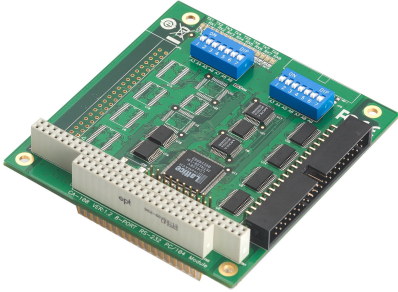# CA-104 Series

*4-port RS-232 PC/104 modules*

### Features and Benefits

- 921.6 kbps maximum baudrate for fast data transmission
- On-chip software flow control
- IRQ and I/O settings are jumper and DIP switch selectable
- Onboard Tx and Rx LED indicators for each port
- Supports Windows CE 5.0/6.0 and Windows XP Embedded operating systems
- Wide-temperature model available for -40 to 85°C environments

### Certifications

CE  FC

## Introduction

The CA-104 PC/104 modules are reliable, high-performance, multiport serial communication solutions that have 4 RS-232 ports, and can be used with PC/104 CPU boards that accept the PC/104 expansion interface. Optional DB9 and DB25 connection cables are available for connecting to serial devices, and versatile driver support makes the modules suitable for a wide range of applications.

## Specifications

### Serial Interface

| | |
|---|---|
| Comm. Controller | 16C550C or compatible x 4 |
| Bus | PC/104 bus |
| Connector | 40-pin box header |
| DIP Switches | I/O base address, Interrupt vector |
| IRQ | 3, 4, 5, 6, 7, 9, 10, 11, 12, 15 (shared for all ports) |
| FIFO | 64 bytes |
| Max. No. of Boards per PC | 8 |
| No. of Ports | 4 |
| Serial Standards | RS-232 |
| Baudrate | 50 bps to 921.6 kbps |
| Data Bits | 5, 6, 7, 8 |
| Stop Bits | 1, 1.5, 2 |
| Parity | None, Even, Odd, Space, Mark |
| Flow Control | None, RTS/CTS, XON/XOFF |

### Serial Signals

| | |
|---|---|
| RS-232 | TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND |

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## Serial Software Features

| | |
|---|---|
| Windows Drivers | DOS, Windows 95/98/ME/NT/2000, Windows XP/2003/Vista/2008/7/8/8.1/10 (x86/x64), Windows 2008 R2/2012/2012 R2 (x64), Windows Embedded CE 5.0/6.0, Windows XP Embedded |
| Linux Drivers | Linux kernel 2.4.x, Linux kernel 2.6.x |
| UNIX Drivers | FreeBSD 4.x, QNX 4 |

## Power Parameters

| | |
|---|---|
| Input Current | 210 mA @ 5 VDC |
| Input Voltage | 5 VDC |

## Physical Characteristics

| | |
|---|---|
| Dimensions | 90 x 96 mm (3.54 x 3.78 in) |

## LED Interface

| | |
|---|---|
| LED Indicators | Built-in Tx, Rx LEDs for each port |

## Environmental Limits

| | |
|---|---|
| Operating Temperature | CA-104: 0 to 55°C (32 to 131°F)<br>CA-104-T: -40 to 85°C (-40 to 185°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: 4 kV; Air: 8 kV<br>IEC 61000-4-3 RS: 80 MHz to 1 GHz: 3 V/m<br>IEC 61000-4-4 EFT: Power: 2 kV; Signal: 1 kV<br>IEC 61000-4-5 Surge: Power: 0.5 kV<br>IEC 61000-4-6 CS: 150 kHz to 80 MHz: 3 V/m; Signal: 3 V/m<br>IEC 61000-4-8 PFMF |
| Environmental Testing | IEC 60068-2-1<br>IEC 60068-2-2<br>IEC 60068-2-3<br>IEC 60068-2-14 |
| Safety | EN 60950-1, UL 60950-1 |
| Vibration | IEC 60068-2-6 |

## Declaration

| | |
|---|---|
| Green Product | RoHS, CRoHS, WEEE |

## MTBF

| | |
|---|---|
| Time | 897,459 hrs |
| Standards | Telcordia (Bellcore), GB |

## Warranty

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

Package Contents

| Device | 1 x CA-104 Series PC/104 module |
|---|---|
| Documentation | 1 x document and software CD<br>1 x quick installation guide<br>1 x warranty card |

## Ordering Information

| Model Name | Serial Standards | No. of Serial Ports | Operating Temp. |
|---|---|---|---|
| CA-104 | RS-232 | 4 | 0 to 55°C |
| CA-104-T | RS-232 | 4 | -40 to 85°C |

## Accessories (sold separately)

Cables

| CBL-F40M25x4-50 | F40 to 4 x DB25 male cable, 50 cm |
|---|---|
| CBL-F40M9x4-50 | F40 to 4 x DB9 male cable, 50 cm |

# CA-108 Series

*8-port RS-232 PC/104 modules*

### Features and Benefits

- 921.6 kbps maximum baudrate for fast data transmission
- On-chip hardware and software flow control
- IRQ and I/O settings are jumper and DIP switch selectable
- Onboard Tx and Rx LED indicators for each port
- Supports Windows CE 5.0/6.0 and Windows XP Embedded operating systems
- Wide-temperature model available for -40 to 85°C environments

### Certifications

$C\:E$   FC

## Introduction

The CA-108 PC/104 modules are reliable, high-performance, multiport serial communication solutions that have 8 RS-232 ports, and can be used with PC/104 CPU boards that accept the PC/104 expansion interface. Optional DB9 and DB25 connection cables are available for connecting to serial devices, and versatile driver support makes the modules suitable for a wide range of applications.

