

Product Overview:

Valiant’s VCL-2739, 1588v2 PTP Aware Switch (PTP Transparent Clock). The VCL-2739 is a non-blocking wire-speed Ethernet switch with full support for IEEE 1588v2 Precision Time Protocol (PTP) Transparent Clock features.



Features of IEEE 1588v2 PTP Switch & Clock Synchronization:

- Transparent Clock (TC) with auto correction update
- Master and Slave Ordinary Clock (OC) support
- End-to-end (E2E) and Peer-to-peer (P2P) delay mechanism support
- PTP multicast and unicast message support
- PTP message transport over IPv4 and IEEE 802.3 (layer 2)
- IEEE 1588v2 PTP packet filtering.
- One-step and Two-step

Features:

- Six Ports:
 - 5x10/100/1000Base-T Electrical Ethernet Ports
 - 1x1000Base-X Optical Fiber Ethernet Port
- IEEE 1588 v2 Transparent Clock capable of distributing precision time across the substation network
- IEEE 802.3x full-duplex flow control and half-duplex back pressure collision control.

Switch Performance Capabilities

- 10/100/1000Mbps Ethernet switch basic functions: frame buffer management, address look-up table, queue management, MIB counters
- Non-blocking store-and-forward switch fabric assures fast packet delivery by utilizing 4096 entry forwarding table with 256K Byte frame buffer
- Jumbo packet support up to 9000 bytes.

Substation and Industrial Hardened Switch

- IEC 61850-3 and IEEE 1613 compliance for operating in electric substation environments

Applications:

- IEC61850 networks power substation automation
- Industrial Ethernet (Profinet, MODBUS, Ethernet/IP)
- Supports 3G/4G/5G Ethernet networks
- Industrial control/automation
- Test and measurement applications.

Technical Specifications

Power Supply Specifications:

Input DC voltage	48V DC (nominal)
Range of input voltage	15V to 60V DC Input
Voltage reversal protection	Provided
Short circuit protection	Provided

Additional Power Supply Options (external adaptor):

- AC Power - 100 to 240V AC, 50/60 Hz
- DC Power - 110VDC, 220VDC

Power Consumption:

- < 20W at ambient (steady state 24°C)

Local / Remote Communication Options:

- Telnet / SSH (With option to disable clear text communication to comply with NERC security requirements)
- CLI Control Interface (HyperTerminal or VT100)

Management and Control Ports:

- Serial Management Port (Connector type USB)
- 10/100 BaseT for remote management

Security and Protection:

- Password Protection
- SSH

Command Language:

- English text commands
- Graphical User Interface (GUI) - English

Mechanical Specifications:

- H x W x D: 42 x 168 x 134 mm
- Weight: 0.5 Kg.

Technical Specifications

Environmental (Equipment):

Operational:	-10C to +50C (Typical: +25C)
Cold start	0C
Storage	-40C to +85C
Humidity	95% non-condensing
Cooling	Convention Cooled. No cooling fans are required.

MTBF and Equipment MTBF:

- Per MIL-HDBK-217F: ≥ 15.8 years @ 24C
- Per Telcordia SSR 332, Issue 1: ≥ 20.2 years @ 24C

Compliance:

- EMC FCC Part 15 Class 2
- Operation ETS 300 019 Class 3.2
- Storage ETS 300 019 Class 1.2
- Transportation ETS 300 019 Class

Ordering Information

Core Unit without PSUs:

Part No.	Description
VCL-2739-DIN	6 Port, IEEE 1588v2 PTP Transparent Clock (Industrial Ethernet Switch)

*Add Power Supply Options:

48VDC	1 x 15~60V DC Power Supply Input
AC220	1 x 110~240V, 50/60Hz AC Power Supply Input (External Adaptor)
DC220	1 x 100-220V DC Power Supply Input (External Adaptor)

Technical specifications are subject to changes without notice.

All brand name and trademarks are the property of their respective owners.

Revision – 2.2, March 08, 2021

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

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

INDIA

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

E-mail: mail@valiantcom.com