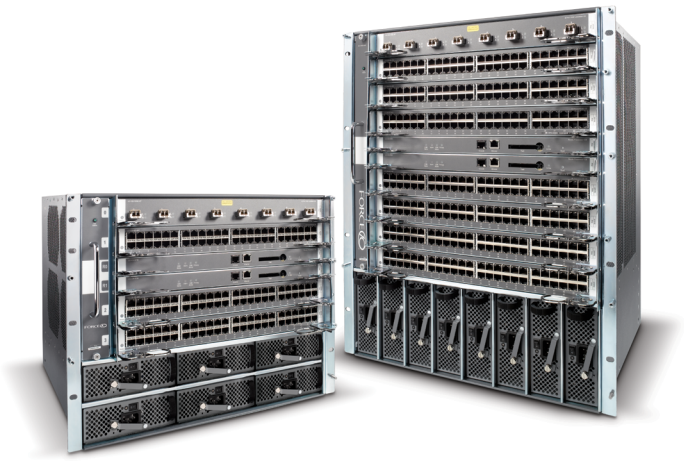

Dell Networking C-Series

C7004 and C7008 aggregation/core chassis switches

High-density, line-rate, non-blocking 1/10/40GbE switches, cost-effective PoE+ enabled GbE ports, modular Dell FTOS software for inherent stability, and in-service diagnostics and traffic visibility tools for increased network control.

C-Series resilient switches

The Dell C-Series resilient chassis-based switches deliver reliability, network control and scalability. The C-series is designed to support GbE and 10GbE switch aggregation for enterprise campus and business wiring closets, while also supporting 1/10GbE server aggregation and 10/40GbE core operations/campus connections for data centers. Comprehensive management capabilities make the C-Series a cost-effective and flexible deployment option.

Key applications

- High-density 1/10GbE aggregation into a multiple Gbps or 40GbE backbone
- Cost-effective, scalable PoE+ IEEE wiring closet aggregation of VoIP phones, wireless access points or other IEEE 802.3at-compliant devices
- Low-cost 100/1000Mbps server aggregation for small-to medium-sized data centers (100s to 1,000s of servers)
- Scalable GbE aggregation and 10GbE transport in a carrier's Middle Mile network to enable the deployment of triple play services

Key features

The Dell C-Series is designed to provide inherent reliability, network control and scalability for high-performance Ethernet environments.

- Up to 24 x 40GbE ports (9RU chassis) or 48 x 40GbE ports total (13RU chassis)
- Up to 320 line-rate 10/100/1000Base-T ports with full 30W Class 4 PoE+ support in a 13RU chassis
- Up to 64 line-rate, non-blocking 10GBase-T ports or 128 x 10GBase-T ports total in a 13RU chassis
- Full complement of standards-based layer 2, IPv4 and IPv6 features for unicast and multicast applications
- Can be deployed as either a L2 or L3 access switch with a extended capabilities, including PVST+, PBR, OSPF, ECMP and BGP
- Switch fabric capacity of up to 1.536Tbps and up to 952Mpps L2/L3 packet forwarding capacity
- High availability architecture
  - 1+1 Route Processor Module (RPM) design
  - Continuous runtime data plane monitoring and advanced in-service CLI diagnostic functions
  - Power supply redundancy with load sharing power bus enabling critical operations and uninterrupted VoIP calls during one or multiple power supply failures
- Suite of security, access control and wiring closet edge features for enterprise networks
- Intelligent power management features provide automatic sensing, provisioning and management of PoE power

Scalable, cost-effective aggregation chassis for enterprise campus and data center networks.

Specifications: C-Series Resilient Enterprise Switches

Dell SKU Description

C-Series chassis
C7004 4-slot chassis* with 3 AC power supplies
C7004 4-slot chassis* with 1 AC power supply
C7004 4-slot chassis* with 3 AC power supplies, & variable speed fan
C7004 4-slot chassis* with 1 AC power supply, & variable speed fan
C7008 8-slot chassis* with 4 AC power supplies
C7008 8-slot chassis* with 2 AC power supplies
C7008 8-slot chassis* with 4 AC power supplies, & variable speed fan
C7008 8-slot chassis* with 2 AC power supply, & variable speed fan
*Chassis includes backplane, switch and route processor module and fan subsystem.

