Serial Converters / Device Servers

What is a Serial Converter?
A serial converter, sometimes referred to as a protocol converter, converts different serial protocols such as RS232 and RS485.

How is a Serial Converter used?
Most serial converts have two ports or terminal blocks where copper wire, UTP or multi conductor data cable, are attached either by screwing in (terminal block) plugging in RJ11, RJ45 or screwing in DB9, DB25 the connector or leads. One end interfaces with a RS232 network and the other with a RS422 network for example.

Where are Serial Converters used?
Serial converters are used in many applications and environments including Point of Sale (POS), factory automation, processing plants (food, petroleum) and warehouse and shipping operations.

Typical Serial Converter Applications

What is a Device Server?
A Device Server, sometimes referred to as an Ethernet Serial Server, is used to connect a serial network such as RS232 to an Ethernet device or Network that uses the IP (Internet Protocol) protocol.

How is a Device Server used?
A Device Server has one or more serial ports and typically one RJ45 Ethernet port. Cables are connected to each port into the Serial and Ethernet network. Typically some set up is required to set up the communication between the two networks via a management application built into the Device Server.

Where are Device Servers used?
Like Serial Converters, Device Server are used in many industrial applications where legacy serial networks are installed. Many newer devices such as pumps, flow meters, scales and even industrial robots found on automobile manufacturing lines are being designed and built with Ethernet interfaces. Ethernet is very scalable and it provides world wide access and control when used with a router. Additionally many industrial operations are now building integrated networks where Ethernet IP is used at the factory/process level all the way through the administrative business network. In the past the two networks were separate as the plant used Modbus, Profinet and other serial based networks that did not communicate with the corporate Ethernet networks.

Typical Device Server Application

For more useful information go to....
www.L-com.com/Resources
THE TB279 is a small, versatile, RS232 to current loop converter for use with teletypes or computers providing local terminal input via a 20mA or 60mA current loop. The TB65A includes a wall-mounted transformer and internal power supply circuitry. Additionally the TB65A provides switch selection of all RS232 operating modes including: Half Duplex - Passive Loop, Half Duplex - Active Loop, Full Duplex - Passive Loop, and Full Duplex - Active Loop. This product will drive 20mA and accept 20mA or 60mA loop currents and operates from DC to 9.6 Kbps.

**TB65A**
- RS232 to Current Loop Converter (Includes Power Supply)
  - List Price: 103.20

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**Economy RS232 to RS422/RS485 Serial Converters**
- This RS232 to RS42/RS485 serial converter is an economical solution to interface problems. These devices are self-powered and feature a DB25F RS232 port and either a 4-pin terminal block or a RJ45 jack for connecting devices.
  - **ICC47A-013** Economy RS232 to RS422/RS485 Serial Converter with 4-Pin Terminal Block
    - List Price: 39.95
  - **ICC48A-013** Economy RS232 to RS422/RS485 Serial Converter with RJ45 Jack
    - List Price: 39.95

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**Economy RS232 to Current Loop Converter with 4-Pin Terminal Block**
- The ICC47B-014 RS232 to current loop serial converter provides users with an economical and compact way to extend RS232 signals using standard twisted pair cabling. The ICC47B-014 features a DB25F input connector and a 4-pin terminal block for the current loop side. The ICC47B-014 supports data rates up to 128Kbps and distances up to 1,000 meters. The unit includes a 9VDC external power supply and a one year manufacturer’s warranty.
  - **ICC47B-014** Economy RS232 to X24 Interface Converter with 4-Pin Terminal Block
    - List Price: 52.95

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**RS232 Fiber Optic Line Drivers**
- The TB271 series of RS232 fiber optic line drivers provides maximum protection from ground currents and noise interference between equipment as well as increases operating distances to up to 2km. Three versions are available, supporting RS232 serial interfaces. The TB271 series achieves power from the transmit data line, whereas, the TB271A series has an external power supply (included). DB25M and DB25F versions available. Fiber optic interface utilizes dual ST connectors and duplex 62.5/125 multimode cabling.
  - **TB271M** RS232 Fiber Line Driver, DB25M, Self Powered
    - List Price: 129.00
  - **TB271AF** RS232 Fiber Line Driver, DB25F, Self Powered
    - List Price: 129.00
  - **TB271AE** RS232 Fiber Line Driver, DB25F, Externally Powered
    - List Price: 135.20