## Specifications

### Serial Interface

| | |
|---|---|
| Comm. Controller | 16C550C or compatible x 4 |
| Bus | PC/104 bus |
| Connector | 40-pin box header |
| DIP Switches | I/O base address, Interrupt vector |
| IRQ | 3, 4, 5, 6, 7, 9, 10, 11, 12, 15 (shared for all ports) |
| FIFO | 64 bytes |
| Max. No. of Boards per PC | 8 |
| No. of Ports | 8 |
| Serial Standards | RS-232 |
| Baudrate | 50 bps to 921.6 kbps |
| Data Bits | 5, 6, 7, 8 |
| Stop Bits | 1, 1.5, 2 |
| Parity | None, Even, Odd, Space, Mark |
| Flow Control | None, RTS/CTS, XON/XOFF |

### Serial Signals

| | |
|---|---|
| RS-232 | TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND |

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## Serial Software Features

| | |
|---|---|
| Windows Drivers | DOS, Windows 95/98/ME/NT/2000, Windows XP/2003/Vista/2008/7/8/8.1/10 (x86/x64), Windows 2008 R2/2012/2012 R2 (x64), Windows Embedded CE 5.0/6.0, Windows XP Embedded |
| Linux Drivers | Linux kernel 2.4.x, Linux kernel 2.6.x |
| UNIX Drivers | FreeBSD 4.x, QNX 4 |

## Power Parameters

| | |
|---|---|
| Input Current | 210 mA @ 5 VDC |
| Input Voltage | 5 VDC |

## Physical Characteristics

| | |
|---|---|
| Dimensions | 90 x 96 mm (3.54 x 3.78 in) |

## LED Interface

| | |
|---|---|
| LED Indicators | Built-in Tx, Rx LEDs for each port |

## Environmental Limits

| | |
|---|---|
| Operating Temperature | CA-108: 0 to 55°C (32 to 131°F)<br>CA-108-T: -40 to 85°C (-40 to 185°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: 4 kV; Air: 8 kV<br>IEC 61000-4-3 RS: 80 MHz to 1 GHz: 3 V/m<br>IEC 61000-4-4 EFT: Power: 2 kV; Signal: 1 kV<br>IEC 61000-4-5 Surge: Power: 0.5 kV<br>IEC 61000-4-6 CS: 150 kHz to 80 MHz: 3 V/m; Signal: 3 V/m<br>IEC 61000-4-8 PFMF<br>IEC 61000-4-11 DIPs |
| Environmental Testing | IEC 60068-2-1<br>IEC 60068-2-2<br>IEC 60068-2-3<br>IEC 60068-2-14 |
| Safety | EN 60950-1, UL 60950-1 |
| Vibration | IEC 60068-2-6 |

## Declaration

| | |
|---|---|
| Green Product | RoHS, CRoHS, WEEE |

## MTBF

| | |
|---|---|
| Time | 897,459 hrs |
| Standards | Telcordia (Bellcore), GB |

## Warranty

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

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### Package Contents

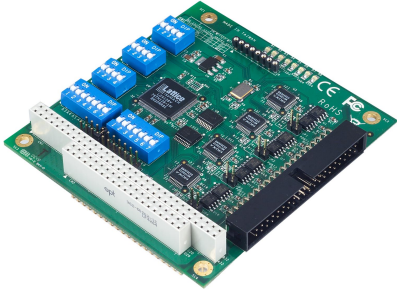| Device | 1 x CA-108 Series PC/104 module |
|---|---|
| Documentation | 1 x document and software CD<br>1 x quick installation guide<br>1 x warranty card |

## Ordering Information

| Model Name | Serial Bus | Serial Standards | No. of Serial Ports | Operating Temp. |
|---|---|---|---|---|
| CA-108 | PC/104 | RS-232 | 8 | 0 to 55°C |
| CA-108-T | PC/104 | RS-232 | 8 | -40 to 85°C |

www.moxa.com

# CA-114 Series

*4-port RS-232/422/485 PC/104 modules*

## Features and Benefits

- 921.6 kbps maximum baudrate for fast data transmission

- On-chip hardware and software flow control

- IRQ settings, I/O settings, and serial interface are jumper and DIP switch selectable

- Onboard Tx and Rx LED indicators for each port

- Supports Windows CE 5.0/6.0 and Windows XP Embedded operating systems

- Wide-temperature model available for -40 to 85°C environments

## Certifications

CE FC

## Introduction

The CA-114 PC/104 modules are reliable, high-performance, multiport serial communication solutions that have 4 RS-232/422/485 ports, and can be used with PC/104 CPU boards that accept the PC/104 expansion interface. Optional DB9 and DB25 connection cables are available for connecting to serial devices, and versatile driver support makes the modules suitable for a wide range of applications.

