VECTOR DATA™

6910 Ethernet Access Switch

PRODUCT OVERVIEW

Carrier Class Platform

The Vector Data 6910 is a carrier-grade access switch that meets the requirements for non-stop networking with Layer 2 services. The platform provides dual-power input for redundancy, and has been architected with a state-of-the-art hardware design and field-proven operating system to help ensure high reliability and resiliency. It combines the low cost and high capacity of Ethernet with the reliability, management, and service quality needed for mission-critical applications. With its small form factor, fanless design, and temperature-hardened specifications, the Vector Data 6910 is ideal for a variety of physical environments that support enterprise customers, managed service providers, Multi-Tenant Unit (MTU)/Multi-Dwelling Unit (MDU) deployments, and wireless backhaul providers.

Purpose-built as an Ethernet access switch, the Vector Data 6910 efficiently delivers business services to the edge while providing broadband services and business Virtual Private Network (VPN) solutions. The Vector Data 6910 utilizes industry standards, enabling seamless deployment and interoperability within the network. It supports the full suite of Layer 2 features—including Ethernet Ring Protection (G.8032), Spanning Tree Protocols (STPs), Provider Bridging (PB), and IGMP snooping—as well as Layer 3 static routing for Internet connectivity.

High Reliability

The Vector Data 6910 helps provide a foundation for high reliability and continuous availability. It supports G.8032 Ethernet Ring Protection Switching—which enables the network to detect and recover from incidents without impacting users—and meets the most demanding quality and availability requirements.

Carrier-grade Ethernet services

- Up to 16,000 MAC addresses
- IEEE 802.1ad Provider Bridges
- IEEE 802.1ag Connectivity Fault Management
- ITU Y.1731 End-to-end performance measurement
- ITU-T Y.1731 Service Framework Comprehensive set of Layer 2 control protocols: RSTP, MSTP, and ITU G.8032
- MEF 9 and MEF 14 certification
- E-LINE (EPL and EVPL) and E-LAN

Product Highlights

- Provides a cost-efficient, compact switch design for space-constrained environments
- Enables service providers to economically deliver high-value Ethernet services
- Combines the low cost and high capacity of Ethernet switching with the reliability, management, and service quality needed for mission-critical applications
- Provides a state-of-the-art hardware design and field-proven operating system to help ensure high reliability and resiliency
- Enables managed services through remote Ethernet monitoring and management tools
- Reduces facilities costs and cooling requirements by being able to function in extreme temperature conditions

Support for link aggregation

- Up to 8 ports per LAG
- Link Aggregation Control Protocol (LACP)

Traffic Management

- Inbound and outbound two-rate three-color traffic policers
- Eight queues per port, each with a distinct priority level
- Multiple queue servicing disciplines: Strict Priority, Weighted Round Robin, and hybrid
- Egress-based shaping

Comprehensive hardware-based security and policies

- Hardware-based ACLs (both inbound and outbound)

Additional security capabilities

- Port-based network access control using 802.1x or MAC port security

Advanced monitoring capabilities

- Hardware-based sFlow sampling that allows extensive Layer 2-7 traffic monitoring for IPv4 and Carrier Ethernet services
- Flow support

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Features

Port density	12 10/100/1000 Base-T ports or 12 100/1000 Base-X ports
Forwarding performance	24 Gbps
Buffering	8 Mb
Power supply	Dual AC or DC (1+1 redundant)
Fan redundancy	Fanless

Dimensions

Height	44.5 mm (1.75 in)
Width	440 mm (17.3 in)
Depth	250 mm (9.8 in)

Redundancy

- Redundant, AC/DC power supplies (internal)
- Fanless design

Interface capabilities

- Jumbo frame support up to 9216 bytes
- IEEE 802.3ah Link OAM

Physical design and mounting

Rack mount	19-inch rack-mount supporting racks compliant with: • ANSI/EIA-310-D • ETS 300 119

Environmental

Temperature	Operating: - 20°C to 65°C (-4°F to 149°F) Non-operating: -25°C to 70°C (-13°F to 158°F)
Humidity	Relative: 5% to 90% at 40°C (104°F), non-condensing Non-operating: 95% maximum relative humidity, non-condensing

Electromagnetic emission

- ICES-003 Electromagnetic Emission
- FCC Class A
- EN 55022/CISPR-22 Class A/VCCI Class A
- AS/NZS 55022
- EN 61000-3-2 Power Line Harmonics
- EN 61000-3-3 Voltage Fluctuation and Flicker
- EN 61000-6-3 Emission Standard (Supersedes: EN 50081-1)

MEF specifications

- MEF 2 Requirements and Framework for Ethernet Service Protection
- MEF 4 Metro Ethernet Network Architecture Framework Part 1: Generic Framework
- MEF 6.1 Metro Ethernet Services Definitions Phase 2
- MEF 9 Abstract Test Suite for Ethernet Services at the UNI
- MEF 10.1 Ethernet Services Attributes Phase 2
- MEF 11 User Network Interface (UNI) Requirements and Framework
- MEF 12 Metro Ethernet Network Architecture Framework Part 2: Ethernet Services Layer
- MEF 13 User Network Interface (UNI) Type 1 Implementation Agreement
- MEF 14 Abstract Test Suite for Traffic Management Phase 1
- MEF 17 Service OAM Framework and Requirements (partial)

Immunity

- EN 61000-6-1 Generic Immunity and Susceptibility. This supersedes EN 50082-1.
- EN 55024 Immunity Characteristics. This supersedes:
  - EN 61000-4-2 ESD
  - EN 61000-4-3 Radiated, radio frequency, electromagnetic field
  - EN 61000-4-4 Electrical fast transient
  - EN 61000-4-5 Surge
  - EN 61000-4-6 Conducted disturbances induced by radio-frequency fields
  - EN 61000-4-8 Power frequency magnetic field
  - EN 61000-4-11 Voltage dips and sags

Safety agency approvals

- CAN/CSA-C22.2 No. 60950-1-3
- UL 60950-1
- IEC 60950-1
- EN 60950-1 Safety of Information Technology Equipment
- EN 60825-1 Safety of Laser Products—Part 1: Equipment Classification, Requirements and User's Guide
- EN 60825-2 Safety of Laser Products—Part 2: Safety of Optical Fibre Communication Systems

Environmental regulatory compliance

- EU 2002/95/EC RoHS
- EU 2002/96/EC WEEE

IEEE compliance

- IEEE 802.3 10Base-T
- IEEE 802.3u 100Base-TX, 100Base-FX, 100Base-LX
- IEEE 802.3z 1000Base-SX/LX
- IEEE 802.3ab 1000Base-T
- 802.3 CSMA/CD Access Method and Physical Layer Specifications
- 802.3x Flow Control
- 802.3ad Link Aggregation
- 802.1Q Virtual Bridged LANs
- 802.1D MAC Bridges
- 802.1w Rapid STP
- 802.1s Multiple Spanning Trees
- 802.1x Port-based Network Access Control
- 802.1ad Provider Bridges
- 802.1ag Connectivity Fault Management (CFM)

For more information, please contact your Vector Data account manager.