

UC-8580 系列

Arm Cortex-A7 雙核心 1 GHz 列車對地電腦，包括 4 個用於無線模組的 Mini-PCIe 擴充插槽



特色與優點

- 符合所有 EN 50155 規範強制性測試項目¹
- 每個行動通訊模組支援最多 3 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
- EN 50155 Tx (-40 至 70°C) 工作溫度，可在嚴苛環境下使用
- 5 年保固

認證



EN 50155



EN 50121-4



簡介

Moxa UC-8580 是專為交通運輸應用所設計的創新運算平台。

UC-8580 提供兩種不同類型天線接頭可選擇。SMA 型號支援所有 SMA 類型接頭。QMA 型號支援 GPS 的 TNC 接頭和 Wi-Fi/行動通訊模組的 QMA 接頭，並且有 4 個可用於安裝無線模組的插槽。²三個插槽支援 4G LTE 模組，一個插槽支援 Wi-Fi 模組。每個 4G LTE 模組含有 2 個 SIM 卡插槽，可透過內建的 Wireless 管理程式（針對行動通訊和 Wi-Fi 管理的 Moxa 軟體公用程式）實現行動網路通訊備援或選擇 SIM 卡的地理圍欄。

UC-8580 採用基於 Linux Kernel 4.1 為內核的 Debian 8 系統開放平台，允許解決方案提供商透過 Debian 的 APT（高級封裝工具）管理軟體套件，或藉由 Moxa 的 API 程式庫和 GNU C 程式庫開發軟體應用程式。

UC-8580 的單側 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-8580 也採用前端存取面板，使用者不需要從牆面拆下已安裝的整組裝置，即可安裝或更換無線模組、SIM 卡或 mSATA 卡。

