

# VESR321

## Vlinx™ Isolated Industrial Ethernet Serial Servers

- ✓ Three-way Isolation
- ✓ Ethernet Enable Serial Devices
- ✓ Direct IP, Virtual COM Port, or Paired Mode
- ✓ Ethernet Pass-through Port Available
- ✓ Ethernet Fiber Options
- ✓ Serial RS 232/422/485 Port
- ✓ Complies with NEMA TS1 & TS2 Environmental requirements for



Take control of your serial devices with VLINX VESR321 Isolated Industrial Ethernet Serial Servers.

Easy to use Vlinx Manager software puts access to your whole shop right on your desktop. Configure your serial devices, upgrade firmware and monitor activity from a single location.

The data ports are isolated from one another and also from the power supply.

Multiple fiber optic options make integration into any existing network quick and easy. Choose from Multi-mode LC and Single-mode LC.

VESR321 series servers also feature an additional copper pass-through RJ45 port that functions like an unmanaged switch, allowing you to connect another Ethernet device or PC work-station.

Heartbeat connectivity keeps the serial server on-line. If connectivity is lost it will attempt to reconnect every five seconds until a connection is regained. A manual reboot is not required when communications are restored.

### Specifications

Port to Port Isolation	
Serial to Ethernet	2 kV
Serial to Power	2 kV
Ethernet to Power	1.5 kV
Power	
Source	External
Input Voltage	10 to 48 VDC (58 VDC Maximum)
Connector	Removable Terminal Block (12 – 28 AWG and barrel connector)
Power Consumption	4 W
Mechanical	
LED Indicators	Ready, Power, Serial Data, Ethernet Speed, Ethernet Link
Switches	Reset Button (Mode)
Dimensions	5.5 x 3.5 x 1.4 in (13.9 x 8.7 x 3.5 cm)
Enclosure	IP 30, Metal
Weight	1.4 lbs (635 g)
Environmental	
Operating Temperature	-40 to 80°C (-40 to 176°F)
Operating Humidity	10 to 95% Non-condensing
Storage Temperature	-40 to 85°C
MTBF	86,882 hours
MTBF Calc Method	Based on MIL 217F using Parts Count Reliability Prediction
NEMA TS1 & TS2 (tested on model VESR321)	Complies with NEMA TS1 & TS2 Environmental requirements for Traffic Control Equipment
Network	
Serial Memory	8 KB per port
Network Memory	8 KB
IP Port Addresses	Setting in TCP Mode 8899 – VESRx Update
LAN	10/100 Mbps Auto-detecting, 10BaseT or 100BaseTX
Ethernet	IEEE 802.3 auto detecting & auto MDI/MDX, 10BaseT and 100Base TX
Protocols	TCP, IPv4, UDP, ARP, HTTP 1.0, ICMP/PING, DHCP/BOOTP
IP Mode	Static, DHCP
TCP	User definable
Ordering Information	
See chart below for available models	
Accessories	
PS12BVLB-INT-MED	Medical Grade Power Supply, 24VDC, 1.7A
C5UMB7FBG	Ethernet Cable

<b>Specifications</b>	
<b>Protocols</b>	
Protocols IP Mode TCP	TCP, IPv4, UDP, ARP, HTTP 1.0, ICMP/PING, DHCP/BOOTP Static, DHCP User definable
<b>Other</b>	
Connection Mode Client Connection Search Diagnostics Firmware Upgrade	Server, Client, VCOM, Paired At power up or upon data arrival Serial direct COM and Ethernet Auto Search or specific IP Display PC IP, ping, test VCOM, save test config (text readable) Web GUI through Ethernet
<b>Software</b>	
OS Compatibility	Win XP (32/64 bit), 2003 Server (32/64 bit), Vista (32/64 bit), 2008 Server (32/64 bit), Win 7 (32/64 bit), Windows 2008 Server
<b>Ethernet Pass-through Port</b>	
Standards Processing Type Flow Control MAC Address Table	IEEE 802.3, 802.3u, 802.3x Store and Forward with 802.3x full duplex, non blocking flow control IEEE 802.3x flow control, back pressure flow control 2K
<b>Serial Technology</b>	
RS-232 RS-485 2-Wire RS-422/485 4-Wire Serial Connector Data Rate	TD, RD, RTS, CTS, DTR, DSR, DTD, GND Data A(-), Data B(+), GND TDA(-), TDB(+), RDA(-), RDB(+), GND DB9M RS-232, Terminal Block Rs-422/485 Up to 230.4 Kbps