**RS422 and 485 Fiber Optic Line Drivers**
- Similar to the TB271 series except designed for RS422 and RS485. Both units utilize DB25F and dual fiber ST ports. For use with duplex Multimode Fiber Optic cabling.
  - **TB276F** RS422 Fiber Line Driver, DB25F, Externally Powered
    - List Price: 135.20
  - **TB485F** RS485 Fiber Line Driver, DB25F, Externally Powered
    - List Price: 135.20

**RS232 Fiber Optic Line Driver - Auto Powered**
- The TB271I RS232 fiber optic auto powered line driver features a standard DB9 Female interface and Dual ST style fiber connectors. It can be installed in applications requiring very high data transmission rates, offers resistance to Electromagnetic Interference (EMI) and isolation from lightning-induced current surges and ground loops. The unit employs an RS232 data interface, can achieve 56Kbps asynchronously and operates in either half- or full duplex modes over dual fibers up to 2km in length.
  - **TB271I** RS232 Fiber Optic Auto Powered Line Driver
    - List Price: 127.20

**RS232, 422 or 485 Fiber Optic Modem - DIN Rail Mountable**
- The model TB277 is a unique asynchronous fiber optic modem whose optical interface can operate in either point to point or ring (daisy chain) configurations and whose electrical interface can also operate in point to point or multi-drop configurations depending on the user selected interface. The electrical interface is switch selectable between RS232, RS422 and RS485. The TB277 is supplied with a power cord for the DC input. An optional AC power adapter is available for installations where 12 VDC is not accessible.
  - **TB277** RS232, 422 or 485 Fiber Optic Modem - DIN Rail Mountable
    - List Price: 223.00
  - **TB277-110PSU** Optional 110VAC Power Supply
    - List Price: 14.95

**Economy RS232 Fiber Optic Line Driver (Port or Ext Powered)**
- The ICC45B-001 RS232 fiber optic line driver provides users a compact, low cost solution for extending RS232 data over extended distances by using fiber optic cabling. The ICC45B-001 features a DB25F input connector and duplex ST connectors for an output. This device can handle up to 115Kbps and supports cable lengths up to 2km over multimode fiber cabling. This economical converter can either be port powered or powered by an optional external power adapter (sold separately). The ICC45B-001 can be used with standard 62.5/125 fiber cable.
  - **ICC45B-001** Economy RS232 Fiber Optic Line Driver
    - List Price: 69.00

**Single mode to Multimode Fiber Converter**
- The TB279 provides transparent conversion between fiber optic devices utilizing multimode fiber and those with single mode fiber. Features of the TB279 include the ability to operate from DC to 2.5Mbps. This allows a variety of applications to take advantage of the transmission capability of the device and fiber cable. The TB279 is powered by a wall-mounted 12VDC adapter.
  - **TB279** Single mode to Multimode Converter
    - List Price: 639.20

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**Helpful videos**
- How-to videos help with some of today’s popular product applications. L-com.com/Tips

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Digi Connect Wi-SP

The Digi Connect Wi-SP is the industry’s first wireless serial server to provide enterprise-class wireless security through a complete set of strong encryption and authentication services, which are compliant with the WPA2 and 802.11i standards. It also offers additional unique features such as comprehensive product customization options and intelligent remote management and monitoring through Digi Connectware® Manager device management software.

Digi PortServer TS W MEI Series Device Servers

The PortServer TS W MEI family of serial servers makes it easy to network-enable serial devices to a wireless 802.11b infrastructure. Users will appreciate the new external antenna and hidden wireless card offered by the versatile one-, two-, and four-port solutions. PortServer TS W MEI also delivers easy installation through an auto-run wizard on the CD for Microsoft® and UNIX® platforms, RS-232/422/485 serial ports for connectivity to almost any serial interface, and many advanced networking features.

Digi PortServer TS Series Device Servers

The Digi PortServer TS family of device servers delivers standard serial-to-Ethernet connectivity simply and reliably. These robust device servers are ideal for applications requiring COM ports or where TCP/UDP Sockets, or UDP multicast functionality is required. Theses device servers include Digi’s patented RealPort® COM port redirector technology, which makes it possible to establish a connection between the host and networked serial device by creating a local COM or TTY port on the host computer, allowing existing software applications to work without modification.

