DELL 1405 Series EMC Networking Virtual Edge Platform User Guide

Contents

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Notes, cautions, and warnings

- **NOTE:** A NOTE indicates important information that helps you make better use of your product.
- **CAUTION:** A CAUTION indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.
- **WARNING:** A WARNING indicates a potential for property damage, personal injury, or death.

About this Guide

This guide provides site preparation recommendations, step-by-step procedures for rack and desk mounting, inserting modules, and connecting to a power source for the Dell EMC Networking Virtual Edge Platform (VEP) 1405 series of systems.

- **CAUTION:** To avoid electrostatic discharge (ESD) damage, wear grounding wrist straps when handling this equipment.
- **WARNING:** Only trained and qualified personnel can install this equipment. Read this guide before you install and power up this equipment. This equipment contains one power cable. Disconnect the power cable before servicing.
- **WARNING:** This equipment supports optical transceivers, which comply with the limits of Class 1 laser radiation.

Figure 1. Class 1 laser product tag

WARNING: When the SFP transceiver is plugged in and a cable is not connected, visible and invisible laser radiation may be emitted from the aperture of the optical transceiver ports. Avoid exposure to laser radiation, and do not stare into open apertures.

Table 1. Regulatory compliance information for the VEP1405 series of systems

Marketing model number	Regulatory model number	Regulatory type number	Remarks
VEP1425/VEP1425N	E42W	E42W001	4-core, 120G SSD
VEP1445/VEP1445N	E42W	E42W001	8-core, 240G/960G SSD
VEP1485/VEP1485N	E42W	E42W001	16-core, 240G/2TB SSD

NOTE: The VEP1425N, VEP1445N, and VEP1485N system models do not include wireless or Bluetooth capabilities.

Related documents
For information about the Virtual Edge Platform 1405 (VEP1405) series of systems, see the following documents:

- Dell EMC Networking Virtual Edge Platform (VEP) 1405 Series Operating System Installation Guide
- Dell EMC Networking Virtual Edge Platform (VEP) 1405 Series Diag OS and Tools Release Notes
- Dell EMC Networking Virtual Edge Platform (VEP) 1405 Series Technology Guide

  NOTE: For the most recent documentation, see the support site: **https://www.dell.com/support**.

Information symbols
This book uses the following information symbols:

- **NOTE:** The Note icon signals important operational information.
- **CAUTION:** The Caution icon signals information about situations that could result in equipment damage or loss of data.
- **NOTE:** The Warning icon signals information about hardware handling that could result in injury.
- **NOTE:** The ESD Warning icon requires that you take electrostatic precautions when handling the device.

Site Preparations

The Virtual Edge Platform 1405 series of systems, or VEP1405, are a universal customer premise equipment (uCPE) devices. The VEP1405 series connects the service provider edge or small to medium branch locations to the cloud, to host virtual network functions.
For more information about VEP1405 series specifications, see the Chassis physical design section.

Site selection
Ensure that the area where you install your platform meets the following safety requirements:

- Near an adequate power source
- Connected to a properly grounded power outlet

  WARNING: The VEP1405 series of systems AC power cord must be connected to a socket outlet that has properly wired earth ground.

- Environmental—platform location—continuous temperature range is 0–40°C (32–104°F)
- Operating humidity:
  - 5% to 85% (RH), noncondensing continuously
  - 5% to 90% (RH), noncondensing Short term (< 1% of operational hour per year)
- In a dry, clean, well-ventilated, and temperature-controlled room, away from heat sources such as hot air vents or direct sunlight
- Away from sources of severe electromagnetic noise
- In a location that enables the VEP1405 series of systems to be out of direct view within the workplace

For more information about platform storage and environmental temperatures, see Specifications.

Chassis mounting
The VEP1405 series supports the following mounting options:

- Desktop placement (rubber feet)
- Wall mount placement
- Rack-mounted using the optional rack mount tray

Desktop placement
The VEP1405 series includes four rubber feet that provide secure and stable placement of the unit on a flat surface.

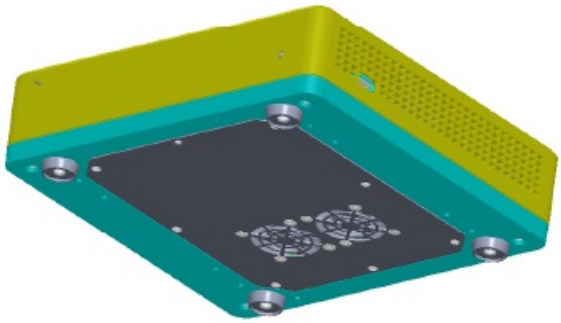


Figure 2. VEP1405 series desktop placement

Wall mount installation
The VEP1405 series includes the hardware that is required for wall mount installation. Using a torque screwdriver, affix the wall mount brackets to the VEP1405 series using the four M3 screws included.

NOTE: When driving the screws into the bracket and VEP1405 series unit, verify that 5 lb-in is the achieved torque setting.
NOTE: If mounting the VEP1405 series to the wall using the wall mount bracket provided, removal of the rubber feet from the bottom of the VEP1405 series unit is not necessary.