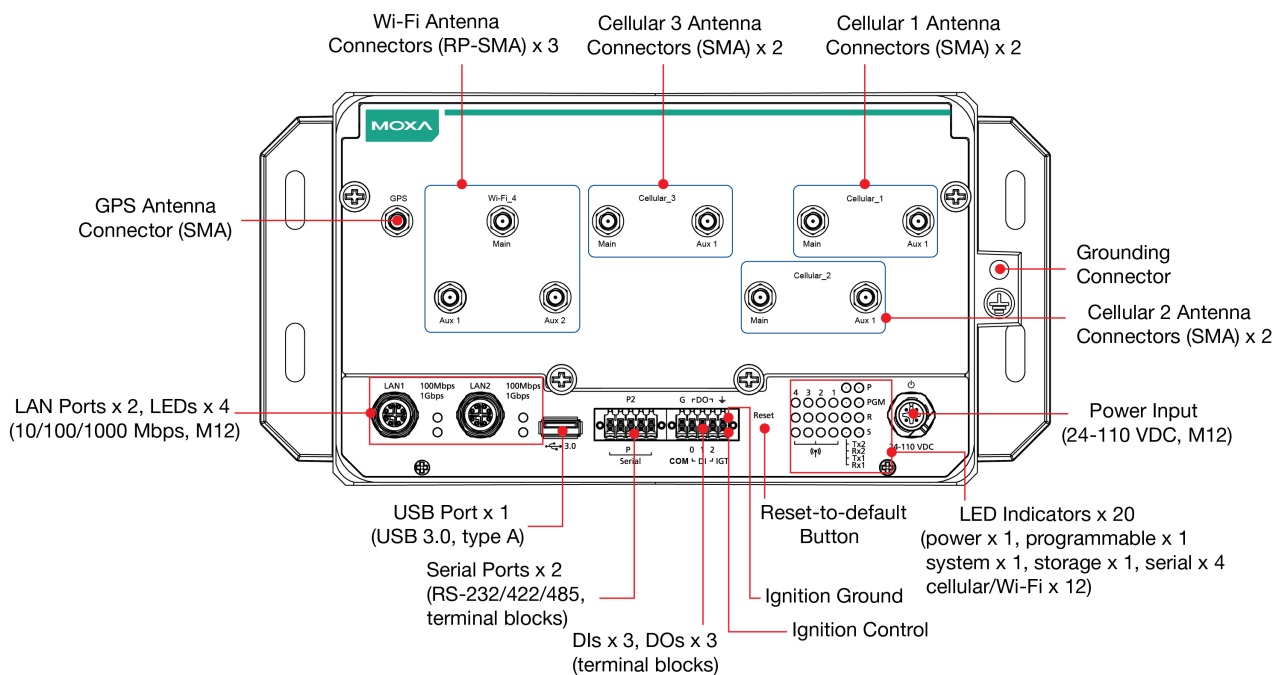
UC-8580 可作為下列應用的通訊中心運算平台：

- 車輛對地通訊閘道
- TCMS T2G（列車對地）閘道
- 移動監控裝置
- 車載網路車對地閘道器
- 車載無線自動化收費裝置

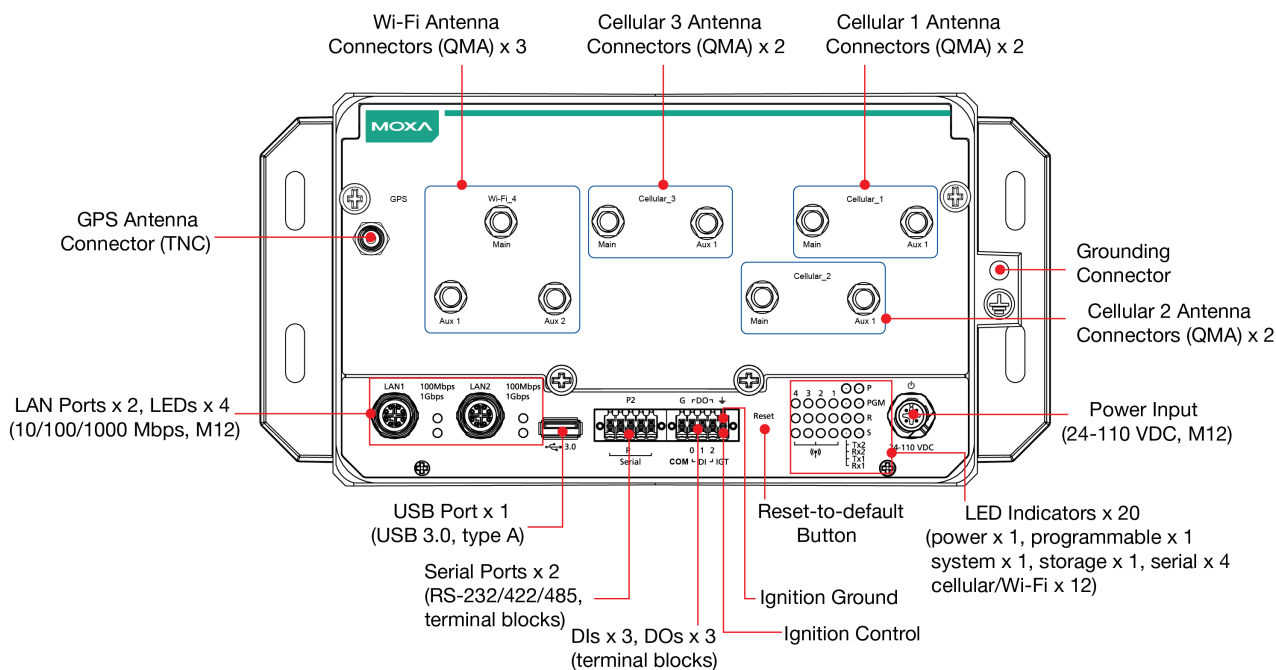
1. 此產品適用於符合 EN 50155 標準所定義的所有軌道車輛應用。按此處取得更詳細內容：www.moxa.com/doc/specs/EN_50155_Compliance.pdf
2. 無線模組需另購。詳情請聯絡 Moxa 銷售代表。