## Specifications

### Serial Interface

| | |
|---|---|
| Comm. Controller | 16C550C or compatible x 4 |
| Bus | PC/104 bus |
| Connector | 40-pin box header |
| DIP Switches | I/O base address, Interrupt vector, Serial interface |
| IRQ | 3, 4, 5, 6, 7, 9, 10, 11, 12, 15 (shared for all ports) |
| FIFO | 64 bytes |
| Max. No. of Boards per PC | 8 |
| No. of Ports | 4 |
| Serial Standards | RS-232, RS-422, RS-485 |
| Baudrate | 50 bps to 921.6 kbps |
| Data Bits | 5, 6, 7, 8 |
| Stop Bits | 1, 1.5, 2 |
| Parity | None, Even, Odd, Space, Mark |
| Flow Control | None, RTS/CTS, XON/XOFF |

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## Serial Signals

| | |
|---|---|
| RS-232 | TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND |
| RS-422 | Tx+, Tx-, Rx+, Rx-, GND |
| RS-485-4w | Tx+, Tx-, Rx+, Rx-, GND |
| RS-485-2w | Data+, Data-, GND |

## Serial Software Features

| | |
|---|---|
| Windows Drivers | DOS, Windows 95/98/ME/NT/2000, Windows XP/2003/Vista/2008/7/8/8.1/10 (x86/x64), Windows 2008 R2/2012/2012 R2 (x64), Windows Embedded CE 5.0/6.0, Windows XP Embedded |
| Linux Drivers | Linux kernel 2.4.x, Linux kernel 2.6.x |

## Power Parameters

| | |
|---|---|
| Input Current | 305 mA @ 5 VDC |
| Input Voltage | 5 VDC |

## Physical Characteristics

| | |
|---|---|
| Dimensions | 90 x 96 mm (3.54 x 3.78 in) |

## LED Interface

| | |
|---|---|
| LED Indicators | Built-in Tx, Rx LEDs for each port |

## Environmental Limits

| | |
|---|---|
| Operating Temperature | CA-114: 0 to 55°C (32 to 131°F)<br>CA-114-T: -40 to 85°C (-40 to 185°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: 4 kV; Air: 8 kV<br>IEC 61000-4-3 RS: 80 MHz to 1 GHz: 3 V/m<br>IEC 61000-4-4 EFT: Power: 2 kV; Signal: 1 kV<br>IEC 61000-4-5 Surge: Power: 0.5 kV<br>IEC 61000-4-6 CS: 150 kHz to 80 MHz: 3 V/m; Signal: 3 V/m<br>IEC 61000-4-8 PFMF |
| Environmental Testing | IEC 60068-2-1<br>IEC 60068-2-2<br>IEC 60068-2-3<br>IEC 60068-2-14 |
| Safety | EN 60950-1, UL 60950-1 |
| Vibration | IEC 60068-2-6 |

## Declaration

| | |
|---|---|
| Green Product | RoHS, CRoHS, WEEE |

## MTBF

| | |
|---|---|
| Time | 630,997 hrs |
| Standards | Telcordia (Bellcore), GB |

## Warranty

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

## Package Contents

| Device | 1 x CA-114 Series PC/104 module |
|---|---|
| Documentation | 1 x document and software CD<br>1 x quick installation guide<br>1 x warranty card |

## Ordering Information

| Model Name | Serial Bus | Serial Standards | No. of Serial Ports | Operating Temp. |
|---|---|---|---|---|
| CA-114 | PC/104 | RS-232/422/485 | 4 | 0 to 55°C |
| CA-114-T | PC/104 | RS-232/422/485 | 4 | -40 to 85°C |

## Accessories (sold separately)

### Cables

| CBL-F40M25x4-50 | F40 to 4 x DB25 male cable, 50 cm |
|---|---|
| CBL-F40M9x4-50 | F40 to 4 x DB9 male cable, 50 cm |

# CA-132/132I Series

*2-port RS-422/485 PC/104 modules with optional 2 kV isolation*
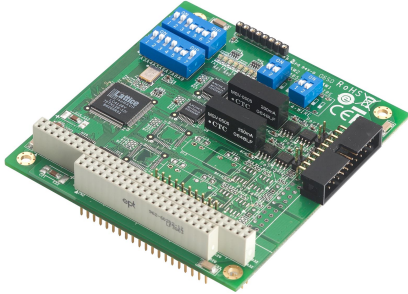


## Features and Benefits

- 921.6 kbps maximum baudrate for fast data transmission

- On-chip software flow control

- Onboard Tx and Rx LED indicators for each port

- Supports RS-485 ADDC® (Automatic Data Direction Control)

- Supports Windows CE 5.0/6.0 and Windows XP Embedded operating systems

- Wide-temperature models available for -40 to 85°C environments

## Certifications



## Introduction

The CA-132/132I PC/104 modules are reliable, high-performance, multiport serial communication solutions that have 2 RS-422/485 ports, and can be used with PC/104 CPU boards that accept the PC/104 expansion interface. Optional DB9 and DB25 connection cables are available for connecting to serial devices, and versatile driver support makes the modules suitable for a wide range of applications.

