

UC-8540 系列

Arm Cortex-A7 雙核心 1 GHz 列車對地電腦，配備 2 個 mPCIe 擴充插槽，可安裝無線通訊模組



特色與優點

- 支援 1 個 WWAN 連線以及 2 個 SIM 卡插槽
- 支援 1 個 WLAN (IEEE 802.11 a/b/g/n/ac) 連線
- 採用單一面板 I/O 設計，不僅縮小安裝空間，而且維護更容易
- 採用前端存取面板，可輕鬆完成維護
- 24 至 110 VDC 隔離電源輸入，支援遠端電源控制功能，適用於車輛應用
- 符合 EN 50155 Tx 標準，支援 -40 至 70°C 寬溫操作，適用於嚴苛環境
- 符合所有 EN 50155 規範強制性測試項目¹
- 5 年保固

認證



EN 50121-4



EN 50155



簡介

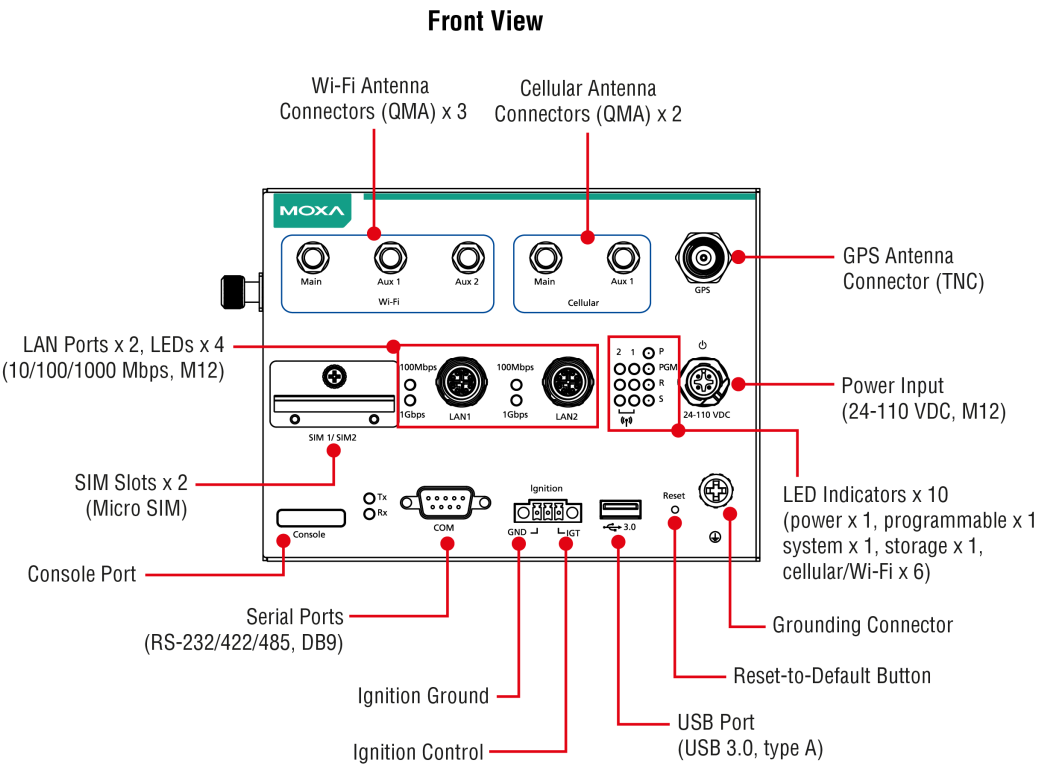
Moxa UC-8540 是專為交通運輸應用所設計的創新運算平台。其單側 I/O 設計適合沒有足夠空間安裝通訊裝置設備的車輛應用。UC-8540 也採用前端存取面板，因此能夠輕鬆地安裝或更換 SIM 卡及配線。使用者可選擇從上方或下方安裝或更換無線模組、mSATA 卡或 RTC 電池，讓系統維護變得更簡便。