Fans
C7004 enhanced fan subsystem
C7008 enhanced fan subsystem

Line cards
Switch Fabric and Route Processor Module
6-port 40 Gigabit Ethernet line card, QSFP+ modules required*
16-port 1/10 Gigabit Ethernet line card with RJ45 interfaces*
8-port 10 Gigabit Ethernet Line card SFP+ modules required
4-port 10 Gigabit Ethernet line card, XFP modules required
8-port 10 Gigabit Ethernet line card, XFP modules required
48-port Gigabit Ethernet line card, SFP modules required
48-port 10/100/1000Base-T line card with RJ45 interfaces
48-port 10/100/1000Base-T line card with RJ45 interfaces and PoE
48-port 10/100/1000Base-T line card with RJ45 interfaces and PoE+
FlexMedia line card - 36 10/100/1000Base-T RJ45 interfaces, eight GbE interfaces and two 10 GbE interfaces
– SFP modules required
– SFP+ modules required
FlexMedia line card with PoE - 36 10/100/1000Base-T RJ45 interfaces, eight GbE interfaces and two 10 GbE interfaces
– SFP modules required
– SFP+ modules required

Redundant power supply
1200 W AC Power Supply Module
1600 W AC Power Supply Module

For Optics/Transceivers and Cables reference, please refer to the respective line card in this spec sheet.
*available in 1H14

Chassis models

C7008 – 8 line card slots
2 Route processor module with integrated switch fabric slots
8 Power supply module slots and 1 fan tray slot
Size: 13 RU, 22.7 h x 17.4 w x 14.4" d (57.66 h x 44.2 w x 37.58 cm d)
Weight with factory-installed components: 55 lbs (24.95 kg)
Weight fully loaded: 152.27 lbs (69.07 kg)
ISO 7779 A-weighted sound pressure level: 73.8 dBA at 73.4°F (23°C)
1600W PSU:
Nominal input voltage: 100–240 VAC 50/60 Hz
Maximum thermal output:
9,235 BTU/h at 100/120 VAC, 9,299 BTU/h at 200/240 VAC
Maximum input current per module:
14 A at 100 VAC, 11 A at 120 VAC, 9 A at 200 VAC, 7 A at 240 VAC
Maximum system power input:
9,667 KVA at 100/120 VAC,12,596 KVA at 200/240 VAC
Maximum power consumption:
2,707 W at 100/120 VAC, 2,726 W at 200/240 VAC
1200W PSU:
Maximum thermal output:
8,055 BTU/h at 100/120 VAC, 7,420 BTU/h at 200/240 VAC
Maximum input current per module:
14 A at 100 VAC, 12 A at 120 VAC, 7 A at 200 VAC, 6 A at 240 VAC
Maximum system power input:
8,274 KVA at 100/120 VAC, 8,088 KVA at 200/240 VAC
Maximum power consumption:
2,361 W at 100/120 VAC, 2,175 W at 200/240 VAC

C7004 – 4 line card slots
2 Route processor module with integrated switch fabric slots
6 Power supply module slots and 1 fan tray slot
Size: 9 RU, 15.7 h x 17.5 w x 15.3" d (39.88 h x 44.45 w x 38.86 cm d)
Weight with factory-installed components: 38 lbs (17.24 kg)
Weight fully loaded: 86.63 lbs (39.29 kg)
ISO 7779 A-weighted sound pressure level: 69.3 dBA at 73.4°F (23°C)
1600W PSU:
Maximum thermal output:
5,618 BTU/h at 100/120 VAC, 5,304 BTU/h at 200/240 VAC
Maximum input current per module:
14 A at 100 VAC, 11 A at 120 VAC, 9 A at 200 VAC, 7 A at 240 VAC
Maximum system power input:
6,897 KVA at 100/120 VAC, 7,315 KVA at 200/240 VAC
Maximum power consumption:
1,647 W at 100/120 VAC, 1,555 W at 200/240 VAC
1200W PSU:
Maximum thermal output:
4,449 BTU/h at 100/120 VAC, 4,122 BTU/h at 200/240 VAC
Maximum input current per module:
14 A at 100 VAC, 11 A at 120 VAC, 7 A at 200 VAC, 6 A at 240 VAC
Maximum system power input:
4,261 KVA at 100/120 VAC, 4,165 KVA at 200/240 VAC
Maximum power consumption:
1,304 W at 100/120 VAC, 1,208 W at 200/240 VAC

Common attributes to both chassis
19" front rack mountable
Maximum operating specifications:
Temperature: 32° to 104°F (0° to 40°C)
Altitude: no performance degradation to 10,000 feet (3,048 meters)
Relative humidity: 5 to 85% (RH), non-condensing
Maximum non-operating specifications:
Temperature: -40° to 158°F (-40° to 70°C)
Maximum altitude: 15,000 feet (4,572 meters)
Relative humidity: 5 to 95% (RH), non-condensing

