

V2406C 系列

Intel® 第 7/8 代 Core™/Celeron® 鐵路電腦，配備 2 個可熱插拔 HDD/SSD 插槽、2 個用於無線的 Mini PCIe 擴展插槽、配備隔離的 24 至 110 VDC 電源輸入、-40 至 70°C 操作溫度



特色與優點

- Intel® Celeron®/Intel® Core™ i3/i5/i7 高效能網路錄影機，可供軌道車輛應用
- DDR4 記憶體插槽；容量可達 32GB
- 支援雙獨立顯示器 (VGA 和 HDMI，具有 4K 解析度)
- 2 個 Gigabit 乙太網路連接埠，M12 X-coded 連接器
- M12 A-coded 電源連接器
- 符合所有 EN 50155 規範強制性測試項目¹
- 符合 EN 50121-4 標準
- 通過 IEC 61373 防撞和抗震認證
- 提供 -40 至 70°C 寬溫度型號

認證



簡介

V2406C 系列嵌入式電腦搭載 Intel® Core™ i7/i5/i3 或 Intel® Celeron® 高效能處理器，並且配備高達 32 GB 記憶體、一個 mSATA 插槽，以及兩個可熱插拔的 HDD/SSD 以供儲存空間擴充。本電腦符合 EN 50155:2017 與 EN 50121-4 標準，涵蓋操作溫度、電源輸入電壓、突波、ESD 以及震動，使其適合軌道車載以及軌旁應用。

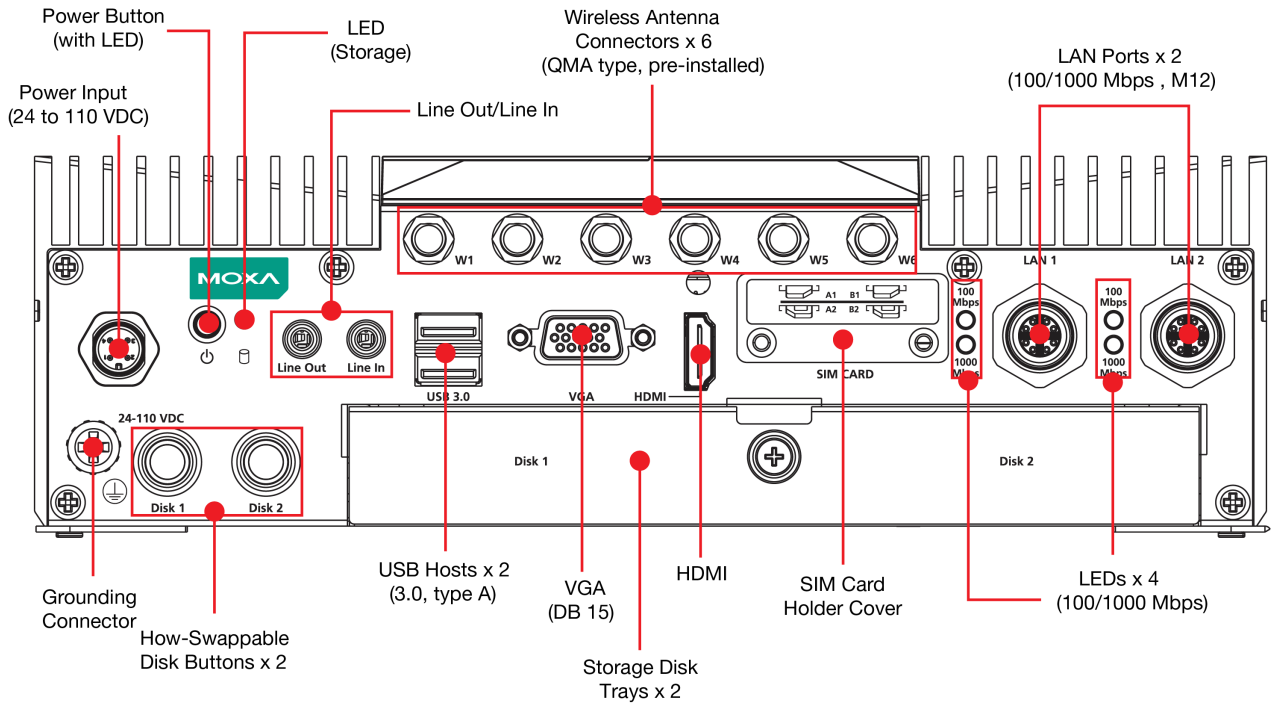
為連接車載以及軌旁系統與裝置，V2406C 電腦配備有各種豐富介面，包括 2 個 Gigabit 乙太網路連接埠、4 個 RS-232/422/485 串列埠、6 個 DI、2 個 DO 以及 4 個 USB 3.0 連接埠。此外，V2406C 電腦提供了 1 個 VGA 視訊輸出以及 1 個 HDMI 輸出，並且支援 4K 解析度。

