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Find the *Dell Networking / Force 10 CC-E1200I-2800W-AC* at our website: ***Click HERE***



Dell Networking E-Series

High-performance 1/10GbE chassis core systems

Operate a high-capacity virtualized network fabric at a low TCO, ensure the network is as agile and efficient as the virtualized server and storage components, and build long-term ROI and investment protection.

The next step in Ethernet technology

Dell Networking E-Series platforms are virtualized chassis-based switches that enable a new way of designing switching and routing infrastructures. E-Series architecture, patented backplane and ASIC technology are designed to increase network availability, agility and efficiency while reducing power and cooling costs. E-Series platforms support mission critical applications across converged fabrics in data center, telecommunication provider, service provider, enterprise and HPCC networks.

Dell Networking E-Series platforms, coupled with Dell FTOS, make a cost-effective and flexible deployment option complete with comprehensive management, automation and resource provisioning capabilities.

Key applications

- Virtualized data center and cloud computing networks with multiple switching or routing domains in local or geographically disparate environments
- High-capacity 1/10GbE switching/routing in high-performance layer 2, IP core or aggregation networks
- HPCC networks with non-blocking and deterministic N:N and N:1 management and storage I/O requirements

High-density, line-rate chassis switch enabling virtualized data centers and cloud networks.

Key features

- Up to 100Gbps of data capacity per slot (125Gbps/slot raw capacity)
- Up to 140 line-rate 10GbE ports in one half rack
- Switching fabric capacity of up to 3.5Tbps, and packet forwarding capacity of more than 2Bpps using hardware-based distributed forwarding engines
- VRF Lite manages, controls and secures multiple switching and routing domains on one physical platform
- Layer 2/3 provides switching for aggregation and core networks, with IPv4/v6 readiness
- High-performance RPM uses distributed control plane processing on three CPUs and provides 1+1 control plane redundancy with hitless forwarding
- Redundant switch fabric modules with graceful and deterministic failure recovery
- High availability hardware and software architecture with OIR (hot swap) of all components
- Stacking technology reduces TCO by consolidating the physical network and virtualizing boundaries
- FTOS software, built on NetBSD and a Unix-like kernel, running on the route processor modules (RPM) and line cards, enables new advances in control plane scalability and system reliability

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Specifications: E-Series virtualized high capacity switches

Ordering information

E600i AC Chassis Bundle: ExaScale
E1200i AC Chassis Bundle: ExaScale
E600i/E1200i Route Processor Module (RPM) (series EH)
E600i/E1200i Route Processor Module (RPM) (series EJ)
E-Series Switch Fabric Module 3 (SFM3)
E600i 2500/1500W AC Power Supply Module (PSM)
E1200i 2800W AC Power Supply Module (PSM)
10-port 10GbE Line Card: SFP+ Modules Required (series EH)
10-port 10GbE Line Card: SFP+ Modules Required (series EJ)
10-port 10GbE Line Card: XFP Modules Required (series EH)
10-port 10GbE Line Card: XFP Modules Required (series EJ)
40-port 10GbE Line Card: SFP+ Modules Required (series EH)
40-port 10GbE Line Card: SFP+ Modules Required (series EJ)
50-port GbE Line: SFP Modules Required (series EH)
50-port GbE Line: SFP Modules Required (series EJ)
90-port 10/100/1000Base-T Line Card with MRJ21 Interfaces (series EH)
90-port 10/100/1000Base-T Line Card with MRJ21 Interfaces (series EJ)

Optics
SR/SW 10GbE SFP+ Optics Module, LC Connector
LR/W 10GbE SFP+ Optics Module, LC Connector
SR 10GbEXFP Optics Module
LR 10GbE XFP Optics Module
ER 10GbE XFP Optics Module
ZR 10GbE XFP Optics Module
DWDM 10GbE XFP Optics Module
LX GbE Optics Module, LC Connector
SX GbE SFP Optics Module, LC Connector