外觀

SMA 型號



QMA 型號



規格

Computer

CPU	Arm v7 Cortex-A7 dual-core 1 GHz
System Memory Pre-installed	1 GB DDR3L

Supported OS	Linux Debian 8 (Linux kernel v4.1)
Storage Slot	mSATA slots x 1, internal mini-PCIe socket
Storage Pre-installed	8 GB eMMC

Computer Interface

Ethernet Ports	Auto-sensing 10/100/1000 Mbps ports (M12 X-coded) x 2
Serial Ports	RS-232/422/485 ports x 2, software-selectable (terminal block)
USB 3.0	USB 3.0 hosts x 1, type-A connectors
Digital Input	DIs x 3
Digital Output	DOs x 3
Expansion Slots	mPCIe slots x 4
Wi-Fi Antenna Connector	UC-8580-LX/8580-T-LX/8580-T-CT-LX: RP-SMA x 3 UC-8580-Q-LX/8580-T-Q-LX/8580-T-CT-Q-LX: QMA x 3
Cellular Antenna Connector	UC-8580-LX/8580-T-LX/8580-T-CT-LX: SMA x 6 UC-8580-Q-LX/8580-T-Q-LX/8580-T-CT-Q-LX: QMA x 6
Number of SIMs	6
SIM Format	Mini
GPS Antenna Connector	UC-8580-LX/8580-T-LX/8580-T-CT-LX: SMA x 1 UC-8580-Q-LX/8580-T-Q-LX/8580-T-CT-Q-LX: TNC x 1
Console Port	RS-232 (TxD, RxD, GND), 4-pin header output (115200, n, 8, 1)

Input/Output Interface

Buttons	Reset button
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Digital Inputs

Channel-to-Channel Isolation	3K VDC
Connector	Screw-fastened Euroblock terminal
Counter Frequency	25 Hz
Dry Contact	On: short to GND Off: open
I/O Mode	DI
Points per COM	3 x channel
Sensor Type	Wet contact (NPN or PNP)
Wet Contact (DI to COM)	On: 10 to 30 VDC Off: 0 to 3 VDC

Digital Outputs

Connector	Screw-fastened Euroblock terminal
Current Rating	200 mA per channel
I/O Type	Sink
Voltage	0 to 30 VDC

LED Indicators

System	Power x 1 System Ready x 1 Programmable x 1
Wireless Signal Strength	Cellular/Wi-Fi x 12
LAN	2 per port (10/100/1000 Mbps)
Serial	2 per port (Tx, Rx)

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

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

Housing	Metal
IP Rating	IP40
Dimensions (with ears)	270 x 134 x 88 mm (10.63 x 5.28 x 3.46 in)
Dimensions (without ears)	220 x 134 x 88 mm (8.66 x 5.28 x 3.46 in)
Weight	Product only: 2,200 g (4.85 lb)
Installation	Wall mounting
Protection	-CT models: PCB conformal coating

Environmental Limits

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)

Standards and Certifications

EMC	EN 55032/24
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 60950-1 UL 60950-1
Shock	IEC 60068-2-27, IEC 61373, EN 50155:2017
Vibration	IEC 60068-2-64, IEC 61373, EN 50155:2017

Declaration

Green Product	RoHS, CRoHS, WEEE
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Warranty