## Specifications

### Serial Interface

| | |
|---|---|
| Comm. Controller | 16C550C or compatible x 2 |
| Bus | PC/104 bus |
| Connector | 20-pin box header |
| DIP Switches | I/O base address, Interrupt vector |
| IRQ | 3, 4, 5, 6, 7, 9, 10, 11, 12, 15 (shared for all ports) |
| FIFO | 64 bytes |
| Max. No. of Boards per PC | 8 |
| No. of Ports | 2 |
| Serial Standards | RS-422, RS-485 |
| Baudrate | 50 bps to 921.6 kbps |
| Data Bits | 5, 6, 7, 8 |
| Stop Bits | 1, 1.5, 2 |
| Parity | None, Even, Odd, Space, Mark |
| Flow Control | None, XON/XOFF |
| Isolation | CA-132I/132I-T: 2 kV |

## Serial Signals

| | |
|---|---|
| RS-422 | Tx+, Tx-, Rx+, Rx-, GND |
| RS-485-4w | Tx+, Tx-, Rx+, Rx-, GND |
| RS-485-2w | Data+, Data-, GND |

## Serial Software Features

| | |
|---|---|
| Windows Drivers | DOS, Windows 95/98/ME/NT/2000, Windows XP/2003/Vista/2008/7/8/8.1/10 (x86/x64), Windows 2008 R2/2012/2012 R2 (x64), Windows Embedded CE 5.0/6.0, Windows XP Embedded |
| Linux Drivers | Linux kernel 2.4.x, Linux kernel 2.6.x |
| UNIX Drivers | FreeBSD 4.x, QNX 4, SCO UNIX, OpenServer |

## Power Parameters

| | |
|---|---|
| Input Current | CA-132 Series: 155 mA @ 5 VDC<br>CA-132I Series: 190 mA @ 5 VDC |
| Input Voltage | 5 VDC |

## Physical Characteristics

| | |
|---|---|
| Dimensions | 90 x 96 mm (3.54 x 3.78 in) |

## LED Interface

| | |
|---|---|
| LED Indicators | Built-in Tx, Rx LEDs for each port |

## Environmental Limits

| | |
|---|---|
| Operating Temperature | Standard Models: 0 to 55°C (32 to 131°F)<br>Wide Temp. Models: -40 to 85°C (-40 to 185°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: 4 kV; Air: 8 kV<br>IEC 61000-4-3 RS: 80 MHz to 1 GHz: 3 V/m<br>IEC 61000-4-4 EFT: Power: 2 kV; Signal: 1 kV<br>IEC 61000-4-5 Surge: Power: 0.5 kV<br>IEC 61000-4-6 CS: 150 kHz to 80 MHz: 3 V/m; Signal: 3 V/m<br>IEC 61000-4-8 PFMF |
| Environmental Testing | IEC 60068-2-1<br>IEC 60068-2-2<br>IEC 60068-2-3<br>IEC 60068-2-14 |
| Safety | EN 60950-1, UL 60950-1 |
| Vibration | IEC 60068-2-6 |

## Declaration

| | |
|---|---|
| Green Product | RoHS, CRoHS, WEEE |

## MTBF

| Time | 536,288 hrs |
|---|---|
| Standards | Telcordia (Bellcore), GB |

## Warranty

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

## Package Contents

| Device | 1 x CA-132/132I Series PC/104 module |
|---|---|
| Documentation | 1 x document and software CD<br>1 x quick installation guide<br>1 x warranty card |

## Ordering Information

| Model Name | Serial Bus | Serial Standards | Serial Isolation Protection | Operating Temp. |
|---|---|---|---|---|
| CA-132 | PC/104 | RS-422/485 | – | 0 to 55°C |
| CA-132I | PC/104 | RS-422/485 | 2 kV | 0 to 55°C |
| CA-132-T | PC/104 | RS-422/485 | – | -40 to 85°C |
| CA-132I-T | PC/104 | RS-422/485 | 2 kV | -40 to 85°C |

## Accessories (sold separately)

### Cables

| CBL-F20M25x2-50 | F20 to 2 x DB25 male cable, 50 cm |
|---|---|
| CBL-F20M9x2-50 | F20 to 2 x DB9 male cable, 50 cm |