The VEP1405 series of systems include a wall mount bracket with cross-shaped cutout for the mounting screws.
The wall mount bracket includes cross-shaped cutouts for the mounting screws.
Wall mount bracket with cross-shaped cutout for the mounting screws

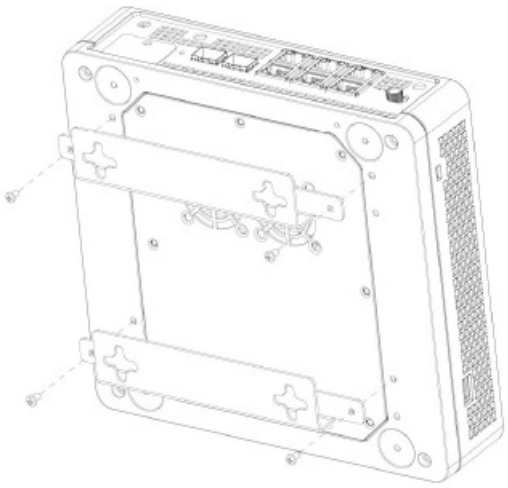


Figure 3. VEP1405 series wall mount installation – cross-shaped cutout

To mount the VEP1405 series unit to the wall using the wall mount bracket provided, you must first anchor the screws into the wall surface. Depending on the type of wall surface, use the M3 screw and anchor to ensure a secure installation. The recommended M3 screw dimensions are as follows:

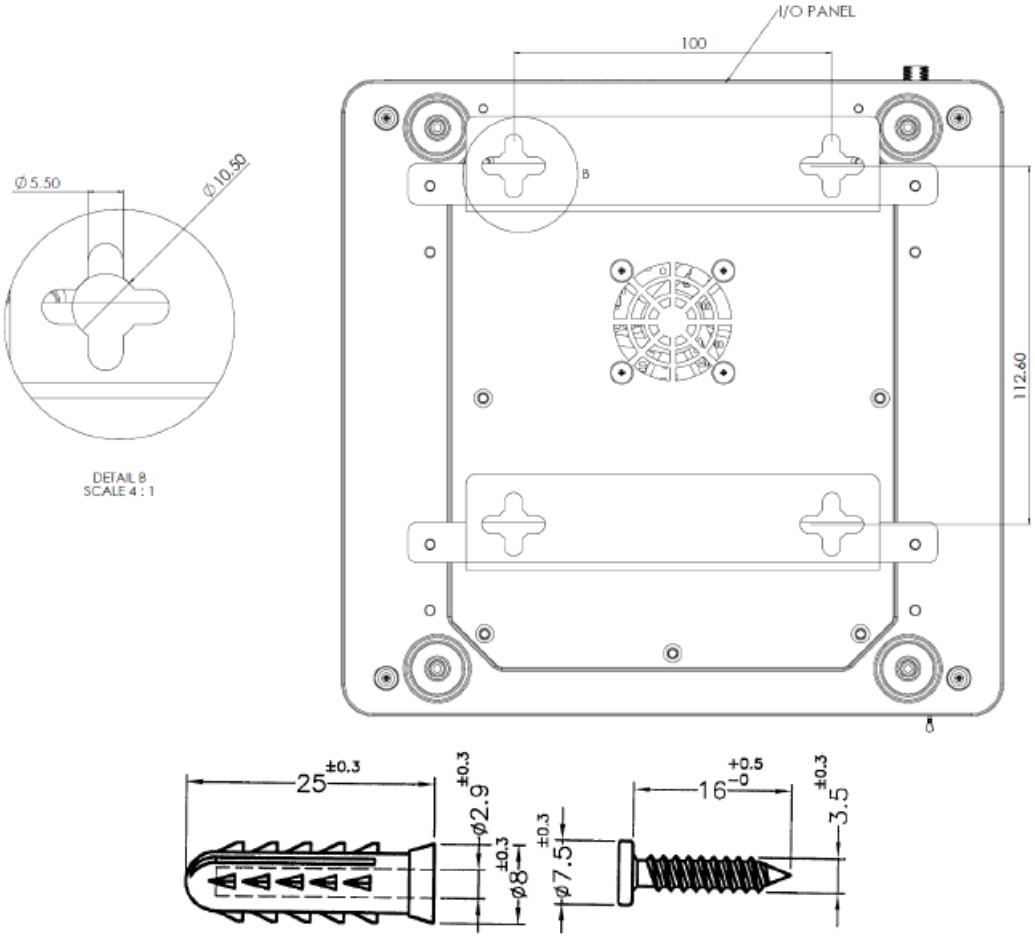


Figure 4. VEP1405 series wall mount, installation anchor, and screw dimensions

NOTE: Before mounting the VEP1405 series to the wall, verify that the wall surface is strong enough to support a firm installation of the unit and can withstand the weight of the unit, power cable, and network cabling.

