PATTON ELECTRONICS COMPANY

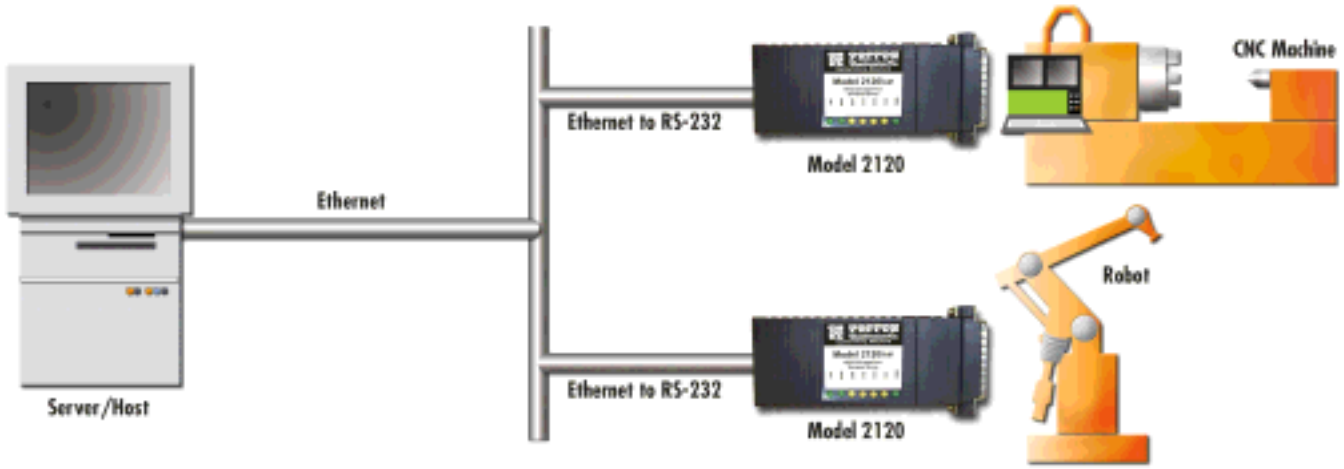
PRODUCT QUICK REFERENCE FAQs

Model 2120 Single Port RS-232 Terminal Server Frequently Asked Questions

Applications

What are some of the applications for the Model 2120 Single Port Terminal Server?

The Patton Single Port RS-232 Terminal Server provides the ability to bring virtually any RS-232 device onto the LAN. Using industry based TCP/IP protocol allows Patton's Single Port Terminal Server to provide a standard Ethernet communication link to any type of host. Below is an example of the Model 2120's role in an industrial environment.



Other examples of RS-232 devices that typically connect to a terminal server are:

- Factory Floor Machinery
- Security Systems
- Printers
- Scales
- Barcode Scanners
- Various Instruments
- Climate Control Systems
- Dumb Terminals
- Vending Machines
- Cash Registers (POS)
- RS-232 Control/Console Ports (PBX, Switches, Remote Access Servers, etc.)

Model 2120 Single Port RS-232 Terminal Server Frequently Asked Questions

Product Related Questions

What advantages does a Single Port Terminal Server offer?

- Allows the use of an existing network backbone for the transportation medium
- Users can access or switch between any number of network hosts provided the network administrator has granted the necessary rights
- Eliminates the need for a point-to-point link
- Ethernet 10Base-T provides better noise protection than serial cabling
- Twisted Pair wiring is far less expensive than traditional serial cabling
- Dedicated to one device, no lack of performance due to shared terminal server ports
- Allows all equipment to be brought onto one LAN, thus eliminating the need to administer/manage multiple systems/infrastructures

How does the Single Port Terminal Server work?

The Model 2120 links your serial devices to the network by encapsulating the RS-232 data into IP packets for transport over the LAN. Using Raw-TCP or TELNET, the Model 2120 can connect to any user defined IP address or port. Once connected to the remote host, data is passed transparently end-to-end. The built in DHCP Client allows the Model 2120 to dynamically obtain an IP address from a DHCP server.

Can the Model 2120 support both incoming and outgoing connections over the LAN?

Yes, the Model 2120 permits incoming connection requests to the serial interface from remote devices over the LAN and automatic connection requests to remote devices over the LAN.

Does the Model 2120 have any security features?

The Model 2120 features optional User ID and Password protection for access to the serial interface and Management ID and Password protection for users attempting a Telnet session over the LAN. Further, the Model 2120 has the capability of sending a User ID and Password when attempting an automatic connection to remote devices over the LAN.

Can the Model 2120 act as a Remote Access Server?

Yes, using SLIP (Serial Line Internet Protocol) or PPP (Point-to-Point Protocol) protocols with a dial-up/ISDN modem allows the Model 2120 to function as a Remote Access Server. This functionality will be available soon in a future 2120 software release.

How can I upgrade my Model 2120 with the latest software version?

Download the latest 2120 software, release notes and software installation instructions from http://upgrades.patton.com. Use your own FTP Server or download directly to your Model 2120 using Patton's FTP Site.

