Universal PCI Smart Serial Board Quick Installation Guide

Version 1.2, January 2021

Technical Support Contact Information
www.moxa.com/support

P/N: 1802001142327

Overview

Moxa's Universal PCI (UPCI) multiport serial boards can be installed in PCI or PCI-X slots and support both 3.3V and 5V PCI/PCI-X.

Package Checklist

UPCI board are shipped with the following items:

- 1 Moxa UPCI multiport serial board
- Low-profile bracket (low-profile models only)
- Quick installation guide (printed)
- Warranty card

NOTE Notify your sales representative if any of the above items are missing or damaged.

Hardware Installation Procedure

The Universal PCI board MUST be plugged into the PC before the driver is installed.

Follow the steps below:

1. **Select serial transmission mode.** This step is for certain models listed below. If your product on hand is not included, please directly go to step2.
   If your model is CP-112UL Series/CP-114UL Series/CP-118U Series/ CP-132UL Series/CP-134U Series/CP-138U Series, you will need to set onboard DIP switches for each port.
   (Refer to "**Dip Switch Settings**" section to complete the DIP switches setting)
2. **Install the board.** Power off the PC and then plug the board firmly into any open PCI or PCI-X expansion slot.
3. **Plug the connection cable into the board's connector.** (Refer to "**Pin Assignments**" section for the cable pin assignment).
4. **Start system and verify the driver initialization.**

Software Installation Information

1. **Get the driver at www.moxa.com.** Based on the OS type, choose the corresponding driver.
2. **Installing the driver:**
   - **For Windows OS** (Take the installation of Win7 as an example)
     - 2.1. Unzip and execute the .exe file
     - 2.2. Follow the instructions to install the drivers
   - **For Linux**
     Execute the following commands from the Linux prompt:
     - 2.1. Get the driver at **www.moxa.com** and unzip the file:
       #cd /
       #mkdir moxa
       #cd moxa
       #cp /<driver directory>/driv_linux_smart_<version>_build_<build_date>.tgz .

#tar -zxvf
driv_linux_smart_<version>_build_<build_date>.tgz

- 2.2. Install the driver:
  #cd mxser
  #./mxinstall
- 2.3. Verify the driver status
  Use the Moxa diagnostic utility to verify the driver status:
  #cd /moxa/mxser/utility/diag
  #./msdiag
- 2.4. Test the tty port
  Use the Moxa terminal utility to test the tty ports:
  #cd /moxa/mxser/utility/term
  #./msterm

DIP Switch Settings

CP-112UL Series/CP-112UL-I Series

Mode	S1	S2	S3
RS-232	ON	–	–
RS-422	OFF	ON	–
4-Wire RS-485	OFF	OFF	ON
2-Wire RS-485	OFF	OFF	OFF

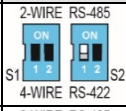
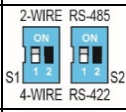
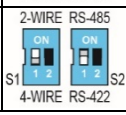
CP-114UL Series/CP-114UL-I Series

Mode	S1	S2	S3
RS-232	–	–	ON
RS-422	–	ON	OFF
4-Wire RS-485	ON	OFF	OFF
2-Wire RS-485	OFF	OFF	OFF

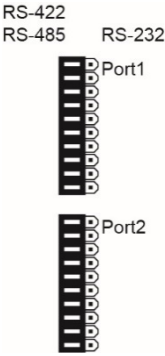
CP-118U Series/CP-118U-I Series

Mode	S1	S2	S3
RS-232	–	–	ON
RS-422	–	ON	OFF
4-Wire RS-485	ON	OFF	OFF
2-Wire RS-485	OFF	OFF	OFF

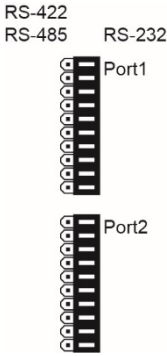
CP-132UL Series

Mode	S1	S2	Illustration
RS-422	–	OFF	
2-Wire RS-485	ON	ON	
4-Wire RS-485	OFF	ON	

CP-134U Series/CP-134U-I Series



RS-422 or RS-485 mode: Use the jumper to cover the two columns on the left of the jumper pins.