FTOS software

E600i chassis (physical)

7 line card slots
Size: 16 RU, 28 x 17.4 x 21.45" (71.1 x 44.2 x 54.4 cm)
Weight (factory-installed components): 81 lbs (36.7 kg)
Weight fully loaded: 242 lbs (109.8 kg)
AC power
- Nominal input voltage: 120–240 VAC 50/60 Hz
- Maximum thermal output:
  - 12,734 BTU/h (3,732W) at 100/120 VAC
  - 11,677 BTU/h (3,423W) at 200/240 VAC
- Maximum input current per module:
  - 11.5A at 100 VAC, 9.6A at 120 VAC
  - 8A at 200 VAC, 6.7A at 240 VAC
- Maximum system power input:
  - 4.0 KVA at 100/120 VAC
  - 3.7 KVA at 200/240 VAC
- Maximum power consumption:
  - 3,982W at 100/120 VAC
  - 3,673W at 200/240 VAC

E1200i chassis (physical)

14 line card slots
Size: 24 RU, 42 x 17.4 x 22.25" (106.68 x 44.20 x 56.51 cm)
Weight (factory-installed components): 139 lbs (63.05 kg)
Weight fully loaded: 422 lbs (191.2 kg)
AC power
- Nominal input voltage:
  - 200240 VAC 50/60 Hz
- Maximum thermal output:
  - 22,804 BTU/h (6,684W)
- Maximum input current per module:
  - 14.6A at 200 VAC, 12.2A at 240 VAC
- Maximum system power input:
  - 7.0 KVA at 200/240 VAC
- Maximum power consumption:
  - 6,934W at 200/240 VAC

Specifications

Common

19" front, 19" middle (optional) and 23" middle
Maximum operating specifications
- Temperature: 32° to 104°F (0° to 40°C)
- Altitude: no degradation to 10,000 feet (3,048 m)
- Relative humidity: 5 to 85 percent, noncondensing

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%, noncondensing

Redundancy/Availability

E1200i

1+1 redundant RPMs
9+1 redundant SFMs
3+3 redundant AC power supply modules: 200/240 VAC

E600i

1+1 redundant RPMs
4:1 redundant SFMs
2+2 redundant AC PSMs: 200/240 VAC
3+1 redundant AC PSMs: 100/120 VAC and 200/240 VAC



E-Series RPM, Route Processor Module

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 10GbE (10GBase-W, 10GBase-X)
802.3i Ethernet (10Base-T)
802.3u Fast Ethernet (100Base-TX)
802.3x Flow Control
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 UD
793 TCP
854 Telnet
959 FTP
1321 MD5
1350 FTP
2474 Differentiated Services
2698 Two Rate Three Color Marker
3164 Syslog

General IPv4 protocols

791 IPv4
792 ICMP
826 ARP
1027 Proxy ARP
1035 DNS (client)
1042 Ethernet Transmission
1191 Path MTU Discovery
1305 NTPv3
1305 NTPv3
1519 CIDR
1542 BOOTP (relay)
1812 Routers
1858 IP Fragment Filtering
2131 DHCP (relay)
2338 VRRP
3021 31-bit Prefixes
3128 Tiny Fragment Attack Protection
3046 DHCP Relay Agent Information Option

General IPv6 protocols

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

RIP

1058 RIPv1
2453 RIPv2

OSPF

1587 NSSA
2154 MD5
2328 OSPFv2
2370 Opaque LSA
2740 OSPFv3
3623 Graceful Restart
4222 Prioritization and Congestion Avoidance

IS-IS

1142 IS-IS
1195 IPv4 Routing
2763 Dynamic Hostname
2966 Domain-Wide Prefixes
3373 Three-Way Handshake
3567 MD5
3784 Wide Metrics
5306 Restart Signaling for IS-IS
draft-ietf-isis-igp-p2p-over-lan-06 Point-to-Point Operation
draft-ietf-isis-ipv6-06 IPv6 Routing
draft-kaplan-isis-ext-eth-02 Extended Frame Size

