



CB PC/104-Plus Quick Installation Guide

Second Edition, June 2008

1. Overview

The CB Series multiport serial module provides serial port expansion for embedded PCs. It is designed for PC/104-Plus CPU boards that accept the PC/104-Plus expansion interface. Optional DB9 and DB25 cables are available to connect different devices. The device drivers make full use of the 128-byte Tx/Rx FIFO and on-chip flow control, which allows up to 921.6 Kbps data transmission. Three different models are available as follows:

- **CB-108:** 8 ports, RS-232
- **CB-114:** 4 ports, RS-232/422/485
- **CB-134I:** 4 ports, RS-422/485 w/ 2 KV optical isolation protection

2. Package Checklist

Before installing the CB Series PC/104-Plus multiport serial module, verify that the package contains the following items:

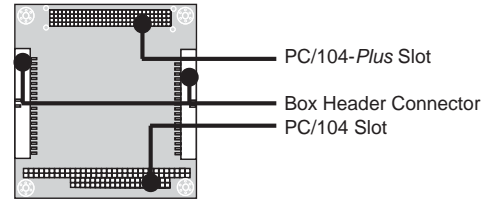
- CB Series PC/104-Plus multiport serial module
- Documentation and Software CD-ROM
- Quick Installation Guide
- 5-year product warranty statement

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

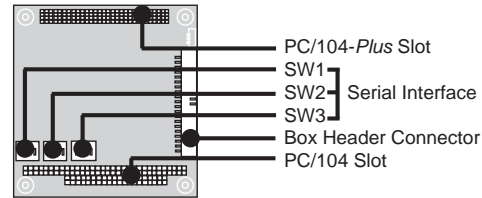
P/N: 180200104A000

3. Board Layout

CB-108

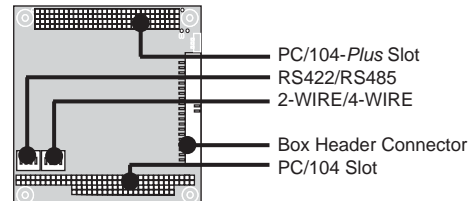


CB-114



Interface	S1	S2	S3
RS-232	---	---	ON
RS-422	---	ON	OFF
4-wire RS-485	ON	OFF	OFF
2-wire RS-485	OFF	OFF	OFF

CB-134I



Interface	2-WIRE/4-WIRE	RS422/RS485
RS-422	---	OFF
4-wire RS-485	OFF	ON
2-wire RS-485	ON	ON

4. Hardware Installation Procedure

Do not install the drivers until the module has been installed in the embedded computer. Install the module in the embedded computer as follows:

- STEP 1:** Turn the embedded computer off.
STEP 2: On the module, select the serial interface using the DIP switches.
STEP 3: Insert the module firmly into an available PC/104-Plus slot.
STEP 4: Screw the control board in place.

- STEP 5:** Connect the cables.
STEP 6: Turn the embedded computer on. The BIOS will automatically set the IRQ and I/O address.

5. Software Installation Procedure

For detailed software installation instructions, please refer to the CB Series User's Manual.

Windows Vista (32-bit)

1. Windows will automatically detect the module on boot-up.
2. Insert the Document and Software CD in your CD-ROM drive.
3. Select **Locate and install driver software (recommended)**.
4. A window will appear stating that "Windows needs your permission to continue". Click **Continue**.
5. A window will appear requesting that you "Insert the disc that came with your PCI Serial Port". Select **I don't have the disc, show me other options**.
6. Select **Browse my computer for driver software (advanced)**.
7. For 32-bit (x86) platforms, select the **CB Series\Software\Windows Vista\x86** folder on the CD and click **Next** to continue.
8. If you see a warning that the software has not passed Windows Logo testing, click **Install this driver software anyway**.
9. After the module is installed, the installation wizard will guide you through port installation, starting with port 0.
10. Use Windows Device Manager to verify that the installation was successful. Click the + sign next to **Hardware** and check under **Multi-port serial adapters** and **Ports (COM & LPT)**. If there are any special marks in front of the board or port icons, such as a question mark or exclamation point, you may refer to the **Event Log** to try and determine where the problem is.

Windows 2003 and XP (32-bit, 64-bit)

1. Windows will automatically detect the module on boot-up.
2. Insert the Document and Software CD in your CD-ROM drive.
3. Select **No, not this time**.
4. Select **Install from a list or specific location (Advanced)**.
5. Select **Search for the best driver in these locations, Include this location in the search**, and click **Browse**.
 - For 32-bit (x86) platforms, select the **CB Series\Software\Windows XP_2003\x86** folder on the CD
 - For 64-bit (x64) platforms, select the **CB Series\Software\Windows XP_2003\x64** folder on the CD.
 Click **Next** to continue.
6. If you see a warning that the software has not passed Windows Logo testing, click **Continue Anyway**.
7. After the module is installed, the installation wizard will guide you through port installation, starting with port 0.

