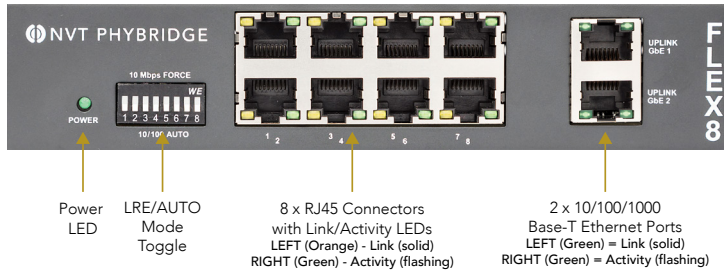


QUICK INSTALL GUIDE - FLEX8

The NVT Phybridge FLEX8 plug-and-play long reach 1, 2 or 4 Pair UTP PoE Switch is a versatile, secure, high-powered, enterprise-class solution that delivers fast Ethernet (10/100Mbps full duplex, symmetrical) and up to PoE++ (50W per port) over 4-pair UTP for up to 2,000ft (610m) – that's 6Xs the distance of typical PoE switches. Visit www.nvtpybridge.com for more information.

NOTE: Please see Page 3 for important safety instructions.

FRONT



BACK



FLEX8 Switch Package Includes:

- 1 x FLEX8 Unit
- 1 x Mounting Bracket Kit
- 1 x AC/DC Power Adapter
- 1 x Quick Install Guide
- 4 x Rubber Feet

You are advised to register your product purchase at www.nvtpybridge.com, under support. Doing so ensures you are set up in our system for prompt support should you ever require assistance.



Get technically certified today! Convenient and flexible online, on demand certification program; visit www.nvtpybridge.com.

IMPORTANT INSTALLATION INSTRUCTIONS

NOTE: If you are considering single pair UTP deployment, you will require the FLEX-Link and FLEX4 adapters to be locally powered.

- Review installation instructions and the "PoE Power Available to FLEX-Link, FLEX4 and FLEX-C" table.
- Ensure that your IP devices are IEEE 802.3 af/at compliant and PoE requirements can be supported given cable type and distance.
- To ensure proper ventilation of the FLEX8, leave at least 2 inches of unobstructed space on all sides of the unit.
- Properly mount the FLEX8 switch in its final location before connecting endpoints. (See Mounting Options Below)
- Make sure cable between downlink ports and adapters or IP endpoints are properly terminated before connecting to switch.
- For endpoints within standard Ethernet reach (328ft/100m) connect directly to downlink ports. For extended reach, use FLEX adapters (FLEX-C, FLEX-Link or FLEX4) in between the end point and the switch.
- The FLEX-Link and FLEX4 can be deployed up to 2000ft away from the FLEX8 and can deliver up to 50 Watts of power.
- The FLEX-C can be deployed up to 2000ft away from the FLEX8 and can deliver up to 30 Watts of power.
- The FLEX8 out of the box operates in 10/100 Mbps Auto Speed mode; if 10 Mbps is required, it can be forced via the mode toggle located on the front of the unit.
 - The forced 10Mbps feature can be used when the auto negotiation is not achieving a link between the switch and adapter.
- Connect the uplink GbE 1 or GbE 2 port to the network switch or directly to your application. Uplink ports can be daisy chained.
- Ensure power supply is securely connected to FLEX8.
- Power up the FLEX8 switch.

Downlink Port LED Indicators

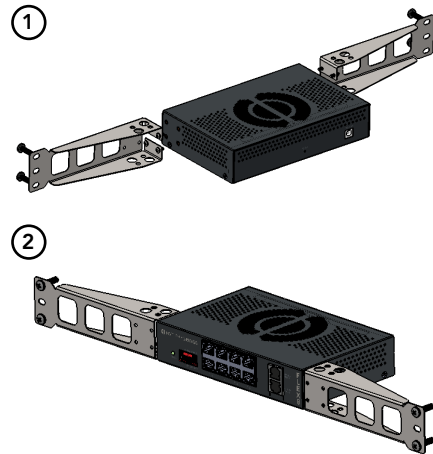
Solid orange (left) means link is established

