



PRODUCT PORTFOLIO

The vEdge routers are available in the following models:

- 1 **vEdge-100:** 100Mbps AES-256 throughput, with 5 fixed 10/100/1000 Mbps ports (including 1 PoE, except on 100b model)
- 2 **vEdge-1000:** 1 Gbps AES-256 throughput, with 8 ports of fixed GE SFP
- 3 **vEdge-2000:** 10 Gbps AES-256 throughput, with 2 Pluggable Interface Modules

vEdge-100, vEdge-1000 and vEdge-2000 routers offer identical software functionality. The key differences between the platforms are in respect to throughput, redundancy in hardware components and port density. Some models of vEdge-100 routers offer additional functionality in the form of PoE, integrated GPS and integrated WiFi. Key hardware specifications for vEdge-100, vEdge-1000 and vEdge-2000 routers are listed in Table 1.

INTRODUCTION

The Viptela vEdge-100, vEdge-1000 and vEdge-2000 routers are hardware appliances that sit at the perimeter of a site, such as remote office, branch office, campus or a data center. They participate in establishing a secure virtual overlay network, Viptela Secure Extensible Network, over mix of any Wide Area Network transports. vEdge Routers provide essential features of routing, forwarding, security, encryption, QoS, policy and management.

Table 1: Key hardware specifications of the vEdge routers

| ITEM | vEdge-100 | vEdge-1000 | vEdge-2000 |
|---|----------------------------------|----------------------------------|---|
| Services and Slot Density | | | |
| Traffic ports | 5 x 10/100/1000 Mbps RJ-45 ports | 8 x 1 Gbps SFP | 4 x 1 Gbps SFP, 2 Pluggable Interface Module (PIM) slots. PIM Options: 2 x 10 Gbps SFP, 8 x 1 Gbps SFP |
| Embedded hardware-based crypto acceleration (IPSec) | Yes | Yes | Yes |
| Memory DDR3 ECC | 2 GB | 2 GB | 8 GB |
| SD card slot (external) | N/A | Maximum capacity supported 32 GB | Maximum capacity supported 32 GB |
| NAND storage (internal) | 4 GB | 8 GB | 8 GB |

| | | | |
|--|---|-------------------------------|---|
| External USB Host Port | 100b: N/A 100m: 1 (USB 3.0 Type A) | 2 (USB 3.0 Type A) | 2 (USB 3.0 Type A) |
| Power-over-Ethernet (PoE) | 100b: N/A 100m: 1 port, 15.4W (802.3af) | N/A | N/A |
| 4G LTE | 100b: N/A 100m: 1 Integrated | N/A | N/A |
| Global Positioning System (GPS) | Integrated with external antenna | N/A | N/A |
| USB console port | 1, Mini Type B (115.2 Kbps) | 1, Type B (115.2 Kbps) | 1, Type B (115.2 Kbps) |
| Serial console port | N/A | 1, RJ-45 (115.2 Kbps) | 1, RJ-45 (115.2 Kbps) |
| Management Ethernet port (RJ-45 10/100/1000Mbps) | N/A | 1, RJ-45 10/100/1000 | 1, RJ-45 10/100/1000 |
| Power supply option | 100b: External AC-DC power adapter 100m: Internal fixed AC power adapter | External AC-DC power adapter | Hot-swappable Power Supply Units (PSUs) |
| Redundant power supply support | N/A | Yes | 1+1 active-active redundancy |
| Fans | 100b: N/A (fanless) 100m: 1, fixed | 2 | 2, hot swappable |
| Power Specifications | | | |
| AC input voltage | 90-264 Vrms (100-240V) | 90-264 Vrms (100-240V) | 90-264 Vrms (100-240V) |
| AC input line frequency | 47-63 Hz | 47-63 Hz | 47-63 Hz |
| Typical power consumption | 100b: 15W 100m: 35W with PoE, 20W without PoE | 28W | 125W |
| Physical Specifications | | | |
| Rack height | 100b: 1 RU 100m: 1RU Plus | 1 RU | 1 RU |
| Chassis height | 100b: 1.75 in. (4.4 cm) 100m: 1.8 in. (4.6 cm) | 1.75 in. (4.4 cm) | 1.75 in. (4.4 cm) |
| Chassis width | 100b: 6.75 in. (17 cm) 100m: 9.25 in. (23.5 cm) | 7.5 in. (19 cm) | Chassis only: 17.25 in. (43.82 cm) Chassis with mounting brackets attached: 19 in. (48.2 cm) |
| Chassis depth | 100b: 5.5 in. (14 cm) 100m: 5.75 in. (14.6 cm) | 10 in. (25.4 cm) | 18.5 in. (47 cm) |
| Chassis weight | 1.75 lb (0.79 kg) | 3.55 lb (1.6 kg) | Chassis only: 11 lb (5 kg) Chassis with two power supplies installed: 15 lb (6.8 kg) |
| Airflow | 100b: N/A (fanless) 100m: Top | Front to back | Front to back |
| Rack-mount accessory kit 19 in (48.3 cm) EIA | 100b: Provided with the unit 100m: Available and sold separately | Available and sold separately | Provided with the unit |