Digi PortServer TS MEI and H Series Device Servers

The Digi PortServer TS MEI (Multi-Electrical Interface, RS-232/422/485) makes it easy to connect any serial device to your network. These device servers combine the inherent benefits of data networking with proven asynchronous connectivity to deliver powerful, yet simple Ethernet connectivity for all your serial devices. The PortServer TS MEI series delivers universal and powerful features including data security via SSHv2, port buffering, and full SNMP management, making it ideal for applications such as console management where device management and monitoring are critical. PortServer TS H series features operating temps of -35° to 70° Celsius.

Digi One SP 1 Port Device Server

The Digi One SP serial server makes it easy to connect any device with a serial port to the Ethernet. The compact design of the Digi One SP delivers cost-effective performance and capability in one of the smallest form factors available. The Digi One SP delivers efficient serial-to-Ethernet connectivity and is ideal for applications where TCP Socket, UDP Socket, or UDP multicast functionality is needed.

Digi CM Series Console Servers

The Digi CM series console servers provide in-band or out-of-band console management of any network equipment with a serial console port. Remote out-of-band management is made easy for administrators, who can securely monitor and control servers, routers, switches, PBXs, firewalls and other network devices from anywhere on the corporate TCP/IP network, over the Internet, or through dial-up modem connections using Digi’s best-in-class integrated web user interface. Digi CM is the first console server to provide a secure Graphical User Interface (GUI) for easy out-of-band management of Microsoft Windows Server 2003 systems. Its free KVM feature enables fast, low-bandwidth remote desktop access to perform application level tasks via RDP and VNC.

### Item List

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<tr>
<th>Item #</th>
<th>Description</th>
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<td>Digi Console Server 48 Port RJ45 (S)</td>
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Technical resources

Free tips, tutorials and downloads help you learn all about connectivity. Visit L-com.com/Resources
Aboundi

Electric Connect® from Aboundi is a solution designed to enable high speed Ethernet packets to traverse over many different transmission mediums: in-premise electrical wiring, extended distance for twisted pair wires and long distance coaxial cables. This ‘versatile wiring’ capability allows us the vast opportunities of solving many physical networking infrastructure connectivity deployment related problems cost effectively and spans across many market segments in applications.

- AEC1000-002-01 Aboundi Complete System-(2) Network Devices-US 280.00
- AEC1000-002-02 Aboundi Complete System-(2) Network Devices-EU 280.00
- AEC1000-002-03 Aboundi Complete System-(2) Network Devices-UK 280.00
- AEC1000-004-01 Aboundi Complete System-(4) Network Devices-US 420.00
- AEC1000-004-02 Aboundi Complete System-(4) Network Devices-EU 420.00
- AEC1000-004-03 Aboundi Complete System-(4) Network Devices-UK 420.00
- AEC1000-012-01 Aboundi Complete System-(12) Network Devices-US 980.00
- AEC1000-012-02 Aboundi Complete System-(12) Network Devices-EU 980.00
- AEC1000-012-03 Aboundi Complete System-(12) Network Devices-UK 980.00

Aboundi RS232 to 802.11b Wireless Bridge

The Aboundi WLAN-ARS1000 dual RS232 Serial 802.11b WLAN Bridge easily brings wireless connectivity to any RS232 device via standards based 802.11b in an easy to configure and secure manner. The WLAN-ARS1000 enables remote accessibility for services and support to any legacy RS232 devices and eliminates cable interference and ground loops in addition to expanding operating distances beyond cabling limitations. Its external antenna design allows the use of a third party antenna for extended range and performance. The unit is easy to set up and supports multiple configuration choices through a Windows-based installation utility via either the WLAN, RS232 or USB port. The WLAN-ARS1000 Site Survey utility allows users to browse the available active access points for ease of connection in the network.

