



DELL EMC SD-WAN SOLUTION POWERED BY VMWARE – EDGE 600 SERIES

Next generation Dell Technologies edge networking appliances factory-integrated with VMware Velocloud SD-WAN software for turnkey WAN modernization.

Dell EMC SD-WAN Solution powered by VMware combines next generation networking appliances from Dell Technologies with leading SD-WAN software from VMware. The Edge 600 hardware series is designed in a fixed form factor, with optional rack mount kit, using Intel® Atom® C-3000 x86-based processor which is optimized for value, lower power consumption and multiple core options. The Edge 600 is well suited for branch office and home locations, and complements the SD-WAN Edge 3000 series for core and data center use cases.

The Edge 600 series is part of the Dell EMC SD-WAN Solution powered by VMware, which delivers:

- **Simplicity & Agility** with a Dell Technologies hardware and VMware software in one solution for turnkey modernization
- **Performance & Efficiency** that boosts applications performance and can help reduce WAN costs by up to 75%
- **Scale & Trust** by backing your modernization with enterprise-class support, services, and supply chain capabilities all from a single trusted vendor – Dell Technologies

Purpose-built appliance for SD-WAN

The Edge 600 family features a fixed form factor perfect for the service provider edge or enterprise branch, where high-value, low power, compact form factor, and large number of configuration options are design considerations.

- High-value fixed form factor
- Compact desktop dimensions, with available kit for rack installations.
- Intel Atom C-3000 x86-based Denverton processor, designed for performance and low power consumption
- Processing from 2, 4, 8, or 16 core options offers more head-room to add VNFs
- Quick Assist Technology (QAT) to accelerate security encryption; and Data Plane Development Kit (DPDK) to accelerate packet processing (Excluding Edge 610)
- Memory from 4, 8, or 32GB options
- Storage from 120 or 240GB options
- WiFi comes standard
- Ports: 6X1G (standard), 2x 1GSFP (Edge 610) 2X10G SFP+ (Edge 620/640/680)

Future ready

This high value fixed form factor appliance is future ready to add WAN traffic without a forklift upgrade.

Validated choice

The SD-WAN Edge 600 brings you simplified deployment and maximum choice with validated hardware and software options.

- Multiple configurations offer choices in cores, storage, memory, and ports
- The Edge 600 has been validated with industry leading VMware SD-WAN software
- Widely available around the world: sold, serviced, supported and backed with Dell Technologies' s best-in-class supply chain
- Validation accelerates time to revenue; and reduces deployment risks.

Edge 600 series models

	SD-WAN Edge 610	SD-WAN Edge 620	SD-WAN Edge 640	SD-WAN Edge 680
CPU	Denverton 2 Core	Denverton 4 Core	Denverton 8 Core	Denverton 16 Core
Drive	16G eMMC Flash	M.2 120 SSD with 16G eMMC Flash	M.2 240 SSD with 16G eMMC Flash	M.2 240 SSD with 16G eMMC Flash
RAM	4G	8G	32G	32G
Ports	(6 x 1G) + (2 x 1G SFP)	(6 x 1G) + (2 x 10G SFP+)	(6 x 1G) + (2 x 10G SFP+)	(6 x 1G) + (2 x 10G SFP+)
Fan	None	1	2	2
WiFi & Bluetooth	802.11b/g/n/ac, 2x2 MIMO, 2.4/5 GHz, Bluetooth	802.11b/g/n/ac, 2x2 MIMO, 2.4/5 GHz, Bluetooth	802.11b/g/n/ac, 2x2 MIMO, 2.4/5 GHz, Bluetooth	802.11b/g/n/ac, 2x2 MIMO, 2.4/5 GHz, Bluetooth

Rear View



Performance and scale

	SD-WAN Edge 610	SD-WAN Edge 620	SD-WAN Edge 640	SD-WAN Edge 680
Max Recommend Subscription	350 Mbps	750 Mbps	1 Gbps	2 Gbps
Max throughput (1300 bytes)	350 Mbps	1.5 Gbps	3 Gbps	6 Gbps
Maximum Tunnel Scale	50	100	400	800
Max Flows per second	2,400	4,800	19,200	19,200
Maximum concurrent flows	240K	480K	1.9M	1.9M
Maximum routes	100K	100K	100K	100K
Maximum segments	16	16	16	16