Redundancy/Availability
1+1 redundant Switch Fabric & Route Processor Modules (RPM)
Redundant power supplies/PSUs (**Note: all power supplies must be of the same type for switch operation**)
C7008:
3 PSU (redundant) or 2 PSU minimum for 100/120 VAC, using either 1600W or 1200W PSU
3 PSU (redundant) or 2 PSU minimum for 200/240 VAC, using 1200W PSU
2 PSU (redundant) or 1 PSU minimum for 200/240 VAC, using 1600W PSU
Up to 7+1 redundant PSUs supported
PoE+ operation requires 1600W PSU; PoE operation uses 1600W or 1200W PSU

C7004:
2 PSU (redundant) or 1 PSU minimum for 100/120 or 200/240VAC, using either 1600W or 1200W PSU
Up to 5+1 redundant PSUs supported
PoE+ operation requires 1600W PSU; PoE operation uses 1600W or 1200W PSU
Online insertion and removal of all components
Environmental self-monitoring

Performance

MAC addresses:	C7004: 256K, C7008: 512K
IPv4 routes:	12K
IPv6 routes:	6K
Switching fabric capacity:	C7004: 768 Gbps (476 Mpps) C7008: 1,536 Tbps (952 Mpps)
Link aggregation:	8 links per group, 128 groups per chassis
Queues per port:	4 queues
VLANs:	1024 VLANs with 4096 tag value support
Line-rate Layer 2 switching:	all protocols, including IPv4 and IPv6
Line-rate Layer 3 routing:	IPv4 and IPv6
LAG load balancing:	based on Layer 2, IPv4 or IPv6 headers
Switching latency:	<5 µs for 64 byte frames

IEEE Compliance

802.1AB	LLDP
802.1D	Bridging, STP
802.1p	L2 Prioritization
802.1Q	VLAN Tagging, Double VLAN Tagging, GVRP
802.1s	MSTP
802.1w	RSTP
802.1X	Network Access Control
802.3ab	Gigabit Ethernet (1000BASE-T)
802.3ac	Frame Extensions for VLAN Tagging
802.3ad	Link Aggregation with LACP
802.3ae	10 Gigabit Ethernet (10GBASE-X)
802.3af	Power over Ethernet
802.3ak	10 Gigabit Ethernet (10GBASE-CX4)
802.3at	Power over Ethernet Plus
802.3ba	40 Gigabit Ethernet on optical ports
802.3i	Ethernet (10BASE-T)
802.3u	Fast Ethernet (100BASE-FX, 100BASE-TX)
802.3x	Flow Control
802.3z	Gigabit Ethernet (1000BASE-X)
ANSI/TIA-1057	LLDP-MED
Force10	FRRP (Force10 Redundant Ring Protocol)
Force10	PVST+
MTU	9,252 bytes

RFC and I-D Compliance

General Internet Protocols

768	UDP	1350	TFTP
793	TCP	2474	Differentiated Services
854	Telnet	3164	Syslog
959	FTP	draft-ietf-bfd-base-03	BFD
1321	MD5		

General IPv4 Protocols

791	IPv4	1812	Routers
792	ICMP	1858	IP Fragment Filtering
826	ARP	2131	DHCP (server and relay)
1027	Proxy ARP	2338	VRRP
1035	DNS (client)	3021	31-bit Prefixes
1042	Ethernet Transmission	3046	DHCP Option 82
1191	Path MTU Discovery	3069	Private VLAN
1519	NTPv3	3128	Tiny Fragment Attack Protection
1542	CIDR		
1542	BOOTP (relay)		

General IPv6 Protocols

1981	Path MTU Discovery (partial)	2464	Ethernet Transmission
2460	IPv6		
2461	Neighbor Discovery (partial)	2675	Jumbograms
2462	Stateless Address Autoconfiguration	3587	Global Unicast Address Format
2463	ICMPv6	4291	Addressing

RIP

1058	RIPv1	2453	RIPv2

OSPF

1587	NSSA	3623	Graceful Restart
2328	OSPFv2	4222	Prioritization and Congestion Avoidance
2370	Opaque LSA		
2740	OSPFv3		

BGP

1997	Communities	2842	Capabilities
2385	MD5	2858	Multiprotocol Extensions
2439	Route Flap Damping	2918	Route Refresh
2545	Multiprotocol Extensions for IPv6	3065	Confederations
2796	Route Reflection	4360	Extended Communities
draft-ietf-idr-bgp4-20	BGPv4	4893	4-byte ASN
draft-ietf-idr-bgp4-20	Graceful Restart	5396	4-byte ASN Representation

