DRP Series
Quick Installation Guide

Version 1.0, September 2023

Technical Support Contact Information
www.moxa.com/support

MOXA®

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Overview

The DRP series DIN-rail computers are powered by an Intel Atom®, Intel® Celeron®, or Intel® Core™ i5/i7 processor. The computers come with a rich set of interface options including up to 8 software-selectable RS-232/422/485 serial ports and up to 10 gigabit Ethernet ports. The communication interfaces are located on the front and rear sides of the product, enabling easy access and expansion for industrial applications. A dual-storage design that includes CFast and SD slots enables easy storage expansion. The unique battery fastener cover design for the battery slot secures the battery in place and ensures stability in all operating environments.

Designed as compact fanless computers with operating temperature range of -30 to 60°C and built-in TPM 2.0 module, the DRP computers are ideal as reliable and secure computing platforms for both IT/ OT applications in extreme operating environments.

Package Checklist

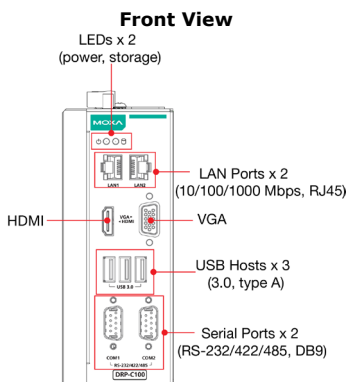Before installing the DRP Series, verify that the package contains the following items:

- DRP Series computer with DIN-rail kit
- 2-pin terminal block for DC power
- Quick installation guide (printed)
- Warranty card

NOTE Please notify your sales representative if any of the above items are missing or damaged.
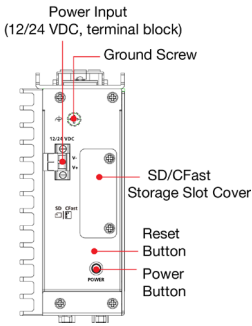
Panel Layouts

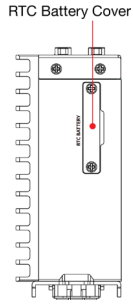The panel layouts of the DRP series computers are shown in the following illustrations:
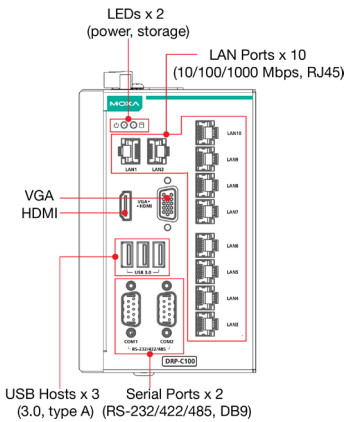
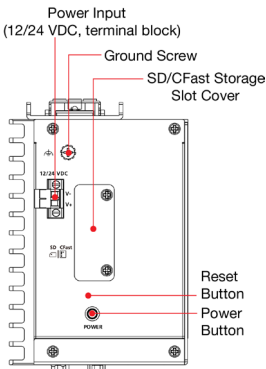**DRP-C100-C1-T/DRP-C100-C5-T/DRP-C100-C7-T Models**

Front View

LEDs x 2 (power, storage)

LAN Ports x 2 (10/100/1000 Mbps, RJ45)

HDMI

VGA

USB Hosts x 3 (3.0, type A)

Serial Ports x 2 (RS-232/422/485, DB9)

Top View

Power Input
(12/24 VDC, terminal block)

Ground Screw

12/24 VDC

SD CFast

POWER

SD/CFast
Storage Slot Cover

Reset
Button

Power
Button

Bottom View

RTC Battery Cover

RTC BATTERY

DRP-C100-C1-8L-T/DRP-C100-C5-8L-T/DRP-C100-C7-8L-T Models

Front View

LEDs x 2
(power, storage)

LAN Ports x 10
(10/100/1000 Mbps, RJ45)