為了在列車對地 (T2G) 應用方面提供可靠的連線，此系列電腦提供了 2 個 mPCIe 無線擴充插槽以及 4 個 SIM 卡插槽。這些設計有助於建立備援 LTE/Wi-Fi 連接，確保在高速行駛的列車以及軌旁應用之間提供可靠的雙向通訊。此外，用於無線模組預先安裝的 QMA 纜線可減少組裝工作，並且確保 RF 低洩漏。

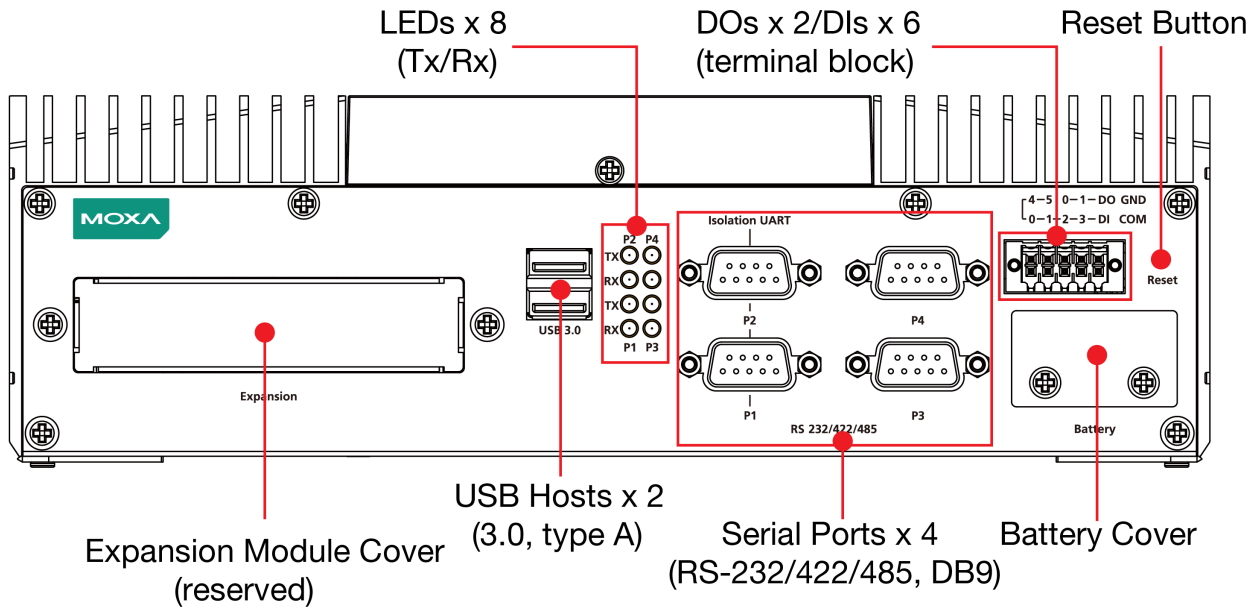
1. 此產品適用於符合 EN 50155 標準所定義的所有軌道車輛應用。按此處取得更詳細內容：www.moxa.com/doc/specs/EN_50155_Compliance.pdf

