

# CP-102UF Series

## 2-port Universal PCI serial over fiber boards



- > Extend serial transmission distance up to:
  - 40 km with single-mode (CP-102UF-S-ST)
  - 5 km with multi-mode (CP-102UF-M-ST)
- > Supports “Ring” and “Point-to-Point” transmission modes
- > 921.6 Kbps maximum baudrate for super fast data transmission
- > 128-byte FIFO and on-chip H/W, S/W flow control
- > Compatible with 3.3/5V PCI and PCI-X
- > Drivers provided for Windows (2000, XP/2003/Vista x86/x64), DOS, Linux 2.4/2.6, QNX 6
- > Easy maintenance with on-board LED display and management software
- > Immune from signal interference
- > Guards against electronic degradation and chemical corrosion

The certification logos shown here apply to some or all of the products in this section. Please see the **Specifications** section or Moxa’s website for details.



### Overview

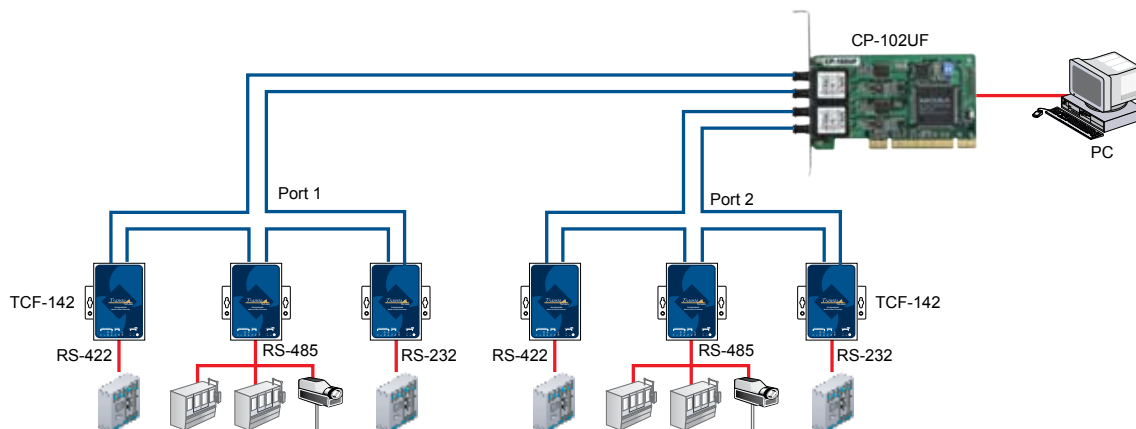
The CP-102UF smart Universal PCI boards are designed for industrial automation applications that require a long distance, multi-point, PC-based data acquisition solution. The boards are compatible with all popular operating systems, and each of the 2 serial ports support data rates up to 921.6 Kbps. In addition, the CP-102UF boards work with both 3.3V and 5V PCI buses, allowing them to be installed in virtually any available PC server. With a maximum data transmission distance

of 40 km (with the single-mode model), the CP-102UF cards beat the 15 meter maximum for RS-232, and even the 1.2 km maximum for RS-422/485. For many industrial applications, an even bigger benefit is that optical fiber isolates the data from dangerous increases in ground potential, ground loops, and electrical EMI/RFI electromagnetic radiation.

### Ring Operation

With the CP-102UF card, your PC can be included as one node of a fiber ring formed using Moxa’s own TCF-142 serial-to-fiber converter. Since each TCF-142 has two fiber ports and one serial port, PCs that are part of the ring will be able to communicate with serial devices connected to the ring. Note that the Tx port of the CP-102UF connects to a neighboring converter’s Rx port to form the ring. Once the ring has been set up, simply use the DIP switches to configure the CP-

102UF to “Ring mode.” When one node transmits a signal, the signal travels around the ring until it returns back to the transmitting unit, which then blocks the signals. With the CP-102UF, you can set up fiber rings that are up to 100 km in total length.



