

UPort® 1400 Series

4-port RS-232 and RS-232/422/485 USB-to-serial converters with optional 2 kV isolation



- > Hi-Speed USB 2.0 for up to 480 Mbps USB transmission
- > 921.6 kbps maximum baudrate for super fast data transmission
- > 15N high retention USB type B connector
- > 128-byte FIFO and on-chip H/W, S/W flow control
- > Built-in 15 kV ESD protection for all serial ports
- > 2 kV electrical isolation (UPort 1450I only)
- > Hassle-free COM port retention
- > Drivers provided for Windows/WinCE/Linux
- > Choose bus power or external power (UPort 1410/1450 only)
- > Locking power jack



Overview

The UPort® 1400 USB-to-serial converters allow you to connect 4 RS-232 or RS-232/422/485 devices to your laptop or workstation through the USB (Universal Serial Bus) port. The UPort® 1400

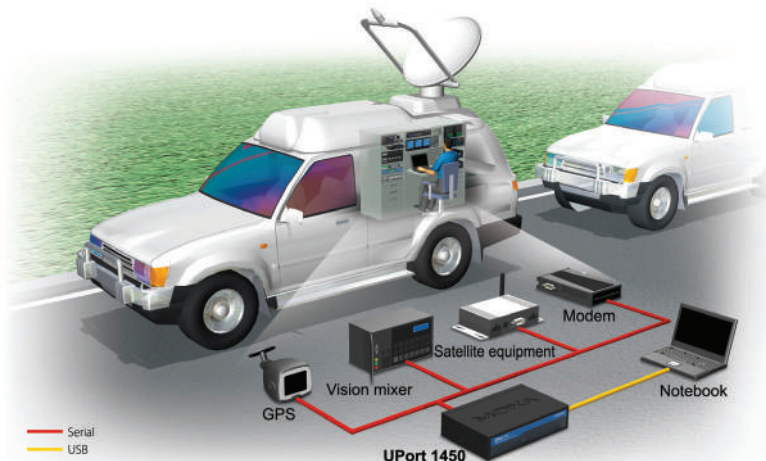
converters are compatible with new and legacy serial devices, and are perfect for mobile, instrumentation, and point-of-sale applications.

Typical Application—Military Satellite Truck

Before the arrival of mobile satellite technology, military applications relied on terrestrial communication systems to collect data in remote locations and broadcast the signals to a geostationary communications satellite. Satellite trucks, which are commonly used in modern Satellite News Gathering (SNG), allow military command centers to gather intelligence and other data with greater mobility and flexibility than before. Due to the mobile nature of SNG technology, onboard data acquisition equipment needs to be highly portable yet provide seamless and reliable communication. In addition, satellite trucks are outfitted with various degrees of video production and editing gear that need to be readily available and connected at all times. One of our

military clients uses Moxa's UPort® 1450 converter as their solution of choice for reliable device connectivity in their fleet of satellite trucks. The UPort® 1450 has the following features:

- No data loss with 128-byte FIFO and on-chip flow control for hardware and software
- Electrostatic protection and LED indicators designed for critical environments
- Small form factor and wall-mountable to save space
- Easy COM port configuration and plug & play capability
- 3-in-1 RS-232/422/485 support for connecting any serial interface device



Specifications

USB Interface

Compliance: USB 1.1/2.0 compliant

Connector: USB type B

Speed: 480 Mbps (Hi-Speed USB) and 12 Mbps (Full-Speed USB)

Serial Interface

Number of Ports: 4

Serial Standards:

UPort 1410: RS-232

UPort 1450/1450I: RS-232/422/485

Connector: DB9 male

Serial Line Protection

ESD Protection: 15 kV embedded

Electrical Isolation: 2 kV (UPort 1450I only)

Performance

Baudrate: 50 bps to 921.6 kbps (including 500 kbps)

Serial Communication Parameters

Data Bits: 5, 6, 7, 8

Stop Bits: 1, 1.5, 2

Parity: None, Even, Odd, Space, Mark

Flow Control: RTS/CTS, XON/XOFF

FIFO: 128 bytes

Serial Signals

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

RS-422: TxD+(B), TxD-(A), RxD+(B), RxD-(A), GND

RS-485-4w: TxD+(B), TxD-(A), RxD+(B), RxD-(A), GND

RS-485-2w: Data+(B), Data-(A), GND

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

Operating Systems

Windows Real COM Drivers: Windows 2000, Windows XP/2003/Vista/2008/7/8/8.1 (x86/x64), Windows 2012 (x64), Windows Embedded CE 5.0/6.0

Android Driver

Linux Real TTY Drivers: Linux 2.4.x, 2.6.x, 3.x

Note: Please refer to Moxa's website for the latest driver support information.