外觀

前視圖



後視圖



規格

Computer

CPU	V2406C-KL1-T/KL1-CT-T: Intel® Celeron® 3965U processor (2M cache, 2.2 GHz) V2406C-KL3-T: Intel® Core™ i3-7100U processor (3M cache, 2.4 GHz) V2406C-KL5-T: Intel® Core™ i5-7300U processor (3M cache, 2.6 GHz) V2406C-KL7-T/ KL7-CT-T: Intel® Core™ i7-7600U processor (4M cache, 2.8 GHz) V2406C-WL1-T/ WL1-CT-T: Intel® Celeron® 4305UE processor (2M cache, 2 GHz) V2406C-WL3-T: Intel® Core™ i3-8145UE processor (4M cache, 2.2 GHz) V2406C-WL5-T: Intel® Core™ i5-8365UE processor (6M cache, 1.6 GHz) V2406C-WL7-T/ WL7-CT-T: Intel® Core™ i7-8665UE processor (8M cache, 1.7 GHz)
Storage Slot	2.5-inch HDD/SSD slots x 2 mSATA slots x 1
Supported OS	Order via the Moxa Computer Configuration System (CCS): Windows 10 Embedded IoT Ent 2019 LTSC 64-bit Windows 10 Embedded IoT Ent 2021 LTSC 64-bit WL Models: Moxa Industrial Linux 2.x (Debian 10, kernel 4.19) KL Models: Debian 9 (kernel 4.9) Download Drivers From Website: Linux Debian 11/Ubuntu 20.04/CentOS 7.9 drivers
System Memory Slot	SODIMM DDR4 slot x 2
DRAM	32 GB max
Graphics Controller	Intel® Celeron® Models: Intel® HD Graphics 610 Intel® Core™ i3/i5/i7 Models: Intel® HD Graphics 620

Computer Interface

Ethernet Ports	Auto-sensing 10/100/1000 Mbps ports (M12 X-coded) x 2
Digital Output	DOs x 2
Serial Ports	RS-232/422/485 ports x 4, software selectable (DB9 male)
Digital Input	DIs x 6
USB 3.0	USB 3.0 hosts x 4, type-A connectors
Audio Input/Output	Line in x 1, Line out x 1, 3.5 mm phone jack
Video Output	VGA x 1, 15-pin D-sub connector (female) HDMI x 1, HDMI connector (type A)
Expansion Slots	mPCIe slots x 2

Digital Inputs

Connector	Screw-fastened Euroblock terminal
I/O Mode	DI
Isolation	3k VDC
Sensor Type	Wet contact (NPN) Dry contact
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

Connector	Screw-fastened Euroblock terminal 10-pin terminal block
Current Rating	200 mA per channel
I/O Type	Sink
Voltage	0 to 30 VDC
Isolation	3k VDC

LED Indicators

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

Serial Interface

Baudrate	50 bps to 115.2 kbps
Connector	DB9 male
ESD	Contact: 6 kV; Air: 8 kV (level 3)
Isolation	2 kV
Data Bits	5, 6, 7, 8
Flow Control	RTS/CTS, XON/XOFF, ADDC® (automatic data direction control) for RS-485, RTS Toggle (RS-232 only)
Parity	None, Even, Odd, Space, Mark
Stop Bits	1, 1.5, 2

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

Power Parameters

Input Voltage	24 to 110 VDC
Power Connector	M12 A-coded male connector
Power Consumption (Max.)	70 W (max.)

Physical Characteristics

Housing	Aluminum
IP Rating	IP20
Dimensions (without ears)	250 x 75 x 150 mm (9.84 x 2.95 x 5.91 in)
Weight	2,700 g (5.95 lb)

Installation	Wall mounting (standard)
Protection	PCB conformal coating Available on request

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

EMI	CISPR 32, FCC Part 15B Class A
EMS	IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 20 V/m IEC 61000-4-4 EFT: Power: 2 kV; Signal: 2 kV IEC 61000-4-5 Surge: Power: 2 kV IEC 61000-4-6 CS: 10 V IEC 61000-4-8 PFMF
Railway Fire Protection	EN 45545-2
EMC	EN 55032/35
Safety	EN 62368-1 IEC 62368-1 UL 62368-1
Railway	EN 50121-4 EN 50121-3-2 EN 50155:2017
Shock	IEC 60068-2-27, IEC 61373
Vibration	IEC 60068-2-64, IEC 61373

Declaration

Green Product	RoHS, CRoHS, WEEE
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MTBF

Time	KL Models: 382,506 hrs WL Models: 369,408 hrs
Standards	Telcordia (Bellcore), GB