BGP

1997 Communities
2385 MD5
2439 Route Flap Damping
2545 Multiprotocol Extensions for IPv6
2796 Route Reflection
2842 Capabilities
2858 Multiprotocol Extensions
2918 Route Refresh
3065 Confederations
4360 Extended Communities
4893 4-byte ASN
5396 4-byte ASN Representation
draft-ietf-idr-bgp4-20 BGPv4
draft-ietf-idr-restart-06 Graceful Restart

Multicast

1112 IGMPv1
2236 IGMPv2
2710 MLDv1
3376 IGMPv3
3569 SSM for IPv4/IPv6
3618 MSDP
3810 MLDv2
4541 IGMPv1/v2/v3, MLDv1 Snooping, MLDv2 Snooping
draft-ietf-pim-sm-v2-new-05
PIM-SM for IPv4/IPv6

Network management

1155 SMIv1
1156 Internet MIB
1157 SNMPv1
1212 Concise MIB Definitions
1215 SNMP Traps
1493 Bridges MIB
1724 RIPv2 MIB
1850 OSPFv2 MIB
1901 Community-Based SNMPv2
2011 IP MIB
2012 TCP MIB
2013 UDP MIB
2024 DLSw MIB
2096 IP Forwarding Table MIB
2570 SNMPv3
2571 Management Frameworks
2572 Message Processing and Dispatching



E-Series SFM3, Switch Fabric Module 3

2573 SNMPv3 USM
2575 SNMPv3 VACM
2576 Coexistence Between SNMPv1/v2/v3
2578 SMIv2
2579 Textual Conventions for SMIv2
2580 Conformance Statements for SMIv2
2618 RADIUS Authentication MIB
2665 Ethernet-Like Interfaces MIB
2674 Extended Bridge MIB
2787 VRRP MIB
2819 RMON MIB (groups 1,2,3,9)
2863 Interfaces MIB
2865 RADIUS
3273 RMON High Capacity MIB
3416 SNMPv2
3418 SNMP MIB
3434 RMON High Capacity Alarm MIB

Network management

3580 802.1X with RADIUS
3815 LDP MIB
5060 PIM MIB
ANSI/TIA-1057 LLDP-MED MIB
draft-grant-tacacs-02 TACACS+
draft-ietf-idr-bgp4-mib-06 BGP MIBv1
draft-ietf-isis-wg-mib-16 IS-IS MIB
IEEE 802.1AB LLDP MIB
IEEE 802.1AB LLDP DOT1 MIB
IEEE 802.1AB LLDP DOT3 MIB
ruzin-mstp-mib-02 MSTP MIB (traps)
sFlow.org sFlowv5
sFlow.org sFlowv5 MIB (version 1.3)
FORCE10-BGP4-V2-MIB
FORCE10-FIB-MIB
FORCE10-IF-EXTENSION-MIB
FORCE10-LINKAGG-MIB
FORCE10-CHASSIS-MIB
FORCE10-COPY-CONFIG-MIB
FORCE10-MON-MIB
FORCE10-PRODUCTS-MIB
FORCE10-SMI
FORCE10-SYSTEM-COMPONENT-MIB
FORCE10-TC-MIB
FORCE10-TRAP-ALARM-MIB

Regulatory compliance

Safety

UL/CSA 60950-1, 1st Edition
EN 60950-1, 1st Edition
IEC 60950-1, 1st Edition 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 Fiber Communication System
FDA Regulation 21 CFR 1040.10 and 1040.11

Emissions

Australia/New Zealand: AS/NZS CISPR 22: 2006, Class A
Canada: ICES-003, Issue-4, Class A
Europe: EN 55022: 2006 (CISPR 22: 2006), Class A
Japan: VCCI V3/2007.04 Class A
USA: FCC CFR 47 Part 15, Subpart B, Class A

Immunity

EN 300 386 V1.3.3: 2005 EMC for Network Equipment
EN 55024: 1998 + A1: 2001 + A2: 2003
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

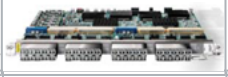
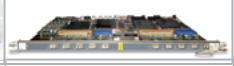
All E-Series components are EU RoHS compliant.