Using the measurements provided in the following diagram, use the measurement in the red box to mark the distance between the two installation points:

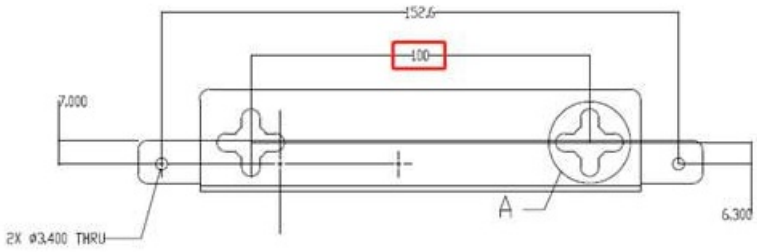


Figure 5. VEP1405 series M3 screw installation points
After the brackets have been attached to the VEP1405 series unit and the screws that are mounted into the wall, place the brackets over the screws and slide the unit to one side to secure the unit in place.

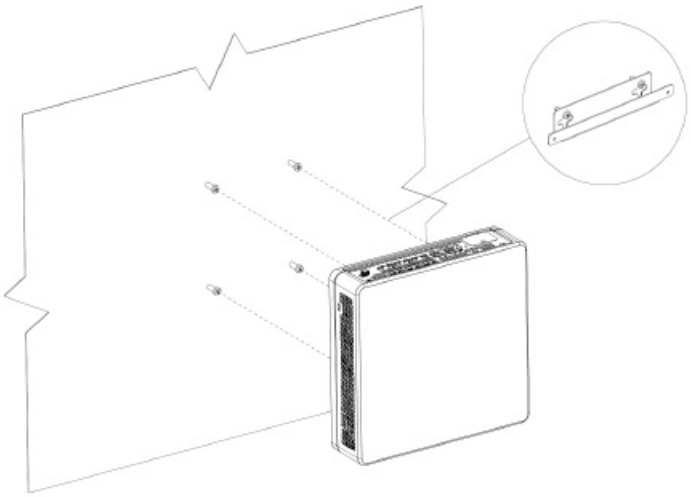


Figure 6. VEP1405 series wall mount bracket installation – cross-shaped cutout

Rack-mounted installation
As an option, the VEP1405 series can be mounted to a dual rack mount tray. Purchased separately, you can install the VEP1405 series to the dual rack mount tray using a torque screwdriver and the eight M3 screws included.

NOTE: When driving the screws into the bracket and VEP1405 series unit, verify that 5 lb-in is the achieved torque setting.
NOTE: If mounting the VEP1405 series to a dual rack mount tray, removal of the rubber feet from the bottom of the VEP1405 series unit is not necessary.

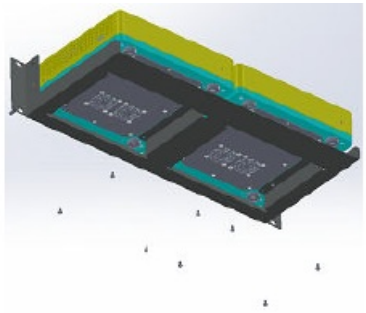


Figure 7. VEP1405 series rack mount installation

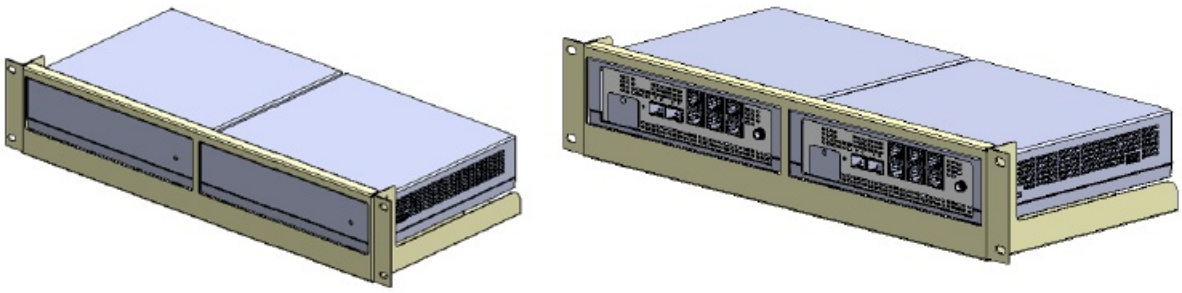


Figure 8. VEP1405 series rack installation – front and back view

Fans and airflow
Fan installation is done as part of the factory install and is based on the stock keeping unit (SKU) type. The VEP1405 series of systems support a DC fan unit with fan airflow starting from the bottom of the unit:

- Four core unit with single fan
- Eight core unit with two fans
- Sixteen core unit with two fans

  Position the unit in a well ventilated environment with clearance around the exhaust vents. The fan speed varies based on internal temperature monitoring. The platform never intentionally turns off the fans.

  CAUTION: The fans are not field-replaceable.

  CAUTION: For thermal considerations, do not stack the VEP1405 series platforms on top of each other. Do not place the external power supply on top of the VEP1405 series unit. Stacking the units or placing the power supply on top of a unit impairs cooling.

Power
Connect the platform to the applicable power source using the appropriate power cable. The VEP1405 series of systems ship with one external AC/DC power supply and one AC power cable.
When installing AC platforms, follow the requirements of the National Electrical Code ANSI/NFPA 70, where applicable.
The platform is powered-up when the power cable is connected between the platform and the power source.
CAUTION: Before servicing, ensure that the power cable is disconnected.
CAUTION: Use the power supply cable as the main disconnect device. Ensure that the socket-outlet is located near the equipment and is accessible.