WLAN-ARS1000 Aboundi RS232 to 802.11b Wireless Bridge 299.00

Aboundi RS232, RS422, RS485 to Ethernet Dual SerialBridge

The Aboundi ARS1200 Ethernet Dual SerialBridge provides connectivity to any RS232, RS422 or RS485 serial device via an Ethernet LAN in a simple and secure manner. The ARS1200 enables remote accessibility for services and support to any legacy serial devices within a Wired Ethernet LAN environment. It is extremely easy to set up via web browser with password protection. Its flash-upgradeable firmware provides future ease of upgradeability support and services. The ARS1200 supports full and half-duplex transmission, software and hardware flow control, and has programmable baud rate to maximize application optimization.

ARS1200-001 Aboundi Ethernet Dual SerialBridge 169.71

Aboundi Serial to Ethernet Fiber Optic Dual SerialBridge

The Aboundi ARS1300 Ethernet Optical Dual SerialBridge provides connectivity between an Ethernet LAN and serial devices via Multimode or Single Mode fiber optic cabling. This product features one Fiber ST (or SC) interface that connects to an Ethernet LAN. The maximum fiber distance supported is 120Km (Single Mode fiber version). It is extremely easy to set up via web browser with password protection. Flash-upgradeable firmware provides future ease of upgradeability support and services. The ARS1300 supports full and half-duplex transmission, software and hardware flow control, and has programmable baud rate to maximize application optimization. Several Singlmode modes are available please call for details.

ARS1300-200C Aboundi Ethernet Fiber Dual SerialBridge, SM SC, 20Km 449.95
ARS1300-200ST Aboundi Ethernet Fiber Dual SerialBridge, SM ST, 20Km 449.95

Aboundi WLAN Dual SerialBridge

The Aboundi ARS1120 802.11b wireless Dual SerialBridge easily brings a wireless connection to any serial device in a simple and secure manner. The ARS1120 has a broad range of networking features utilizing TCP/IP and UDP/IP to provide serial tunneling. It is easy to set up using a secure web browser. Its flash-upgradeable firmware provides future upgradeability. Additionally, the ARS1120 Site Survey function allows users to browse the available active Access Points facilitating easy network connection. It also supports full mobility and seamless roaming from cell to cell. Its enhanced security features include 64 bit and 128 bit WEP (Wired Equivalent Privacy) encryption. Contact us today for large project volume pricing.

ARS1120-001 Aboundi WLAN Dual SerialBridge 235.71

Aboundi ADK Series Mounting and Adapter Accessories

The Aboundi ADK series accessories consist of a DIN Rail mounting kit, which provides the ability of any Aboundi ARS SerialBridge device to be either wall or DIN Rail mounted and several adapters which convert RS232/422/485 wiring utilizing RJ45, DB9 and terminal strip interfaces. These products offer flexibility and versatility for your Aboundi network designs.

ADK1000-000 Aboundi DIN Rail Mounting Kit 10.00
ADK1120-002 Aboundi DB9 to RJ45/RS232 Adapter 34.29
ADK1120-003 Aboundi DB9 to RJ45/RS422/RS485 Adapter 34.29
ADK1120-004 Aboundi DB9 to Terminal Strip Adapter 34.29

Passport Networks ESport RS232/422/485 to Ethernet Device Servers

The ESport-10x Ethernet device servers connect RS-232, 422, 485 serial devices to a 10/100 Ethernet LAN/WAN providing a reliable communications connection. The ESport-10x Windows driver installs virtual COM ports in the Device Manager of the operating system. The ESP101 features one RS232/422/485 DB9 port and one RJ45 10/100 Ethernet port. The ESP102 features a single RJ45 10/100 Ethernet port and two DB9M ports, one port supports RS232/422 and 485 and the other only supports RS232. The ESP104 ships with its own external power supply (do not use the ESP-PWR power supply with the ESP104). These products can be powered by an external DC power supply or by an optional 9VDC power adapter. An optional DIN Rail mounting kit is sold separately. Includes 1-year manufacturer’s warranty.

ESP101 Passport Networks Single Port DB9 RS232/422/485 to RJ45 10/100 125.00
ESP102 Passport Networks Dual Port DB9 RS232/422/485 to RJ45 10/100 169.00
ESP104 Passport Networks Four Port DB9 RS232/422/485 to RJ45 10/100 359.00
ESP-PWR 9VDC 500mA Power Adapter 10.00
PPN-12VDC-PWR 12V DC DIN Rail Power Supply 59.99
DK-36A DIN Rail-mounting Kit (55 mm) 0.00