Flashing green (right) represents activity

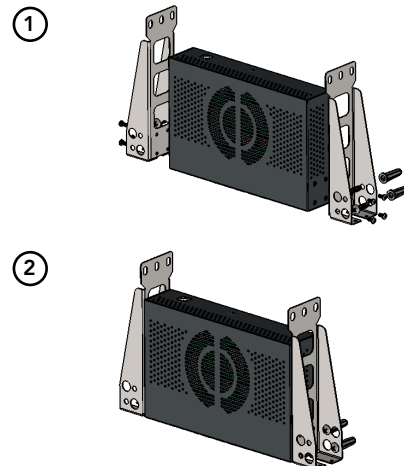
Both orange and green flashing (2x per second) represents a short on line. Please correct cable infrastructure.

MOUNTING OPTIONS

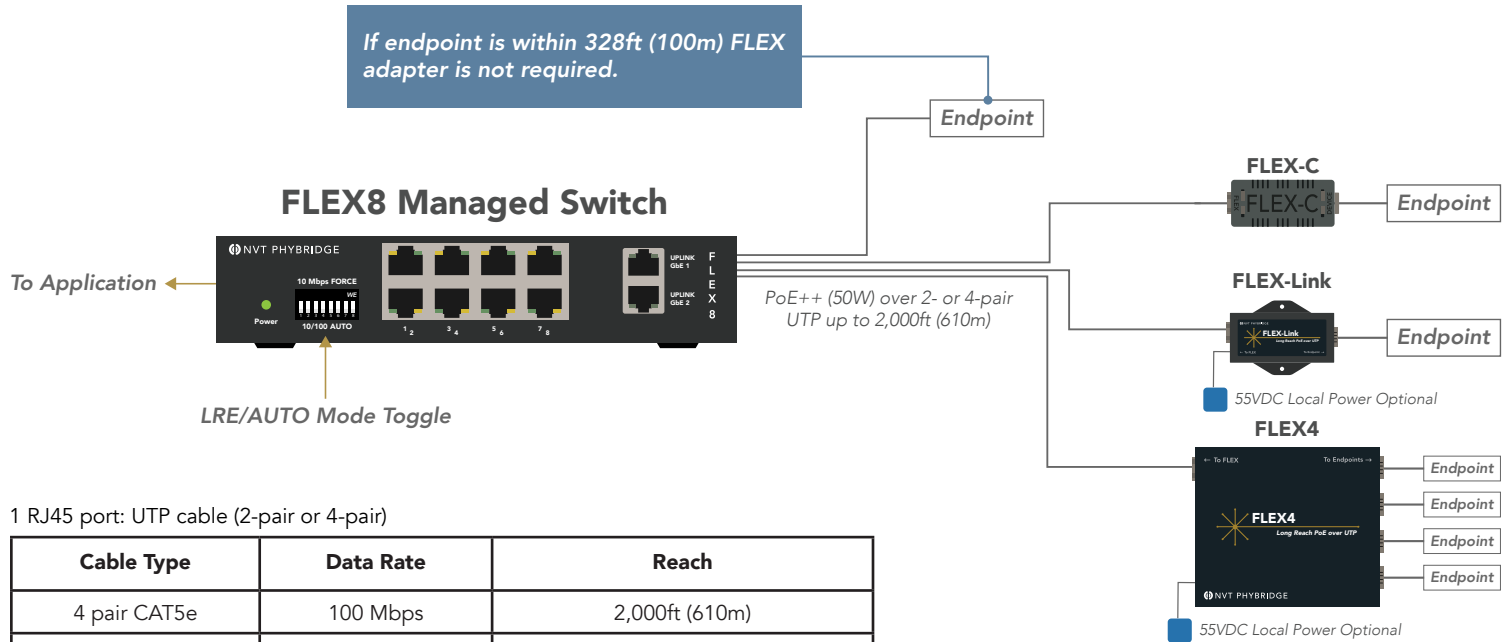
RACK MOUNT CONFIGURATION



WALL MOUNT CONFIGURATION



FLEX8 SWITCH HARDWARE TOPOLOGY



1 RJ45 port: UTP cable (2-pair or 4-pair)

Cable Type	Data Rate	Reach
4 pair CAT5e	100 Mbps	2,000ft (610m)
2 pair CAT5e	100 Mbps 10 Mbps	1,000ft (300m) 2,000ft (610m)
1 pair CAT5e*	100 Mbps 10 Mbps	1,000ft (300m) 2,000ft (610m)