Multicast

1112	IGMPv1	4541	IGMPv1/v2 Snooping
2236	IGMPv2	draft-ietf-pim-sm-v2-new-05	PIM-SM for IPv4
3376	IGMPv3		
3569	SSM for IPv4		

Network Management

1155	SMIv1	2863	Interfaces MIB
2385	MD5	2865	RADIUS
1156	Internet MIB	3273	RMON High Capacity MIB
1157	SNMPv1	3376	IGMPv3
1212	Concise MIB Definitions	3416	SNMPv2
1215	SNMP Traps	3418	SNMP MIB
1493	Bridges MIB	3434	RMON High Capacity Alarm MIB
1850	OSPFv2 MIB	3580	802.1X with RADIUS
1901	Community-based SNMPv2	5060	PIM MIB
2011	IP MIB	ANSI/TIA-1057	LLDP-MED MIB
2012	TCP MIB	draft-grant-tacacs-02	TACACS+
2013	UDP MIB	draft-ietf-idr-bgp4-mib-06	BGP MIBv1
2024	DLSw MIB	IEEE 802.1AB	LLDP MIB, LLDP DOT1 MIB, LLDP DOT3 MIB
2096	IP Forwarding Table MIB	ruzin-mstp-mib-02	MSTP MIB (traps)
2570	SNMPv3	sFlow.org	sFlowv5
2571	Management Frameworks	sFlow.org	sFlowv5 MIB (version 1.3)
2572	Message Processing and Dispatching	FORCE10-BGP4-V2-MIB	
2574	SNMPv3 USM	FORCE10-CS-CHASSIS-MIB	
2575	SNMPv3 VACM	FORCE10-IF-EXTENSION-MIB	
2576	Coexistence Between SNMPv1/v2/v3	FORCE10-LINKAGG-MIB	
2578	SMIv2	FORCE10-COPY-CONFIG-MIB	
2579	Textual Conventions for SMIv2	FORCE10-MON-MIB	
2580	Conformance Statements for SMIv2	FORCE10-PRODUCTS-MIB	
2618	RADIUS Authentication MIB	FORCE10-SMI	
2665	Ethernet-like Interfaces MIB	FORCE10-SYSTEM-COMPONENT-MIB	
2674	Extended Bridge MIB	FORCE10-TC-MIB	
2787	VRRP MIB	FORCE10-TRAP-ALARM-MIB	
2819	RMON MIB (groups 1, 2, 3, 9)		

Regulatory Compliance

Safety
UL/CSA 60950-1
EN 60950-1
IEC 60950-1, Including all National Deviations and Group Differences
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
FDA Regulation 21 CFR 1040.10 and 1040.11

Emissions
Australia/New Zealand: AS/NZS CISPR 22: Class A
Canada: ICES-003, Issue-4, Class A
Europe: EN 55022 (CISPR 22), Class A
Japan: VCCI Class A
USA: FCC CFR 47 Part 15, Subpart B, Class A

Immunity
EN 300 386: EMC for Network Equipment
EN 55024
EN 61000-3-2: Harmonic Current Emissions
EN 61000-3-3:Voltage Fluctuations and Flicker
EN 61000-4-2: ESD
EN 61000-4-3: Radiated Immunity
EN 61000-4-4: EFT
EN 61000-4-5: Surge
EN 61000-4-6: Low Frequency Conducted Immunity

RoHS
All C-Series components are EU RoHS compliant.

Certifications
TAA (Trade Agreement Act) compliant models also available

	Available 2014	Available 2014		
	Dell Networking C-Series 40 Gigabit Ethernet 6-port QSFP Line Card	**Dell Networking C-Series 16-port 1/10 Gigabit Ethernet 10GBase-T Line Card**	**Dell Networking C-Series 10 Gigabit Ethernet 8-port SFP+ Line Card**	**Dell Networking C-Series 10 Gigabit Ethernet 8-port XFP Line Card**
				
