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 Se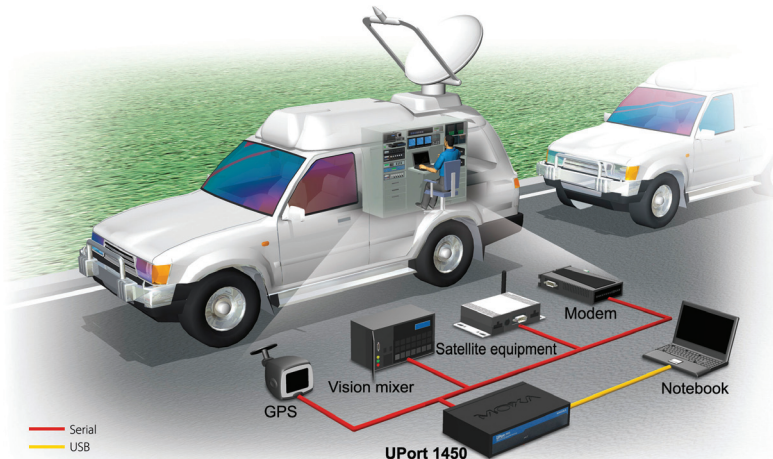rial Bus) port. The UPort® 1400 converters are compatible with new and legacy serial devices, and are perfect for mobile, instrumentation, and point-of-sale applications.

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

Serial
USB

UPort 1450

: 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 in)

Environmental Limits
Operating Temperature: 0 to 55°C (32 to 131°F)
Storage Temperature: -20 to 75°C (-4 to 167°F)

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:
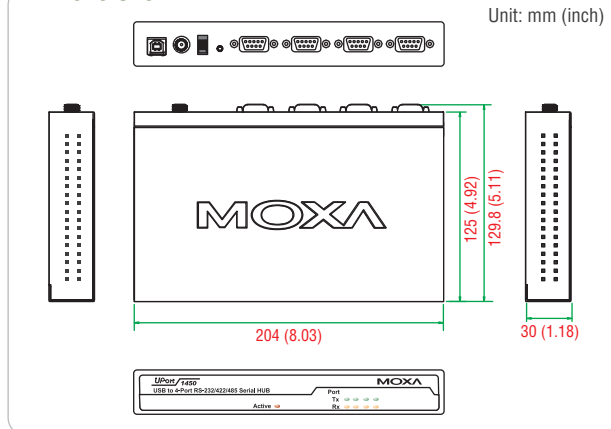UPort 1410: 394,441 hrs
UPort 1450: 546,770 hrs
Database:
UPort 1410: MIL-HDBK-217F
UPort 1450: Telcordia (Bellcore), GB

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

Dimensions

Unit: mm (inch)

125 (4.92)
129.8 (5.11)
204 (8.03)
30 (1.18)

: 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

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