Dell PowerConnect 7000 Series

Dell™ PowerConnect™ 7000 Gigabit Ethernet switches are Layer 3 scalable entry-level Top-of-Rack and enterprise switches that give you the power and flexibility you need for today and the future, offering advanced switching capabilities including high-density, 10 Gigabit Ethernet uplinks, high-performance stacking, high redundancy and availability, scalable from the small business to the Datacenter Edge.

The PowerConnect 7000 series switches are designed to offer secure, fixed-port Gigabit Ethernet switching solutions which deliver full wire-speed switching performance. With 24 or 48 Gigabit Ethernet ports in a 1U form factor, the PowerConnect 7000 series has a total switching capacity of up to 224 Gbps to support demanding network environments. The switches also offer simple management and scalability via a 64Gbps high-availability stacking architecture that allows you to manage up to twelve switches from a single IP address, and share the upgradeable 10GbE ports across the stack for uplinks to the next layer in your network. The switches are designed with power-saving features including Energy Efficient Ethernet (IEEE 802.3az), which will reduce per port power consumption considerably when the link is idle, or if ports are inactive, as well as 80 PLUS certified power supplies and multi-speed fan operation, which together help decrease cooling and power costs.

High-performance and high availability for data centers and enterprise

The PowerConnect 7000 Ethernet Switch family is designed for entry-level ToR and enterprise applications where high performance, high availability, and energy efficiency are key requirements. Operating at wire speed, the 7000 switches deliver up to 160 Mpps throughput and a data rate of up to 224 Gbps (full duplex) for both Layer 2 and Layer 3 environments.

Your next deployment can be greatly simplified by utilizing high availability stacking and 10GbE capabilities of the 7000 family of switches. Up to 600 ports can be managed from a single screen using the highly-available stacking architecture, and the entire stack can be redundantly linked back to the rest of the network at 10Gb via the upgradeable stacking ports. The 7000 family can also stack with the Dell M6348 high density Ethernet blade, to enable seamless redundant availability and single IP management of an entire rack. Fast stack failover enables sub-50ms failover scenarios with the 7000 and/or M6348 within the same stack.

The 7048R model offers a data center friendly switch design with features such as high availability, redundant internal power supplies and fans (protecting the switch from a single power supply or fan failure), as well as configurable airflow. The 7048R supports back-to-front and front-to-back cooling (configured at factory), where front- and rear-facing configuration options ensure closer proximity to server ports, optimizing performance and keeping cable lengths short and manageable.

Robust security

Advanced security features of PowerConnect 7000 series switches help protect the network from accidental or malicious interference. Edge authentication using IEEE 802.1x provides a meaningful security solution which is centralized and easier to manage than standard ACLs, and the monitor mode of the switch allows for easier rollout of 802.1x in new environments. The PowerConnect 7000 series provides password management for increased network security, encrypted management traffic through SSL or SSH and secures SNMP access by filtering hosts based upon IP address. MAC-based port security is designed to prevent unauthorized MAC addresses from accessing the network. RADIUS and TACACS+ support enables centralized, remote authentication of administrative access to the switch.

Easy, powerful enterprise management

The switches also support rapid USB auto-configuration so you can rapidly deploy the switches in minutes without setting up complex TFTP configurations or sending technical staff to remote offices. The iSCSI Optimization feature also auto-detects EqualLogic iSCSI arrays and auto-configures the switch and tracks iSCSI sessions. The PowerConnect 7000 series switches can be managed via an industry-standard command line interface (CLI), embedded Web server, third party SNMP-based management console applications, Telnet, or serial connections.

Power Over Ethernet Plus (PoE+) support

The PowerConnect 7000 series PoE switches offer PoE+ (IEEE 802.3at), support for power-dependent client applications including WLAN Access Points (WAPs), Voice over IP (VoIP) handsets, video conferencing and badge reading. The 7024P and 7048P switches can provide up to 30.8 watts of power on all ports for network-attached devices on up to 24 ports simultaneously, with the MPS-1000 power module enabling up to 48 ports.

Lifetime Warranty*

Select PowerConnect switches are backed by an industry-leading, lifetime warranty which guarantees Basic Hardware Service (repair or replacement) for life.
Details at Dell.com/LifetimeWarranty*