<b>Approvals / Certifications</b>			
Emissions	FCC Class B, CISPR Class B (EN55022)		
CE	EN61000-6-2:2005	(Heavy Industrial)	
	EN61000-4-2:2008	(ESD)	+/-8kV Contact, +/-15kV Air
	EN61000-4-3:2006	(RI)	10V/m, 80-1000MHz; 3V/m, 1.3 to 2.7 GHz
	EN61000-4-4:2004	(EFT Burst)	+/-2kV DC ports; +/-1kV signal ports
	EN61000-4-5:2005	(Surge)	+/- 0.5 kV DC Ports, +/- 1 kV Signal Ports
	EN61000-4-6:2005	(CI)	10 VRMS, 0.15 to 80 MHz
	EN61000-4-8:2001	(Magnetic)	10A/m, 50Hz & 60Hz
Shock	IEC60068-2-27	50G peak, 11ms, 3 axes	
Vibration	IEC60068-2-6	10-500Hz, 4G, 3 axes	
Freefall (Drop)	IEC60068-2-32	10 total drops from sides, corner and edges, 1M	

Model	Serial Port With DB9 and Terminal Block	Ethernet Ports	Fiber Ports
VESR321	1	2	0
VESR321-SL	1	1	1 LC optical
VESR321-ML	1	1	1 multi-mode LC optical port

The models listed above are standard build options. The following build options are possible for large projects:

- Models with 2 fiber optic ports.
- Models with long range fiber optic ports such as 40km and 80km single-mode.

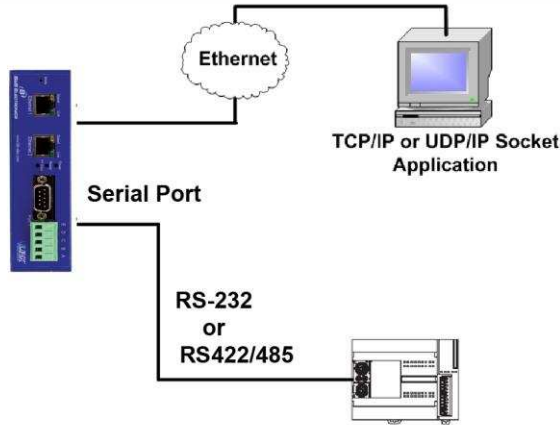
Please contact B&B Electronics for more information.

*Fiber Optic Cable Information*

Mode and Distance	Wavelength	Output Power	Receive Sensitivity
Multi-mode (2 km)	1310 nm	-23 to -14 dBm	</= -31 dBm
Single-mode (15 km)	1310 nm	15 to -8 dBm	</= -34 dBm
Single-mode (40 km)	1310 nm	-5 to 0 dBm	</= -35 dBm
Single-mode (80 km)	1550 nm	-5 to 0 dBm	</= -34 dBm

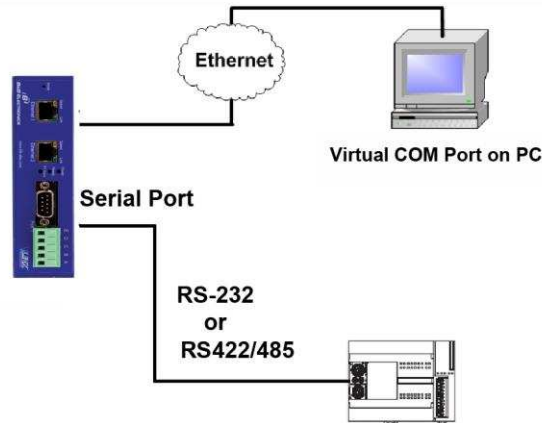
**Direct IP Mode**

TCP/IP or UDP/IP socket applications communicate directly with serial devices



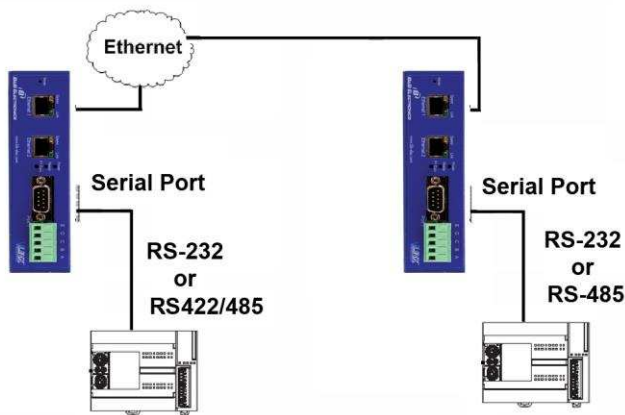
**Virtual COM Mode**

Communicate with serial devices through your network as if they were connected to a physical COM port.