MOXA

LAN1 LAN2

LAN10
LAN9
LAN8
LAN7

VGA
HDMI

VGA + HDMI

USB 3.0

LAN6
LAN5
LAN4
LAN0

COM1 COM2

RS-232/422/485

DRP-C100

USB Hosts x 3   Serial Ports x 2
(3.0, type A)   (RS-232/422/485, DB9)

Top View

Power Input
(12/24 VDC, terminal block)

Ground Screw

SD/CFast Storage
Slot Cover

12/24 VDC

SD CFast

POWER

Reset
Button

Power
Button

Bottom View

RTC Battery Cover
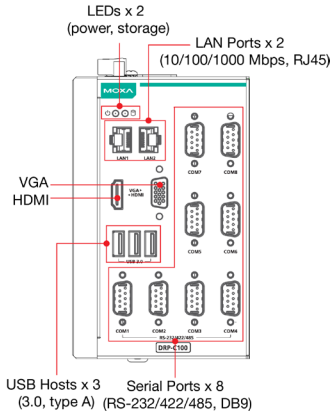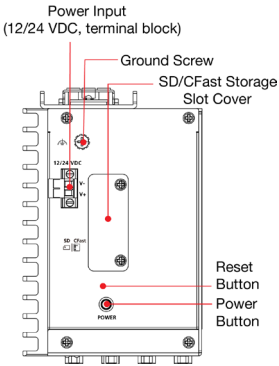
RTC BATTERY
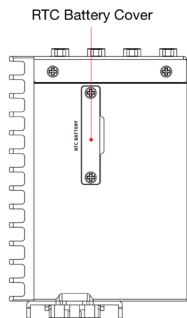
DRP-C100-C1-6C-T/DRP-C100-C5-6C-T/DRP-C100-C7-6C-T Models

Front View

LEDs x 2
(power, storage)

LAN Ports x 2
(10/100/1000 Mbps, RJ45)

VGA
HDMI

USB Hosts x 3
(3.0, type A)

Serial Ports x 8
(RS-232/422/485, DB9)

Top View

Power Input
(12/24 VDC, terminal block)

Ground Screw

SD/CFast Storage
Slot Cover

Reset
Button

Power
Button

Bottom View

RTC Battery Cover

DRP-C100-C1-2L4C-T/DRP-C100-C5-2L4C-T/DRP-C100-C7-2L4C-T Models

Front View

LEDs x 2
(power, storage)

LAN Ports x 4
(10/100/1000 Mbps, RJ45)

VGA

HDMI

USB Hosts x 3
(3.0, type A)

Serial Ports x 6
(RS-232/422/485, DB9)

Top View

Power Input
(12/24 VDC, terminal block)

Ground Screw

SD/CFast Storage
Slot Cover

Reset
Button

Power
Button

Bottom View

RTC Battery Cover

DRP-A100-E2-T/DRP-A100-E4-T Models

Front View

LEDs x 2
(power, storage)

LAN Ports x 2
(10/100/1000 Mbps, RJ45)

HDMI

VGA

USB Hosts x 3
(3.0, type A)

Serial Ports x 2
(RS-232/422/485, DB9)

Top View

Power Input
(12/24 VDC, terminal block)

Ground Screw

SD/CFast
Storage Slot Cover

Reset
Button

Power
Button

Bottom View

RTC Battery Cover
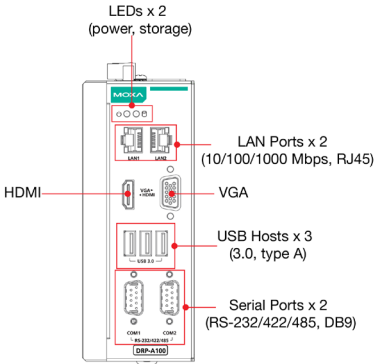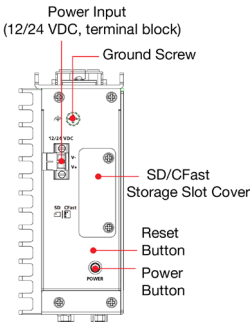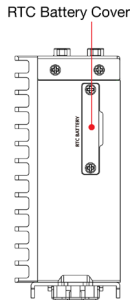
DRP-A100-E2-8L-T/DRP-A100-E4-8L-T Models

