DELL EMC SD-WAN SOLUTION POWERED BY VMWARE – EDGE 510 LTE

Next generation Dell Technologies edge networking appliances factory-integrated with VMware 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 510 hardware is designed in a fixed form factor, with optional rack mount kit, using Intel® Atom® C-2300 x86-based processor which is optimized for value, lower power consumption and multiple core options. The Edge 510-LTE is well suited for branch office, home and remote locations that have an additional requirement of built-in LTE/Cellular connection. This platform complements the 600 and 3000 series that cover higher scale of performance.

The Edge 510 LTE 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 510 LTE features a fixed form factor perfect for the service provider edge or enterprise branch, where low power, compact form factor, and large number of configuration options are design considerations.

- Compact desktop dimensions, with available kit for rack installations.
- Intel Atom C-2358 x86-based Rangeley processor, designed for performance and low power consumption
- Quick Assist Technology (QAT) to accelerate security encryption; and Data Plane Development Kit (DPDK) to accelerate packet processing
- WiFi and LTE interface with two SIM slots comes standard
- Ports: 4X1G and 2 USB interfaces

Future ready

This appliance is future ready to add WAN connectivity over both wired and wireless access.

The SD-WAN Edge 510 LTE brings you simplified deployment and maximum choice software subscription options.

Edge 510 LTE model comparison to Edge 600

	SD-Wan Edge 510-LTE	SD-WAN Edge 610	SD-WAN Edge 620
CPU	Rangeley 2 Core	Denverton 2 Core	Denverton 4 Core
Drive	8G eMMC Flash	16G eMMC Flash	M.2 120 SSD with 16G eMMC Flash
RAM	4G	4G	8G
Ports	4x 1G	(6 x 1G) + (2 x 1G SFP)	(6 x 1G) + (2 x 10G SFP+)
Fan	None	None	1
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

Rear View

SD-WAN Edge 510 LTE Spec Sheet

Performance and scale

	SD-WAN Edge 510 LTE	SD-WAN Edge 610	SD-WAN Edge 620
Max Recommend Subscription	200 Mbps	350 Mbps	750 Mbps
Maximum Tunnel Scale	25	50	100
Max Flows per second	2,400	2,400	4,800
Maximum concurrent flows	240K	240K	480K
Maximum routes	100K	100K	100K
Maximum segments	16	16	16

VMware SD-WAN 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 C2358 SOC, 2 CORE, QAT, 7W, 1.7GHz
Networking ports	4 x 1G copper
Management ports	Out-of-band management using micro-USB 2.0 console port.
USB ports	2x USB 2.0 type A. One on each of the two sides.
Memory	Memory: DDR4 with ECC, on-board 4GB
TPM	1.2
WiFi	Integrated WiFi
LTE	Integrated LTE
QAT	Yes
Fans	Fanless
Airflow	Exhaust on sides and back

Dimensions, Power, Operations and Reliability	
Size (W x D X H) in mm	206 x 180 x 39.7 mm
Weight in lbs	2.0 lbs
Power Supply and AC input	External AC, 100v to 240v auto-ranging, Frequency: 50 Hz to 60 Hz
Power Load (Typical/Max)	15W/40W
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).
MTBF	40.6 yrs

Regulatory and compliance certifications

Regulatory	
Safety	- 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	- 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	- 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	EN 50581:2012 All S9999 components are EU RoHS compliant.
Reliability	- 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	- 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 SD-WAN 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.

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