# CA-134I Series

*4-port RS-422/485 PC/104 modules with 2 kV isolation*
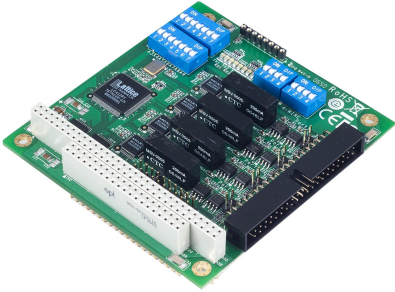
### Features and Benefits

• 921.6 kbps maximum baudrate for fast data transmission

• On-chip software flow control

• Onboard Tx and Rx LED indicators for each port

• Supports Windows CE 5.0/6.0 and Windows XP Embedded operating systems

• Wide-temperature model available for -40 to 85°C environments

### Certifications

CE FC

## Introduction

The CA-134I PC/104 modules are reliable, high-performance, multiport serial communication solutions that have 4 RS-422/485 ports, and can be used with PC/104 CPU boards that accept the PC/104 expansion interface. Optional DB9 and DB25 connection cables are available for connecting to serial devices, and versatile driver support makes the modules suitable for a wide range of applications.

## Specifications

### Serial Interface

| | |
|---|---|
| Comm. Controller | 16C550C or compatible x 4 |
| Bus | PC/104 bus |
| Connector | 40-pin box header |
| DIP Switches | I/O base address, Interrupt vector, Serial interface |
| IRQ | 3, 4, 5, 6, 7, 9, 10, 11, 12, 15 (shared for all ports) |
| FIFO | 64 bytes |
| Max. No. of Boards per PC | 8 |
| No. of Ports | 4 |
| Serial Standards | RS-422, RS-485 |
| Baudrate | 50 bps to 921.6 kbps (supports non-standard baudrates) |
| Data Bits | 5, 6, 7, 8 |
| Stop Bits | 1, 1.5, 2 |
| Parity | None, Even, Odd, Space, Mark |
| Flow Control | None, XON/XOFF |
| Isolation | 2 kV |

## Serial Signals

| | |
|---|---|
| RS-422 | Tx+, Tx-, Rx+, Rx-, GND |
| RS-485-4w | Tx+, Tx-, Rx+, Rx-, GND |
| RS-485-2w | Data+, Data-, GND |

## Serial Software Features

| | |
|---|---|
| Windows Drivers | DOS, Windows 95/98/ME/NT/2000, Windows XP/2003/Vista/2008/7/8/8.1/10 (x86/x64), Windows 2008 R2/2012/2012 R2 (x64), Windows Embedded CE 5.0/6.0, Windows XP Embedded |
| Linux Drivers | Linux kernel 2.4.x, Linux kernel 2.6.x |

## Power Parameters

| | |
|---|---|
| Input Current | 220 mA @ 5 VDC |
| Input Voltage | 5 VDC |

## Physical Characteristics

| | |
|---|---|
| Dimensions | 90 x 96 mm (3.54 x 3.78 in) |

## LED Interface

| | |
|---|---|
| LED Indicators | Built-in Tx, Rx LEDs for each port |

## Environmental Limits

| | |
|---|---|
| Operating Temperature | CA-134I: 0 to 55°C (32 to 131°F)<br>CA-134I-T: -40 to 85°C (-40 to 185°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: 4 kV; Air: 8 kV<br>IEC 61000-4-3 RS: 80 MHz to 1 GHz: 3 V/m<br>IEC 61000-4-4 EFT: Power: 2 kV; Signal: 1 kV<br>IEC 61000-4-5 Surge: Power: 0.5 kV<br>IEC 61000-4-6 CS: 150 kHz to 80 MHz: 3 V/m; Signal: 3 V/m<br>IEC 61000-4-8 PFMF |
| Environmental Testing | IEC 60068-2-1<br>IEC 60068-2-2<br>IEC 60068-2-3<br>IEC 60068-2-14 |

## Declaration

| | |
|---|---|
| Green Product | RoHS, CRoHS, WEEE |

## Standards and Certifications

| | |
|---|---|
| Safety | EN 60950-1, UL 60950-1 |
| Vibration | IEC 60068-2-6 |

## MTBF

| | |
|---|---|
| Time | 339,822 hrs |
| Standards | Telcordia (Bellcore), GB |

## Warranty

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

## Package Contents

| | |
|---|---|
| Device | 1 x CA-134I Series PC/104 module |
| Documentation | 1 x document and software CD<br>1 x quick installation guide<br>1 x warranty card |

## Ordering Information

| Model Name | Serial Bus | Serial Standards | No. of Serial Ports | Serial Isolation Protection | Operating Temp. |
|---|---|---|---|---|---|
| CA-134I | PC/104 | RS-422/485 | 4 | 2 kV | 0 to 55°C |
| CA-134I-T | PC/104 | RS-422/485 | 4 | 2 kV | -40 to 85°C |

## Accessories (sold separately)

### Cables

| | |
|---|---|
| CBL-F40M25x4-50 | F40 to 4 x DB25 male cable, 50 cm |
| CBL-F40M9x4-50 | F40 to 4 x DB9 male cable, 50 cm |