Front View

LEDs x 2
(power, storage)

LAN Ports x 10
(10/100/1000 Mbps, RJ45)

VGA
HDMI

USB Hosts x 3   Serial Ports x 2
(3.0, type A)   (RS-232/422/485, DB9)

Top View

Power Input
(12/24 VDC, terminal block)

Ground Screw

SD/CFast Storage
Slot Cover

Reset
Button

Power
Button

Bottom View

RTC Battery Cover
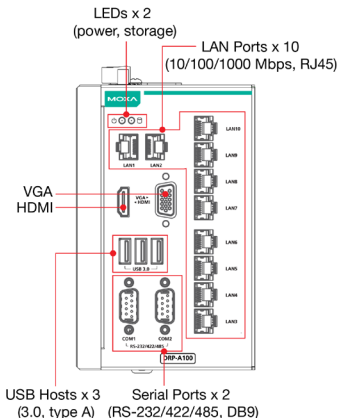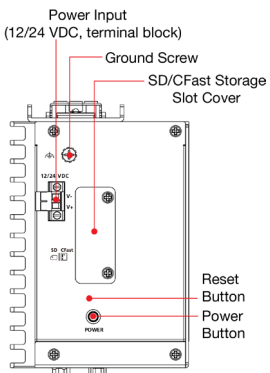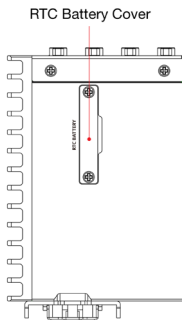
DRP-A100-E2-6C-T/DRP-A100-E4-6C-T Models

Front View

LEDs x 2
(power, storage)

LAN Ports x 2
(10/100/1000 Mbps, RJ45)

VGA
HDMI

USB Hosts x 3   Serial Ports x 8
(3.0, type A)   (RS-232/422/485, DB9)

Top View

Power Input
(12/24 VDC, terminal block)

Ground Screw

SD/CFast Storage
Slot Cover

Reset
Button

Power
Button

Bottom View

RTC Battery Cover

DRP-A100-E2-2L4C-T/DRP-A100-E4-2L4C-T Models

Front View

LEDs x 2
(power, storage)

LAN Ports x 4
(10/100/1000 Mbps, RJ45)

VGA
HDMI

USB Hosts x 3
(3.0, type A)

Serial Ports x 6
(RS-232/422/485, DB9)

Top View

Power Input
(12/24 VDC, terminal block)

Ground Screw

SD/CFast Storage
Slot Cover
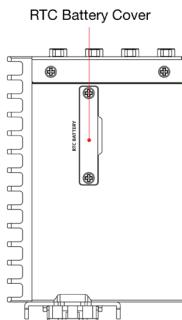
Reset
Button

Power
Button

Bottom View

RTC Battery Cover

Dimensions

DRP-C100-C1-T/DRP-C100-C5-T/DRP-C100-C7-T/DRP-A100-E2-T/DRP-A100-E4-T Models

Unit: mm (inch)

50.6 (2.0) 9.20 (0.36)

60 (2.36)   130 (5.12)   3.80 (0.15)

150 (5.91)   60.5 (2.38)   34.70 (1.37)
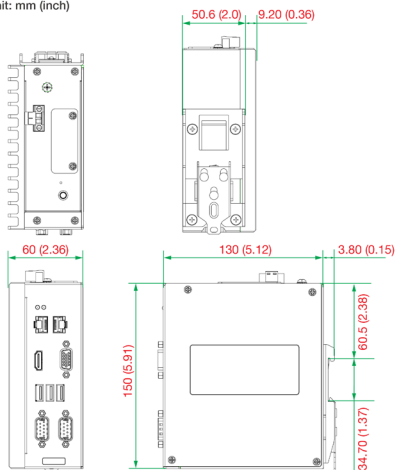
DRP-C100-C1-8L-T/DRP-C100-C5-8L-T/DRP-C100-C7-8L-T/DRP-A100-E2-8L-T/DRP-A100-E4-8L-T Models