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Multipoint Serial Boards > CP-102UF Series

## Specifications

### Hardware

**Bus:** 32-bit Universal PCI

**Number of Ports:** 2

**Number of Boards:** 4 per PC (max.)

### Optical Fiber Interface

**Fiber Connectors:** ST type

#### Cable Requirements:

CP-102UF-M: 50/125, 62.5/125, or 100/140  $\mu\text{m}$

CP-102UF-S: 8.3/125, 8.75/125, 9/125 or 10/140  $\mu\text{m}$

#### Transmission Distance:

CP-102UF-M: Up to 5 km with multi-mode fiber

CP-102UF-S: Up to 40 km with single-mode fiber

#### Wavelength:

CP-102UF-M: 820 nm

CP-102UF-S: 1310 nm

**Tx Output:** -5 dBm

#### Rx Sensitivity:

CP-102UF-M: -20 dBm

CP-102UF-S: -24 dBm

**Point-to-Point Transmission:** Half or full duplex

**Ring Transmission:** Half duplex

### Performance

**Baudrate:** 50 bps to 921.6 Kbps

### Serial Communication Parameters

**Data Bits:** 5, 6, 7, 8

**Stop Bits:** 1, 1.5, 2

**Parity:** None, Even, Odd, Space, Mark

**Flow Control:** XON/XOFF

**I/O Address:** Assigned by BIOS

**IRQ:** Assigned by BIOS

### Driver Support

**Operating Systems:** Windows (2000, XP/2003/Vista x86/x64), DOS, Linux 2.4/2.6, QNX 6

### Environmental Limits

**Operating Temperature:** 0 to 55°C (32 to 131°F)

**Operating Humidity:** 5 to 95% RH

**Storage Temperature:** -20 to 85°C (-4 to 185°F)

### Regulatory Approvals

**FCC:** Part 15 Class B

**EMI:** EN55022 Class B

#### EMS:

EN55024

EN 61000-3-2

EN 61000-3-3

IEC 61000-4-2(ESD)

IEC 61000-4-3(RS)

IEC 61000-4-4(EFT)

IEC 61000-4-5(Surge)

IEC 61000-4-6(CS)

IEC 61000-4-8

IEC 61000-4-11(DIPS)

### Power Requirements

#### Power Consumption:

CP-102UF-M: 429 mA @ +5V

CP-102UF-S: 424 mA @ +5V

### Warranty

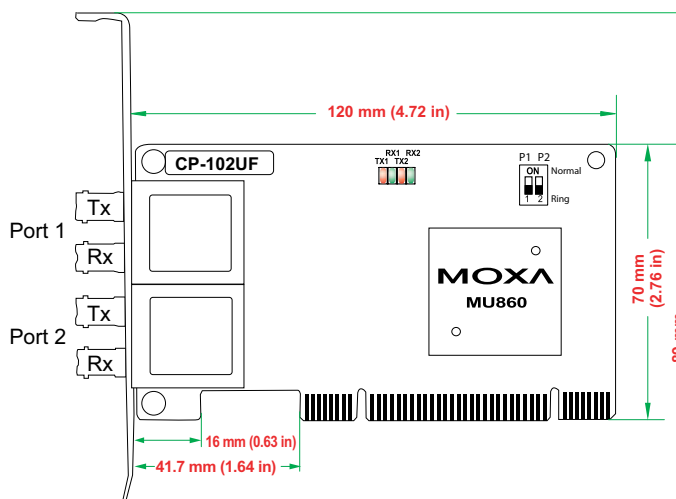
**Warranty Period:** 5 years

**Details:** See [www.moxa.com/warranty](http://www.moxa.com/warranty)

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Multiport Serial Boards &gt; CP-102UF Series

### Dimensions



## Ordering Information

### Available Models

**CP-102UF-M-ST:** 2-port Universal PCI serial over fiber board with multi-mode fiber for 5 km transmission (ST connector)

**CP-102UF-S-ST:** 2-port Universal PCI serial over fiber board with single-mode fiber for 40 km transmission (ST connector)

### Package Checklist

- CP-102UF-M or CP-102UF-S card
- Standard bracket
- Document and Software CD
- Quick Installation Guide (printed)
- Warranty Card