| Packaging Specifications | | | |
|----------------------------------|--|--|--|
| Package height | 3.58 in. (9.09 cm) | 8.5 in. (21.6 cm) | 8.5 in. (21.6 cm) |
| Package width | 100b: 7.75 in. (19.68 cm) 100m: 10 in. (25.4 cm) | 11.75 in. (29.84 cm) | 22 in. (55.88 cm) |
| Package depth | 13 in. (33 cm) | 16.5 in. (41.9 cm) | 23.5 in. (59.7 cm) |
| Operating Condition | | | |
| Temperature | 0 to 40°C (32 to 104°F) at sea level (temperature de-rating of 1.5 deg C per 1000 feet of altitude applicable up to max of 10000 feet or 3000 m) | 0 to 40°C (32 to 104°F) at sea level (temperature de-rating of 1.5 deg C per 1000 feet of altitude applicable up to max of 10000 feet or 3000 m) | 0 to 40°C (32 to 104°F) at sea level (temperature de-rating of 1.5 deg C per 1000 feet of altitude applicable up to max of 10000 feet or 3000 m) |
| Altitude | Max 3000 m (10000 ft) | Max 3000 m (10000 ft) | Max 3000 m (10000 ft) |
| Humidity | 10 to 85% RH | 10 to 85% RH | 10 to 85% RH |
| Transportation/Storage Condition | | | |
| Temperature | -40 to 70°C (-40 to 158°F) | -40 to 70°C (-40 to 158°F) | -40 to 70°C (-40 to 158°F) |
| Humidity | 5 to 95%RH | 5 to 95%RH | 5 to 95%RH |
| Altitude | 4570 m (15000 ft) | 4570 m (15000 ft) | 4570 m (15000 ft) |
| Reliability | | | |
| MTBF | 104K hours | 80K hours | 420K hours |
| Regulatory Compliance | | | |
| SAFETY | AS/NZS 60950-1 | AS/NZS 60950-1 | AS/NZS 60950-1 |
| | CAN/CSA 60950-1 | CAN/CSA 60950-1 | CAN/CSA 60950-1 |
| | CB-IEC60950-1 | CB-IEC60950-1 | CB-IEC60950-1 |
| | CE Marking | CE Marking | CE Marking |
| | EN 60950-1 | EN 60950-1 | EN 60950-1 |
| | UL60950-1 | UL60950-1 | UL60950-1 |
| EMC | 100b: AS/NZS CISPR22 Class A 100m: AS/NZS CISPR22 Class B | AS/NZS CISPR22 Class A | AS/NZS CISPR22 Class A |
| | EN 300 386 | EN 300 386 | EN 300 386 |
| | 100b:EN 55022 Class A 100m: EN 55022 Class B | EN 55022 Class A | EN 55022 Class A |
| | 100b: FCC Class A 100m: FCC Class B | FCC Class A | FCC Class A |
| | 100b: ICES Class A 100m: ICES Class B | ICES Class A | ICES Class A |
| | 100b: VCCI Class A 100m: VCCI Class B | VCCI Class A | VCCI Class A |
| ENVIRONMENTAL | ROHS 6/6 | ROHS | ROHS |

Table 2 depicts key specifications for the 4G/LTE functionality on vEdge-100 platforms

Table 2: Key 4G/LTE specifications of the vEdge-100 routers

| ITEM | vEdge-100m |
|------------------------------------|---------------------------------------|
| Hardware Components | |
| LTE modem | Internal PCIe module |
| SIM card | 1, Mini SIM (2FF) |
| Antenna type | MIMO, Dipole swivel |
| Antenna connectors | 2, type F |
| Specifications and Features | |
| User equipment implementation | 3GPP, release 9 compliant |
| User equipment category | UE category 3 |
| Maximum data transfer rates | Downlink: 100 Mbps Uplink: 50 Mbps |
| Voice and SMS | No |
| Certifications | PTCRB, GCF |

Table 3 depicts 4G/LTE bands supported on vEdge-100 platforms

Table 3: 4G/LTE bands on vEdge-100 platforms

| Region | 100m-VZ | 100m-AT | 100m-NA | 100m-GB | 100m-NT |
|--------------------------------|--|--|---|--|---|
| LTE Bands | 4 (AWS 1700MHz/2100Hz), 13 (700MHz) | 2 (1900MHz), 4 (AWS 1700Hz/2100Hz), 5 (850MHz), 17 (700MHz) | 2 (1900MHz), 4 (AWS 1700MHz/2100MHz), 5 (850MHz), 13 (700MHz), 17 (700MHz), 25 (1900MHz) | 1 (2100MHz), 3 (1800MHz), 7 (2600MHz), 8 (900MHz), 20 (800MHz) | 1 (2100MHz), 19 (800MHz), 21 (1500MHz) |
| Australia | × | × | × | ✓ | × |
| Europe | × | × | × | ✓ | × |
| Middle East | × | × | × | ✓ | × |
| Latin America and Asia Pacific | × | × | × | ✓ | × |
| United States | Verizon | AT&T | ✓ | × | × |
| Canada | × | × | × | × | × |
| Japan | × | × | × | ✓ | NTT Docomo |