# CB-108 Series

*8-port RS-232 PC/104-Plus modules*
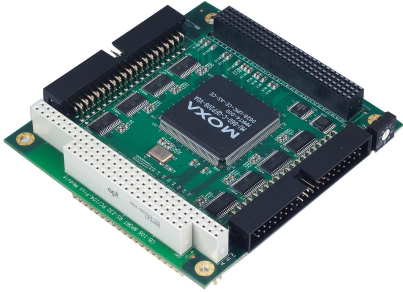


## Features and Benefits

- 921.6 kbps maximum baudrate for fast data transmission

- On-chip hardware and software flow control

- Onboard Tx and Rx LED indicators for each port

- Supports Windows, Windows CE 5.0/6.0, and Windows XP Embedded operating systems

- Wide-temperature model available for -40 to 85°C environments

- Easy maintenance with built-in LEDs and management software

## Certifications



## Introduction

The CB-108 PC/104-Plus modules come with 8 RS-232 ports, and can be used with PC/104-Plus CPU boards that accept the PC/104-Plus expansion interface. Optional DB9 and DB25 connection cables are available for connecting to serial devices, and versatile driver support makes the modules suitable for a wide range of applications. The CB-108 modules can be used on the PC/104-Plus (PCI) bus, and provide a reliable, high-performance solution for multiport serial communication.

## Specifications

### Serial Interface

| | |
|---|---|
| Comm. Controller | 16C550C or compatible x 4 |
| Bus | PC/104 plus bus |
| Connector | 40-pin box header |
| DIP Switches | Serial interface |
| IRQ | Assigned by BIOS |
| I/O Address | Assigned by BIOS |
| FIFO | 128 bytes |
| Max. No. of Boards per PC | 8 |
| No. of Ports | 8 |
| Serial Standards | RS-232 |
| Baudrate | 50 bps to 921.6 kbps |
| Data Bits | 5, 6, 7, 8 |
| Stop Bits | 1, 1.5, 2 |
| Parity | None, Even, Odd, Space, Mark |
| Flow Control | None, RTS/CTS, XON/XOFF |

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## Serial Signals

| | |
|---|---|
| RS-232 | TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND |

## Power Parameters

| | |
|---|---|
| Input Current | 153 mA @ 5 VDC |
| Input Voltage | 5 VDC |

## Physical Characteristics

| | |
|---|---|
| Dimensions | 90 x 96 mm (3.54 x 3.78 in) |

## LED Interface

| | |
|---|---|
| LED Indicators | Built-in Tx, Rx LEDs for each port |

## Environmental Limits

| | |
|---|---|
| Operating Temperature | CB-108: 0 to 55°C (32 to 131°F)<br>CB-108-T: -40 to 85°C (-40 to 185°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: 4 kV; Air: 8 kV<br>IEC 61000-4-3 RS: 80 MHz to 1 GHz: 3 V/m<br>IEC 61000-4-4 EFT: Power: 2 kV; Signal: 1 kV<br>IEC 61000-4-5 Surge: Power: 0.5 kV<br>IEC 61000-4-6 CS: 150 kHz to 80 MHz: 3 V/m; Signal: 3 V/m<br>IEC 61000-4-8 PFMF |
| Environmental Testing | IEC 60068-2-1<br>IEC 60068-2-2<br>IEC 60068-2-3<br>IEC 60068-2-14 |
| Safety | EN 60950-1, UL 60950-1 |
| Vibration | IEC 60068-2-6 |

## MTBF

| | |
|---|---|
| Time | 403,631 hrs |
| Standards | Telcordia (Bellcore), GB |

## Warranty

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

## Package Contents

| | |
|---|---|
| Device | 1 x CB-108 Series PC/104-Plus module |
| Documentation | 1 x document and software CD<br>1 x quick installation guide<br>1 x warranty card |

## Ordering Information

| Model Name | Serial Bus | Serial Standards | No. of Serial Ports | Operating Temp. |
|---|---|---|---|---|
| CB-108 | PC/104-Plus | RS-232 | 8 | 0 to 55°C |
| CB-108-T | PC/104-Plus | RS-232 | 8 | -40 to 85°C |

## Accessories (sold separately)

### Cables

| | |
|---|---|
| CBL-F40M25x4-50 | F40 to 4 x DB25 male cable, 50 cm |
| CBL-F40M9x4-50 | F40 to 4 x DB9 male cable, 50 cm |

# CB-114 Series

## 4-port RS-232/422/485 PC/104-Plus modules
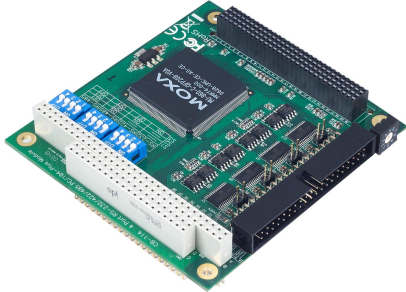


### Features and Benefits

- 921.6 kbps maximum baudrate for fast data transmission

- On-chip hardware and software flow control

- Serial interface is DIP switch selectable

- Onboard Tx and Rx LED indicators for each port

- Supports Windows, Windows CE 5.0/6.0, and Windows XP Embedded operating systems

- Wide-temperature model available for -40 to 85°C environments

### Certifications



## Introduction

The CB-114 PC/104-Plus modules come with 4 RS-232/422/485 ports, and can be used with PC/104-Plus CPU boards that accept the PC/104-Plus expansion interface. Optional DB9 and DB25 connection cables are available for connecting to serial devices, and versatile driver support makes the modules suitable for a wide range of applications. The CB-114 modules can be used on the PC/104-Plus (PCI) bus, and provide a reliable, high-performance solution for multiport serial communication.

