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## Plug and Play Convenience with Industrial Ruggedness

A factory floor is no place for wimpy USB devices that you pick up at your local electronics store. Unless of course, you're willing to play Russian roulette with some pretty expensive equipment.

Ever fry a laptop when you're 300 km from home on a service call? Ouch. Too bad you didn't call us before you shopped elsewhere.

Ever stood 12 feet off the ground and watched your laptop break the cable connection and hit the pavement? Whoops. That hurts.

As an industrial, Medical, Laboratory or Field Services interface, USB has benefits that outweigh the risks. But, you can reduce your odds of disaster with simple fixes...like high retention ports...and isolation.

Find it here. Look for the orange connector – you'll find a high retention port that's 50% stronger than a conventional USB port. It won't let go until you want it too.

You'll also find isolation protection built into many of our USB products. It prevents common surges, spikes and ground loops from damaging your equipment.

## New in USB...

### USR602

Ruggedized 2 port Isolated USB to Serial Converter features high Retention ports, wide temp, and its shock and vibration tested. Ready made for your industrial environment.

*See page 32 for details*

### USR604

The USB604 is a 4 port version of the USB602. 2 or 4 port, you get the same reliable performance.

*See page 32 for details*



## USB Inline Isolated Converter for RS-422/485

**Our #1 best selling USB converter – by a landslide**  
Pocket sized - carry it with you anywhere!

### Five Reasons You'll Love It

- High retention USB port means cables won't accidentally loosen or drop out
- Port power means no separate power supply is required
- 2 kV VDC isolation – protection from surges, spikes and noise
- USB 1.0, 1.1 and 2.0 compatible
- Removable terminal block means flexible RS-422/485 wiring

USB is the connectivity workhorse of today's PCs, but many commercial and industrial devices still use RS-422/485 serial interfaces. Field technicians need robust, reliable conversion solutions to protect their PC's from power surges and spikes. USB ports are also common on POS systems, instrumentation, medical devices and lab equipment – environments ripe for power fluctuation and ground loops. Simply plug the converter into an available USB port, configure as an additional COM port, and the converter is compatible with Windows applications.



USOPTL4

**APPLICATIONS:** Field Service, POS Systems, Lab Instrumentation, Industrial Equipment

USOPTL4	Isolated RS-422/485 Inline USB converter
USOPTL4-LS	Locked serial number version of USOPTL4
USPTL4	Non-isolated inline USB converter
USPTL4-LS	Locked serial number version of USPTL4

### Note...

Field Service Technicians usually prefer the locked serial version for installation convenience.

## USB Inline Isolated Converter for RS-232

**Same great features as our #1 seller**

### Five Reasons You'll Love This One, Too.

- Port power means no separate power supply is required
- 2 kV VDC isolation – protection from surges, spikes and noise
- USB 1.0, 1.1 and 2.0 compatible
- DB9 male serial connector
- 460 kbps baud rate

This compact little converter has many of the features as the USOPT4 model, only with a DB9 male (DTE) serial connector for RS-232 conversion. Available in both a standard version and as a "locked serial" version.



US09ML2

US09ML2	USB to RS-232 inline isolated converter
US09ML2-LS	Locked serial number version of US09ML2

## Mini Non-Isolated Inline USB to Serial Converters

### Extremely compact for mobile applications

Check online for more great models and serial port/connection options



485USB9F-2W



232USB9M

#### Features & Benefits

- Includes a 1 meter USB cable and driver CD
- Locked serial version available: add -LS to your item number when ordering
- RS-232 baud rate = 460 Kbps
- RS-485 baud rate = 921.6 Kbps
- RS-485 mini converters are configured only as 2 (2W) or 4 wire (4W) models

These non-isolated mini converters are typically used in mobile applications. With the 1 meter USB cable, they coil easily and will handily fit into your laptop case.

The mini-converters with the terminal block as the serial connector feature high retention ports. TTL 5.0V and 3.3V models available.

485USBTB-2W	RS-485 2 wire/terminal block USB converter
485USB9F-2W	RS-485 2 wire/DB9 female USB converter
232USB9M	RS-232 DB9 male USB converter

## New! Rugged 2 or 4 Port USB Converters for Industrial Environments

### Shock, vibration and drop tested for durability and performance

High retention USB ports, DIN rail or panel mount options



USR602



USR604

#### Features & Benefits

- Modbus SCII/RTU compatible
- 2 kV port to port isolation
- High ESD protection 8 kV contact, 15 kV air
- Dual input power 10-48 VDC
- Wide temperature (-40 to 80°C)

These USB converters can take the punishment that would cripple lesser competitors. The rugged metal case houses devices tailor made to stand up to unpleasant conditions. Wide temperature rated, (-40 to 85°C), 2kV port to port isolation, high ESD protection, shock and vibration tested. We even dropped them. They passed every test with flying colors.

