Product Overview

Valiant's Enigmätron-C is an integrated router and firewall equipment with extremely advanced firewall features that may be installed to secure critical infrastructure such as Sub-Stations, Smart Grid Distribution Systems, Airport and Railway IT Networks as well as Financial Infrastructure such as Banks and Payment Processing Gateways.

Access to Enigmätron-C is password protected with advanced firewall capabilities that meet and exceed NERC as well as all mandatory requirements of Password Protection and Control as provided in the GR-815-CORE-2 specifications. Enigmätron-C can optionally be managed centrally from a RADIUS Server to provide enhanced levels of access security and centralized password management and control.

Enigmätron-C provides Comprehensive Protection for:

- IP Networks, including all types of Data, Voice and Video over IP applications
- MPLS meshed networks
- Metro Ethernet and VPLS networks

Firewall - Features and Capabilities:

- Deep Packet Inspection
- Per-frame/packet authentication
- Firewall
  - Port (Soft) Based
  - MAC based
  - IP Address based
  - IP Domain based
- White List and Black List options
  - White List Exception allowed and Blocks all other traffic by default (system default mode)
  - Black List Exception blocked and Allows all other traffic by default
- Seamless scalability
- Infrastructure neutral
- Transparent to network and applications
- Easy installation and management

Interfaces:

- Total Number of Interfaces : 5
  - Four 10/100 RJ45 locally switched network interfaces to the local (trusted) network
  - One 10/100/1000 RJ45 network interface to the WAN (untrusted) network
- Integrated four-port Ethernet switch
- Auto MDI/X (straight or crossover Ethernet cable correction)
- USB serial port for local access and configuration.

Applications

- Utilities: Electric generation, transmission and distribution
- Smart Grid Distribution Systems
- Oil & Gas production, pipelines
- Remote nodes in SCADA multi-drop networks
- Railway and Airport Infrastructure
- Financial Infrastructure such as Banks and Payment Processing Gateways
- Law Enforcement.

Firewall and Security:

- Secure Boot
- Firewall Security:
  - Inclusion Policy - Access Control based upon White List IP addresses, MAC address and IP Domain
  - Exclusion Policy -Access Control based on Black List
- Continuous monitoring of the TLS connection to nullify MitM attacks
- Resistance to Denial of Service (DoS) Attack
- Encrypted Firmware Updates
- Non-volatile Access Log with capability to "fingerprint" all successful and failed log-in attempts and keep a log of the IP and MAC addresses of all successful and failed logins / login attempts
- SNMP trap generation, along with LED and external alarm indication
- Password Protection with password strength monitor
- RADIUS Password Authentication
- SSH (Secure Access Control) with encrypted Password Protection

Firewall Resilience:

- May be used in conjunction with VCL-2478; or VCL-2454, Ethernet Failover Switches to provide 1:N Firewall Redundancy and Automatic Failover in the event of equipment failure; or in the event of hostile intrusion attempts.
- Valiant's Enigmätron-C uses complex algorithms to automatically detect attempts to break it and may be used in conjunction with VCL-2478; or VCL-2454, Ethernet Failover Switches to very effectively to repel and frustrate all such hostile intrusion attempts, including DoS (Denial of Service) attacks.

Firewall Throughput:

- ≤ 90Mbps.

Router Throughput:

- ≤ 90Mbps.

Network Support:

- IPv4, IPv6 Routing
- Ethernet
- VLAN tag preservation
- MPLS tag preservation
- Secure NTP (Client).

Monitoring and Access Control:

- Password Strength Monitor
- Device Management and Alarm Monitoring
- Command Line Interface - Telnet, SSH
- SNMPv2 Alarm Monitoring
- Alarm condition detection and reporting (traps and SNMP alarm table)
- Syslog
- Audit Log

Indicators:

- System Status LED
- Power LED

Power:

- Power: 1+0 and 1+1 Redundant Power Supply Options.
- 100~240VAC, 50/60Hz
- 18VDC ~ 60VDC
- 85VDC ~ 140VDC
- Power consumption: 9W at maximum load

Environmental:

- Operational:
  - Temperature -20C to +60C (-4F to 140F),
  - Humidity up to 95% R.H. (Non-condensing at 60C)
  - Cold start: temperature -10C
  - Maximum Operational Humidity 95% R.H. (Non-condensing)

Regulatory:

- Emissions — As per CISPR 22 / EN55022 Class B
- FCC — Part 15 Subpart A
- Immunity — EN55024, En61000

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.

Physical and MTBF:

- 1U, 19-Inch Industrial (IP50) Chassis. Optional, 1U, Ruggedized Industrial (IP61) Chassis.
- Height x Depth x Width: 44 mm x 250 mm x 482 mm
- Weight: 3 Kgs
- MTBF: ≥ 280,000 hours with dual redundant power supplies.

Ordering Information

Product	Enigmätron-C-RFW
Part No.	VCL-2142RFW-yy
Description	Router and Firewall Equipment
Power	yy: AC or DC

Technical specifications are subject to changes without notice.
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