Unit: mm (inch)

50.6 (2.0) 9.20 (0.36)

94 (3.70)   130 (5.12)   3.80 (0.15)

150 (5.91)   60.5 (2.38)   34.70 (1.37)
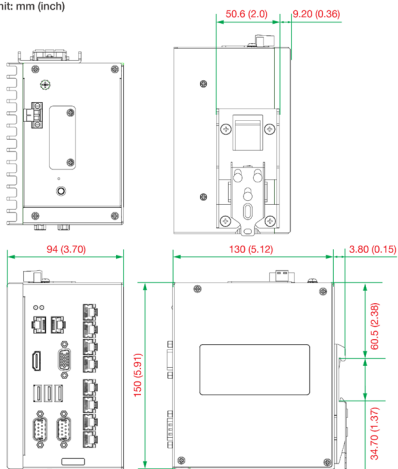
DRP-C100-C1-6C-T/DRP-C100-C5-6C-T/DRP-C100-C7-6C-T/DRP-A100-E2-6C-T/DRP-A100-E4-6C-T Models

Unit: mm (inch)

50.6 (2.0) 9.20 (0.36)

94 (3.70) 130 (5.12) 3.80 (0.15)

150 (5.91)

60.5 (2.38)

34.70 (1.37)
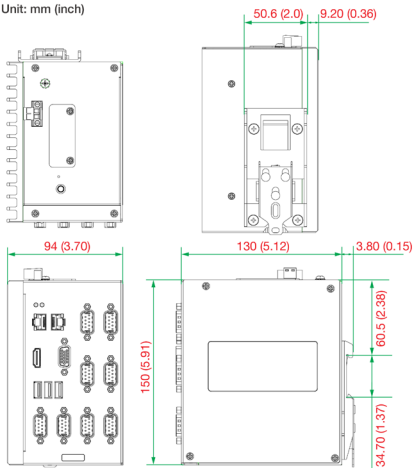
DRP-C100-C1-2L4C-T/DRP-C100-C5-2L4C-T/DRP-C100-C7-2L4C-T/DRP-A100-E2-2L4C-T/DRP-A100-E4-2L4C-T Models

Unit: mm (inch)

50.6 (2.0) 9.20 (0.36)

94 (3.70) 130 (5.12) 3.80 (0.15)

150 (5.91)

60.5 (2.38)

34.70 (1.37)
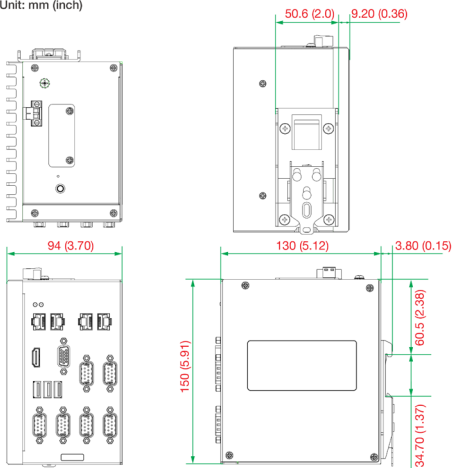
LED Indicators

The following table describes the LED indicators located on the front panel of the DRP Series:

LED Name	Status	Function
Power	Green	Power is ON
	OFF	No power input or any other power error
Ethernet (10/100 Mbps) (1000 Mbps)	Green	Steady ON: 10/100 Mbps Ethernet link Blinking: Data is being transmitted or received
	Yellow	Steady ON: 1000 Mbps Ethernet link Blinking: Data is being transmitted or received
	OFF	No Ethernet connection
Storage (CFast)	Yellow	Blinking: Data is being accessed from the CFast card
	OFF	Data is not being accessed from the CFast card