Storing components
If you do not install the VEP1405 series unit and components immediately, properly store the platform and all optional components following these guidelines:

- The storage temperature range is from -40°C to 70°C (-40°F to 158°F) with humidity at 5% to 90% noncondensing
- Store on a dry surface or floor, away from direct sunlight, heat, and air conditioning ducts
- Store in a dust-free environment

NOTE: ESD damage can occur when components are mishandled. Always wear an ESD-preventive wrist or heel ground strap when handling the platform and its accessories. After you remove the original packaging, place the VEP1405 series unit and its components on an antistatic surface.

VEP1405 Series Installation

To install the VEP1405 series unit, complete the installation procedures in the order that is presented in this section.
Always handle the platform and its components with care.
NOTE: ESD damage can occur if components are mishandled. Always wear an ESD-preventive wrist or heel ground strap when handling the platform and its components. As with all electrical devices of this type, take all the necessary safetyprecautions to prevent injury when installing this platform.

Unpack
NOTE: Before unpacking the platform, inspect the container and immediately report any evidence of damage. When unpacking the VEP1405 series unit, ensure that the following items are included:

- One VEP1405 series system
- Micro-USB console cable
- One AC/DC power supply and AC power cable
- Wall mount hardware
- Dell EMC Networking Virtual Edge Platform (VEP) 1405 Getting Started Guide
- Safety and Regulatory Information
- Warranty and Support Information

1. Place the container on a clean, flat surface.
2. Open the container.
3. Carefully remove the unit from the container and place it on a secure and clean surface.
4. Remove all packing material.
5. Inspect the product and accessories for damage.

   NOTE: If damage to the product or accessories is found, contact your Dell EMC sales representative for assistance.

Platform power-up
Before you turn on the system, reinspect the rack mounting or desktop placement of platform, and verify that the power supply to the VEP1405 series unit is secure.
Verify the following:

- The ambient temperature around the unit, which may be higher than the room temperature, be within the limits that are specified for the VEP1405 series of systems, see Specifications
- There is sufficient clearance around the unit
- All protective covers are in place

NOTE: If the components are mishandled, ESD damage can occur. Always wear an ESD-preventive wrist or heel ground strap when handling the platform and its components.

Power up sequence
The fans immediately come on at high speed when the platform powers up. The fan speed slows as the platform continues to boot.

Specifications

This section lists the specifications for the VEP1405 series of systems.
CAUTION: Operate the product at an ambient temperature between 0-40°C (32–104°F).

WARNING: There is a danger of explosion if the lithium battery is incorrectly replaced. Replace only with the same or equivalent type of battery. Dispose of the battery according to the manufacturer's instructions.
NOTE: For RoHS information, see **https://www.dell.com/learn/tw/zh/twcorp1/envt-info-materials**.

Chassis physical design
Table 2. Dell EMC Virtual Edge Platform (VEP) 1405 model descriptions

Model	CPU	Description
VEP1425	4-core	• 8 GB DDR4 • 16 GB eMMC • 120 GB SSD • 2x 2 Wi-Fi • 6x 1 GB Copper RJ45 • 2x 10 GB SFP+ • Versa software installed • Trusted Platform Module (TPM) 2.0 – World-wide except China • 2x USB 3.0 • Low-energy Bluetooth (BLE) • One fan
VEP1425N	4-core	• 8 GB DDR4 • 16 GB eMMC • 120 GB SSD • 6x 1 GB Copper RJ45 • 2x 10 GB SFP+ • Versa software installed • Trusted Platform Module (TPM) 2.0 – World-wide except China • 2x USB 3.0 • One fan

VEP1445	8-core	• 16 GB DDR4 • 16 GB eMMC • 240 GB SSD • 2x 2 Wi-Fi • 6x 1 GB Copper RJ45 • 2x 10 GB SFP+ • Versa software installed • Trusted Platform Module (TPM) 2.0 – World-wide except China • 2x USB 3.0 • Low-energy Bluetooth (BLE) • Two fans
VEP1445	8-core	• 32 GB DDR4

Model	**CPU**	**Description**
		• 16 GB eMMC • 960 GB SSD • 2x 2 Wi-Fi • 6x 1 GB Copper RJ45 • 2x 10 GB SFP+ • ADVA software installed • Trusted Platform Module (TPM) 2.0 – World-wide except China • 2x USB 3.0 • Low-energy Bluetooth (BLE) • Two fans

VEP1445N	8-core	• 16 GB DDR4 • 16 GB eMMC • 240 GB SSD • 6x 1 GB Copper RJ45 • 2x 10 GB SFP+ • Versa software installed • Trusted Platform Module (TPM) 2.0 – World-wide except China • 2x USB 3.0 • Two fans
VEP1485	16-core	• 32 GB DDR4 • 16 GB eMMC • 240 G SSD • 2x 2 Wi-Fi • 6x 1 GB Copper RJ45 • 2x 10 GB SFP+ • Versa software installed • Trusted Platform Module (TPM) 2.0 – World-wide except China • 2x USB 3.0 • Low-energy Bluetooth (BLE) • Two fans
VEP1485	16-core	• 64 GB DDR4 • 16 GB eMMC • 2 TB SSD • 2x 2 Wi-Fi • 6x 1 GB Copper RJ45 • 2x 10 GB SFP+ • ADVA software installed • Trusted Platform Module (TPM) 2.0 – World-wide except China • 2x USB 3.0 • Low-energy Bluetooth (BLE) • Two fans