*adapter must be locally powered

PoE POWER AVAILABLE TO FLEX-LINK, FLEX4, AND FLEX-C

FLEX-Link /FLEX4	20ft (6m)	250ft (76m)	500ft (152m)	750ft (228m)	1,000ft (305m)	1,250ft (381m)	1,500ft (457m)	1,750ft (533m)	2,000ft (610m)
4-Pair UTP/STP	50W	47W	44W	41W	38W	35W	32W	30W	27W
2-Pair UTP/STP	30W	30W	27W	25W	22W	22W	17W	14W	12W

The FLEX-Link can support up to 50W of power using all 4-pairs or maximum of 30W using 2-pairs. FLEX4 can accept up to 120W of power and it can output up to 30W of power for 802.3af/at compliant devices. To account for cable losses and increase PoE delivery, the FLEX-Link and FLEX4 adapters have the option of using a local external power supply. The FLEX-Link and FLEX4 are IEEE compliant and will negotiate power with the IP device.

FLEX-C	20ft (6m)	250ft (76m)	500ft (152m)	750ft (228m)	1,000ft (305m)	1,250ft (381m)	1,500ft (457m)	1,750ft (533m)	2,000ft (610m)
4-Pair UTP/STP	30W	30W	30W	29W	27W	26W	25W	23W	22W
2-Pair UTP/STP	30W	30W	27W	25W	22W	20W	17W	14W	12W

The FLEX-C supports IEEE-compliant devices and can support up to 30W of power. If additional power is required use the FLEX-Link instead.

TECHNICAL SPECIFICATIONS

Model	FLEX8
Part Number	NV-FLX-08
Dimensions	7.09" x 4.53" x 1.45" (LxWxH); 18cm x 11.5cm x 3.68cm (LxWxH)
Weight	1.3 lbs (0.59 kgs)
Interface: Ethernet Uplink (Trunk IP)	2 RJ45 ports: 10/100/1000 Base-T autosensing, independent speed selection, Ethernet IEEE 802.3, CAT5e copper cable
Interface: Downlink (PoE and IP to Adapter)	8 x RJ45 Jacks Speed: 10/100Mbps (full duplex)
Power Supply	48-58 VDC (55VDC, 190W power supply included)
Power Consumption	6W
Power Injection (PoE)	DC voltage: 48VDC to 58VDC IEEE 802.3af/at If power is provided on all 4-pairs then maximum 50W; If power is provided on 2-pairs then maximum 30W
Operating Temperature	+14°F to +149°F (-10°C to +65°C) Tests conducted against international safety standard at maximum ambient temperatures of +104°F (40°C)
Humidity	10% to 95% (non-condensing) at +95°F (+35° C)

Specifications subject to change without notice.

NOTE THE FOLLOWING:

All of the above instructions provide basic installation information necessary for the proper and safe functioning of this equipment. Persons installing or maintaining this product must read all of the safety instructions and the parts of system grounding, which are applicable to the system being maintained. Only trained, qualified service personnel shall install or maintain this product.

WARNINGS

FAILURE TO FOLLOW ALL INSTRUCTIONS MAY RESULT IN IMPROPER EQUIPMENT OPERATION AND/OR RISK OF ELECTRICAL SHOCK.

ANY CONNECTION TO AN OUTSIDE PLANT LEAD, AN OFF-PREMISE APPLICATION, OR ANY OTHER EXPOSED PLANT APPLICATION MAY RESULT IN A FIRE OR SHOCK HAZARD, AND/OR DEFECTIVE OPERATION, AND/OR EQUIPMENT DAMAGE.

Keep these instructions with the equipment.

Do not attempt to install or service this equipment unless you are skilled in the installation and maintenance of electronic telecommunications equipment and have successfully completed specific training for this equipment.

