

Voltaire® Vantage™ 6024

Low Latency Layer 2/3 Switch



Scaling-Out Data Centers Using 10 Gigabit Ethernet

The Voltaire Vantage 6024 switch is a low latency, high performance Layer 2/3 top-of-rack switch optimized for enterprise data center and cloud computing environments. It features the industry's most power-efficient and lowest latency capabilities on 10 Gigabit Ethernet, enabling new levels of efficiency, scalability and real-time application performance, while at the same time consolidating multiple/redundant network tiers and significantly reducing infrastructure expenses.

With 24 ports of 10GbE line-rate connectivity and power consumption as low as 115 Watts (4.8 Watts/port), the Voltaire Vantage 6024 switch features an impressive Layer 2 and 3 protocol stack, enabling the most robust and advanced 10GbE fabric.

Low Latency L2/3 Enabling High Gains

With its low latency silicon core, the Voltaire Vantage 6024 enables the fastest Ethernet fabric, featuring less than 700 nanoseconds of port-to-port latency under a full load and with a wide range of transceivers. This in turn enables latency-sensitive applications and algorithms to perform at their best and stay ahead of the competition, eliminating the use of unnecessary buffers that add to the switching latency.

Enabling Managed Scalability

The Voltaire Vantage 6024 switch together with the Voltaire Vantage 8500 Layer 2 core switch creates a low latency, scalable, two-tier fabric of up to 3400 non-blocking 10GbE connected nodes. Voltaire Unified Fabric Manager™ (UFM™) software manages the fabric as a single entity, applying fabric-wide policies and configuration and monitoring the different traffic flows and elements to assure application scalability at any point in time.

Data Center Virtualization

The Voltaire Vantage 6024 uses Converged Enhanced Ethernet (CEE) technology to provide capabilities such as a lossless switching fabric, and supports Fibre Channel over Ethernet (FCoE) traffic, I/O virtualization, and fabric-wide congestion management and QoS. The switch is interoperable with standards-based 1GbE and 10GbE network adapter cards, and third-party management and virtualization solutions enabling a best-of-breed, cost effective data center fabric.

The Vantage 6024 also enables users to manage roaming virtual machine ports with their policies across the fabric. In conjunction with UFM, this management can be automated on a fabric-wide basis, enabling VM mobility without any human intervention in the fabric networking configuration.



- **High performance** with linear scalability and non-blocking 10GbE data center connectivity
- **High density, low power** 10GbE data center switch
- **Ultra-low latency** of 700 nanoseconds (port-to-port)
- **Support for virtual machines** with isolation and fabric-wide QoS per virtual machine
- Complies with IEEE **Data Center Bridging (DCB)** standards and FCoE
- **Seamlessly integrates** with Voltaire Vantage 8500

TECHNICAL SPECIFICATIONS

Voltaire Vantage 6024

- 24x SFP+ ports that operate at 10GbE or Gigabit speeds
- Port-to-port latency: 700 nanoseconds
- 480 Gb/s non-blocking switching throughput (full duplex)
- Redundant power and fan units

Management

- 2x10/100/1000 Ethernet RJ45 ports for Management
- 1 mini-USB console port for management
- SNMP v1, v2, v3
- RMON
- Dual NTP
- DHCP
- Telnet
- SSH V1, 2
- sFlow
- Port-based and ACL-based mirroring
- Web-based management interface
- Scriptable CLI

Security

- RADIUS
- TACACS+
- SCP
- Wire Speed Filtering: Allow and Deny
- HTTPS Secure BBI
- Secure Interface Login & Password
- MAC address move notification

Layer 2

- Up to 16K Unicast MAC addresses
- 1K VLANs
- Private VLAN
- Jumbo frames (9K)
- IGMP snooping v1, v2, v3
- LACP
- LLDP
- Port mirroring
- ACL based mirroring
- QoS 802.1p (including DSCP marking)
- 802.3x flow control
- Multiple Spanning Tree (802.1s)
- Rapid Spanning Tree (802.1w)
- PVRST+

Routing Protocols (Layer 3)

- RIP v2
- OSPF v2, v3
- BGP
- DHCP Relay
- VRRP
- IP PIM Sparse Mode
- IP PIM Dense Mode

DCB (Datacenter Bridging) Compliance

- L2 Multipathing
- Priority based flow control (PFC)
- Enhanced Transmission Selection (ETS)
- DCBX
- FIP Snooping (FCoE)

IEEE Compliance

- 802.1
- 802.3
- 802.3ae
- 802.3z
- 802.3ad LACP
- 802.3x Flow control
- 802.1Q VLAN
- 802.1p (QoS)
- 802.1d STP
- 802.1w RSTP
- 802.1s MSTP
- 802.1AB LLDP
- 802.3Qbb
- 802.3Qaz

Physical/ Electrical

- 24 10GbE ports SFP+ cages:
 - ▶ 10GBASE-SR (30m to 300m)
 - ▶ 10GBASE-LR (10Km)
- SFP+ Twinax cable (copper)
- Power supply redundancy
- Power consumption: 115W-168W
- Airflow: front-to-back
- Heat dissipation: 1100 BTU/hour maximum

Physical Characteristics

- 17.3" wide, 15" deep, 1 RU high
- Weight 6.40kg (14.08 lb)

Environmental

- Operating
 - ▶ Ambient temperature: 0° to 40° C
 - ▶ Humidity: 10 to 90%, non-condensing
 - ▶ Altitude: 0 to 10000 ft (3050m)

Ordering Options

Part Number	Product Description
Vantage 6024	
VLT-30057	6024 24-PORT 1/10GE SWITCH
SFP+ copper - DAC	
CBL-00239	ETH CABLE SFP+ (10GE) 1M 30AWG
CBL-00240	ETH CABLE SFP+ (10GE) 3M 28AWG
CBL-00242	ETH CABLE SFP+ (10GE) 5M 26AWG
CBL-00244	ETH CABLE SFP+ (10GE) 7M 24AWG
CBL-00245	ETH CABLE SFP+ (10GE) 10M 24AWG

Part Number	Product Description
SFP+ Optic Transceivers	
OPT-90003	6024 ETH SFP+ SR TRANSCEIVER (UP TO 300M)
OPT-90004	6024 ETH SFP+ LR TRANSCEIVER (UP TO 10KM)
OPT-90005	6024 ETH SFP SX TRANCEIVER
OPT-90006	6024 ETH SFP T Copper TRANSCEIVER
OPT-90007	6024 ETH SFP LX TRANSCEIVER