Note: The Edge devices have a different throughput when a firewall VNF is actively service chained:

	SD-WAN Edge 610	SD-WAN Edge 620	SD-WAN Edge 640	SD-WAN Edge 680
3rd party VNF support	No	Yes	Yes	Yes
Max. throughput with FW VNF		100 Mbps	350 Mbps	500 Mbps

VMware Velocloud software features

Category	Features
AAA	RADIUS, local authentication and authorization, multitenant 3 Tier role-based access control (RBAC) architecture, auditing, roles and privileges
Availability	High availability for VMware SD-WAN Edge, disaster recovery for VMware SD-WAN Orchestrator, multilink for high availability of WAN, VMware SD-WAN Edge clustering
Configuration and monitoring	REST API, SDK (Java and Python), Syslog, SNMP, NetFlow, 3000+ applications/categories, ANPM, application usage, device identification, live mode, zero IT touch activation

Deployment flexibility	Eliminate pre-stage, no CLI, group policies, consolidated ICOM and end customer dashboard, VNF form-factor, multitenant stateless headend, transport group for business policy abstraction, application-aware service insertion on premises or in cloud, RMA workflow, customized application maps
DMPO	Application and network condition aware sub-second steering, jitter/loss correction, fast intelligent routing, intelligent gateway selection, link aggregation, TCP flow optimization, uni-directional link measurements, bandwidth detection
Multitenancy	VMware SD-WAN Controller, VMware SD-WAN Gateway, VMware SD-WAN Orchestrator
Network Services	IPv4, DNS, DHCP client, DHCP server, DHCP relay, NAT
QoS	Shaping, policing, per-flow queueing, tunnel shaper, multi-source inbound QoS, rate-limiter, COS aware, outer/inner DSCP tagging, smart defaults, MPLS COS
Remote Troubleshooting	Live mode, alerts, events, remote diagnostics (examples: DNS test, ping test, flush active flows, list active flows, paths, VPN tests, packet capture, etc.), PKI infrastructure with certificate management workflows, diagnostic bundles
Routing	OSPF, BGP, static, connected, ICMP probes/responders, overlay flow control, per-packet application aware steering, route filter, route redistribution
SaaS/IaaS	Improved performance for cloud apps, supports well-known IaaS (e.g., AWS, Azure, GCP), Cloud Web Security (e.g., Check Point, Zscaler, Palo Alto Networks, Netskope, Menlo Security, Websense, OpenDNS)
Security	AES256/128, SHA1/SHA2, IKEv2, VPNC compliant IPsec, PKI, segmentation, TLS1.2, SCEP, firewall L2-7, 1:1 NAT, port forwarding, dynamic branch to branch, MAC filtering security service Insertion capabilities: simplified service insertion of third-party NGFW VNF running locally on Edge simplified cloud-based NGFW, AV, IPS/IDS, threat-detection service insertion
VLAN Tagging	802.1Q, 802.1ad, QinQ (0x8100), QinQ (0x9100), native
WAN overlay support	Public/private/hybrid transport, cloud and on-premises

Technical Specifications

CPU		Intel Atom C-3000 Denverton (2, 4,8 and 16 core)
Networking ports	2 core	- 6 x 1G copper, 2 x 1G SFP
	4 core	- 6 x 1G copper, 2 x 10G SFP+
	8 core	- 6 x 1G copper, 2 x 10G SFP+
	16 core	- 6 x 1G copper, 2 x 10G SFP+
Management ports	Out-of-band management using micro-USB 2.0 console port.	
USB ports	2x USB 3.0 type A. One on each of the two sides.	
Console ports	Dedicated management console on Mini-USB (Edge 610) or micro-USB port	
Storage Option	One M.2 SATA SSD with capacity of 120GB or 240G based on SKU.	
Memory	Memory: DDR4 with ECC, on-board (by SKU) and on-board+SO-DIMM socket (by SKU) with size 4GB, 8GB, and 32GB. SKUs with 32GB have 16GB on-board and 16GB using SO-DIMM.	
Connectors	M.2 and mini-PCIe (These are internal connectors and modules plugged into these are NOT field upgradable. M.2 is for LTE and SSD. Mini-PCIe is for WiFi module.)	
TPM	2.0	
QAT	Yes (Except Edge 610)	
Power Supply	External	
Fans	Fanless for Edge 610, One fan in Edge 620. Two fans in Edge 640, 680.	
Airflow	Fan Inlet at the bottom, exhaust on sides and back	