VEP1485N	16-core	• 32 GB DDR4 • 16 GB eMMC • 240 G SSD • 6x 1 GB Copper RJ45 • 2x 10 GB SFP+ • Versa software installed • Trusted Platform Module (TPM) 2.0 – World-wide except China • 2x USB 3.0 • Two fans

NOTE: For a listing of the supported optics guidelines for the VEP1405 series, see the Virtual Edge Platform 1405 Series Technology Guide.

Figure 9. VEP1405 series front view

1. Security lock port
2. USB port

   NOTE: An additional USB port is located on the opposite side of the system.
3. System status indicator LED

   Table 3. Front view system status indicator LED

Color	Status
Red	Power on
White	System is booting
Green	Operating system boots with diagOS
Blue	Reset button is pressed for more than five seconds **NOTE:** See the **Reset button behavior** table below for more information.

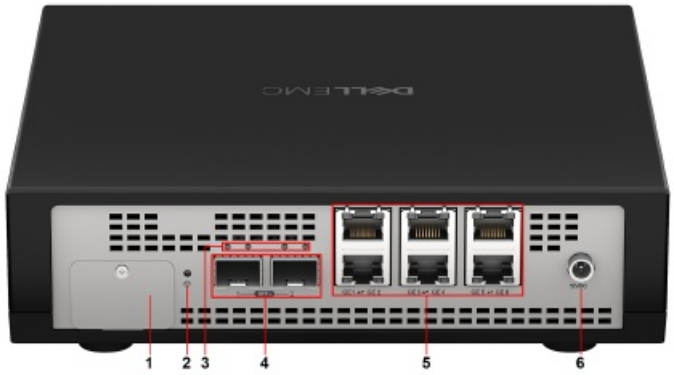


Figure 10. VEP1405 series rear view (with port cover)

1. Port cover
2. Reset button

   NOTE: After upgrading to UFW 2.2, the system response when you push the Reset button on a running VEP14xx switch is determined by the operating system that the switch is currently running.

   NOTE: See the Reset button behavior table below for more information.
3. LED status indicators for SFP+ ports
4. SFP+ ports
5. Ethernet ports and LED status indicators
6. Power connection port

NOTE: To prevent the VEP1405 series system console port from being accessed in a nonsecure location, the system ships from the factory with a plate covering the micro USB port. To uncover the port, use a #0 (2.5 mm) Phillips head screwdriver to loosen or remove the screw that holds the plate in place.

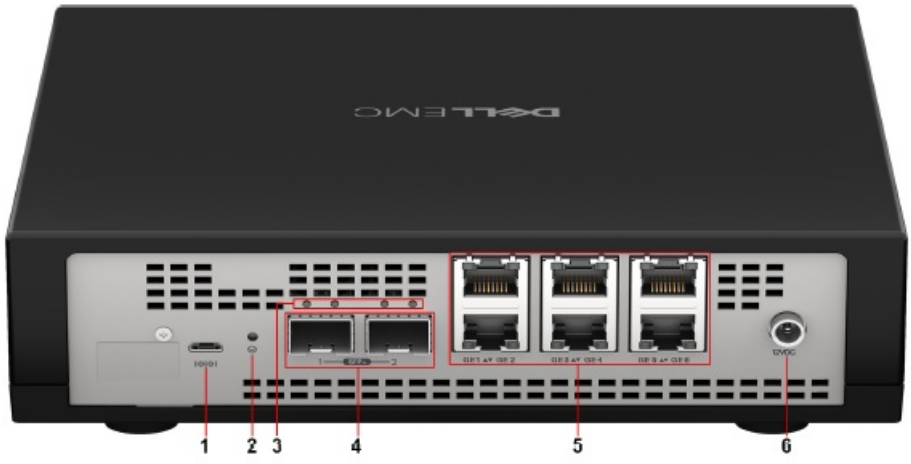


Figure 11. VEP1405 series back view (without port cover)

1. Micro USB serial console port
2. Reset button

   NOTE: After upgrading to UFW 2.2, the system response when you push the Reset button on a running VEP14xx switch is determined by the operating system that the switch is currently running.