Lifetime Warranty

Product	Dell™ PowerConnect™ 7024 & 7024P	Dell ™ PowerConnect ™ 7024F	Dell ™ PowerConnect ™ 7048, 7048P & 7048R
Port types	24 10/100/1000BASE-T auto-sensing Gigabit Ethernet switching ports; upgradeable 4x 10GbE/ stacking ports; 4 Combo (SFP or 10/100/1000) Gigabit Ethernet ports; 7024P: Supplies up to 30.8 watts per port (with optional external power supply) on all 24 ports	24 1000-SX or 1000-LX Gigabit Ethernet ports; 4 Combo (SFP or 10/100/1000) Gigabit Ethernet ports; Up to 4 10-Gigabit Ethernet Ports; Distances: 1000BASE-SX:Up to 500m 1000BASE-LX:Up to 2 km	48 10/100/1000BASE-T auto- sensing Gigabit Ethernet switching ports;Upgradeable 4x 10GbE / stacking ports, 4 Combo (SFP or 10/100/1000) Gigabit Ethernet ports; 7048P: Supplies up to 30.8 watts per port (with optional external power supply) on all 48 ports
Performance	Switch Fabric Capacity 176 Gb/s, Forwarding Rate 125 Mpps, Up to 32,000 MAC Addresses		Switch Fabric Capacity 224 Gb/s Forwarding Rate 160 Mpps Up to 32,000 MAC Addresses
Port configuration	Resilient stacking up to 12 systems (with optional module); Auto-negotiation for speed, duplex mode and flow control; Auto MDI/MDIX; Port mirroring; Flow-based port mirroring; Broadcast storm control, Energy Efficient Ethernet (IEEE802.3az) per port settings (1 & 10GbE ports), Port profiles-predefined macros to help automatically configure ports, Up to 12,000 Routes Supported		
Management	Web-based management interface, Industry-standard CLI accessible via Telnet, Out-of-Band Ethernet or Local Serial Port; SNMPv1, SNMPv2c and SNMPv3 supported; four RMON groups supported (history, statistics, alarms and events); TFTP transfers of firmware and configuration files; Dual firmware images on-board; Multiple configuration file upload/download supported; Statistics for error monitoring and performance optimization including port summary tables; BootP/DHCP IP address management supported; Syslog remote logging capabilities; LLDP-MED, SNTP, iSCSI Auto Configuration		
Quality of service	8 Priority Queues per Port, Layer 2 Trusted Mode (IEEE 802.1p tagging); Layer 3 Trusted Mode (DSCP); Layer 4 Trusted Mode (TCP/UDP); Advanced Mode using Layer 2/3/4 flow-based Policies, including metering/rate limiting, marking and bandwidth guarantees; up to 100 ACLs can be used for QoS flow identification via Class-maps; Adjustable Weighted-Round-Robin (WRR) and Strict Queue Scheduling; Port-based QoS Services Mode; Flow-based QoS Services Mode, IPv4 and IPv6 support		
Security	Switch access password protection, including strong password support, User-definable settings for enabling or disabling Web, SSH, Telnet, SSL management access; Port-based MAC Address alert and lock-down, IP Address filtering for management access via Telnet, HTTP, HTTPS/SSL, SSH and SNMP; RADIUS and TACACS+ remote authentication for switch management access; SSLv3 and SSHv2 encryption for switch management traffic; Management access filtering via Management Access Profiles; IEEE 802.1x-based edge authentication;802.1x monitor mode to aid in .1x troubleshooting, MAC and IP based ACLs, Time controlled ACLs, Dynamic ARP Inspection, Up to 100 Access Control Lists (ACLs) supported; Up to 1K rules per ACL, 8K rules total (7K Ingress rules, 1K Egress rules)		
VLAN	IEEE 802.1Q tagging and port-based, up to 1,000 user-configurable VLANs Protocol-based VLANs Dynamic VLANs with GVRP support		
Layer 2 multicast	IGMP v1/v2/v3 snooping IGMP snooping for IP multicast support IGMP Querier Static IP Multicast		
Other switching features	Link Aggregation with support for up to 72 link aggregation groups (LAGs) per switch and up to 8 member ports per LAG (IEEE 802.3ad) LACP support (IEEE 802.3ad) Port Mirroring Jumbo frame support up to 9K DHCP Server support, DHCP Snooping, DHCP Relay Link Layer Discovery Protocol supported (IEEE 802.1AB)		
Availability	External redundant power support with PowerConnect RPS-720 (sold separately), MPS-1000 (sold separately) Spanning Tree (IEEE 802.1D) and Rapid Spanning Tree (IEEE 802.1w) with Fast Link Support Multiple spanning trees (IEEE 802.1s) Spanning Tree optional features – STP root guard, BPDU guard, BPDU filtering Dual firmware images Configuration file upload and download (USB supported) Switch Auditing support sFlow Supports Virtual Redundant Routing Protocol (VRRP); Cable diagnostics; SFP/SFP+ transceiver diagnostics		
Layer 3 routing protocols	Static Routes; Routing Information Protocol (RIP) v1/v2; Open Shortest Path First (OSPF) v1/v2/v3; Classless Inter-Domain Routing (CIDR); Internet Control Message Protocol (ICMP); ICMP Router Discover Protocol (IRDP); Virtual Redundant Routing Protocol (VRRP); Address Resolution Protocol (ARP); Internet Group Management Protocol (IGMP) v2; Distance-Vector Multicast Routing Protocol (DVMRP)		
Chassis	* 440 x 460 x 44 mm (W x D x H) * 17.32 x 18.1 x 1.73 in (W x D x H) * 1U, rack-mounting kit included * Approximate weight: 6.35 kg / 14 lb (7024); 7.62 kg / 16.8 lb (7024P); 6.3 kg / 13.9 lb (7024F); 6.77 kg / 14.92 lb (7048); 8.1 kg / 17.86 lb (7048P); 9.75 kg / 21.49 lb (7048R)		
Environmental	Operating Temperature: 0° C to 45° C (0° F to 113° F), Storage Temperature: -20° C to 70° C (-4° F to 158° F)		
Power	Internal Power Supply Voltage AC 110/240 V +- 10% (50/60Hz) Power Consumption Max (Watts): 7024 (88W); 7024F (101.8W); 7024P (796W, all ports as PoE+); 7048 (114.3W); 7048R (122.7W); 7048P (930W, All ports as PoE+)		
Peripheral products	RPS-720 Redundant Power Supply (7024, 7024F, 7048), MPS-1000 (7024P, 7048P) 64Gbps Stacking /CX4 (10GbE) Module - Includes 0.3m Stacking Cable; Supports Dell stacking cables/CX-4 cables Uplink Module for dual SFP+ 10GbE Uplink Module for dual 10GBASE-T Dell SFP Transceivers (1000-SX and 1000-LX), Dell SFP+ Transceivers (SR, LR, LRM, Twin-ax)		

*Select PowerConnect products carry a Lifetime Limited Warranty with Basic Hardware Service (repair or replacement) for life. Repair or replacement does not include troubleshooting, configuration, or other advanced service provided by Dell ProSupport. For more details see dell.com/lifetimewarranty

Learn more at Dell.com/PowerConnect