Comparison and configurations

Performance	E600i	E1200i
Configuration	ExaScale	ExaScale
Raw switching capacity	1.75Tbps	3.5Tbps
Slot capacity—half duplex (Gbps)	125	125
Forwarding capacity (Mpps)	1,042	2,083
Ports		
Line-rate 10/100/1000Base-T	630	1,260
Line-rate GbE (SFP)	350	700

Line card capabilities and applications	E-Series EH	E-Series EJ
Layer 2 switching	Yes	Yes
IPv4 routing	Aggregation, data center, LAN core	Backbone, peering, transit
IPv6 routing	Aggregation, data center, LAN core	Backbone, peering, transit

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	Dell Networking E Series 90-port high density 10/100/1000Base-T line card	Dell Networking E Series GbE 50-port SFP line card	Dell Networking E Series 40-port high density 10GbE SFP+/SFP line card	Dell Networking E Series 10-port 10GbE SFP+ line card	Dell Networking E Series 10-port 10GbE XFP line card
					
Description	The 90-port high density 10/100/1000Base-T line card for the Dell E-Series E600 and E1200 provides connectivity over Cat5 UTP copper for distances up to 100 meters. This line card provides high density of up to 1,260 GbE ports in a single chassis. Each line card slot supports 48Gbps of throughput or a density of up to 672 line-rate, non-blocking Gigabit Ethernet ports in a single chassis.	The 50-port GbE pluggable SFP module line card for the Dell E-Series E600i and E1200i is based on the third-generation ExaScale™ suite of packet processing and switching ASICs. This line card provides up to 700 line-rate GbE pluggable SFP ports in a single chassis. ExaScale uses patented backplane technology and advances in ASIC design to power the E-Series switch/routers with superior density, performance, reliability and eco-efficiency.	The 40-port 10GbE line card for the Dell E-Series E600 and E1200 ExaScale virtualized core switch/router provides support for up to 560 10GbE SFP+/SFP ports in a single half-rack E1200i chassis. This high density card enables the ExaScale switch/router to aggregate more 10GbE devices per card, leaving more chassis space available for future growth while allowing IT architects to reduce network complexity.	The 10-port 10GbE line card for the Dell E-Series E600i and E1200i is based on the third-generation ExaScale suite of packet processing and switching ASICs and provides up to 140 line-rate 10GbE SFP+ ports in a single chassis.	The 10-port 10GbE line card for the Dell E-Series E600i and E1200i is based on the third-generation ExaScale suite of packet processing and switching ASICs and provides up to 140 line-rate 10GbE XFP ports in a single chassis.
Key features	Fully functional switching and routing with up to 64K MACs, 256K IPv4 addresses or 192K/6K IPv4/IPv6 addresses per line card (using default CAM profiles) Wire-speed security features include up to 4K L2, 26K IPv4 and 8K IPv6 access control lists (ACLs) per line card (using default CAM profiles) Guaranteed packet delivery through virtual output queues minimizes latency and eliminates head-of-line blocking Per-port status and activity LEDs	Line-rate throughput for 64 to 9,252 byte Ethernet frames on all ports with all features enabled removes performance bottlenecks from the network Pluggable SFP modules support SX, LX and ZX interfaces Guaranteed packet delivery through virtual output queues minimizes latency and eliminates head-of-line blocking Per-port status and activity LEDs	Consistent