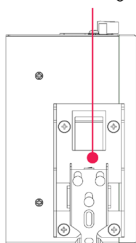## Installing the DRP Computer

DIN-rail Mounting

The DRP computers come with a DIN-rail mounting kit. To install the DIN-rail mounting kit, do the following:
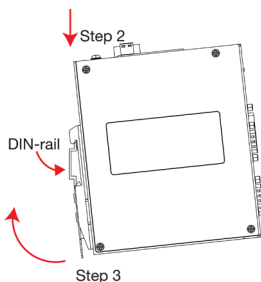
STEP 1:
Check the DIN-rail mounting kit that comes preinstalled on the rear panel of the DRP computers.

DIN-rail Mounting Kit

STEP 2:
Insert the top of the DIN rail into the slot just below the upper hook of the DIN-rail mounting kit.

STEP 3:
Press the DRP computer towards the DIN rail until the mounting kit snaps into place.
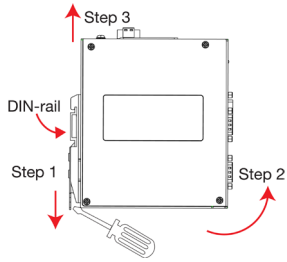

Step 2

DIN-rail

Step 3

Removal:

STEP 1:
Pull down the latch on the mounting kit with a screwdriver.

STEP 2 & 3:
Slightly pull the DRP Series forward and lift it up to remove it from the DIN rail.

The specifications of the DIN-rail mounting screws are indicated in the illustration on the right. Adhere to these values if you need to buy replacement screws to attach and secure the DIN-rail bracket to the rear panel of the computer.


Cross recess No. 2 penetration depth.
2.33 max.
1.79 min.
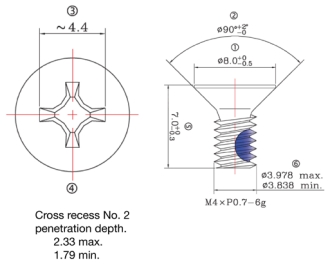
NOTE This computer is intended to be installed only in an area with restricted access. In addition, for safety reasons, the computer should be installed and handled only by qualified and experienced professionals.

Connecting the Power

The DRP computers are provided with 2-pin power input connectors in a terminal block on the front panel. Insert the power-cord wires into the connectors and tighten them to secure the wires in place. Plug in the power cable to a power source. The power LED will light up to indicate that power is being supplied to the computer. It should take about 30 to 60 seconds for the operating system to complete the boot-up process.

Pin	Definition
1	V+
2	V-

Earth Ground
(Green & Yellow)

Min. 18 AWG

12/24 VDC

2 — V-
1 — V+
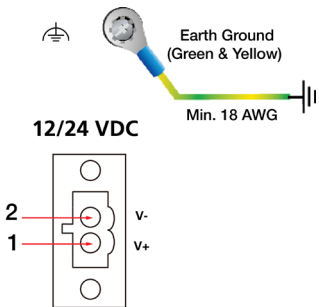
> **⚠ ATTENTION**
>
> This product is intended to be supplied by a Listed Power Supply with output marked LPS and rated to deliver the following power specifications:
> DRP-C100:12 VDC (max.) @ 6.82A, 24 VDC (max.) @ 3.25A
> DRP-A100: 12 VDC (max.) @ 5A, 24 VDC (max.) @ 2.5A
> and a minimum Tma=60°C. If you need assistance with purchasing a power adapter, contact the Moxa technical support team.

> **⚠ ATTENTION**
>
> Before connecting the DRP computer to the DC power input, ensure that the DC power source voltage is stable.
> - The wiring for the input terminal block must be installed by qualified and experienced professionals.
>   - Wire Type: Cu
>   - Use 18-12 AWG wire size and a torque value of 0.5 N-m
> - Use only one conductor in a clamping point between the DC power source and the power input.

