

Product Overview:

VCL-6046, Dual Media LTE Router, is an intelligent router which can be used to securely provide connectivity over wired Gigabit Ethernet or GSM LTE network using a choice of secure routing and security protocols including OSPF, RIP, OpenVPN and IPsec. VCL-6046 is a ruggedized router equipment that is embedded with routing and cyber security features which makes it suitable for installation in critical infrastructure such as utilities, railways, metro-rail, airports, and similar applications that require high reliability industrial equipment.

VCL-6046 Dual Media LTE Router is password protected with capabilities that meet and exceed the most demanding security requirements.



Front View



Back View

Wired Interfaces:

- 1 x 1G Fiber Optical Port (SFP based)
- 1 x 10/100/1000BaseT RJ45 Electrical port
- 1 x RS232/RS485 port (user switchable / user selectable)
- 1 x USB Management port
- 1 x 10/100BaseT Management port.

Wireless LTE Interfaces:

- 1 x GSM LTE Interface
- 1 x GPS / NavIC Interface

Security Features and Capabilities:

- VPN Tunnels
 - IPsec site-to-site Tunnels
 - OpenVPN tunnel
- Access lists

Highlights:

- High-Reliability hardware
- Dual redundant power supply inputs
- Suitable for installation in critical infrastructures like utilities, sub stations, railways and airports
- Supports Ethernet/Gigabit Ethernet Electrical and Optical Interfaces/GSM-LTE
- Supports Mission Critical QCLs as per 3GPP
- Secure Boot
- DHCP Server and Relay
- Port Forwarding
- Bridging
- Easy Installation and Management
- Supports frame size from 64 to 1450 bytes
- SSH (Secure Access Control) with encrypted password.
- SNMPv2 and SNMPv3
- Infrastructure neutral.

Routing Features and Capabilities:

- IPv4 and Ipv6
- Static IPv4 Routing, Static IPv6 Routing
- Routing Information Protocol (RIP v1, RIP v2)
- OSPF
- ARP, IP Forwarding
- Supports 802.1Q VLAN, Inter-VLAN Based routing
- TCP/UDP
- DHCPv4 and DHCPv6
- Syslog.

LTE Features and Capabilities:

- 1.8V/3V SIM and eSIM
- Compatibility with existing LTE networks
- Optimized for higher bandwidth and voice applications
- CAT 1/4: B1/B2/B3/B4/B5/B8/B18/B19/B20/B25/B26/B40/B66
- LTE: 3GPP E-UTRA CAT 4
- Protocols: TCP/IP/HTTP/HTTPS /MQTT/MQTTS/FTP/FTPS
- GPS support: GNSS* -
 - GPS/GLONAS/Galileo/QZSS/SBAS/IRNSS (NavIC)
- Wireless Data-connectivity
 - LTE CAT 1: 5Mbps (UL), 10Mbps (DL)
 - LTE CAT 4: 50Mbps (UL), 150Mbps (DL)

Physical Dimension:

19 Inch, 1U High Rack Mount

- D x W x H: 178mm x 477mm x 45mm
- Net Weight: 3.50 Kgs
- Access lists

Encryption Algorithms:

- AES-128, AES-192, AES-256
- 3DES, DES
- Camellia 128, 192, 256
- Blowfish 128, 192, 256

Hash Algorithms:

- MD5, AES-XCBC
- SHA 1, SHA 256, SHA 512

EMI, EMC, Surge Withstand and other Compliances:

EN 50081-2	EN 50082-2	IEC 60068-2-29
IEC 61000-4-6 (Conducted Immunity)	IEC 60068-2-1	IEC 60068-2-2
IEC 60068-2-78	IEC 60068-2-14	IEC 60068-2-1
CISPR 32 / EN55032 Class A (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 61000-4-4	IEC 61000-4-5	IEC 61000-4-8
IEC 61000-4-3 (Radiated Immunity)		IEC 61000-4-2

Environmental (Operational):

- Operating Temperature : -10 °C to 55 °C
- Storage Temperature : -20 °C to 75 °C
- Operating Humidity : 10% ~95% relative humidity, non-condensing
- Storage Humidity: 10% ~ 95% @40 °C; non-condensing.