Warranty

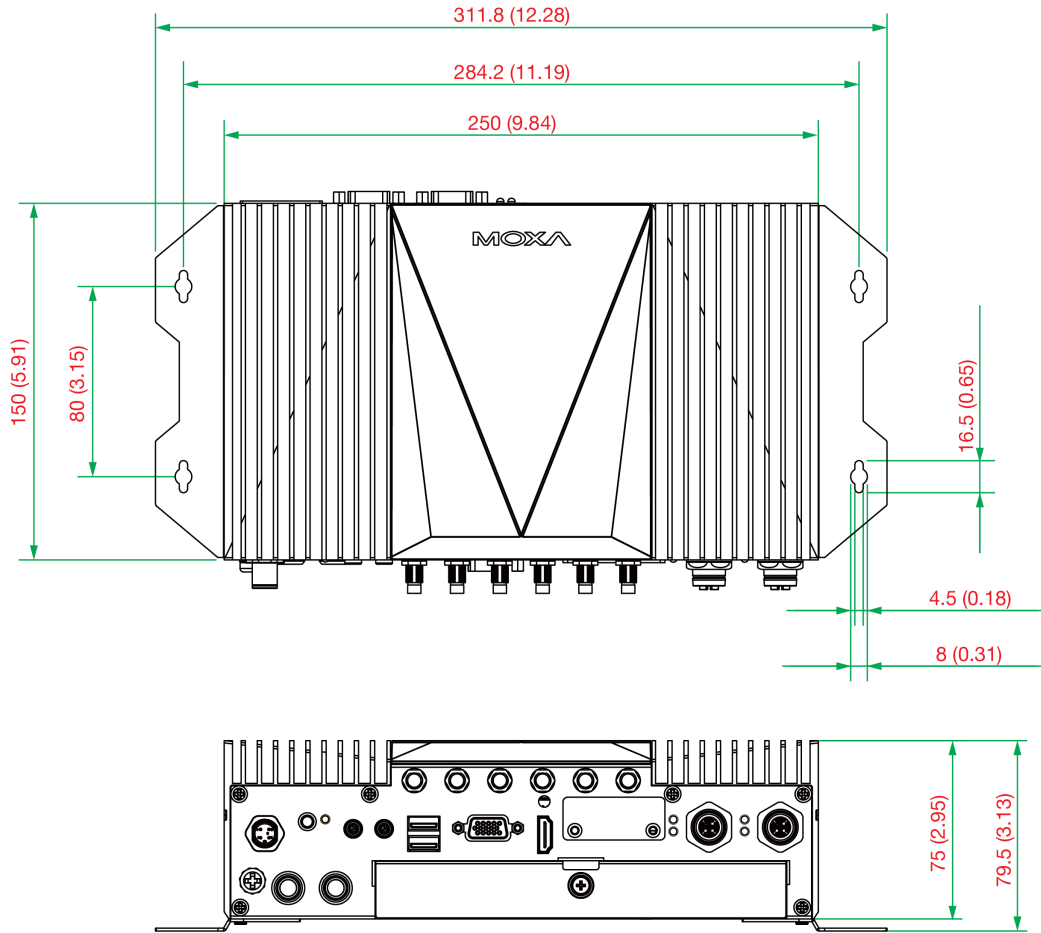
Warranty Period	3 years
Details	See www.moxa.com/tw/warranty

Package Contents

Device	1 x V2406C Series computer
Installation Kit	2 x SSD/HDD trays 1 x clamp for HDMI cable 1 x wall-mounting kit
Documentation	1 x quick installation guide 1 x warranty card

尺寸

單位：公釐 (英吋)