The orange high retention USB ports, (50% stronger than standard ports) also mean your cables will stay connected.

The serial port connector for both the 2 and 4 port version is DB9 male.

USR602	2 port rugged USB RS-232/422/485 converter
USR604	4 port rugged USB RS-232/422/485 converter
MDR-20-24	DIN rail mount 24V, 1A, 24W
PS12VLB-INT-MED	12VDC power supply, locking barrel plug

## Isolated Panel Mount USB to Serial Converters

### 2-port RS-422/485 model 2kV RMS port-to-port optical isolation



#### Features & Benefits

- 2-wire and 4-wire compatible
- High retention USB ports
- USB 2.0 (backward compatible)
- Supports Automatic Send Data Control
- Port powered or external power

This converter automatically configures on Windows 98, ME, 2000, XP, Vista and Windows 7. It also supports transmit, receive and handshake lines, smoothing out communications between the PC and the linked devices.

### 4-port RS-422/485 model 2kV RMS port-to-port optical isolation



#### Features & Benefits

- 2-wire and 4-wire compatible
- High retention USB ports
- USB 2.0 (backward compatible)
- Supports Automatic Send Data Control
- Port powered or external power

Just like the 2 port model, the 4 port model automatically configures on Windows 98, ME, 2000, XP, Vista and Windows 7. It also supports transmit, receive and handshake lines, smoothing out communications between the PC and the linked devices.

USOPTL4-2P 2 port RS-422/485 USB converter

USOPTL4-4P 4 port RS-422/485 USB converter

#### Need Cables?

Find Cables  
*See online for details*

#### You might also need...

MDR-20-24	24VDC, 1.0 A output DIN rail power supply
422HESP	RS-422/485 surge protector
485HESP	RS-485 surge protector

#### Need Cables?

Find Cables  
*See online for details*

#### You might also need...

MDR-20-24	24VDC, 1.0 A output DIN rail power supply
422HESP	RS-422/485 surge protector
485HESP	RS-485 surge protector

## 2-Port RS-232 Model

### 2kV RMS port-to-port optical isolation



#### Features & Benefits

- DB9 male serial connectors
- High retention USB ports
- USB 2.0 (backward compatible)
- Supports Automatic Send Data Control

The 2-port RS-232 model features the same automatic configuration as the RS-422/485 model listed above. With RS-232 transmit, receive and handshake function, TDA, TDB, RDA, RDB, GND are fully supported.

## 4-Port RS-232 Model

### 2kV RMS port-to-port optical isolation



#### Features & Benefits

- DB9 male serial connectors
- High retention USB ports
- USB 2.0 (backward compatible)
- Supports Automatic Send Data Control

The 4-port RS-232 model features the same automatic configuration as the RS-422/485 model listed above. With RS-232 transmit, receive and handshake function, TDA, TDB, RDA, RDB, GND are fully supported.

USO9ML2-2P 2-port RS-232 USB converter

USO9ML2-4P 4-port RS-232 USB converter

#### Need Cables?

Find Cables  
*See online for details*

#### You might also need...

232HESP	Surge protector
MDR-20-24	24VDC, 1.0 A output DIN rail power supply

#### Need Cables?

Find Cables  
*See online for details*

#### You might also need...

232HESP	Surge protector
MDR-20-24	24VDC, 1.0 A output DIN rail power supply

## The World's Most Compact USB to USB Isolators

These little isolators pack a powerful punch against noise, surges and spikes



UH401

### Features & Benefits

- High retention USB connectors
- Wide temperature protection (-40 to +80°C)
- USB bus powered – no need for external power
- Includes 1 meter USB cable
- Meets UL 60601-1-2 specifications for use in medical devices

At just 2.0 x 1.7 x 0.8 inches, you get outstanding protection for a tiny investment. This isolation barrier eliminates ground loops – which are disruptive for any measurement applications, and protects expensive equipment against electrical noises, power surges and spikes.

Available in both 2kV and 4kV models, you select the level of protection you need. The 4kV model (UH401) meets UL EN60600-1-2 specifications for use in medical devices – without any additional components or software modifications. 12 Mbps USB speed.