UC-8540 配備 1 個帶有 USB 訊號的 mini-PCIe 插槽，以支援 4G LTE 模組，以及 1 個帶有 PCIe/USB 訊號的插槽，以支援 Wi-Fi 模組。4G LTE 模組含有 2 個 SIM 卡插槽，可透過內建的 MIRF 2.0 (Moxa 無線裝置遠端管理平台)，來實現行動網路備援，或依據裝置所在位置自動切換 SIM 卡。

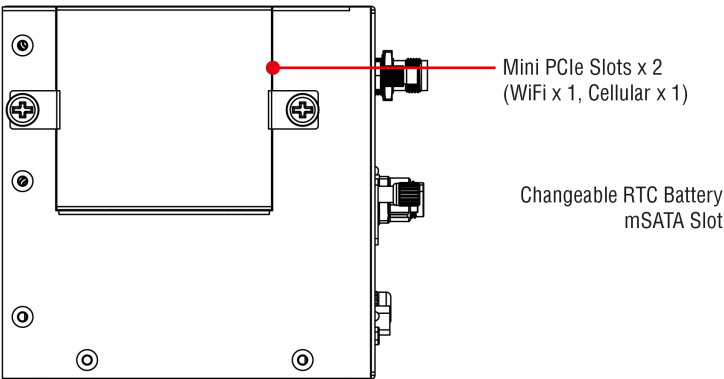
UC-8540 可以作為通訊中心的運算平台方面的應用，例如車輛對地通訊閘道、TCMS T2G (列車對地) 閘道、移動監控裝置、車對地閘道器，以及車載無線自動化收費裝置。²

本平台採用開放式架構，搭載基於 Linux Kernel 4.1 的 Debian 8 作業系統，支援透過 Debian APT (進階套件管理工具) 進行軟體套件管理，並可使用 Moxa API 程式庫與 GNU C 函式庫開發應用程式。

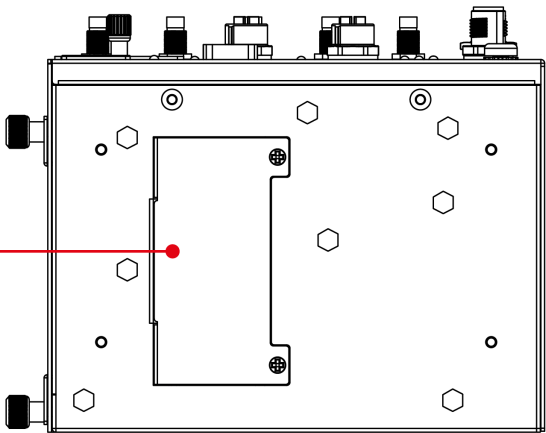
1. 此產品適用於符合 EN 50155 標準所定義的所有軌道車輛應用。按此處取得更詳細內容：www.moxa.com/doc/specs/EN_50155_Compliance.pdf
2. 無線模組需另購。詳情請聯絡 Moxa 銷售代表。



Side View



Bottom View



規格

Computer	
CPU	Armv7 Cortex-A7 dual-core 1 GHz
Storage Pre-installed	8 GB eMMC
Supported OS	Linux Debian 8 (Linux kernel v4.1)
System Memory Pre-installed	1 GB DDR3L
Storage Slot	mSATA slots x 1, internal mini-PCIe socket
Computer Interface	
TPM	TPM v2.0 (HW V1.1.0 and later)
Expansion Slots	mPCIe slots x 2

Ethernet Ports	Auto-sensing 10/100/1000 Mbps ports (M12 X-coded) x 2
Cellular Antenna Connector	QMA x 2
USB 3.0	USB 3.0 hosts x 1, type-A connectors
Wi-Fi Antenna Connector	QMA x 3
Serial Ports	RS-232/422/485 ports x 1, software selectable (DB9 male)
Number of SIMs	2
Console Port	RS-232 (Tx, Rx, GND), 4-pin header output (115200, n, 8, 1)
GPS Antenna Connector	TNC x 1
SIM Format	Micro

Input/Output Interface

Buttons	Reset button
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LED Indicators