throughput for 64 to 9,252 byte Ethernet frames on all ports with all features enabled Pluggable SFP+ modules support 10GbE SR, LR and ER interfaces Pluggable SFP modules support GbE SX, LX and ZX interfaces Provides 6MB per port dedicated input buffers to absorb temporary oversubscription Per-port status and activity LEDs	Line-rate throughput for 64 to 9,252 byte Ethernet frames on all ports with all features enabled removes performance bottlenecks from the network Line-rate and non-blocking scalability with predictable latency, 100Gbps/slot data capacity Per-port status and activity LEDs	Line-rate throughput for 64 to 9,252 byte Ethernet frames on all ports with all features enabled removes performance bottlenecks from the network Line-rate and non-blocking scalability with predictable latency, 100Gbps/slot data capacity Per-port status and activity LEDs
Ports					
10/100/1000Base-T	90 (MRJ21 interface)	none	none	none	none
1 GbE (Fiber)	none	50 (SFP)	40 (SFP)	none	none
10 GbE	none	none	40 (SFP+)	10 (SFP+)	10 (XFP)
Optics and cables (sold separately)	N/A	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, qualified SR/SW 10GbE SFP+ optics module, LC connector Transceiver, qualified LR/LW 10GbE SFP+ optics module, LC connector Transceiver, qualified ER/EW 10GbE 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 SR/SW 10GbE SFP+ optics module, LC connector Transceiver, qualified LR/LW 10GbE SFP+ optics module, LC connector	Transceiver, qualified SR/SW 10GbE XFP optics module, LC connector Transceiver, qualified LR/LW 10GbE XFP optics module, LC connector Transceiver, qualified ER/EW 10GbE XFP optics module, LC connector Transceiver, qualified ZR/ZW 10GbE XFP optics module, LC connector Transceiver, qualified DWDM 10GbE XFP optics module, LC connector (100 GHz ITU grid, C-Band) Transceiver, qualified CX4 10GbE XFP module, CX4 connector
IEEE compliance	802.1p L2 prioritization 802.1Q VLAN tagging, double VLAN tagging 802.3ab GbE (1000Base-T) 802.3ac frame extensions for VLAN tagging 802.3i Ethernet (10Base-T) 802.3u fast Ethernet (100Base-TX, 100Base-FX) 802.3x flow control MTU 9,252 bytes	802.1p L2 prioritization 802.1Q VLAN tagging, double VLAN tagging 802.3ab GbE (1000Base-T) 802.3ac frame extensions for VLAN tagging 802.3i Ethernet (10Base-T) 802.3u fast Ethernet (100Base-FX) 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 10GbE (10GBase-W, 10GBase-X) 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 10GbE (10GBase-W, 10GBase-X) 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 10GbE (10GBase-W, 10GBase-X) 802.3x flow control MTU 9,252 bytes
Maximum power consumption and thermal	320W (1092 BTU/h)	H: 235W (802 BTU/h) EJ: 245W (836 BTU/h)	EH: 475W (1,622 BTU/h) EJ: 500W (1,707 BTU/h)	EH: 300W (1,024 BTU/h) EJ: 325W (1,109 BTU/h)	EH: 300W (1,024 BTU/h) EJ: 325W (1,109 BTU/h)
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 90%, non-condensing				
Physical	Occupies a single slot in the Dell E600/E1200 chassis Maximum insertion force: 32.5 lbs (14.7 kg)				
	11 lbs (5 kg)	12.8 lbs (5.8 kg)	14.8 lbs (6.7 kg)	12.8 lbs (5.8 kg)	12.8 lbs (5.8 kg)
Dimensions	1.07 x 18.75 x 16.06" 2.7 x 47.6 x 40.79 cm	1.07 x 18.75 x 16.06" 2.7 x 47.6 x 40.79 cm	1.75 x 15.25 x 13.75" 4.45 x 38.74 x 34.93 cm	1.75 x 15.25 x 13.75" 4.45 x 38.74 x 34.93 cm	1.75 x 15.25 x 13.75" 4.45 x 38.74 x 34.93 cm

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