> **NOTE** If using Class I adapter, the power cord adapter should be connected to a socket outlet with an earthing connection or the power cord and adapter must comply with Class II construction.

> **NOTE** For surge protection, connect the grounding connector located below the power connector with the earth (ground) or a metal surface.
> A 4 mm^2 conductor must be used when the connection to the external grounding screw is utilized. The heat sink is grounded to the chassis by an internal screw.

> **⚠ Warning**
>
> 為避免電磁干擾，本產品不應安裝或使用於住宅環境。

Connecting Displays

The DRP computer comes with a VGA and a HDIM display output located on the front panel for connecting to audio or video devices.
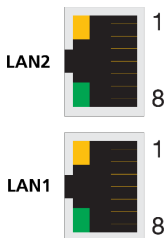
> **NOTE** Use an HDMI-certified cables for a reliable audio or video connection.

Communications Connections

Ethernet Ports

The 10/100/1000 Mbps Ethernet ports use RJ45 connectors.

| Pin	10/100 Mbps	1000 Mbps
1	ETx+	TRD(0)+
2	ETx-	TRD(0)-
3	ERx+	TRD(1)+
4	–	TRD(2)+
5	–	TRD(2)-
6	ERx-	TRD(1)-
7	–	TRD(3)+
8	–	TRD(3)-

NOTE   For reliable Ethernet connections, we recommend enabling the ports in standard temperatures and keeping them enabled in high/low temperature environment.

Serial Ports

The serial ports use DB9 connectors. Each port can be configured by software as a RS-232, RS-422, or RS-485 port. The pin assignments for the ports are shown below:

| Pin	RS-232	RS-422	RS-485 (4-wire)	RS-485 (2-wire)
1	DCD	TxDA(-)	TxDA(-)	–
2	RxD	TxDB(+)	TxDB(+)	–
3	TxD	RxDB(+)	RxDB(+)	DataB(+)
4	DTR	RxDA(-)	RxDA(-)	DataA(-)
5	GND	GND	GND	GND
6	DSR	–	–	–
7	RTS	–	–	–
8	CTS	–	–	–
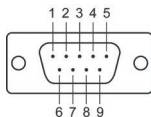
USB Hosts

The DRP Series has 3 USB 3.0 Type-A connectors located on the front panel. The ports support keyboard and mouse devices and can also be used to connect a flash disk for storing large amounts of data.
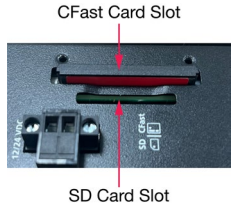
 Inserting SD/CFast Card

The DRP computer comes with two slots that allow users to insert one SD card and one CFast card. To install the cards, do the following:

1.   Unfasten the two screws on the slot cover.
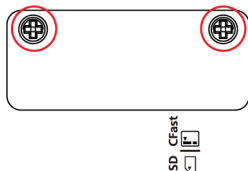
2. Remove the cover and find the location of the SD and CFast card slots.

CFast Card Slot

SD Card Slot

3. Insert the SD and CFast cards in the designated slots.
   Refer to the image printed beside the slots for the correct direction to insert the cards. When the cards are successfully inserted, you will hear a click.

4. To remove the cards, simply push them in to release them and take them out.
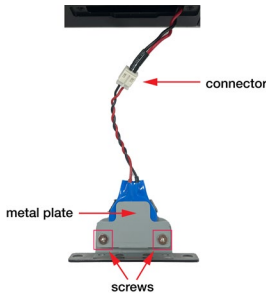
Replacing the Battery

The DRP computer comes with one slot for a battery on the bottom panel of the computer. A lithium battery (3 V / 200 mAh) is preinstalled in the slot.