   NOTE: See the Reset button behavior table below for more information.
3. LED status indicators for SFP+ ports
4. SFP+ ports

5. Ethernet ports and LED status indicators
6. Power connection port

Table 4. Back view system status indicator LED behavior

Class	Behavior
1000 Base-T LED	● Link LED – Green or amber ○ Solid green – Port is linked and running at maximum 1000 M speed on ethernet port ○ Solid amber – Port is linked and running at lower 100M or 10M speed on ethernet port ○ Off – No link ● Activity LED – Green **NOTE:** The LED flashes green during port activity. ○ Off – no port activity
SFP+ LED	● Link LED – Green or amber ○ Solid green – Port is linked and running at 10G speed ○ Solid amber – Port is linked and running at 1G speed ○ Off – No link ● Activity LED – Green **NOTE:** The LED flashes green during port activity. ○ Off – no port activity

Table 5. Reset button behavior

Action	Behavior
Press the **Reset** button. When the system is p owered off:	System powers on
Press the **Reset** button for **more** than 5 secon ds: **NOTE:** When the system is already powered o n, the system responds as described in the Be havior column.	● System reboots ● Status indicator LED color changes to blue ● Flag indicating a long push is set by the BIOS in the CMO S RAM ● Flag allows user to have the operating system detect a lon g button push **NOTE:** After upgrading to UFW 2.2, the system response whe n you push the Reset button on a running VEP14xx switch is d etermined by the operating system that the switch is currently r unning.

Table 6. Chassis physical design

Parameter	Configuration option 1	Configuration option 2
Height	5.2 cm (2.0 in)	5.2 cm (2.0 in)
Width	20.8 cm (8.1 in)	20.8 cm (8.1 in)
Depth	20.0 cm (7.9 in)	20.0 cm (7.9 in)
Chassis weight with factory -	• 4-core: 1.44 kg (3.17 lb)	• 8-core: 1.42 kg (3.13 lb)
installed components	• 8-core: 1.42 kg (3.13 lb)	• 16-core: 1.44 kg (3.17 lb)
	• 16-core: 1.44 kg (3.17 lb)	

NOTE: Chassis weight does not include the weight of the power supply.
Table 7. Environmental parameters

Parameter	Configuration option 1	Configuration option 2
Operating temperature	0–40°C (32°F–104°F) continuously	0–40°C (32°F–104°F) continuously
Operating humidity	• 5% to 85% (RH), noncondensing continuously • 5% to 90% (RH), noncondensing short- term (< 1% of operational hour per year)	• 5% to 85% (RH), noncondensing continuously • 5% to 90% (RH), noncondensing short- term (< 1% of operational hour per year)
Storage temperature	–40°-70°C (–40° to 158°F)	–40°-70°C (–40° to 158°F)
Storage humidity	5% to 90% (RH), noncondensing	5% to 90% (RH), noncondensing
Maximum operational altitu de	3,048 meters (10,000 ft) with no perfo rmance degradation to 950 meters (3 117 ft)	3,048 meters (10,000 ft) with no perform ance degradation to 950 meters (3117 ft)
Maximum nonoperational al titude	10,668 meters (35,000 ft)	10,668 meters (35,000 ft)

Table 8. AC power requirements

Parameter	Configuration option 1	Configuration option 2
Power supply	100–240 VAC 50/60 Hz	100–240 VAC 50/60 Hz
Maximum current draw per system – AC	• 100 VAC: 2.0A • 240 VAC: 1.0A	• 100 VAC: 2.0A • 240 VAC: 1.0A
Power consumption	Typical: • 40 W (16 core) • 35 W (8 core)	Typical: • 40 W (16 core) • 35 W (8 core)

Parameter	Configuration option 1	Configuration option 2
	• 20 W (4 core)	Maximum:
	Maximum: • 50 W (16 core) • 45 W (8 core) • 30 W (4 core)	• 50 W (16 core) • 45 W (8 core)

NOTE: For the most current AC power requirements and power consumption specifications, see the Installation Guide at **https://www.dell.com/support**.

Safety standards and compliance agency certifications

- CUS UL 60950-1, 2nd Edition
  - Meets or exceeds Hi Pot and Ground Continuity testing per UL 60950-1.
- CSA 60950-1-03, 2nd Edition
- EN 60950-1, 2nd Edition
- EN 60825-1, 1st Edition
- 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 21CFR 1040.10 and 1040.11
- IEC 60950-1, 2nd Ed, including all National Deviations and Group Differences
- IEC 62368-1

Product recycling and disposal

You must recycle or discard this switch according to applicable local and national regulations. Dell EMC encourages owners of information technology (IT) equipment to responsibly recycle their equipment when it is no longer needed. Dell EMC offers a variety of product return programs and services in several countries to assist equipment owners in recycling their IT products. Waste electrical and electronic equipment (WEEE) directive for recovery, recycle and reuse of IT and telecommunications products

Dell EMC switches are labeled in accordance with European Directive 2002/96/EC concerning waste electrical and electronic equipment (WEEE). The Directive determines the framework for the return and recycling of used appliances as applicable throughout the European Union. This label is applied to various products to indicate that

the product is not to be thrown away, but rather reclaimed upon end of life per this Directive.
In accordance with the European WEEE Directive, electrical and electronic equipment (EEE) is to be collected separately and to be reused, recycled, or recovered at end of life. Users of EEE with the WEEE marking per Annex IV of the WEEE Directive, as shown above, must not dispose of end of life EEE as unsorted municipal waste, but use the collection framework available to customers for the return, recycling and recovery of WEEE. Customer participation is important to minimize any potential effects of EEE on the environment and human health due to the potential presence of hazardous substances in EEE.

Dell EMC products, which fall within the scope of the WEEE, are labeled with the crossed-out wheelie-bin symbol, as shown above, as required by WEEE.
For information on Dell EMC product recycling offerings, see the WEEE Recycling instructions on Support. For more information, contact the Dell EMC Technical Assistance Center.

