VALIANT COMMUNICATIONS

VCL-3010

RS232 to Ethernet Converter

Introduction:

The The VCL-3010, RS232 / RS485 to Ethernet Converter is a ruggedized and robust, sub-station-hardened converter which may be used to transmit / receive RS232 / RS485 data over an Ethernet / IP network. This device converts serial RS232 / RS485 data to Ethernet and vice versa, thereby allowing users to transmit / receive serial RS232 / RS485 data channels over an Ethernet / IP network.

VCL-3010 supports point-to-point applications.

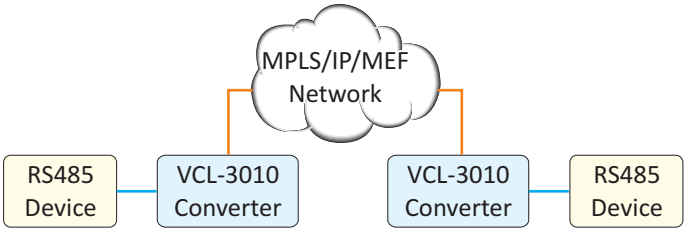
The VCL-3010, RS232 / RS485 to Ethernet Converter complies with IEC-61850-3, EMI, EMC, Surge and Temperature specifications making it suitable for sub-station installations to provide uninterrupted service even in the most demanding and harsh environments.

VCL-3010, RS232 to Ethernet Application:

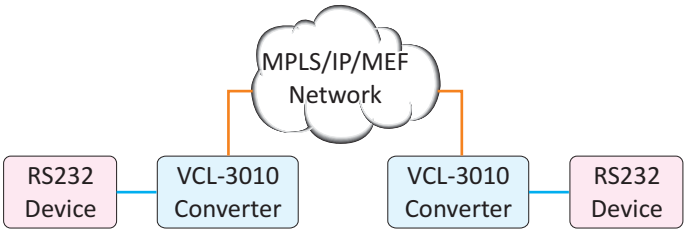
The most common application for the VCL-3010, Converter is for augmenting legacy IEC 60870-5-101 RTUs that provide serial RS232 / RS485 data in sub-stations and SCADA data networks. By simply installing a VCL-3010, Converter the existing IEC 60870-5-101 RTUs serial data can be transmitted over the Ethernet based network without incurring a large capex and without the tiresome task of having to rewire the RTUs that require upgradation.

Another common application for the RS232 / RS485 to Ethernet module is for augmenting legacy products that contain a serial port for a configuration or control interface. Simply installing a RS232 / RS485 to Ethernet module into the legacy serial device provides instant networking capability with no major board redesign or software changes, a tiny form-factor for unobtrusive implementation and cable lengths much longer than what is available for simple serial connections.

Application Diagram #1:



Application Diagram #2:



Technical Features:

Connectors:

- Power: Terminal Block, 2-Pin Supply Connector
- RS232 / RS485 Interfaces (DB9 Connector)
- Ethernet Interface: RJ45 (Female) Connector

Power Supply:

- Power Supply: 15V~55V DC, 2A
- Additional 110V DC and 220V DC Power Supply Options available.

RS232 Interface Specifications:

Mode	RS232 / RS485 Asynchronous
Conformity	To CCITT rec. V.24
Baud rate	300 / 600 / 1200 / 2400 / 4800 / 9600 / 14400 / 19200
Character Length	5 / 6 / 7 / 8
Parity	Even / Odd / None / Mark / Space
Stop Bit	1 / 2
Flow Control	None / Hardware

Ethernet Interface Specifications:

Interface	10/100BaseT (Electrical)
IP Option	Static / DHCP (AutoIP)
Telnet Port	User Programmable (23 by default)
Telnet Mode	Server / Client
Telnet Protocol	Telnet / Raw
Telnet Timeout	0 to 255 seconds

EMI, EMC, Surge Withstand and other Compliances

EN 50081-2	EN 50082-2	IEC 60068-2-29
IEC 61000-4-6 (Conducted Immunity)	IEC 60068-2-6	IEC 60068-2-2
IEC 60068-2-78	IEC 60068-2-1	IEC 60068-2-14
CISPR 22 / EN55022 Class B (Conducted Emission and Radiated Emission)		
IS 9000 (Part II Sec. 1-4, Part III Sec. 1-5, Part IV, Part 14 Sec. 1-3)		
IEC 60870-2-1	IEC 61000-4-5	IEC 61000-4-12
IEC 61000-4-3 (Radiated Immunity)	IEC 61000-4-8	IEC 61000-4-16
IEC 61000-4-2	IEC 61000-4-10	Telcordia GR-1089 Surge and Power Contact
IEC 61000-4-4	IEC 61000-4-11	

- ESD, Voltage and Surge Withstand: Meets and exceeds IEC 61000-4-2, IEC 61000-4-4, IEC 61000-4-5, Level 4 specifications
- Immunity to Voltage Dips, Short Power Supply Interruptions and Voltage Variations meets and exceeds IEC 61000-4-11, Level 1 specifications.

Environmental:

Operating Temperature	-10C to +60C
Maximum Operating Humidity	95% R.H., Non-Condensing
Maximum Operating Altitude	Up to 3,000 meters above sea Level
Operation	Complies with ETS 300 019 Class 3.2
Storage Temperature	-40C to +70C
Storage	Complies with ETS 300 019 Class 1.2
Maximum Storage Humidity	98% R.H., Non-Condensing
Maximum Storage Altitude	Up to 3,000 meters above sea Level
Transportation	Complies with ETS 300 019 Class 2.3

Chassis:

- Aluminium, DIN Rail Mounting.

Other Regulatory Compliance:

- Meets CE requirements
- Complies with FCC Part 68 and EMC FCC Part 15 Class A

Electromagnetic Standards Compliance:

- EN 50081-2
- EN 50082-2
- IEC 61000-6-2 (immunity)
- IEC 610000-6-4 (emission)

Compliance/ Regulatory:

- Meets CE requirements
- Complies to IEEE and IEC standards
- Complies with FCC Part 68 and EMC FCC Part 15 and CISPR 22 Class A
- Operation ETS 300 019 Class 3.2
- Operation ETS 300 019 Class 3.2
- Transportation ETS 300 019 Class 2.3

Ordering Information:

BASE UNIT without PSUs

Part #	Description
VCL-3010	VCL-3010 RS232 / RS485 to Ethernet Converter DIN Rail Mounting Version Supports: - 1 x RS232 / RS485 Asynchronous (DB9 (Female)) - 1 x 10/100BaseT (Electrical) (Ethernet) (RJ45 (Female)) * Add Power Supply Option from below

Power Supply Option (Any one Option)

Part #	Description
AC220	1 x 100-240V AC Power Supply Input
DC024	1 x 24V DC Power Supply Input
DC048	1 x 48V DSC Power Supply Input
DC110	1 x 110V DC Power Supply Input
DC220	1 x 220V DC Power Supply Input

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U.K.

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