

Package Contents

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1. Network Cloud Packet Forwarder
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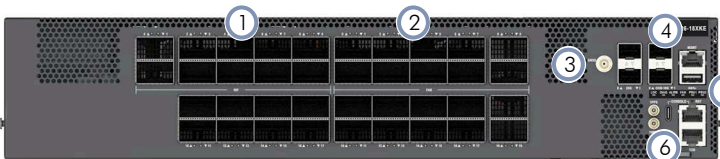
2. Slide-rail mounting kit—2 rack slide-rails and install guide
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3. AC power cord, type IEC C20 (included with AC PSUs only)
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4. DC power cord (included with DC PSUs only)
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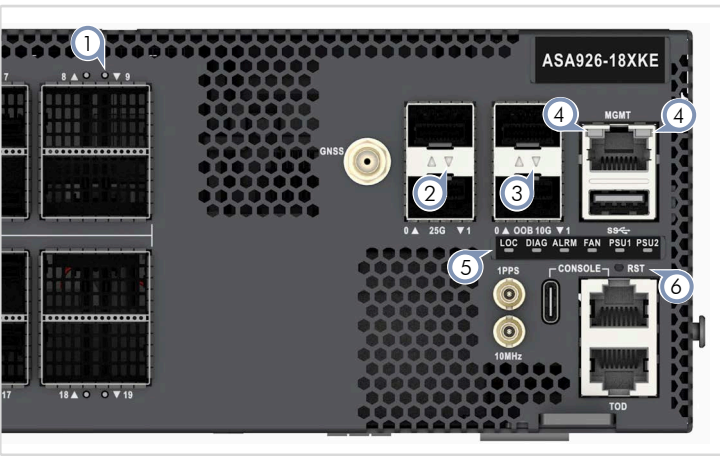
5. Documentation—*Quick Start Guide* (this document) and *Safety and Regulatory Information*

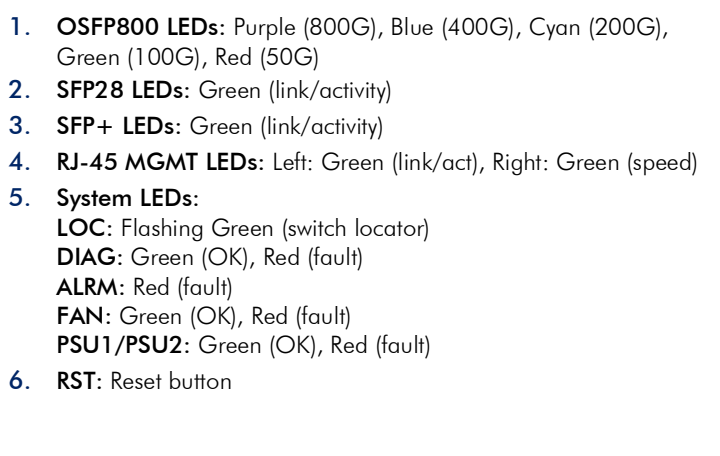
Overview

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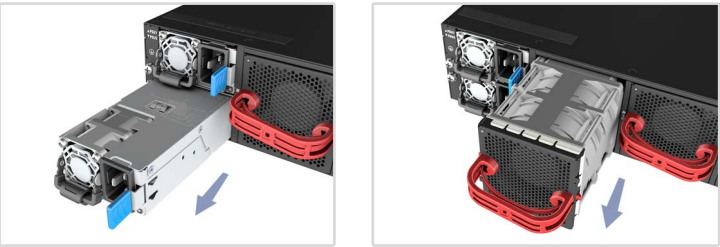
1. 18 x 800G OSFP800 network ports
2. 20 x 800G OSFP800 fabric ports
3. GNSS connector
4. 2 x 25G SFP28 in-band ports, 2 x 10G SFP+ OOB ports, 1 x 1000BASE-T MGMT RJ-45 port, USB
5. System LEDs, reset button
6. Console (RJ-45, USB Type-C), Timing Ports (1PPS, 10 MHz, TOD)
7. 2 x grounding screws
8. 2 x AC or DC PSUs
9. 4 x fan trays
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System LEDs/Buttons

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1. OSFP800 LEDs: Purple (800G), Blue (400G), Cyan (200G), Green (100G), Red (50G)
2. SFP28 LEDs: Green (link/activity)
3. SFP+ LEDs: Green (link/activity)
4. RJ-45 MGMT LEDs: Left: Green (link/act), Right: Green (speed)
5. System LEDs:
LOC: Flashing Green (switch locator)
DIAG: Green (OK), Red (fault)
ALRM: Red (fault)
FAN: Green (OK), Red (fault)
PSU1/PSU2: Green (OK), Red (fault)
6. RST: Reset button
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FRU Replacement



PSU Replacement

1. Remove the power cord.
2. Press the release latch and remove the PSU.
3. Install replacement PSU with matching airflow direction.