To replace the battery, do the following:

1. Unfasten the two screws on the battery cover.

RTC BATTERY
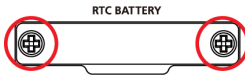
2. Take off the cover.
   The battery is attached to the slot cover as indicated in the image.

connector

metal plate

screws

3. Unplug the connector of the battery-cover assembly from the internal wire of the slot.

4. Remove the two screws on the metal plate attached to the battery holder.

battery holder

battery

5. Place a new battery in the battery holder, replace the metal plate, and fasten the two screws on to the frame to secure the battery.
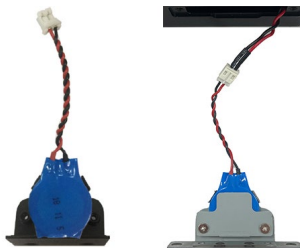
6. Plug in the connector of the battery-cover assembly to the internal wire of the slot.
7. Place the battery holder back in the slot and secure it by fastening the two screws on the cover.

⚠ **Warning**

- Be sure to use the correct type of battery. Incorrect battery may cause system damage. Contact Moxa's technical support staff for assistance, if necessary.
- To reduce the risk of fire or burns, do not disassemble, crush, or puncture the battery; do not dispose of in fire or water and do not short external contacts.

限用物質含有情況標示聲明書

限用物質含有情況標示聲明書
Declaration of the Presence Condition of the Restricted Substances Marking

設備名稱：導軌式電腦　型號（型式）：		DRP-C100-C7-T/DRP-C100-C7-8L-T/ DRP-A100-E4-T/DRP-A100-E4-8L-T （及其系列型號）			
Equipment name		Type designation (Type)			

單元 Unit	限用物質及其化學符號 Restricted substances and its chemical symbols					
	鉛 Lead (Pb)	汞 Mercury (Hg)	鎘 Cadmium (Cd)	六價鉻 (Hexavalent chromium) (Cr⁺⁶)	多溴聯苯 Polybrominated biphenyls (PBB)	多溴二苯醚 Polybrominated diphenyl ethers (PBDE)
外殼	○	○	○	○	○	○
印刷電路板及其電子組件	—	○	○	○	○	○
電纜/電線/連接器	—	○	○	○	○	○
金屬部件-金屬	—	○	○	○	○	○
機械部件-非金屬	○	○	○	○	○	○

備考1.〝超出0.1 wt %〞及〝超出0.01 wt %〞係指限用物質之百分比含量超出百分比含量基準。
Note 1："Exceeding 0.1 wt %" and "exceeding 0.01 wt %" indicate that the percentage content of the restricted substance exceeds the reference percentage value of presence condition.
備考2.〝○〞係指該項限用物質之百分比含量未超出百分比含量基準值。
Note 2："○" indicates that the percentage content of the restricted substance does not exceed the percentage of reference value of presence.
備考3.〝—〞係指該項限用物質為排除項目。
Note 3：The "—" indicates that the restricted substance corresponds to the exemption.

製造商資訊：
Moxa 四零四科技股份有限公司
+886-3-2737575
桃園市八德區和平路1111號
產品型號：

DRP-C100-C1-T	DRP-C100-C5-2L4C-T
DRP-C100-C1-T-Win10	DRP-C100-C7-2L4C-T
DRP-C100-C5-T	DRP-A100-E2-T
DRP-C100-C5-T-Win10	DRP-A100-E2-T-Win10
DRP-C100-C7-T	DRP-A100-E4-T
DRP-C100-C7-T-Win10	DRP-A100-E4-T-Win10
DRP-C100-C1-8L-T	DRP-A100-E2-8L-T
DRP-C100-C5-8L-T	DRP-A100-E4-8L-T
DRP-C100-C7-8L-T	DRP-A100-E2-6C-T
DRP-C100-C1-6C-T	DRP-A100-E4-6C-T
DRP-C100-C5-6C-T	DRP-A100-E2-2L4C-T
DRP-C100-C7-6C-T	DRP-A100-E4-2L4C-T
DRP-C100-C1-2L4C-T	