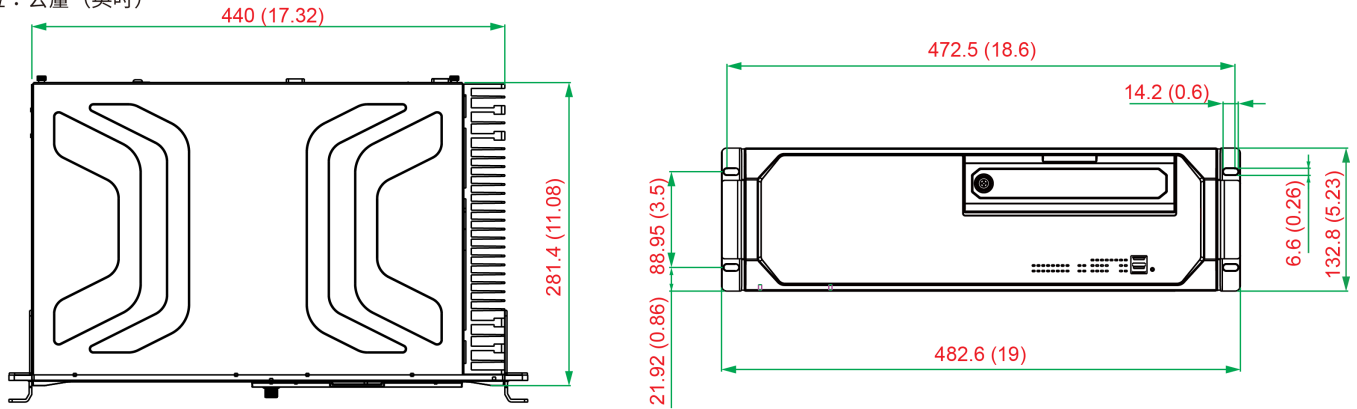
## Physical Characteristics

Housing	Metal
Dimensions (without ears)	440 x 132.8 x 281.4 mm (17.3 x 5.2 x 11.1 in)

Weight	14,000 g (31.11 lb)
Installation	19-inch rack mounting
<b>Environmental Limits</b>	
Operating Temperature	Standard Models: -25 to 55°C (-13 to 131°F) Wide Temp. Models: -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)
<b>Standards and Certifications</b>	
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 60950-1 IEC 62368-1 UL 62368-1
Shock	IEC 61850-3 Edition 2.0, IEC 60068-2-27, IEC 60255-21-2
<b>Declaration</b>	
Green Product	RoHS, CRoHS, WEEE
<b>MTBF</b>	
Time	325,730 hrs
Standards	Telcordia SR332
<b>Warranty</b>	
Warranty Period	3 years
Details	See <a href="http://www.moxa.com/tw/warranty">www.moxa.com/tw/warranty</a>
<b>Package Contents</b>	
Device	1 x DA-820C Series computer
Installation Kit	1 x rack-mounting ear
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)



## 訂購資訊

Model Name	CPU	Power Input 100-240 VAC/VDC	Operating Temp.
DA-820C-KL3-H-T	i3-7102E	Single Power	-40 to 70°C
DA-820C-KL3-HH-T	i3-7102E	Dual Power	-40 to 70°C
DA-820C-KL5-H-T	i5-7442EQ	Single Power	-40 to 70°C
DA-820C-KL5-HH-T	i5-7442EQ	Dual Power	-40 to 70°C
DA-820C-KLXL-H-T	Xeon E3-1505L v6	Single Power	-40 to 70°C
DA-820C-KLXL-HH-T	Xeon E3-1505L v6	Dual Power	-40 to 70°C
DA-820C-KL7-H	i7-7820EQ	Single Power	-25 to 55°C
DA-820C-KL7-HH	i7-7820EQ	Dual Power	-25 to 55°C
DA-820C-KLXM-H	Xeon E3-1505M v6	Single Power	-25 to 55°C
DA-820C-KLXM-HH	Xeon E3-1505M v6	Dual Power	-25 to 55°C

## 配件 (選購)

### Expansion Modules

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
DA-IRIG-B-S-02-T	IRIG-B expansion module, PCI interface, 1 fiber IRIG-B in, 1 DB9M in/out, 1 DB9M out
DE-FX02-SFP-T	2-port 100 Mbps fiber card, SFP slot x 2, PCIe interface (SFP module excluded)

### Connectors

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

CBL-RG58AUBNCMF9-150	DB9 female to BNC male cable for the DA-IRIG-B-S-02-T and DA-IRIG-B-S-04-T, 1.5 m
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