RS-232 mode: Use the jumper to cover the two columns on the right of the jumper pins.

CP-138U Series/CP-138U-I Series

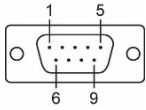
Mode	S1	S2
RS-422	–	ON
4-Wire RS-485	ON	OFF
2-Wire RS-485	OFF	OFF

Pin Assignments

CP-102U Series

Male DB9 RS-232

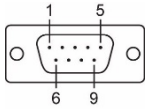
Pin	Signal
1	DCD
2	RxD
3	TxD
4	DTR
5	GND
6	DSR
7	RTS
8	CTS



CP-102UL Series

Female DB25 RS-232

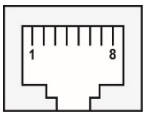
Pin	Signal	Pin	Signal
1	–	14	–
2	DCD1	15	DTR1
3	GND	16	DSR1
4	CTS1	17	RTS1
5	RxD1	18	TxD1
6	–	19	–
7	–	20	–
8	–	21	DCD0
9	DTR0	22	GND
10	DSR0	23	CTS0
11	RTS0	24	RxD0
12	TxD0	25	–
13	–	–	–



CP-104JU Series

RJ45 (RS-232)

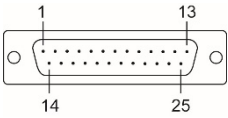
Pin	Signal
1	DSR
2	RTS
3	GND
4	TxD
5	RxD
6	DCD
7	CTS
8	CTR



CP-104UL

Male DB25 (CBL-M44M25x4-50)

Pin	Signal
2	TxD
3	RxD
4	RTS
5	CTS
6	DSR
7	GND
8	DCD
20	DTR

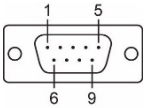


(CBL-M44M9x4-50)

(OPT4-M9A)

Pin	Signal
1	DCD
2	RxD
3	TxD
4	DTR
5	GND
6	DSR
7	RTS
8	CTS

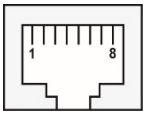
Male DB9



RJ45 (OPT4-RJ45A)

Pin	Signal
1	DSR
2	RTS
3	GND
4	TxD
5	RxD
6	DCD
7	CTS
8	DTR

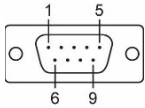
8-pin RJ45



CP-112UL Series

Male DB9 (CBL-M25M9x2-50)

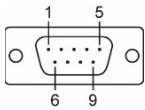
Pin	RS-232	RS-422/ RS-485-4W	RS-485-2W
1	DCD	TxD-(A)	–
2	RxD	TxD+(B)	–
3	TxD	RxD+(B)	Data+(B)
4	DTR	RxD-(A)	Data-(A)
5	GND	GND	GND
6	DSR	–	–
7	RTS	–	–
8	CTS	–	–
9	–	–	–



CP-114UL Series

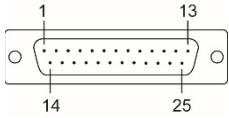
Male DB9 (CBL-M44M9x4-50)

Pin	RS-232	RS-422/ RS-485-4W	RS-485-2W
1	DCD	TxD-(A)	–
2	RxD	TxD+(B)	–
3	TxD	RxD+(B)	Data+(B)
4	DTR	RxD-(A)	Data-(A)
5	GND	GND	GND
6	DSR	–	–
7	RTS	–	–
8	CTS	–	–
9	–	–	–



Male DB25 (CBL-M44M25x4-50)