Description	The 6-port QSFP+ 40 Gigabit Ethernet line card enables future-ready communications and high density connectivity to data center and large scale enterprise aggregation. It also drives up to 48 40 Gigabit Ethernet ports per chassis for high performance, non-stop networking.	The 16-port 1/10 Gigabit Ethernet line card delivers purpose-built performance and higher density to enhance existing network deployments with cost-effective communications and uplink capability with existing Category 5 & 6 copper infrastructure. It also enables up to 128 10 Gigabit Ethernet ports per chassis for high performance, non-stop networking with lower TCO.	The 8-port SFP+ 10 Gigabit Ethernet line card delivers purpose-built performance to enhance existing infrastructure with high-density fiber communications. This line card provides cost-effective uplink capability with open-standards SFP+ operation coupled with lower TCO than XFP options. It also drives up to 64 line-rate, non-blocking 10 Gigabit Ethernet ports for high performance, non-stop networking.	The 8-port 10 GbE line card with pluggable XFP modules, supports distances of up to 80 km. This line card provides density of up to 64 line-rate, non-blocking 10 Gigabit Ethernet ports in a single chassis.
Key features	Maximum capability and connectivity upstream to data center and blade infrastructures Readily aggregates 1/10GbE Edge switches Up to 48 x 40GbE ports in a single chassis Breakout mode enables conversion 40G to 4x10GbE SFP+ ports for bandwidth sharing Per-port status and activity LEDs	Easily enable copper-based infrastructures with cost-effective RJ45 connections 16 10GbE/GbE interfaces per line card with autonegotiation and auto-MDI/MDIX Configure up to 128 10 GbE ports in a single chassis 5 microsecond switching latency under full load for 64 byte frames Per-port status and activity LEDs	Up to 64 10 GbE SFP+ ports in a single chassis with Line-rate, non-blocking performance Pluggable SFP+ modules providing support for SR, LR, ER as well as DAC support 5 microsecond switching latency under full load for 64 byte frames Per-port status and activity LEDs	Up to 64 10 GbE ports in a single chassis with Line-rate, non-blocking performance Pluggable XFP modules providing support for SR, LR, ER, ZR, DWDM and CX4 interfaces 5 microsecond switching latency under full load for 64 byte frames Per-port status and activity LEDs
Ports				
10/100/1000Base-T	none	16 RJ-45 (1000Base-T)	none	none
1GbE (Fiber)	none	none	none	none
10GbE	10GbE breakout mode, up to 24 SFP+ (cables sold separately)	16 RJ-45 (10GBase-T)	8 SFP+	8 XFP
40GbE	6	none	none	none
PoE/PoE+ ports	none	none	none	none