Other Specifications:**Power Supply Input Options:**

12V DC, 24V DC, 48V DC, 110VAC/60Hz, 240VAC/50Hz, 110V DC and 220V DC (1+1) Redundant Power Input Options

Indicators	2 x Power Supply Indicators
MTBF (hours)	101292
IP Level Protection	IP20
Max. Power Consumption	< 20 Watts

CE Compliance:

- Low Voltage Directive 2014/35/EU
- Electromagnetic Compatibility 2014/30/EU

Other Regulatory Compliance:

- RoHS
- CE Marking
- Complies with FCC Part 68 and EMC FCC Part 15

© Copyright : Valiant Communications

Technical specifications are subject to changes without notice.

Revision – 1.3, November 10, 2023

Ordering Information:

Part#	Description
VCL-6046-RAC	VCL-6046 Dual Media LTE Router Interfaces: - 1 x 1G Optical Fiber Port (SFP based / without SFP) - 1 x 10/100/1000BaseT RJ45 Electrical port - 1 x RS232/RS485 Port - 1 x GSM – LTE Port - SIM support - 1.8V/3V USIM and eSIM - 1 x GPS/ Nav Input Port - 1 x USB Management Port - 1 x 10/100BaseT Management Port - 2 x Redundant [1+1] Power Supply Inputs* - Installation Kit: System Core Cables, Mounting Hardware, Documentation, User Manual Add Power Supply

Add Power Supply (Any one option) :

AC220	1 x 110~240V AC, 50/60 Hz, Power Supply Input
DC012	1 x 12V DC Power Supply Input
DC024	1 x 24V DC Power Supply Input
DC048	1 x 48V DC Power Supply Input
DC220	1 x 110~250V DC Power Supply Input
ACDC	1 x 110~240V AC, 50/60 Hz, Power Supply Input 1 x 48V DC Power Supply Input
AC220R	2 x 110~240V AC, 50/60 Hz, Power Supply Input [Redundant]
DC012R	2 x 12V DC Power Supply Input [Redundant]
DC024R	2 x 24V DC Power Supply Input [Redundant]
DC048R	2 x 48V DC Power Supply Input [Redundant]
DC220R	2 x 110~250V DC Power Supply Input [Redundant]

Select SFP Option from below:

VCL-EMOD 0206	1.25Gbps SFP Transceiver Duplex LC, 850nm, 550m, MM (Multi-Mode)
VCL-EMOD 0205	1.25Gbps SFP Transceiver Duplex LC, 1310nm, 10Km, SM (Single-Mode)
VCL-EMOD 0231	1.25Gbps SFP Transceiver Duplex LC, 1310nm, 15Km, SM (Single-Mode)
VCL-EMOD 0255	1.25Gbps SFP Transceiver Duplex LC, 1310nm, 40Km, SM (Single-Mode)
VCL-EMOD 0155	1.25Gbps SFP Transceiver Duplex LC, 1550nm, 40Km, SM (Single-Mode)
VCL-EMOD 0256	1.25Gbps SFP Transceiver Duplex LC, 1550nm, 80Km, SM (Single-Mode)
VCL-EMOD 0341	1.25Gbps SFP Transceiver Duplex LC, 1550nm, 120Km, SM (Single-Mode)

U.S.A.

Valcomm Technologies Inc.
4000 Ponce de Leon Blvd.,
Suite 470, Coral Gables,
FL 33146, U.S.A.

E-mail: us@valiantcom.com

U.K.

Valiant Communications (UK) Ltd
Central House Rear Office,
124 High Street, Hampton Hill,
Middlesex TW12 1NS, U.K

E-mail: gb@valiantcom.com

INDIA

Valiant Communications Limited
71/1, Shivaji Marg,
New Delhi - 110015,
India

E-mail: mail@valiantcom.com