Fan Tray Replacement

1. Pull the handle release latch.
2. Remove the fan tray from the chassis.
3. Install a replacement fan with matching airflow direction.



Caution: During switch operation, fan replacement should be completed within two minutes to prevent the switch shutting down due to its built-in over-temperature protection.

Attention: Pendant le fonctionnement du commutateur, le remplacement du ventilateur doit être effectué dans les deux minutes pour éviter que le commutateur ne s'arrête en raison de sa protection intégrée contre la surchauffe.



Installation



Warning: For a safe and reliable installation, use only the accessories and screws provided with the device. Use of other accessories and screws could result in damage to the unit. Any damages incurred by using unapproved accessories are not covered by the warranty.

Avertissement: Pour une installation sûre et fiable, utilisez uniquement les accessoires et les vis fournies avec l'appareil. L'utilisation d'autres accessoires et vis pourrait endommager l'appareil. Les dommages causés par l'utilisation d'accessoires non approuvés ne sont pas couverts par la garantie.



Caution: The device must be installed in a restricted-access location.

Attention: L'appareil doit être installé dans un emplacement à accès restreint.



Note: The device has the Open Network Install Environment (ONIE) software installer preloaded, but no device software image.

Note: The drawings in this document are for illustration only and may not match your particular model.

1 Mount the Device



Caution: This device must be installed in a telecommunications room or a server room where only qualified personnel have access.

Attention: Cet appareil doit être installé dans une salle de télécommunications ou une salle de serveurs où seul le personnel qualifié a accès.



Using the Slide-Rail Kit

Follow instructions in the install guide provided in the slide-rail kit to mount the device in a rack.



Note: Stability hazard. The rack may tip over causing serious personal injury. Before extending the rack to the installation position, read the installation instructions. Do not put any load on the slide-rail mounted equipment in the installation position. Do not leave the slide-rail mounted equipment in the installation position.

2 Ground the Device



Verify Rack Ground

Ensure the rack on which the device is to be mounted is properly grounded and in compliance with ETSI ETS 300 253. Verify that there is a good electrical connection to the grounding point on the rack (no paint or isolating surface treatment).

Attach Grounding Wire

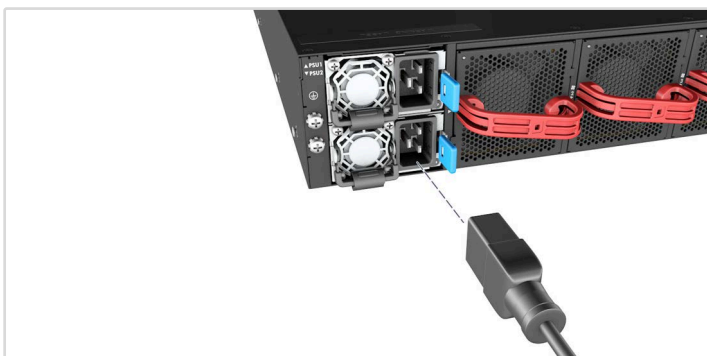
Attach a grounding wire to the grounding point on the device rear panel using two M6 screws and washers with a grounding lug (Panduit LCDXN2-14AF-E or equivalent, not included). The grounding lug should accommodate #6 AWG stranded copper wire (green with yellow stripe, not included).



Caution: This device has a separate protective earthing terminal provided on the chassis in addition to the grounding pin of the power supply cord. This separate protective earthing terminal must be permanently connected to earth ground and the installation must be performed by a qualified professional.

Attention: Cet appareil dispose d'une borne de mise à la terre de protection séparée prévue sur le châssis en plus de la broche de mise à la terre du cordon d'alimentation. Cette borne de terre de protection séparée doit être connectée en permanence à la terre et l'installation doit être réalisée par un professionnel qualifié.