Agency compliance
The VEP1405 is designed to comply with the following safety and agency requirements: India
This product conforms to the relevant Essential Requirements of TEC, Department of Telecommunications, Ministry of Communications, Govt of India, New Delhi-110001.

FCC STATEMENT

USA Federal Communications Commission statement
CAUTION: The use of external signal amplifiers in-line with the transceiver antennas is strictly prohibited.
NOTE: Some of the following declarations may apply only to systems that contain wireless capabilities
This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: 1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules.
These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures.

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution:
Any changes or modifications not expressly approved by the party responsible for compliance could void the user’s authority to operate this equipment.
This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Radiation Exposure Statement:
This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.
NOTE: The country code selection is for non-US model only and is not available to all US model. Per FCC regulation, all WiFi product marketed in US must fixed to US operation channels only.

Industry Canada Statement

This device complies with Industry Canada license-exempt RSS standards. Operation is subject to the following

two conditions:

1. This device may not cause interference, and
2. This device must accept any interference, including interference that may cause undesired operation of the device.

This Class A digital apparatus complies with Canadian ICES-003.

This device complies with RSS-GEN, RSS-210, RSS-130, RSS-132, RSS-133, RSS-139, RSS-195, RSS-199 & RSS-247 of Industry Canada. Operation is subject to the condition that this device does not cause harmful interference.
This device and its antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitter, except tested built-in radios.
The County Code Selection feature is disabled for products marketed in the US/Canada.
Radiation Exposure Statement: This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

Caution:

1. The device for operation in the band 5150-5250 MHz is only for indoor use to reduce the potential for harmful interference to co-channel mobile satellite systems;
2. Users should also be advised that high-power radars are allocated as primary users (i.e. priority users) of the bands 5250-5350 MHz and 5650-5850 MHz and that these radars could cause interference and/or damage to LE-LAN devices.

Radiocommunication equipment compliance for Thailand
The following is for radiocommunication equipment per act B.E. 2498:

Figure 13. Radiocommunication compliance certificate

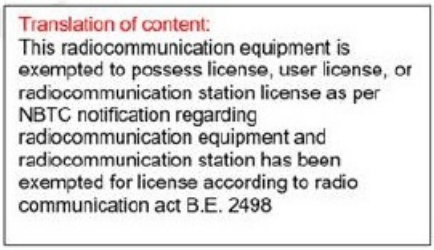
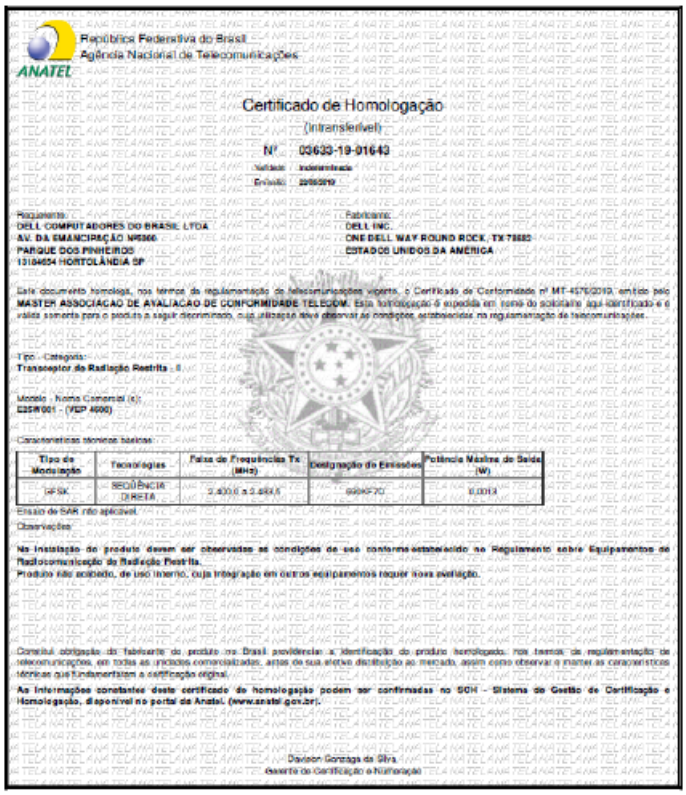


Figure 14. Radiocommunication compliance certificate translation



República Federativa do Brasil
Agência Nacional de Telecomunicações
ANATEL

Certificado de Homologação
(Intransferível)

Nº 03633-19-01643

Validade: Indeterminada
Emissão: 29/05/2019

Requerente:
DELL COMPUTADORES DO BRASIL LTDA
AV. DA EMANCIPAÇÃO Nº5566
PARQUE DOS PINHEIROS
13184054 HORTOLÂNDIA SP

Fabricante:
DELL INC.
ONE DELL WAY ROUND ROCK, TX 78682
ESTADOS UNIDOS DA AMÉRICA

Este documento homologa, nos termos da regulamentação de telecomunicações vigente, o Certificado de Conformidade nº MT-4576/2019, emitido pelo MASTER ASSOCIACAO DE AVALIACAO DE CONFORMIDADE TELECOM. Esta homologação é expedida em nome do solicitante aqui identificado e é válida somente para o produto a seguir discriminado, cuja utilização deve observar as condições estabelecidas na regulamentação de telecomunicações.