訂購資訊

Model Name	CPU	Memory	OS Storage (mSATA)	SSD/HDD (Hot Swap)	USB	Power Input	Operating Temp.	Conformal Coating
V2406C-KL1-T	Celeron 3965U	2, DDR4, 2133 MHz (optional); 32 GB max.	1 (optional); 512 GB max.	2 (optional); 1 TB max.	4 x USB 3.0 (-type A)	24 to 110 VDC (M12 A-coded)	-40 to 70°C	-
V2406C-KL3-T	i3-7100U	2, DDR4, 2133 MHz (optional); 32 GB max.	1 (optional); 512 GB max.	2 (optional); 1 TB max.	4 x USB 3.0 (-type A)	24 to 110 VDC (M12 A-coded)	-40 to 70°C	-
V2406C-KL5-T	i5-7300U	2, DDR4, 2133 MHz (optional); 32 GB max.	1 (optional); 512 GB max.	2 (optional); 1 TB max.	4 x USB 3.0 (-type A)	24 to 110 VDC (M12 A-coded)	-40 to 70°C	-
V2406C-KL7-T	i7-7600U	2, DDR4, 2133 MHz (optional); 32 GB max.	1 (optional); 512 GB max.	2 (optional); 1 TB max.	4 x USB 3.0 (-type A)	24 to 110 VDC (M12 A-coded)	-40 to 70°C	-
V2406C-KL1-CT-T	Celeron 3965U	2, DDR4, 2133 MHz (optional); 32 GB max.	1 (optional); 512 GB max.	2 (optional); 1 TB max.	4 x USB 3.0 (-type A)	24 to 110 VDC (M12 A-coded)	-40 to 70°C	✓
V2406C-KL7-CT-T	i7-7600U	2, DDR4, 2133 MHz (optional); 32 GB max.	1 (optional); 512 GB max.	2 (optional); 1 TB max.	4 x USB 3.0 (-type A)	24 to 110 VDC (M12 A-coded)	-40 to 70°C	✓

Model Name	CPU	Memory	OS Storage (mSATA)	SSD/HDD (Hot Swap)	USB	Power Input	Operating Temp.	Conformal Coating
V2406C-WL1-T	Celeron 4305UE	2, DDR4, 2133 MHz (optional); 32 GB max.	1 (optional); 512 GB max.	2 (optional); 1 TB max.	4 x USB 3.0 (-type A)	24 to 110 VDC (M12 A-coded)	-40 to 70°C	-
V2406C-WL3-T	i3-8145UE	2, DDR4, 2133 MHz (optional); 32 GB max.	1 (optional); 512 GB max.	2 (optional); 1 TB max.	4 x USB 3.0 (-type A)	24 to 110 VDC (M12 A-coded)	-40 to 70°C	-
V2406C-WL5-T	i5-8365UE	2, DDR4, 2133 MHz (optional); 32 GB max.	1 (optional); 512 GB max.	2 (optional); 1 TB max.	4 x USB 3.0 (-type A)	24 to 110 VDC (M12 A-coded)	-40 to 70°C	-
V2406C-WL7-T	i7-8665UE	2, DDR4, 2133 MHz (optional); 32 GB max.	1 (optional); 512 GB max.	2 (optional); 1 TB max.	4 x USB 3.0 (-type A)	24 to 110 VDC (M12 A-coded)	-40 to 70°C	-
V2406C-WL1-CT-T	Celeron 4305UE	2, DDR4, 2133 MHz (optional); 32 GB max.	1 (optional); 512 GB max.	2 (optional); 1 TB max.	4 x USB 3.0 (-type A)	24 to 110 VDC (M12 A-coded)	-40 to 70°C	✓
V2406C-WL7-CT-T	i7-8665UE	2, DDR4, 2133 MHz (optional); 32 GB max.	1 (optional); 512 GB max.	2 (optional); 1 TB max.	4 x USB 3.0 (-type A)	24 to 110 VDC (M12 A-coded)	-40 to 70°C	✓

配件 (選購)

Cables

CBL-M12(FF5P)/OPEN-100 IP67	A-coded M12-to-5-pin power cable, IP67-rated 5-pin female M12 connector, 1 m
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Mounting Kits

V2406C Wall mount kit	Single-bracket wall-mounting kit for the V2406C Series with 8 M3 x 6 mm screws
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Wi-Fi Wireless Modules

V2400 Cover-DB9	Dual DB9 expansion cover, 4 male hex standoff spacer pillars
V2400-WLAN22-AC	SparkLAN WPEQ-261ACNI (BT) Wi-Fi mini card, 4 black screws
V2406C TPM2.0 CT Module	SLB9665XT2.0 TPM 2.0 module with conformal coating
V2406C TPM2.0 Module	SLB9665XT2.0 TPM 2.0 module without conformal coating

Cellular Wireless Modules

V2406C-LTECat4-AP	Telit LE910C4 LTE Cat. 4 mini card for the Asia-Pacific region
V2406C-LTECat4-EU	Telit LE910C4 LTE Cat. 4 mini card for European region
V2406C-LTECat4-NF	Telit LE910C4 LTE Cat. 4 mini card for the North American region

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