Optics & Cables (sold separately)	Transceiver, QSFP+, 40GbE SR Optics, 850nm Wavelength, 100-150m Reach on OM3/OM4 Transceiver, QSFP+, 40GbE eSR Optics, 850nm Wavelength, 300-400 Reach on OM3/OM4 Cable, 40GbE QSFP+, Direct Attach Cable, 0.5m, 1m, 3m, 5m Cable, 40GbE QSFP+ to 4xSFP+ Direct Attach Breakout Cable, 0.5m, 1m, 3m, 5m Cable, 40GbE MTP to 4xLC Optical Breakout Cable (optics not included), 1m, 3m, 5m, 7m MTP Fiber Cable (optics not included), OM3, 1m, 3m, 5m, 7m, 10m, 25m, 50m, 75m, 100m		Transceiver, SFP+, 10GbE, SR, 850nm Wavelength, 300m Reach Transceiver, SFP+, 10GbE, LR, 1310nm Wavelength, 10km Reach Tranceiver, 10GbE SFP+ LRM Optic, 1310nm Wavelength, 220m reach on MMF Transceiver, SFP+, 10GbE, ER, 1310nm Wavelength, 40km Reach Cable, SFP+ to SFP+, 10GbE, Copper Twinax Direct Attach Cable, 0.5m, 1m, 3m, 5m, 7m	Transceiver, Qualified SR/SW 10 GbE XFP optics module, LC connector Transceiver, Qualified LR/LW 10 GbE XFP optics module, LC connector Transceiver, Qualified ER/EW 10 GbE XFP optics module, LC connector Transceiver, Qualified ZR/ZW 10 GbE XFP optics module, LC connector Transceiver, Qualified DWDM 10 GbE XFP optics module, LC connector (100 GHz ITU grid, C-Band) Transceiver, Qualified CX4 10 GbE
IEEE Compliance	802.1AB LLDP 802.1D Bridging, STP 802.1p L2 Prioritization 802.1Q VLAN Tagging, Double VLAN Tagging 802.1X Network Access Control 802.3ac Frame Extensions for VLAN Tagging 802.3ae 10 Gigabit Ethernet (10GBase-X) 802.3ba 40 Gigabit Ethernet (40GBase-SR4, 40GBase-CR4, 40GBase-LR4) on optical ports 802.3x Flow Control 802.3z Gigabit Ethernet (1000Base-X) Dell Networking PVST+ MTU 9,252 bytes	802.1AB LLDP 802.1D Bridging, STP 802.1p L2 Prioritization 802.1Q VLAN Tagging, Double VLAN Tagging 802.1X Network Access Control 802.3ab Gigabit Ethernet (1000BASE-T) 802.3ac Frame Extensions for VLAN Tagging 802.3ae 10 Gigabit Ethernet (10GBase-X) 802.3x Flow Control 802.3z Gigabit Ethernet (1000Base-X) Dell Networking PVST+ MTU 9,252 bytes	802.1p L2 Prioritization 802.1Q VLAN Tagging, Double VLAN Tagging 802.3ac Frame Extensions for VLAN Tagging 802.3ae 10 Gigabit Ethernet 802.3x Flow Control MTU 9,252 bytes	802.1p L2 Prioritization 802.1Q VLAN Tagging, Double VLAN Tagging 802.3ac Frame Extensions for VLAN Tagging 802.3ae 10 Gigabit Ethernet 802.3ak 10 Gigabit Ethernet (10GBASE-CX4) 802.3x Flow Control MTU 9,252 bytes
Maximum Power consumption and thermal	128W (436 BTU/h)	170W (579 BTU/h)	120 W (409 BTU/h)	120 W (409 BTU/h)
Physical	Occupies a single slot in the Dell C7004/C7008 chassis Dimensions 1.75 h x 15.25 w x 13.75" d (4.45 h x 38.74 w x 34.93 cm d)			
	Weight: 6.37 lbs (2.89 kg)	Weight: 7.32 lbs (3.32 kg)	Weight: 5.31 lbs (2.41 kg)	Weight: 5.31 lbs (2.41 kg)
Max Operating Specifications	Operating Temperature: 32° to 104°F (0° to 40°C) Operating Altitude: No performance degradation to 10,000 ft (3,048m) Operating Humidity: Ambient to 90%		Operating Temperature: 32° to 104°F (0° to 40°C) Operating Altitude: No performance degradation to 10,000 ft (3,048 m) Operating Humidity: 5 to 85%, non-condensing	
Max Non-Operating Specifications	Operating Temperature: -40° to 149°F (-40° to 65°C) Operating Altitude: 39,370 ft (12,000 m) Operating Humidity: 20 to 90%		Operating Temperature: -40° to 158°F (-40° to 70°C) Operating Altitude: 15,000 ft (4,572 m) Operating Humidity: 5 to 95%, non-condensing	