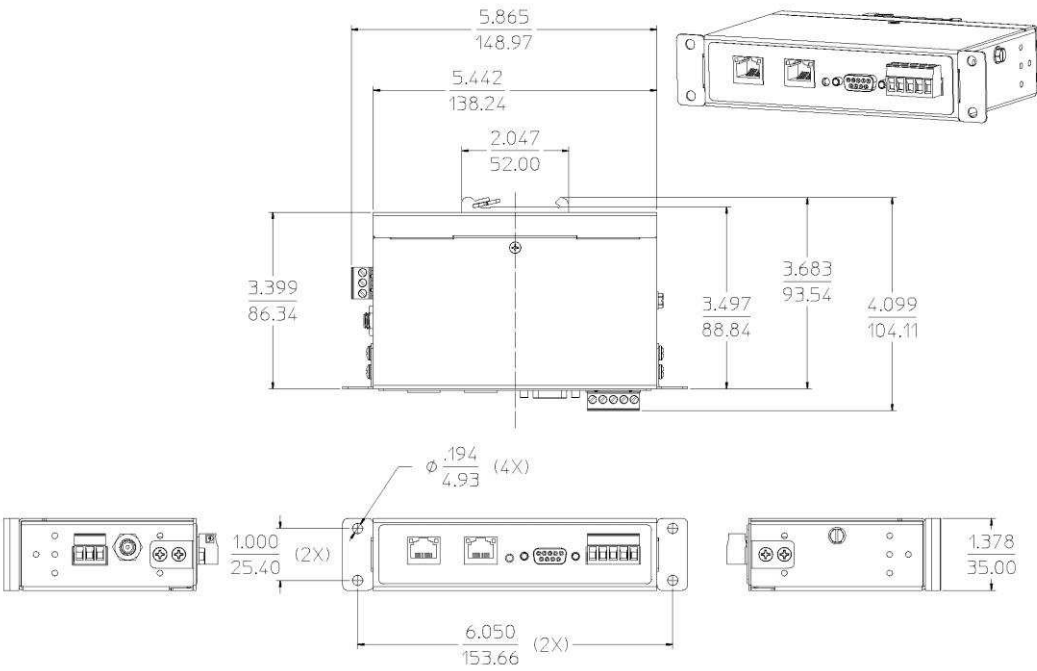


**Paired Mode**

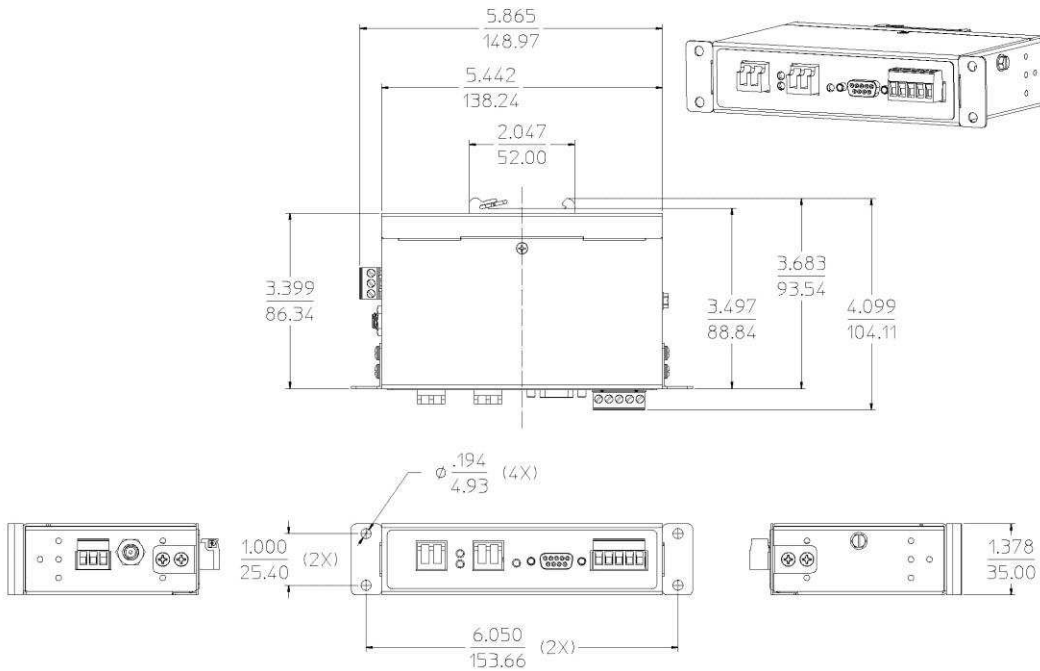
Serial devices communicate with each other by tunneling through your network.



Two Copper Ports



Two Fiber Ports



One Copper Port and One Fiber Port