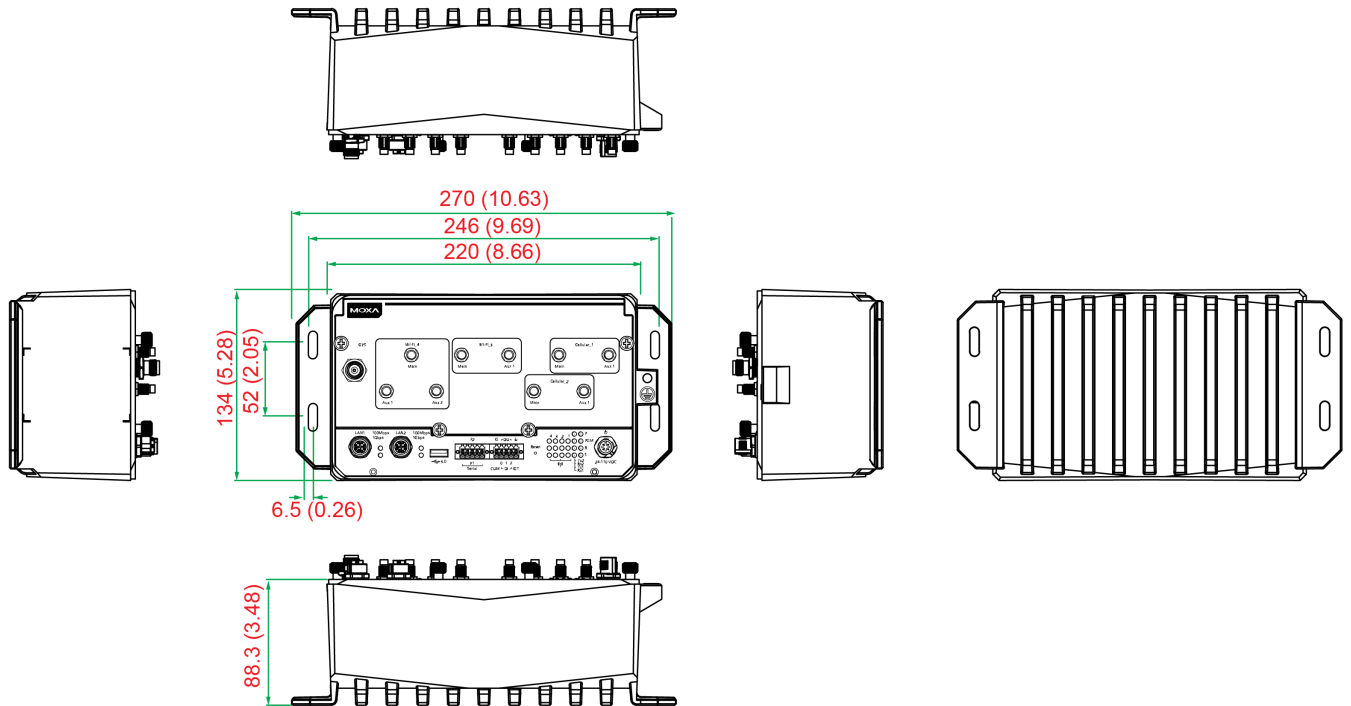
Warranty Period	5 years
Details	See www.moxa.com/tw/warranty

Package Contents

Device	1 x UC-8580 Series computer
Cable	1 x 4-pin header to DB9 console cable
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	Antenna Connector Type	Operating Temp.	Conformal Coating
UC-8580-LX	Armv7 Cortex-A7 dual-core 1 GHz	SMA	-25 to 55°C	–
UC-8580-T-LX	Armv7 Cortex-A7 dual-core 1 GHz	SMA	-40 to 70°C	–
UC-8580-T-CT-LX	Armv7 Cortex-A7 dual-core 1 GHz	SMA	-40 to 70°C	P
UC-8580-Q-LX	Armv7 Cortex-A7 dual-core 1 GHz	QMA	-25 to 55°C	–
UC-8580-T-Q-LX	Armv7 Cortex-A7 dual-core 1 GHz	QMA	-40 to 70°C	–
UC-8580-T-CT-Q-LX	Armv7 Cortex-A7 dual-core 1 GHz	QMA	-40 to 70°C	P

配件（選購）

Wi-Fi Wireless Modules

UC-8580-WLAN33-AC	Wi-Fi 5 (802.11ac) module with 2 transmitters and 2 receivers, 2 SMA connectors with cables, 1 mPCIe adapter bracket with 4 screws, 1 thermal pad
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

Cellular Wireless Modules

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
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-8580-4GCat6-NAMEU	LTE Cat. 6 module for North America and Europe, 2 SMA connectors with cables, -40 to 60°C operating temperature

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

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