System	Power x 1 System Ready x 1 Programmable x 1
LAN	2 per port (10/100/1000 Mbps)
Serial	2 per port (Tx, Rx)
Wireless Signal Strength	Cellular/Wi-Fi x 6

Serial Signals

RS-232	TxD, Rx, 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

GPS Interface

Heading Accuracy	0.3 degrees
Industrial Protocols	NMEA 0183, version 4.0 (V2.3 or V4.1 configurable), UBX, RTCM
Receiver Types	72-channel u-blox M8 engine
Time Pulse	0.25 Hz to 10 MHz
Velocity Accuracy	0.05 ms

Power Parameters

Input Current	1.66 A @ 24 VDC, 0.36 A @ 110 VDC
Input Voltage	24 to 110 VDC
Power Connector	M12 A-coded 4-pin male connector
Power Consumption	40 W (max.)

Physical Characteristics

Protection	UC-8540-T-CT-LX: PCB conformal coating
Dimensions (with ears)	190 x 120 x 125 mm (7.46 x 4.72 x 4.92 in)
Dimensions (without ears)	160 x 120 x 120 mm (6.30 x 4.72 x 4.72 in)
Housing	Metal
Installation	Wall mounting
IP Rating	IP40
Weight	Product only: 1,600 g (3.53 lb)

Environmental Limits

Ambient Relative Humidity	5 to 95% (non-condensing)
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)

Standards and Certifications

EMC	EN 55032/35
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; Signal: 2 kV IEC 61000-4-6 CS: 10 V IEC 61000-4-8 PFMF
Railway	EN 50121-4 EN 50155
Railway Fire Protection	EN 45545-2
Safety	EN 62368-1 IEC 62368-1
Shock	IEC 60068-2-27, IEC 61373, EN 50155
Vibration	IEC 60068-2-64, IEC 61373, EN 50155

Declaration

Green Product	RoHS, CRoHS, WEEE
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Warranty