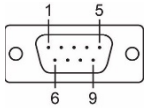
Pin	RS-232	RS-422/ RS-485-4W	RS-485-2W
2	TxD	RxD+(B)	Data+(B)
3	RxD	TxD+(B)	–
4	RTS	–	–
5	CTS	–	–
6	DSR	–	–
7	GND	GND	GND
8	DCD	TxD-(A)	–
20	DTR	RxD-(A)	Data-(A)



CP-118UI Series/CP-138U-I Series

Male DB9 (CBL-M78M9x8-100)

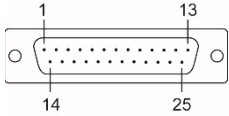
Pin	RS-232	RS-422/ RS-485-4W	RS-485-2W
1	DCD	TxD-(A)	–
2	RxD	TxD+(B)	–
3	TxD	RxD+(B)	Data+(B)
4	DTR	RxD-(A)	Data-(A)
5	GND	GND	GND
6	DSR	–	–
7	RTS	–	–
8	CTS	–	–
9	–	–	–



*CP-118U-I Series only

Male DB25 (CBL-M78M25x8-100)

Pin	RS-232	RS-422/ RS-485-4W	RS-485-2W
2	TxD	RxD+(B)	Data+(B)
3	RxD	TxD+(B)	–
4	RTS	–	–
5	CTS	–	–
6	DSR	–	–
7	GND	GND	GND
8	DCD	TxD-(A)	–
20	DTR	RxD-(A)	Data-(A)



*CP-118U-I Series only

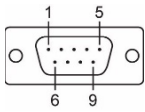
CP-118U Series/CP-138U Series

Male DB9

(CBL-M62M9x8-100, OPT8-M9 is for CP-118U and CP-138U)

(CBL-M78M9x8-100 is for CP-118U-I and CP-138U-I)

Pin	RS-232	RS-422/ RS-485-4W	RS-485-2W
1	DCD	TxD-(A)	–
2	RxD	TxD+(B)	–
3	TxD	RxD+(B)	Data+(B)
4	DTR	RxD-(A)	Data-(A)
5	GND	GND	GND
6	DSR	–	–
7	RTS	–	–
8	CTS	–	–
9	–	–	–

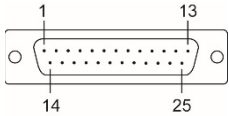


Male DB25

(CBL-M62M25x8-100, OPT8B is for CP-118U and CP-138U)

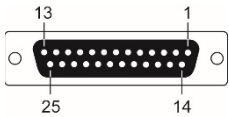
(CBL-M78M25x8-100 is for CP-118U-I and CP-138U-I)

Pin	RS-232	RS-422/ RS-485-4W	RS-485-2W
2	TxD	RxD+(B)	Data+(B)
3	RxD	TxD+(B)	–
4	RTS	–	–
5	CTS	–	–
6	DSR	–	–
7	GND	GND	GND
8	DCD	TxD-(A)	–
20	DTR	RxD-(A)	Data-(A)



Female DB25 (OPT8A/S)

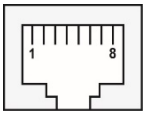
Pin	RS-232	RS-422/ RS-485-4W	RS-485-2W
2	RxD	TxD+(B)	–
3	TxD	RxD+(B)	Data+(B)
4	CTS	–	–
5	RTS	–	–
6	DTR	RxD-(A)	Data-(A)
7	GND	GND	GND
8	DCD	TxD-(A)	–
20	DSR	–	–



*CP-118U Series only

RJ45 (OPT8-RJ45)

Pin	Signal
1	DSR
2	RTS
3	GND
4	TxD
5	RxD
6	DCD
7	CTS
8	DTR

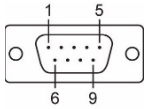


*CP-118U Series only

CP-132UL Series/CP-132UL-I Series

Male DB9 Connector: Device-side Pin Assignments

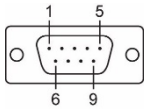
Pin	RS-232	RS-422/ RS-485-4W	RS-485-2W
1	TxD-(A)	TxD-(A)	–
2	TxD+(B)	TxD+(B)	–
3	RxD+(B)	RxD+(B)	Data+(B)
4	RxD-(A)	RxD-(A)	Data-(A)
5	GND	RxD-(A)	GND
6	RTS-(A)	GND	–
7	RTS+(B)	–	–
8	CTS+(B)	–	–
9	CTS-(A)	–	–