Physical Characteristics

Housing: SECC sheet metal (1 mm)

Weight:

Product only: 720 g (1.59 lb)

Packaged: 1320 g (2.91 lb)

Dimensions: 204 x 30 x 125 mm (8.03 x 1.18 x 4.92 inch)

Environmental Limits

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

Storage Temperature: -20 to 75°C (-4 to 167°F)

Ordering Information

Available Models

UPort 1410: 4-port RS-232 USB-to-serial converter

UPort 1450: 4-port RS-232/422/485 USB-to-serial converter, adaptor included

UPort 1450I: 4-port RS-232/422/485 USB-to-serial converter with 2 kV electrical isolation, adaptor included

Optional Accessories (can be purchased separately)

Mini DB9F-to-TB adaptor: DB9 female to terminal block adaptor for RS-422/485 applications

Magnet Accessory: Magnets for attaching the UPort 1400 to the PC's housing

Wall Mount Kit: Metal plates and screws

DIN-Rail Kit: DIN-Rail kit for the UPort 1400 series

DK35A: Mounting kit for 35-mm DIN-Rail

Power Adaptors (can be purchased separately)

Note: Available for the UPort 1410 if the USB port does not provide enough power. You must purchase the adaptor plus one power cord.

PWR-12125-DT-S2: 100-240 VAC to 12 VDC @ 1.25 A power adaptor

PWC-C7US-2B-183: US plug, 2-pin power cord

PWC-C7UK-2B-183: UK plug, 2-pin power cord

PWC-C7EU-2B-183: EU plug, 2-pin power cord

PWC-C7JP-2B-183: JP plug, 2-pin power cord

PWC-C7AU-2B-183: SAA plug, 2-pin power cord

Ambient Relative Humidity: 5 to 95% (non-condensing)

Altitude: Up to 2000 m

Note: Please contact Moxa if you require products guaranteed to function properly at higher altitudes.

Standards and Certifications

Safety: UL 60950-1

EMC: CE, FCC

EMI: EN 55022 Class A, EN 61000-3-2, EN 61000-3-3, FCC Part 15 Subpart B Class A

EMS: EN 55024, EN 61000-4-2, EN 61000-4-3, EN 61000-4-4, EN 61000-4-5, EN 61000-4-6, EN 61000-4-8, EN 61000-4-11

Green Product: RoHS, CRoHS, WEEE

Power Requirements

Power Consumption:

• Bus power:

UPort 1410: 385 mA @ 5 VDC

• 12 to 48 VDC external power:

UPort 1410: 180 mA @ 12 VDC

UPort 1450: 385 mA @ 12 VDC

UPort 1450I: 360 mA @ 12 VDC

MTBF (mean time between failures)

Time:

UPort 1410: 394,441 hrs

UPort 1450: 546,770 hrs

Database:

UPort 1410: MIL-HDBK-217F

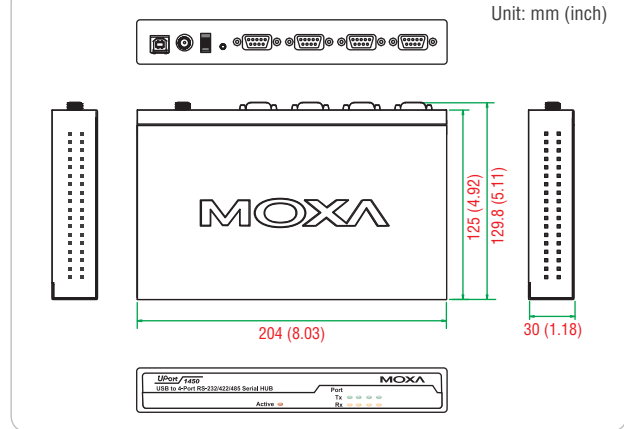
UPort 1450: Telcordia (Bellcore), GB

Warranty

Warranty Period: 5 years

Details: See www.moxa.com/warranty

Dimensions



Package Checklist

- 1 UPort 1400 USB-to-serial converter
- USB-IF certified cable
- 1 mini DB9 female to terminal block adaptor (UPort 1450 and 1450I only)
- Power adaptor (UPort 1450 and 1450I only)
- Documentation and software CD
- Quick installation guide (printed)
- Warranty card