Table 4 depicts 2G and 3G bands supported on vEdge-100 platforms

Table 4: 2G and 3G bands on vEdge-100 platforms

| Technology | 100m-VZ | 100m-AT | 100m-NA | 100m-GB | 100m-NT |
|--|--|--|--|--|--|
| UMTS/HSPA+ | × | 2 (1900MHz), 4 (AWS1700/2100MHz), 5 (850MHz) | A1 (2100MHz), 2 (1900MHz), 4 (AWS 1700/2100MHz), 5 (850MHz), 8 (900MHz) | 1 (2100MHz), 2 (1900MHz), 5 (850MHz), 8 (900MHz) | 1(2100MHz), 5 (850MHz), 6 (800MHz), 19 (850MHz) |
| GPRS/EDGE | × | GSM 850 (850MHz), EGSM 900 (900MHz), DCS 1800 (1800MHz), PCS 1900 (1900MHz) | GSM 850 (850MHz), EGSM 900 (900MHz), DCS 1800 (1800MHz), PCS 1900 (1900MHz) | GSM 850 (850MHz), EGSM 900 (900MHz), DCS 1800 (1800MHz), PCS 1900 (1900MHz) | GSM 850 (850MHz), EGSM 900 (900MHz), DCS 1800 (1800MHz), PCS 1900 (1900MHz) |
| CDMA EVDO Release 0, EVDO Release A | BC0 (Cellular 800 MHz), BC1 (PCS 1900 MHz), BC10 (Secondary 800 MHz) | × | × | × | × |

2G and 3G support on 100m-VZ is pending

SOFTWARE CAPABILITIES

The vEdge routers leverage standards based features for the LAN (Service) and WAN (transport) side of the network. Key software capabilities of the vEdge-100, vEdge-1000 and vEdge-2000 routers are listed in Table 5.

Table 5: Key software capabilities of the vEdge routers

| CATEGORY | FEATURES |
|------------------------------|--|
| AAA | TACACS+, RADIUS, local, Role Based Access Control |
| Routing | OSPF, eBGP, iBGP, static, connected, OMP |
| Bridging | 802.1Q, native VLAN, bridge domains, IRB, host-mode bridging |
| Security | Zero-trust, whitelisting, Tamper Proof Module, DTLS/TLS, IPSec, ESP-256-CBC, AH, HMAC-SHA1, DDOS protection, control plane protection, NAT traversal |
| Forwarding and QoS | Classification, prioritization, low latency queuing, remarking, shaping, scheduling, policing, mirroring, NAT/PAT |
| Multicast | IGMP v1/v2, PIM, Auto-RP, scale-out traffic replication |
| Policy | Route policies, App Aware Routing, control policy, data policy, ACL policy, VPN membership policy, service advertisement and insertion policy |
| Location Services | Geo-location (vEdge-100m) |
| Cellular | Integrated 4G/LTE modem (vEdge 100m), circuit of last resort |
| Mobility | WiFi 802.11 a/b/g/n/ac, WPA2- Enterprise, WPA2-Personal, MAC Filtering, 8 SSIDs per-radio, 802.11i security enhancement and 802.11e QoS, wireless intrusion detection and protection |
| System and Network Services | IPv4, SNMP, NTP, DNS client, DHCP client, DHCP server, DHCP relay, config archival, Syslog, SSH, SCP, NAT/PAT, Cflowd v10 IPFIX export |
| Configuration and Monitoring | Netconf over SSH, CLI, REST (vManage), Linux shell |
| Out-of-band Management | Management port (vEdge-1000, vEdge-2000), Serial console port (vEdge-1000, vEdge-2000), USB console port |

ORDERING INFORMATION

Ordering information for vEdge-100, vEdge-1000 and vEdge-2000 routers is listed in Table 6.

Table 6: Ordering information for vEdge routers

| SKU | SKU DESCRIPTION |
|-----------------|--|
| vEdge-100b-AC | vEdge-100 AC chassis with 5 Ethernet ports, rack mount kit and cables |
| vEdge-100m-AC | vEdge-100 AC chassis with single 4G/LTE SIM, integrated power supply, 5 Ethernet ports and cables |
| vEdge-1000-AC | vEdge-1000 AC base chassis with 8x1GE fixed ports, dual AC power adapters and cables |
| vEdge-2000-AC | vEdge-2000 AC base chassis with 4x1GE fixed ports and dual Pluggable Interface Module slots, dual AC power supplies, rack mount kit and cables |
| PIM-8x1GE-SFP | 8x 1GE SFP Pluggable Interface Module for vEdge-2000 |
| PIM-2x10GE-SFP+ | 2x 10GE SFP Pluggable Interface Module for vEdge-2000 |



FOR MORE INFORMATION ON THE VIPTELA SOLUTION AND HOW IT CAN HELP YOUR NETWORK, PLEASE CONTACT SALES@VIPTELA.COM



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