## Specifications

### Serial Interface

| | |
|---|---|
| Comm. Controller | 16C550C or compatible x 4 |
| Bus | PC/104 plus bus |
| Connector | 40-pin box header |
| DIP Switches | Serial interface |
| IRQ | Assigned by BIOS |
| I/O Address | Assigned by BIOS |
| FIFO | 128 bytes |
| Max. No. of Boards per PC | 8 |
| No. of Ports | 4 |
| Serial Standards | RS-232, RS-422, RS-485 |
| Baudrate | 50 bps to 921.6 kbps |
| Data Bits | 5, 6, 7, 8 |
| Stop Bits | 1, 1.5, 2 |
| Parity | None, Even, Odd, Space, Mark |
| Flow Control | None, RTS/CTS, XON/XOFF |

## Serial Signals

| | |
|---|---|
| RS-232 | TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND |
| RS-422 | Tx+, Tx-, Rx+, Rx-, GND |
| RS-485-4w | Tx+, Tx-, Rx+, Rx-, GND |
| RS-485-2w | Data+, Data-, GND |

## Serial Software Features

| | |
|---|---|
| Windows Drivers | DOS, Windows 95/98/ME/NT/2000, Windows XP/2003/Vista/2008/7/8/8.1/10 (x86/x64), Windows 2008 R2/2012/2012 R2 (x64), Windows Embedded CE 5.0/6.0, Windows XP Embedded |
| Linux Drivers | Linux kernel 2.4.x, Linux kernel 2.6.x, Linux kernel 3.x |
| UNIX Drivers | QNX 6, Solaris 10, UnixWare 7 |

## Power Parameters

| | |
|---|---|
| Input Current | 164 mA @ 5 VDC |
| Input Voltage | 5 VDC |

## Physical Characteristics

| | |
|---|---|
| Dimensions | 90 x 96 mm (3.54 x 3.78 in) |

## LED Interface

| | |
|---|---|
| LED Indicators | Built-in Tx, Rx LEDs for each port |

## Environmental Limits

| | |
|---|---|
| Operating Temperature | CB-114: 0 to 55°C (32 to 131°F)<br>CB-114-T: -40 to 85°C (-40 to 185°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: 4 kV; Air: 8 kV<br>IEC 61000-4-3 RS: 80 MHz to 1 GHz: 3 V/m<br>IEC 61000-4-4 EFT: Power: 2 kV; Signal: 1 kV<br>IEC 61000-4-5 Surge: Power: 0.5 kV<br>IEC 61000-4-6 CS: 150 kHz to 80 MHz: 3 V/m; Signal: 3 V/m<br>IEC 61000-4-8 PFMF |
| Environmental Testing | IEC 60068-2-1<br>IEC 60068-2-2<br>IEC 60068-2-3<br>IEC 60068-2-14 |
| Safety | EN 60950-1, UL 60950-1 |
| Vibration | IEC 60068-2-6 |

## Declaration

| | |
|---|---|
| Green Product | RoHS, CRoHS, WEEE |

## MTBF

| | |
|---|---|
| Time | 381,081 hrs |
| Standards | Telcordia (Bellcore), GB |

## Warranty

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

## Package Contents

| | |
|---|---|
| Device | 1 x CB-114 Series PC/104-Plus module |
| Documentation | 1 x document and software CD<br>1 x quick installation guide<br>1 x warranty card |

## Ordering Information

| Model Name | Serial Bus | Serial Standards | No. of Serial Ports | Operating Temp. |
|---|---|---|---|---|
| CB-114 | PC/104-Plus | RS-232/422/485 | 4 | 0 to 55°C |
| CB-114-T | PC/104-Plus | RS-232/422/485 | 4 | -40 to 85°C |

## Accessories (sold separately)

### Cables

| | |
|---|---|
| CBL-F40M25x4-50 | F40 to 4 x DB25 male cable, 50 cm |
| CBL-F40M9x4-50 | F40 to 4 x DB9 male cable, 50 cm |

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# CB-134I Series

*4-port RS-422/485 PC/104-Plus modules with 2 kV isolation*
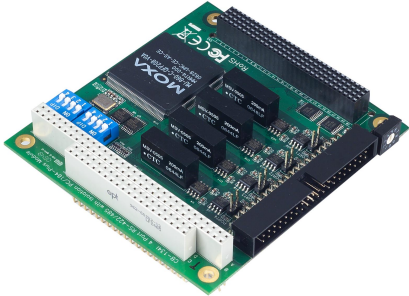
## Features and Benefits

