BB-ESP901
BB-ESP902
BB-ESP904

Ethernet Serial Servers

BB-ESP901   BB-ESP904

Features

- Ethernet enable 1, 2 or 4 serial ports
- Data rate: 110 to 230.4 kbps
- Wide operating temperature range: -20 to +85 °C
- IP30 DIN rail mount metal case
- RS-232/422/485 full-duplex and half-duplex
- 10/100 Mbps Ethernet, auto-detect
- External power source required (included)

Introduction

Ethernet enable any serial device using Advantech Vlinx™ Serial Server technology and put your serial ports to work for you with the ability to communicate with every piece of equipment from any networked PC. Eliminate site visits just to make a minor configuration change. Reduce service calls and increase productivity by knowing what your equipment is doing before you get a trouble report. Spend more time doing relevqnt tasks instead of chasing down nuisance problems with remotely located equipment.

Much of today's high-tech equipment ships with a serial port for programming, monitoring or diagnostics. 80% of these serial ports are left unconnected, often because a person travels to the port to make the connection or a permanent PC is not desirable. With Advantech Vlinx Serial Servers, you can put all of those ports to work.

Simply connect the Vlinx Serial Server to the equipment's serial port and connect the Vlinx Ethernet port to your LAN. Your equipment is now online and appears as a local COM port on any networked PC running Advantech Virtual Serial Port software. No software customization required – just run the appropriate software for your equipment.

The BB-ESP90x family integrates the benefits of Ethernet communications with existing serial devices by offering the combination of three serial interfaces:RS-232, RS-422, and RS-485. The Ethernet connection will auto select 10BaseT or 100BaseTX.

These serial servers provide Windows host control over serial devices located virtually anywhere on a TCP/IP or UDP/IP Ethernet connection giving authorized users control over the connected serial device and server configuration from anywhere outside the LAN.

Operation *(For more information, see user manual on CD.)*

Vlinx Manager allows easy access to the serial server to configure the server and ports, upgrade firmware and monitor port status and activity. When ESP Manager opens, it searches and displays all BB-ESP90x serial servers on the network. The Monitor Port feature allows you to use any PC on the LAN/WAN to actively view and troubleshoot the communications status. It shows when there is a client connection to the server and the client IP address. It displays the number of bytes Transmitted and Received and the status of the hardware handshaking lines.

BB-ESP90x serial servers can be accessed and configured from any web browser on the LAN/WAN allowing you to remotely manage and troubleshoot serial devices and software.

BB-ESP90x serial servers provide automatic resumption of the TCP data connection in case of a power failure or loss of an Ethernet connection on either the client or server. Once the "Heartbeat Connection" is established, the server sends a signal to the client every five seconds. If the signal is not received, the serial server will attempt to reconnect the TCP data connection every five seconds until communication is re-established.

Ordering Information

Model No.	Description	Serial Connector	Ethernet Port	Ethernet Connector
BB-ESP901	(1) RS-232/422/485	DB9 or Terminal Block	(1) Copper	RJ45
BB-ESP902	(1) RS-232/422/485 (1) RS-232	DB9	(1) Copper	RJ45
BB-ESP904	(4) RS-232/422/485	DB9	(1) Copper	RJ45

Accessories – Sold Separately

BB-DRAD-35 – 35mm DIN rail mounting kit

BB-ESP902

Specifications

Serial Technology	
Note: refer to user manual for detailed information on pin-outs and signals.	
Serial Interfaces	RS-232 (DTE), RS-422, RS-485 (2-wire / 4-wire) DIP switch selectable
Serial Connectors	BB-ESP901: 1 x DB9 male BB-ESP902: 2 x DB9 male, as follows: (1) RS-232/422/485 and (1) RS-232 BB-ESP904: 4 x DB9 male
Baud Rate	110 to 230.4 Kbps (5787 bps)
Data Bits	5, 6, 7, 8
Stop Bits	1, 1.5, 2
Serial Buffer	8 Kb per port
Ethernet Technology	
Connector	RJ45 F
Data Rate	10/100 Mbps auto-detecting 10BaseT or 1000BaseTx
Protocols	12 TCP, IP, ARP, DHCP, Telnet, HTTP, UDP, ICMP
Configuration	
Console	RS-232 w/ VT100 Emulation
Telnet	HyperTerminal w/VT100 Emulation
Vlinx™ Manager	Windows (32/64-bit): 2000, XP, Server 2003, Vista, Server 2008, 7, 10
HTTP	Embedded web page
Power (included)	
Source	External power supply, included
Voltage	12 Vdc
Consumption	BB-ESP901: 200 mA @ 12 Vdc BB-ESP902: 300 mA @ 12 Vc BB-ESP904: 500 mA @ 12 Vdc
Connector	2.5mm jack, positive tip
Environmental	
Operating Temperature	-10 to +80 °C
Storage Temperature	-20 to +85 °C
Operating Humidity	5 to 95%, non-condensing
Mechanical	
Enclosure	IP30, metal
Dimensions	BB-ESP901 & BB-ESP902: 8.53W (10.77W w/mounting ears) x 12.0H x 2.34D cm BB-ESP904: 18.5W x 11.4H x 2.9D cm
Regulatory – Approvals / Standards / Directives	
FCC, CE, RoHS-10 (2015/863), REACH-211	