**APPLICATIONS:** Industrial Equipment, Medical, Lab Instrumentation, POS Systems

### You might also need...

- USBAMB-3F    USB cable, 1 meter (3 ft.)
- USBAMB-6F    USB cable (one included), 2 meters (6 ft.)

- UH401                    4 kV USB to USB 1 port isolator
- UH401-2KV            2 kV USB to USB 1 port isolator

USB

## New! Industrial Grade High-Speed USB Hubs

Both isolated and non-isolated models available  
Versatile 6 panel mount or DIN rail mounting options



UHR204



UHR304

### Features & Benefits

- High ESD protection (8kV contact, 15kV air) ensures no system downtime
- High retention USB ports
- 4kV isolation (model UHR304)
- 5.5 x 3.5 x 1.4 inches without panel brackets
- Wide temperature (-40 to 80°C)

Tough and reliable, the new USB hubs are available in both an isolated and non-isolated version. Housed in a rugged metal case, these hubs are well suited for top performance in any industrial setting. Both the USB host port and the downstream ports are designed with high retention connections, ensuring a solid connection regardless of environmental stressors. The UHR304 has been tested to 50G shock and 4g vibration standards. Flexible mounting include 6 way panel mount and DIN rail mount options.

Model UHR304 also meets UL EN60601-2 specs for use in medical devices.

- UHR204                    Non isolated 4 port USB hub
- UHR304                    4kV isolated 4 port USB hub

### You might also need...

- MDR-20-24            24 VDC 1A DIN rail power supply

# UE204 - Four Port USB over Ethernet Server / Hub

The UE204 USB over IP Server / Hub allows multiple PC's to interact with USB peripheral devices over your local area network. Simply load the free software on your PC and it will locate the USB hub on the network and allow you to use peripheral devices as if they were attached locally. They are ideal for applications in which installing a local PC would be too cumbersome or expensive, such as kiosks or security applications.

High speed USB 2.0 (480 Mbps) and Gigabit Ethernet allows you to use high bandwidth devices such as IP cameras and some isochronous devices. The easy to use software allows for simple installation and easy setup.

The UE204 is a simple solution for accessing remote USB devices.

## Features & Benefits

- 10/100/1000 Mbps Ethernet
- USB 2.0 @ 480 Mbps
- Compact Size
- 15 kV ESD Protection
- International Power Supply Included

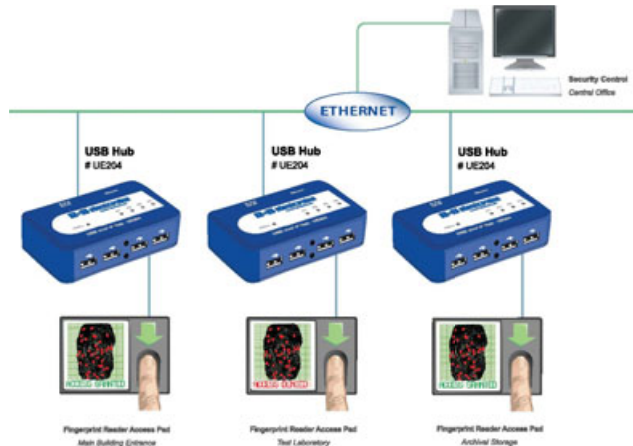


## Indicators

Power / Active	Green LED – ON when power applied
P1 – P4	Green LED – ON when USB Port Connected

## USB & Ethernet Technology

USB Compatibility	1.1 and 2.0
USB Speed	1.5, 12, and 480 Mbps
USB Connector	4 x USB Type A Female
Ethernet	10/100/100 BaseT
Ethernet Connector	RJ-45
IP Address	Default = DHCP 169.254.10.10 if DHCP Not Available User Configurable
Operating System	Windows 7, 32 & 64 bit Windows 2008 Server, 32 & 64 bit Windows Vista, 32 & 64 bit Windows Server 2003 32 and 64 bit Windows XP 32 and 64 bit
Configuration Software	Included with User Manual on CD



## Ordering Information

UE204	USB OVER ETHERNET SERVER 4 PORT
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## Power

Source	External PSU
Power Connector	5.5 mm Barrel Plug, Center Positive
Input Voltage	5 VDC
Power Consumption	2.5 A
USB Downstream	
Power	500 mA per Port
PSU Input	100 to 240 VAC, 50 / 60 Hz, 0.8 A
AC Input Blades	US, EU, UK Included
PSU Output	5 VDC, 3A