- Use Windows Device Manager to verify that the installation was successful. Click the + sign next to **Hardware** and check under **Multi-port serial adapters** and **Ports (COM & LPT)**. If there are any special marks in front of the board or port icons, such as a question mark or exclamation point, you may refer to the **Event Log** to try and determine where the problem is.

Windows 2000

- Windows will automatically detect the module on boot-up.
- Insert the Document and Software CD in your CD-ROM drive.
- Select **Search for a suitable driver for my device (recommended)**.
- Select **Specify a location**.
- Under **Optional search location**, select **specify a location**. Select the \CB Series\Software\Windows 2K folder on the CD and click **OK** to continue.
- If you see a warning that the software has not passed Windows Logo testing, click **Yes** to proceed with the installation.
- After the module is installed, the installation wizard will guide you through port installation, starting with port 0. Be sure to install the software from the \CB Series \Software\Windows 2K folder on the CD.
- Use Windows Device Manager to verify that the installation was successful. Click the “+” sign next to **Hardware** and check under **Multi-port serial adapters** and **Ports (COM & LPT)**. If there are any special marks in front of the board or port icons, such as a question mark or exclamation point, you may refer to the **Event Log** to try and determine where the problem is.

Linux

Please refer to the user’s manual for instructions on installing the Linux drivers.

6. Pin Assignment and Cable Wiring

The box header connector on the module can be used with optional serial cables to connect to your serial devices. The pin assignments are as follows:

RS-232 (CB-108, CB-114)

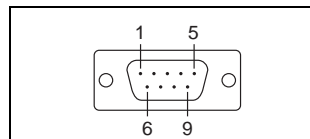
Pin	Signal	Pin	Signal	Pin	Signal	Pin	Signal
1	DCD0	11	DCD1	21	DCD2	31	DCD3
2	DSR0	12	DSR1	22	DSR2	32	DSR3
3	RxD0	13	RxD1	23	RxD2	33	RxD3
4	RTS0	14	RTS1	24	RTS2	34	RTS3
5	TxD0	15	TxD1	25	TxD2	35	TxD3
6	CTS0	16	CTS1	26	CTS2	36	CTS3
7	DTR0	17	DTR1	27	DTR2	37	DTR3
8	---	18	---	28	---	38	---
9	GND0	19	GND1	29	GND2	39	GND3
10	---	20	---	30	---	40	---

RS-422, 4-wire RS-485 (CB-114, CB-134I)

Pin	Signal	Pin	Signal	Pin	Signal	Pin	Signal
1	TxD0-(A)	11	TxD1-(A)	21	TxD2-(A)	31	TxD3-(A)
2		12		22		32	
3	TxD0+(B)	13	TxD1+(B)	23	TxD2+(B)	33	TxD3+(B)
4		14		24		34	
5	RxD0+(B)	15	RxD1+(B)	25	RxD2+(B)	35	RxD3+(B)
6		16		26		36	
7	RxD0-(A)	17	RxD1-(A)	27	RxD2-(A)	37	RxD3-(A)
8		18		28		38	
9	GND0	19	GND1	29	GND2	39	GND3
10		20		30		40	

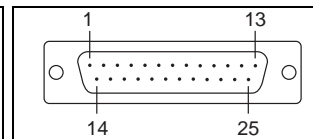
2-wire RS-485 (CB-114, and CB-134I)

Pin	Signal	Pin	Signal	Pin	Signal	Pin	Signal
1		11		21		31	
2		12		22		32	
3		13		23		33	
4		14		24		34	
5	Data0+(B)	15	Data1+(B)	25	Data2+(B)	35	Data3+(B)
6		16		26		36	
7	Data0-(A)	17	Data1-(A)	27	Data2-(A)	37	Data3-(A)
8		18		28		38	
9	GND0	19	GND1	29	GND2	39	GND3
10		20		30		40	



DB9 (M) connectors
(CBL-F40M9x4-50,
CBL-F20M9x4-50)

		RS-422, 4-wire RS-485	2-wire RS-485
Pin	RS-232	RS-485	RS-485
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		



DB25 (M) connectors
(CBL-F40M25x4-50,
CBL-F20M25x4-50)

		RS-422, 4-wire RS-485	2-wire RS-485
Pin	RS-232	RS-485	RS-485
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)

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The Americas: +1-714-528-6777 (toll-free: 1-888-669-2872)
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Asia-Pacific: +886-2-8919-1230
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