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How do I reboot my Model 2120 if I am not physically at the same location?

By establishing a Telnet session with the Model 2120 over the LAN, the unit can be remotely rebooted by utilizing the "boot" command.

Serial Interface Related Questions

What serial connector options are available?

The Model 2120's RS-232/serial interface is currently equipped with a DB-25 Male connector. DB-25 female, DB-9 male and female, and RJ45 female versions will be available in the future.

What data rates does the Model 2120 support?

The Model 2120 can be configured to handle asynchronous data rates of 4800bps to 115.2 Kbps. This is configured through a TELNET session over the LAN or by connecting directly to the Model 2120's serial port.

Is the Model 2120 a DCE or DTE device?

The Model 2120 is DCE/DTE selectable. The preferred configuration can be changed through a TELNET session over the LAN or by connecting directly to the Model 2120's serial port.

Will the Model 2120 support an indefinite connection to the serial interface?

Yes, the Model 2120 will support an indefinite connection serial interface by setting the inactive timeout feature to 0. The factory default setting for this feature is 15, which will close the connection to the serial interface after 15 minutes of inactivity.

Can a connection to the Model 2120's serial interface be closed remotely?

Yes, by establishing a Telnet session with the Model 2120 over the LAN, a connection to the serial interface can be closed remotely by utilizing the "eiaonclose" command.

Ethernet/IP Related Questions

Which TCP/IP Protocols does the 2120 support?

The Model 2120 currently supports TCP, UDP, IP, ICMP, TELNET, RLOGIN, ARP, DHCP, and FTP. TFTP, SLIP, and PPP (w/CHAP & PAP) will be available in a future 2120 software release.

What is TCP/IP (Transmission Control Protocol/Internet Protocol)?

TCP assures that no data is lost or duplicated, and that everything sent to the connection arrives at the target correctly.

IP defines the nature of the format of the data packets and the routing of the data by IP address. IP protocol accepts the segmented data from TCP, routes it, resolves error conditions, and presents the data to TCP for re-sequencing.

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What is an IP address?

An IP address is a number (typically written as four numbers separated by periods, i.e. 107.4.1.3 or 84.2.1.111) that uniquely identifies a computer that is making use of the Internet. The IP address is used by the Internet to direct data to your computer, e.g. the data your web browser retrieves and displays when you surf the net. IP addresses can be permanently assigned or dynamically assigned by a host server using DHCP.

How does the Model 2120 receive an IP address?

The Model 2120 allows the user two ways to set an IP address.

Static IP Address: This is accomplished through the 2120's software command system. Using the configure command, the end-user can physically enter an available IP Address for the Model 2120.

Dynamically Assigned IP Address: With DHCP client mode enabled (factory default), the Model 2120 automatically connects to an active DHCP Server and dynamically receives the next available IP Address.

What is DHCP (Dynamic Host Configuration Protocol)?

DHCP enables individual devices on an IP network to extract their configurations from a DHCP Server and receive a dynamically assigned IP Address. This reduces number of IP Addresses required and the work necessary to administer large IP networks.

What is a MAC address?

A MAC address (also called an NIC, Ethernet address, or an IEEE MAC address) is a number that uniquely identifies a piece of hardware that has an Ethernet interface. Unlike the IP number, it includes no indication of where your computer is located. In a DHCP setting, the server uses a requesting computer's MAC address to uniquely identify it.

Does the Model 2120 come standard with a factory assigned MAC address?

Each Model 2120 is assigned a unique MAC/NIC address before leaving the Patton factory. The MAC address of your Model 2120 can be found on the backside of the unit.

Does the Patton Model 2120 support VLAN or WLAN?

The Model 2120 does not currently support VLAN (802.1Q) or WLAN (802.11). The Model 2120 adheres to the IEEE 802.3 standard, which specifies that the MAC packet be 1500 bytes in size. In both VLAN and WLAN the MAC packet is larger due to additional header information.

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What are SLIP and PPP?

Serial Line IP (**SLIP**) was the first protocol for relaying IP packets over dial-up lines. It defines an encapsulation mechanism, but little else. There is no support for dynamic address assignment, link testing, or multiplexing different protocols over a single link. SLIP has been largely supplanted by PPP.

Point-to-Point Protocol (**PPP**) is the best solution for dial-up Internet connections, including ISDN. PPP is a layered protocol, starting with a Link Control Protocol (LCP) for link establishment, configuration and testing. Once the LCP is initialized, one or many of several Network Control Protocols (NCPs) can be used to transport traffic for a particular protocol suite. The IP Control Protocol (IPCP) permits the transport of IP packets over a PPP link. Some key PPP features, which are not included in SLIP are: address notification, authentication options (PAP) or (CHAP), multiple protocol interoperability, and link monitoring.

Power Supply

What are the power supply options for the Model 2120?

The Model 2120 comes standard with an external UI (100-240VAC) power supply. A –48 VDC power supply is optional.