Warranty Period	5 years
Details	See www.moxa.com/tw/warranty

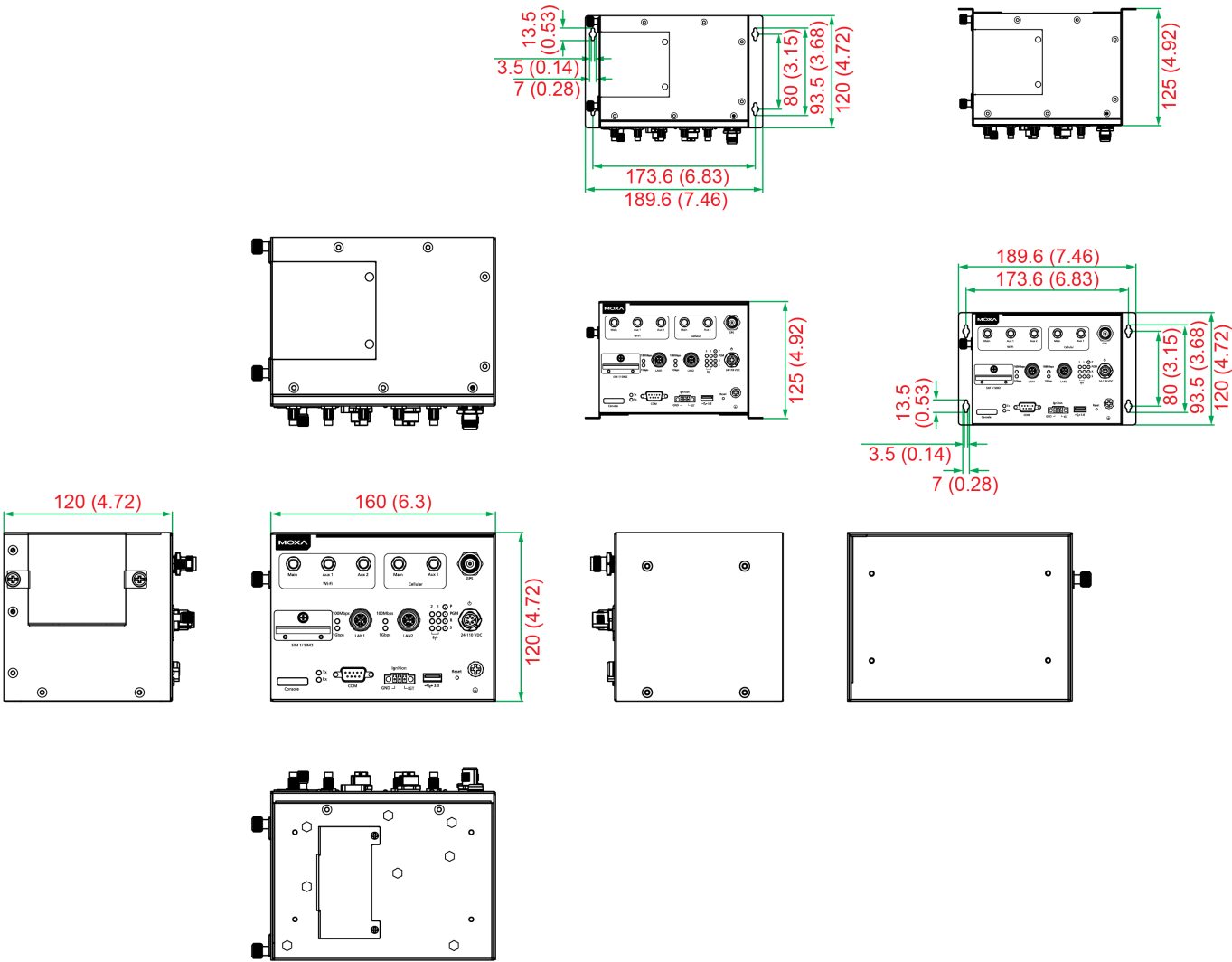
Package Contents

Device	1 x UC-8540 Series computer
Documentation	1 x quick installation guide 1 x warranty card
Cable	1 x 4-pin header to DB9 console cable

尺寸

單位：公釐（英吋）

Mounting Type



訂購資訊

Model Name	CPU	Antenna Connector Type	Operating Temp.	Conformal Coating
UC-8540-LX	Armv7 Cortex-A7 dual-core 1 GHz	QMA	-25 to 55°C	–
UC-8540-T-LX	Armv7 Cortex-A7 dual-core 1 GHz	QMA	-40 to 70°C	–
UC-8540-T-CT-LX	Armv7 Cortex-A7 dual-core 1 GHz	QMA	-40 to 70°C	P

配件（選購）

Wi-Fi Wireless Modules

UC-8500-WLAN33-Q-AC	Wi-Fi 5 (802.11ac) module with 2 transmitters and 2 receivers, 2 QMA connectors with cables, 1 mPCIe adapter bracket with 4 screws, 1 thermal pad
UC-8500-WLAN33-Q-AC-TELEC	Wi-Fi 5 (802.11ac) module with 2 transmitters and 2 receivers, 2 QMA connectors with cables, TELEC certification

Cellular Wireless Modules

UC-8500-4GCat6-Q-NAMEU	LTE Cat. 6 module for North America and Europe, 2 QMA connectors with cables, -40 to 60°C operating temperature
UC-8500-4GCat6-Q-APAC	LTE Cat. 6 module for North America and Europe, 2 QMA connectors with cables, -40 to 60°C operating temperature

Cables

CBL-F9DPF1x4-BK-100	Console cable with 4-pin connector, 1 m
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Power Adapters

PWR-24250-DT-S1	Desktop power supply (requires power cord), 24 VDC, 2.5 A, 100 to 240 VAC, 0 to 40°C operating temperature
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Power Cords

PWC-C13AU-3B-183	Power cord with AU plug, 1.83 m
PWC-C13CN-3B-183	Power cord with three-prong CN plug, 1.83 m
PWC-C13EU-3B-183	Power cord with EU/KR plug, 1.83 m
PWC-C13UK-3B-183	Power cord with UK plug, 1.83 m
PWC-C13JP-3B-183	Power cord with JP plug plug, 7A/125V, 1.83 m
PWC-C13US-3B-183	Power cord with US plug, 1.83 m

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