Tipo - Categoria:
Transceptor de Radiação Restrita - II

Modelo - Nome Comercial (s):
E3SW001 - (VEP 4000)

Características técnicas básicas:

Tipo de Modulação	Tecnologias	Faixa de Frequências Tx (MHz)	Designação de Emissão	Potência Máxima de Saída (W)
16PSK	SEQÜÊNCIA DIRETA	2.400,0 a 2.483,5	880KF7D	0,0013

Ensaio de SAR não aplicável.

Observações:

No instalação do produto devem ser observadas as condições de uso conforme estabelecido no Regulamento sobre Equipamentos de Radiocomunicação de Radiação Restrita.
Produto não acabado, de uso interno, cuja integração em outros equipamentos requer nova avaliação.

Constitui obrigação do fabricante do produto no Brasil providenciar a identificação do produto homologado, nos termos da regulamentação de telecomunicações, em todas as unidades comercializadas, antes de sua efetiva distribuição ao mercado, assim como observar e manter as características técnicas que fundamentaram a certificação original.

As informações constantes deste certificado de homologação podem ser confirmadas no SCH - Sistema de Gestão de Certificação e Homologação, disponível no portal da Anatel (www.anatel.gov.br).

Davison Gonzaga da Silva
Gerente de Certificação e Numeração

Figure 15. Brasil – Aviso da Anatel certificate

European Union EMC directive conformance statement

This product is in conformity with the protection requirements of EU Council Directive 2004/108/EC on the approximation of the laws of the Member States relating to electromagnetic compatibility. Dell EMC cannot accept responsibility for any failure to satisfy the protection requirements resulting from a non-recommended modification of this product, including the fitting of non-Dell EMC option cards.

This product has been tested and found to comply with the limits for Class A Information Technology Equipment according to CISPR 32/CISPR34 and EN55032 / EN55034. The limits for Class A equipment were derived for commercial and industrial environments to provide reasonable protection against interference with licensed communication equipment.

NOTE: This is a Class A product. In a domestic environment, this device may cause radio interference, in which case, you may be required to take adequate measures.

European Community Contact
Dell EMC, EMEA – Central
Dahlienweg 19
66265 Heusweiler
Germany
Tel: +49 172 6802630
Email: EMEA Central Sales

Japan VCCI compliance for Class A equipment

This is Class A product based on the standard of the Voluntary Control Council For Interference by Information Technology Equipment (VCCI). If this equipment is used in a domestic environment, radio disturbance may arise. When such trouble occurs, the user may be required to take corrective actions.

WARNING: Use the AC power cables with Dell EMC equipment only. Do not use Dell EMC AC power cables with any unauthorized hardware.

Wi-Fi and Bluetooth compliance certificate

5GHz

BTE compliance certificate

Korean certification of compliance

	[equipment type]
(Product Name)	Ethernet switch
(Model)	[model number]
(Applicant)	Dell Technologies
(Manufacturer)	[Manufacturer]
(Manufacturing Date)	[date]
(Country of Origin)	China

Radio compliance certificate
Korea (Korean warning statement is only required for devices contain 2400~2483 and/or 5725~5825 MHz radios).
The following is the Korean radio compliance certification:

Singapore certification of compliance
Singapore radio compliance.
Complies with IMDA Standards
Registration number: N2515-19

Support

The support site provides documents and tools to help you effectively use your equipment and mitigate network outages.
Through the support site you can obtain technical information, access software upgrades and patches, download available management software, and manage your open cases. The support site provides integrated, secure access to these services.
To access the support site, go to **https://www.dell.com/support/**. To display information in your language, scroll down to the bottom of the web page and select your country from the drop-down menu.

- To obtain product-specific information, enter the 7-character service tag or 11-digit express service code of your platform and click the Submit button on the screen. To view the chassis service tag or express service code, locate the sticker underneath the system.
- To receive more technical support, click Contact Us. On the Contact Information web page, click Technical Support.

  To access platform documentation, go to **https://www.dell.com/manuals/**.

  To search for drivers and downloads, go to **https://www.dell.com/drivers/**.

Documents / Resources

	**DELL 1405 Series EMC Networking Virtual Edge Platform** [pdf] User Guide VEP1425, VEP1445, VEP1485, 1405 Series EMC Networking Virtual Edge Platform, 1405 Series, EMC Networking Virtual Edge Platform, Networking Virtual Edge Platform, Virtual Edge Platform, Edge Platform

References

- Materials – Restricted Material Compliance | Dell
- Support | Dell US
- Support for Dell EMC Networking VEP1425/VEP1445/VEP1485 | Documentation | Dell US
- Support for Dell EMC Networking VEP1425/VEP1445/VEP1485 | Documentation | Dell US
- Support for Dell EMC Networking VEP1425/VEP1445/VEP1485 | Drivers & Downloads | Dell US
- Support for Dell EMC Networking VEP1425/VEP1445/VEP1485 | Overview | Dell US