	Dell Networking C-Series 10 Gigabit Ethernet 4-port XFP Line Card	Dell Networking C-Series 48-port 10/100/1000Base-T with PoE+ Card	Dell Networking C-Series FlexMedia Gigabit Ethernet and 10 Gigabit Ethernet Line Card	Dell Networking C-Series 48-port 10/100/1000Base-T with PoE Line Card
				
Description	The 4-port 10 GbE line card with pluggable XFP modules, supports distances of up to 80 km. This line card provides density of up to 32 line-rate, non-blocking 10 Gigabit Ethernet ports in a single chassis.	The 48-port 10/100/1000Base-T line card provides IEEE 802.3at PoE+ support. Using intelligent power management, each chassis can provide up to 30W of power per port while maintaining full system and PoE power supply redundancy. **Note: PoE+ operation requires usage of 1600W PSU**	The multi-port FlexMedia line card features 36 10/100/1000Base-T ports, eight Gigabit Ethernet SFP ports, and two 10 Gigabit Ethernet SFP+ ports. This line card provides flexibility for supporting applications that require a diverse set of Gigabit Ethernet and 10 Gigabit Ethernet interfaces in the same chassis. PoE capable line card also available.	The 48-port 10/100/1000Base-T line card provides IEEE 802.3af PoE support. Using intelligent power management, each chassis can provide up to 15.4 W of power per port, while maintaining full system and PoE power supply redundancy.
Key features	Up to 32 10 GbE ports in a single chassis with line-rate, non-blocking performance Pluggable XFP modules providing support for SR, LR, ER, ZR, DWDM and CX4 interfaces 5 microsecond switching latency under full load for 64 byte frames Per-port status and activity LEDs	Up to 384 (320 ports at full PoE+) 10/100/1000Base-T PoE/PoE+ ports in a single chassis with Line-rate, non-blocking performance Intelligent power management with PoE+ (IEEE 802.3at) support, provides Class 4 inline power of 30 watts per port Integrated Time Domain Reflectometer (TDR) to easily monitor and isolate faults on copper wiring infrastructure 5 microsecond switching latency under full load for 64 byte frames Per-port status and activity LEDs	Standard and PoE versions of the line card support wiring closet and data center applications 36 10/100/1000Base-T interfaces with autonegotiation and auto-MDI/MDIX Eight Gigabit Ethernet interfaces with pluggable SFP modules providing support for 100Base-FX, 1000Base-SX, 1000Base-LX, 1000Base-ZX and 1000Base-T Two 10 Gigabit Ethernet interfaces with pluggable SFP+ modules providing support for 10GBase-SR LR/ER Per-port status and activity LEDs	Up to 384 10/100/1000Base-T PoE ports in a single chassis with Line-rate, non-blocking performance Intelligent power management with PoE (IEEE 802.3af) support, provides Class 3 inline power of 15.4 watts per port Integrated Time Domain Reflectometer (TDR) to easily monitor and isolate faults on copper wiring infrastructure 5 microsecond switching latency under full load for 64 byte frames Per-port status and activity LEDs
Ports				
10/100/1000Base-T	none	48	36	48
1GbE (Fiber)	none	none	8 SFP	none
10GbE	4 XFP	none	2 SFP+	none
40GbE	none	none	none	none
PoE/PoE+ ports	none	48 PoE+	36 (PoE model)	48 PoE
Optics & Cables (sold separately)	Transceiver, Qualified SR/SW 10 GbE XFP optics module, LC connector Transceiver, Qualified LR/LW 10 GbE XFP optics module, LC connector Transceiver, Qualified ER/EW 10 GbE XFP optics module, LC connector Transceiver, Qualified ZR/ZW 10 GbE XFP optics module, LC connector Transceiver, Qualified DWDM 10 GbE XFP optics module, LC connector (100 GHz ITU grid, C-Band) Transceiver, Qualified CX4 10 GbE XFP module, CX4 connector		Transceiver, Qualified 100Base-FX Ethernet SFP optics module, LC connector Transceiver, Qualified SX GbE SFP optics module, LC connector Transceiver, Qualified LX GbE SFP optics module, LC connector Transceiver, Qualified ZX GbE SFP optics module, LC connector Transceiver, Qualified 1000Base-T GbE SFP module, RJ45 connector) Transceiver, SFP+, 10GbE, SR, 850nm Wavelength, 300m Reach Transceiver, SFP+, 10GbE, LR, 1310nm Wavelength, 10km Reac Transceiver, SFP+, 10GbE, ER, 1310nm Wavelength, 40km Reach Transceiver, Qualified 1000Base-T GbE SFP module, RJ45 connector)	
IEEE Compliance	802.1p L2 Prioritization 802.1Q VLAN Tagging, Double VLAN Tagging 802.3ac Frame Extensions for VLAN Tagging 802.3ae 10 Gigabit Ethernet 802.3ak 10 Gigabit Ethernet (10GBASE-CX4) 802.3x Flow Control MTU 9,252 bytes	802.1p L2 Prioritization 802.1Q VLAN Tagging, Double VLAN Tagging 802.3ab Gigabit Ethernet (1000BASE-T) 802.3ac Frame Extensions for VLAN Tagging 802.3at Power over Ethernet 802.3i Ethernet (10BASE-T) 802.3u Fast Ethernet (100BASE-TX) 802.3x Flow Control MTU 9,252 bytes	802.1p L2 Prioritization 802.1Q VLAN Tagging, Double VLAN Tagging 802.3ab Gigabit Ethernet (1000BASE-T) 802.3ac Frame Extensions for VLAN Tagging 802.3ae 10 Gigabit Ethernet) 802.3af Power over Ethernet 802.3i Ethernet (10BASE-T) 802.3u Fast Ethernet (100BASE-TX, 100BASE-FX) 802.3x Flow Control 802.3z Gigabit Ethernet (1000BASE-X) MTU 9,252 bytes	802.1p L2 Prioritization 802.1Q VLAN Tagging, Double VLAN Tagging 802.3ab Gigabit Ethernet (1000BASE-T) 802.3ac Frame Extensions for VLAN Tagging 802.3af Power over Ethernet 802.3i Ethernet (10BASE-T) 802.3u Fast Ethernet (100BASE-TX) 802.3x Flow Control MTU 9,252 bytes
Maximum Power consumption and thermal	120 W (409 BTU/h)	105 W (358 BTU/h)	120 W (409 BTU/h)	100 W (341 BTU/h)
Physical	Occupies a single slot in the Dell C7004/C7008 chassis Dimensions 1.75 h x 15.25 w x 13.75" d (4.45 h x 38.74 w x 34.93 cm d)			
	Weight 5.31 lbs (2.41 kg)	5.56 lbs (2.53 kg)	5.31 lbs (2.41 kg)	Weight 5.56 lbs (2.53 kg)
Max Operating Specifications	Operating Temperature: 32° to 104°F (0° to 40°C) Operating Altitude: No performance degradation to 10,000 ft (3,048 m) Operating Humidity: 5 to 85%, non-condensing			
Max Non-Operating Specifications	Operating Temperature: -40° to 158°F (-40° to 70°C) Operating Altitude: 15,000 ft (4,572 m) Operating Humidity: 5 to 95%, non-condensing			