CP-134U Series

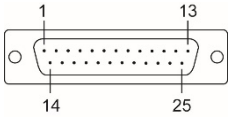
Male DB9 (CBL-M44M9x4-50)

Pin	RS-232	RS-422	RS-485-4W	RS-485-2W
1	DCD	TxD-(A)	TxD-(A)	–
2	RxD	TxD+(B)	TxD+(B)	–
3	TxD	RxD+(B)	RxD+(B)	Data+(B)
4	DTR	RxD-(A)	RxD-(A)	Data– (A)
5	GND	GND	GND	GND
6	DSR	RTS-(A)	–	–
7	RTS	RTS+(B)	–	–
8	CTS	CTS+(B)	–	–
9	–	CTS-(A)	–	–



Male DB25 (CBL-M44M25x4-50)

Pin	RS-232	RS-422	RS-485-4W	RS-485-2W
2	TxD	RxD+(B)	RxD+(B)	Data+(B)
3	RxD	TxD+(B)	TxD+(B)	–
4	RTS	RTS+(B)	–	–
5	CTS	CTS+(B)	–	–
6	DSR	RTS-(A)	–	–
7	GND	GND	GND	GND
8	DCD	TxD-(A)	TxD-(A)	–
20	DTR	RxD-(A)	RxD-(A)	Data-(A)
22	–	CTS-(A)	–	–

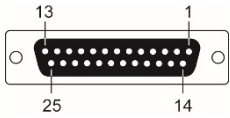


CP-168U Series

RS-232 Cable Wiring for OPT8A/B/C/D/S

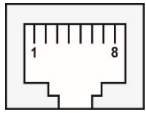
OPT8A/S (DCE, DB25 Female)

Pin	Signal
2	RxD
3	TxD
4	CTS
5	RTS
6	DTR
7	GND
8	DCD
20	DSR



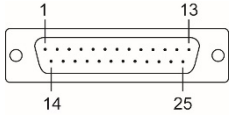
OPT8-RJ45 (8-pin)

Pin	Signal
1	DSR
2	RTS
3	TxD
4	GND
5	RxD
6	DCD
7	CTS
8	DTR



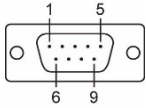
OPT8B/C (DCE, DB25 Male)

Pin	Signal
2	TxD
3	RxD
4	RTS
5	CTS
6	DSR
7	GND
8	DCD
20	DTR



OPT8-M9, OPT8D (DTE, DB9 Male)

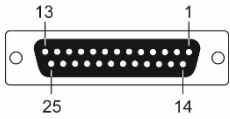
Pin	Signal
1	DCD
2	RxD
3	TxD
4	DTR
5	GND
6	DSR
7	RTS
8	CTS



RS-422 Cable Wiring for OPT8F

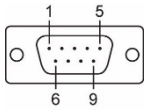
OPT8F/Z (DB25 Female)

Pin	Signal
2	RxD+(B)
3	TxD+(B)
14	RxD-(A)
16	TxD-(A)
7	GND



RS-422/485 Cable Wiring for OPT8K

Pin	RS-422/ RS-485-4W	Pin	RS-485-2W
2	RxD+(B)	2	Data+(B)
3	TxD+(B)	14	Data-(A)
14	RxD-(A)	7	GND
16	TxD-(A)		
7	GND		



POS-104UL Series

Male DB9 (CBL-M44M9x4-50)

Pin	Signal
1	DCD
2	RxD
3	TxD
4	DTR
5	GND
6	DSR
7	RTS
8	CTS
9	RI/5V/12V