Physicals		Inches	cm
Product	Width	8.1	20.8
	Depth	7.9	20.0
	Height	2.0	5.2
Shipping Box	Width	19.4	49.5
	Depth	11.3	28.7
	Height	4.3	10.9
Product Weight		2.87 lb (1.30 Kg) to 3.11 lb (1.41 Kg), depending on SKU	

Power	
Power Input	AC: 100 to 240 VAC, 50/60 Hz
Max current draw per system – AC	100VAC: 2.0A 240VAC: 1.0A
Power Consumption	Edge610- 16 W typical, 26 W Max Edge620- 20 W typical, 30 W max Edge640- 35 W typical, 45 W max Edge680- 40 W typical, 50 W max

Operations	
Operating Temperature	0°C to 40°C (32°F to 104°F)
Storage Temperature	-40°C to 70°C (-40°F to 158°F)
Operating Relative humidity	5% to 85% (RH), non-condensing Continuously 5% to 90% (RH), non-condensing Short term (< 1% of operational hour per year)
Storage Relative humidity	5% to 90% (RH)
Operating Altitude	Maximum operating altitude is 10,000 feet (3048m).

Regulatory and compliance certifications

Regulatory	
Safety	<ul style="list-style-type: none"> • UL/CSA 60950-1, Second Edition • EN 60950-1, Second Edition • IEC 60950-1, Second Edition Including all National Deviations and Group Differences • IEC 62368-1 • 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 Systems FDA Regulation • 21 CFR 1040.10 and 1040.11
Emissions	<ul style="list-style-type: none"> • Australia/New Zealand: AS/NZS CISPR 32, Class A • Canada: ICES-3/NMB-3, Class A • Europe: EN 55024 (CISPR 24), Class A • Japan: VCCI Class A • USA: FCC CFR 47 Part 15, Subpart B, Class A
Immunity	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • EN 50581:2012 All S9999 components are EU RoHS compliant.
Reliability	<ul style="list-style-type: none"> • Enterprise Operational Random Vibration – SV0105 • Enterprise Operational Half-Sine Shock – SV0107 • Enterprise Non-Operational Random Vibration – SV0102 • Enterprise Non-Operational Half-Sine Shock – SV0106 • Enterprise Non-Operational Square Wave Shock – SV0108 • Enterprise Rack and Stack Vibration Test – SV0114
Other	<ul style="list-style-type: none"> • Safety: IEC62368-1 • AS/NZS 60950 • EN 60950-1 Safety of Information Technology Equipment • EMC compliance • ICES-003 (Canada) Class A • EN55032:2015 (Europe) Class A • CISPR32 (International) Class A • AS/NZS CISPR32 (Australia and New Zealand) Class A • taiwanKN32 (Korea) Class A • CNS13438 (Taiwan) Class A • CISPR24 • EN300 386

[Learn more](#)

Dell EMC SD-WAN Solution powered by VMware enables turnkey modernization by combining Dell Technologies Edge networking appliances with VMware Velocloud software in one solution. Our product team is proud to bring you the Edge 600 series, designed exclusively to meet and exceed the demands for high-performance virtualized networking. The Edge 600 is designed with the value and performance, to host SD-WAN. We've partnered with Intel using the Atom C-3000 network optimized low power processor; and VMware SD-WAN provide a comprehensive solution.

For information, visit DellTechnologies.com/SD-WAN. . Contact your Dell Sales Representative for additional information and to discuss your next generation access requirements.