	Dell Networking C-Series 48-port 10/100/1000Base-T Line Card	Dell Networking C-Series Gigabit Ethernet 48-port SFP Line Card
		
Description	The 48-port 10/100/1000Base-T line card provides high density networks with up to 384 line-rate, non-blocking 10/100/1000Base-T Ethernet ports in a single chassis.	The 48-port Gigabit Ethernet line card with pluggable SFP modules support distances up to 80 km over fiber, and pluggable 1000Base-T modules support distances up to 100 m over Cat5/6 UTP. 100Base-FX SFP modules support distances up to 2 km, providing a flexible solution for applications spanning the LAN, MAN, and WAN in mixed fiber/ copper and mixed speed installations.
Key features	Up to 384 10/100/1000Base-T ports in a single chassis with Line-rate, non-blocking performance Integrated Time Domain Reflectometer (TDR) to easily monitor and isolate faults on copper wiring infrastructure 5 microsecond switching latency under full load for 64 byte frames Per-port status and activity LEDs	Up to 384 line-rate, nonblocking Gigabit Ethernet ports in a single chassis Flexible solution for 100Base-FX, 1000Base-SX, 1000Base-LX, 1000Base-ZX and 1000Base-T applications 5 microsecond switching latency under full load for 64 byte frames Per-port status and activity LEDs
Ports		
10/100/1000Base-T	48	none
1GbE (Fiber)	none	48 SFP
10GbE	none	none
40GbE	none	none
PoE/PoE+ ports	none	none
Optics & Cables (sold separately)		Transceiver, Qualified 100Base-FX Ethernet SFP optics module, LC connector Transceiver, Qualified SX GbE SFP optics module, LC connector Transceiver, Qualified LX GbE SFP optics module, LC connector Transceiver, Qualified ZX GbE SFP optics module, LC connector Transceiver, Qualified 1000Base-T GbE SFP module, RJ45 connector)
IEEE Compliance	802.1p L2 Prioritization 802.1Q VLAN Tagging, Double VLAN Tagging 802.3ab Gigabit Ethernet (1000Base-T) 802.3ac Frame Extensions for VLAN Tagging 802.3i Ethernet (10Base-T) 802.3u Fast Ethernet (100Base-TX) 802.3x Flow Control MTU 9,252 bytes	802.1p L2 Prioritization 802.1Q VLAN Tagging, Double VLAN Tagging 802.3ab Gigabit Ethernet (1000Base-T) 802.3ac Frame Extensions for VLAN Tagging 802.3u Fast Ethernet (100Base-FX) 802.3x Flow Control 802.3z Gigabit Ethernet (1000Base-X) MTU 9,252 bytes
Maximum Power consumption and thermal	100 W (341 BTU/h)	130 W (444 BTU/h)
Physical	Occupies a single slot in the Dell C7004/C7008 chassis Dimensions 1.75 h x 15.25 w x 13.75" d (4.45 h x 38.74 w x 34.93 cm d	
	Weight 5.31 lbs (2.41 kg)	
Max Operating Specifications	Operating Temperature: 32° to 104°F (0° to 40°C) Operating Altitude: No performance degradation to 10,000 ft (3,048 m) Operating Humidity: 5 to 85%, non-condensing	
Max Non-Operating Specifications	Operating Temperature: -40° to 158°F (-40° to 70°C) Operating Altitude: 15,000 ft (4,572 m) Operating Humidity: 5 to 95%, non-condensing	

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