- 921.6 kbps maximum baudrate for fast data transmission
- On-chip software flow control
- Serial interface is DIP switch selectable
- Onboard Tx and Rx LED indicators for each port
- Supports Windows XP/Vista/7, Windows CE 5.0/6.0, and Windows XP Embedded operating systems
- Wide-temperature model available for -40 to 85°C environments

## Certifications

CE  FC

## Introduction

The CB-134I PC/104-Plus modules come with 4 RS-422/485 ports, and can be used with PC/104-Plus CPU boards that accept the PC/104-Plus expansion interface. Optional DB9 and DB25 connection cables are available for connecting to serial devices, and versatile driver support makes the modules suitable for a wide range of applications. The CB-134I modules can be used on the PC/104-Plus (PCI) bus, and provide a reliable, high-performance solution for multiport serial communication.

## Specifications

### Serial Interface

| | |
|---|---|
| Comm. Controller | 16C550C or compatible x 4 |
| Bus | PC/104 plus bus |
| Connector | 40-pin box header |
| DIP Switches | Serial interface |
| Max. No. of Boards per PC | 8 |
| IRQ | Assigned by BIOS |
| I/O Address | Assigned by BIOS |
| FIFO | 128 bytes |
| No. of Ports | 4 |
| Serial Standards | RS-422, RS-485 |
| Baudrate | 50 bps to 921.6 kbps (supports non-standard baudrates) |
| Data Bits | 5, 6, 7, 8 |
| Stop Bits | 1, 1.5, 2 |
| Parity | None, Even, Odd, Space, Mark |
| Flow Control | None, XON/XOFF |

## Serial Signals

| | |
|---|---|
| RS-232 | TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND |

## Serial Software Features

| | |
|---|---|
| Windows Drivers | DOS, Windows 95/98/ME/NT/2000, Windows XP/2003/Vista/2008/7/8/8.1/10 (x86/x64), Windows 2008 R2/2012/2012 R2 (x64), Windows Embedded CE 5.0/6.0, Windows XP Embedded |
| Linux Drivers | Linux kernel 2.4.x, Linux kernel 2.6.x, Linux kernel 3.x |
| UNIX Drivers | QNX 6, Solaris 10, UnixWare 7 |

## Power Parameters

| | |
|---|---|
| Input Current | 153 mA @ 5 VDC |
| Input Voltage | 5 VDC |

## Physical Characteristics

| | |
|---|---|
| Dimensions | 90 x 96 mm (3.54 x 3.78 in) |

## LED Interface

| | |
|---|---|
| LED Indicators | Built-in Tx, Rx LEDs for each port |

## Environmental Limits

| | |
|---|---|
| Operating Temperature | CB-134I: 0 to 55°C (32 to 131°F)<br>CB-134I-T: -40 to 85°C (-40 to 185°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, EN 61000-6-2/-6-4 |
| EMI | CISPR 32, FCC Part 15B Class A |
| EMS | IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV<br>IEC 61000-4-3 RS: 80 MHz to 1 GHz: 3 V/m<br>IEC 61000-4-4 EFT: Power: 2 kV; Signal: 1 kV<br>IEC 61000-4-5 Surge: Power: 0.5 kV<br>IEC 61000-4-6 CS: 150 kHz to 80 MHz: 3 V/m; Signal: 3 V/m<br>IEC 61000-4-8 PFMF |
| Environmental Testing | IEC 60068-2-1<br>IEC 60068-2-2<br>IEC 60068-2-3<br>IEC 60068-2-14 |
| Safety | EN 60950-1, UL 60950-1 |
| Vibration | IEC 60068-2-6 |

## Declaration

| | |
|---|---|
| Green Product | RoHS, CRoHS, WEEE |

## MTBF

| | |
|---|---|
| Time | 403,631 hrs |
| Standards | Telcordia (Bellcore), GB |

## Warranty

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

## Package Contents

| | |
|---|---|
| Device | 1 x CB-134I Series PC/104-Plus module |
| Documentation | 1 x document and software CD<br>1 x quick installation guide<br>1 x warranty card |

## Ordering Information

| Model Name | Serial Bus | Serial Standards | No. of Serial Ports | Serial Isolation Protection | Operating Temp. |
|---|---|---|---|---|---|
| CB-134I | PC/104-Plus | RS-422/485 | 4 | 2 kV | 0 to 55°C |
| CB-134I-T | PC/104-Plus | RS-422/485 | 4 | 2 kV | -40 to 85°C |

## Accessories (sold separately)

### Cables

| | |
|---|---|
| CBL-F40M25x4-50 | F40 to 4 x DB25 male cable, 50 cm |
| CBL-F40M9x4-50 | F40 to 4 x DB9 male cable, 50 cm |