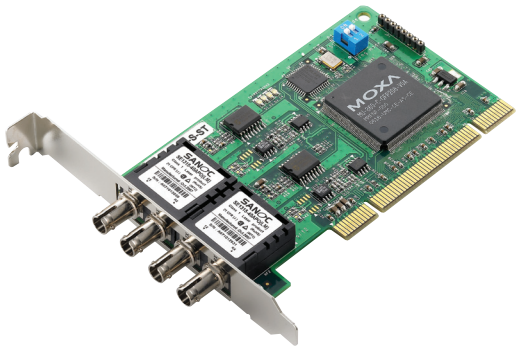
CP-102UF Series

2-port Universal PCI serial over fiber boards



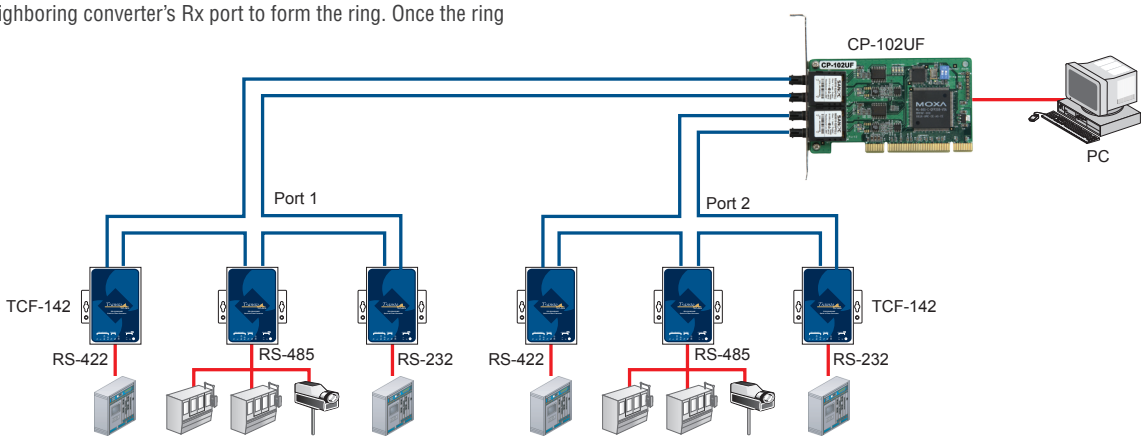
- Extend serial transmission distance up to:
  - 40 km with single-mode (CP-102UF-S-ST)
  - 5 km with multi-mode (CP-102UF-M-ST)
- Supports “Ring” and “Point-to-Point” transmission modes
- 921.6 Kbps maximum baudrate for super fast data transmission
- 128-byte FIFO and on-chip S/W flow control
- Compatible with 3.3/5V PCI and PCI-X
- Drivers provided for Windows (7 x86/x64, XP/2003/Vista/2008 x86/x64, 2000), Windows XP Embedded, Windows CE 5.0/6.0, DOS, Linux 2.4, Linux 2.6 (x86/x64), QNX 6, SCO OpenServer 5/6, and UnixWare 7
- Easy maintenance with on-board LED display and management software
- Immune from signal interference
- Guards against electronic degradation and chemical corrosion
- Wide temperature model available for -40 to 85°C environments

Overview

The CP-102UF 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 board, 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 all 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.



Specifications

Hardware
Bus: 32-bit Universal PCI
Number of Ports: 2
Max. Number of Boards per PC: 4

Optical Fiber Interface
Mode:
CP-102UF-M: Multi-mode
CP-102UF-S: Single-mode
Fiber Connectors: ST type
Cable Requirements:
CP-102UF-M: 50/125, 62.5/125, or 100/140 µm
CP-102UF-S: 8.3/125, 8.75/125, 9/125 or 10/140 µm
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, Windows XP/2003/Vista/2008/7 x86/x64, Windows XP Embedded, DOS, Windows CE 5.0/6.0, DOS, Linux 2.4, Linux 2.6 x86/x64, QNX 6, SCO OpenServer 5/6, UnixWare 7
Note: Please refer to Moxa's website for the latest driver support information.

Physical Characteristics
Dimensions: 70 x 120 mm (2.76 x 4.72 in)

Environmental Limits
Operating Temperature:
Standard Models: 0 to 55°C (32 to 131°F)
Wide Temp. Models: -40 to 85°C (-40 to 185°F)
Storage Temperature: -40 to 85°C (-40 to 185°F)
Ambient Relative Humidity: 5 to 95% (non-condensing)

Standards and Certifications
EMC: CE, FCC
EMI: EN 55022, EN 61000-3-2, EN 61000-3-3, FCC Part 15 Subpart B Class B
EMS: EN 55024, IEC 61000-4-2, IEC 61000-4-3, IEC 61000-4-4, IEC 61000-4-5, IEC 61000-4-6, IEC 61000-4-8, IEC 61000-4-11 (DIPS)
Green Product: RoHS, CRoHS, WEEE

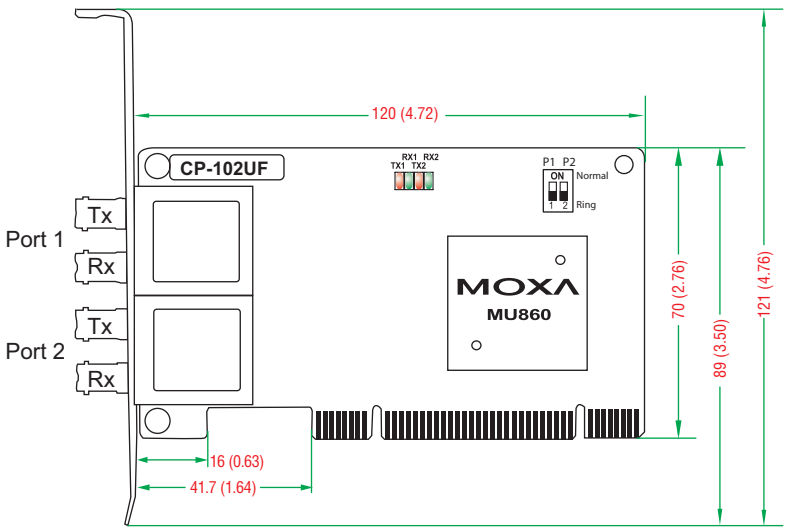
MTBF (mean time between failures)
Time: 591,349 hrs
Database: Telcordia (Bellcore), GB

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

Dimensions

Unit: mm (inch)



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), 0 to 55°C operating temperature
CP-102UF-S-ST: 2-port Universal PCI serial over fiber board with single-mode fiber for 40 km transmission (ST connector), 0 to 55°C operating temperature
CP-102UF-M-ST-T: 2-port Universal PCI serial over fiber board with multi-mode fiber for 5 km transmission (ST connector), -40 to 85°C operating temperature
CP-102UF-S-ST-T: 2-port Universal PCI serial over fiber board with single-mode fiber for 40 km transmission (ST connector), -40 to 85°C operating temperature

Package Checklist
- 1 CP-102UF-M-ST or CP-102UF-S-ST board
- Documentation and software CD
- Quick installation guide (printed)
- Warranty card