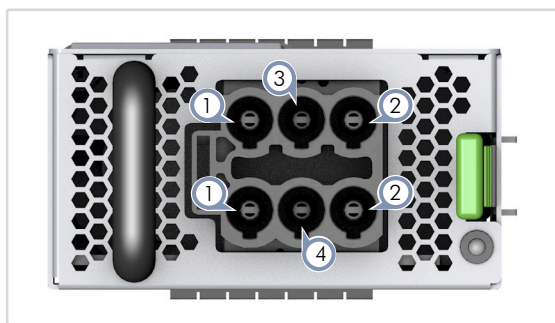
3 Connect Power



Install one or two AC or DC PSUs and connect them to an AC or DC power source.



Note: When using only one AC PSU to power a fully loaded system, be sure to use a high-voltage source (200–240 VAC).



1. -48 – -60 VDC
2. DC return
3. Signal +
4. Signal -



Caution: Use a UL/IEC/EN 60950-1 and/or 62368-1 certified power supply to connect to a DC converter.

Attention: Utilisez une alimentation certifiée UL/IEC/EN 60950-1 et/ou 62368-1 pour le connecter à un convertisseur CC.

Caution: All DC power connections should be performed by a qualified professional.

Attention: Toutes les connexions d'alimentation CC doivent être effectuées par un professionnel qualifié.



Note: Use #6 AWG copper wire (for a -48 to -60 VDC PSU) to connect to a DC PSU.

4 Make Network Connections



800G OSFP800 Ports

Install transceivers and then connect fiber optic cabling to the transceiver ports.
Alternatively, connect DAC or AOC cables directly to the slots.

5 Connect Timing Ports



GNSS

Attach an external GNSS antenna to the GNSS port for clock synchronization with GPS time.

1 PPS Port

Use a coax cable to connect the 1-pulse-per-second (1 PPS) port to another synchronized device.

10 MHz Port

Use a coax cable to connect the 10 MHz port to another synchronized device.

TOD Port

Use a shielded cable to connect the Time-of-Day (TOD) RJ-45 port to other devices that use these synchronization signals.

6 Make Management Connections



25G SFP28 In-Band Management Ports

Install transceivers and then connect fiber optic cabling to the transceiver ports.

10G SFP+ Out-of-Band Management Ports

Install transceivers and then connect fiber optic cabling to the transceiver ports.

10/100/1000M RJ-45 Out-of-Band Management Port

Connect Cat. 5e or better twisted-pair cable.

USB Type-C Console Port

Connect using a standard USB Type-C cable.

RJ-45 Console Port

Use an RJ-45-to-DB-9 null-modem console cable (not included) to connect to a PC running terminal emulator software. Use a USB-to-male DB-9 adapter cable (not included) for connections to PCs that do not have a DB-9 serial port.

Configure the serial connection: 115200 bps, 8 characters, no parity, one stop bit, 8 data bits, and no flow control.

Console cable pinouts and wiring:

Device's RJ-45 Console	Null Modem	PC's 9-Pin DTE Port
6 RXD (receive data)	<-----	3 TXD (transmit data)
3 TXD (transmit data)	----->	2 RXD (receive data)
4,5 SGND (signal ground)	-----	5 SGND (signal ground)

Hardware Specifications

Switch Chassis

Size (WxDxH)	440 x 648.2 x 87 mm (17.32 x 25.52 x 3.43 in.)
Weight	21 kg (46.3 lb), with 2 PSUs and 4 fans installed
Temperature	Operating: 0° C to 40° C (32° F to 104° F) Storage: -40° C to 70° C (-40° F to 158° F)
Humidity	Operating: 5% to 85% (non-condensing)

AC PSU

AC Input	200-240 VAC, 50/60 Hz, 12 A max.
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DC PSU

DC Input	-48 to -60 VDC 50 A max.
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System Input Rating

AC Input	200-240 VAC, 50/60Hz, 12 A max. per PS
DC Input	-48 – -60 VDC, 50 A max. per PS

Regulatory Compliances

Emissions	EN 55032 Class A EN 61000-3-2 EN 61000-3-3 VCCI-CISPR 32 Class A AS/NZS CISPR 32 Class A ICES-003 Issue 7 Class A FCC Class A EN 300 386 Class A
Immunity	EN 55035 IEC 61000-4-2/3/4/5/6/8/11 EN 300 386
Safety	UL (CSA 22.2 No 62368-1 & UL62368-1) CB (IEC/EN 62368-1)