SAFETY WARNINGS AND PRECAUTIONS

- Access to the interior of this unit shall be made only by a qualified technician.
- To ensure adequate cooling of the equipment, a 2-inch unobstructed space must be provided around all sides of the unit.
- To prevent the risk of shock or fire hazard, replace fuse with same type and rating.
- Der Zugang ins Innere des Gerätes ist nur einem fachlich qualifizierten Techniker gestattet.
- Um die Kühlung des Gerätes nicht zu beeinträchtigen, ist es notwendig, an allen Seiten des Gerätes ca 5 cm Raum zu lassen.
- Zur Vermeidung der Stromschlag- und Feueregefahr beim Auswechseln Sicherungen des gleichen Typs und der gleichen Nennleistung einsetzen.
- Seul un spécialiste doit avoir accès l'appareil.
- Afin de ne pas nuire au processus de refroidissement, il est nécessaire de laisser un espace d'environ 5 cm de chaque côté de l'appareil.
- Afin d'éviter tout risque d'incendie ou d'électrocution, remplacez les fusibles par des fusibles de même type et ampérage.
- El acceso al interior de esta unidad deberá ser realizado únicamente por un técnico cualificado.
- Para asegurar un enfriamiento adecuado del equipo, se debe proporcionar un espacio sin obstrucciones de 2 pulgadas alrededor de todos los lados de la unidad.
- Para evitar el riesgo de choque o peligro de incendio, reemplace el fusible con el mismo tipo y clasificación.
- L'accesso all'interno di questa unità `deve essere effettuata solo da un tecnico qualificato.
- Per garantire un adeguato raffreddamento dell'apparecchiatura, uno spazio libero da 2 pollici deve essere fornita intorno a tutti i lati dell'unità.
- Per evitare che la prevenzione del rischio di scossa o di pericolo di incendio, sostituire il fusibile con lo stesso tipo e valore.
- Достъп до вътрешността на този уред трябва да се извършва само от квалифициран техник.
- За да се осигури подходящо охлаждане на оборудването, трябва да се осигури 2-инчово свободно пространство около всички страни на устройството.
- За да предотвратите опасност от удар или пожар, сменете предпазителя със същия тип и квалификация.
- Juurdepääs interjööri selle üksuse tehakse ainult kvalifitseeritud tehnik.
- Jahutuse tagamiseks seadme, 2-tolline vaba ruum peab olema ümber kõik küljed üksus.
- Selleks, et vältida riski ning tulekahjuoht, vaheta kaitse sama tüüpi ja hinnang.
- Η πρόσβαση στο εσωτερικό της μονάδας πρέπει να γίνεται μόνο από εξειδικευμένο τεχνικό.
- Για να εξασφαλιστεί η κατάλληλη ψύξη του εξοπλισμού, πρέπει να υπάρχει ένας ελεύθερος χώρος 2 ιντσών γύρω από όλες τις πλευρές της μονάδας.
- Για να αποφύγετε τον κίνδυνο κρούσης ή πυρκαγιάς, αντικαταστήστε την ασφάλεια με τον ίδιο τύπο και την ίδια βαθμολογία.
- Piekļuve interjera šīs vienības veic tikai kvalificēts tehniķis.
- Lai nodrošinātu pietiekamu dzesēšanu iekārtu, 2 collu aizsegts telpu jānodrošina ap visām pusēm vienības.
- Lai novērstu risku, ka trieciena vai ugunsgrēka briesmas, nomainīt drošinātāju ar tāda paša veida un reitingu.
- Prieiga prie šio įrenginio viduje, turi būti atlikti tik kvalifikuotas specialistas.
- Siekiant užtikrinti tinkamą aušinimą įranga, 2 colių užgriozdinti erdvę turi būti pateikta apie visus įrenginio pusių.
- Siekiant užkirsti kelią šoko ar gaisro pavojus riziką, pakeiskite saugiklį su tos pačios rūšies ir įvertinimas.
- A készülék belsejét csak szakképzett szakember végezheti.
- A berendezés megfelelő hűtésének biztosítása érdekében egy 2 hüvelykes, akadálytalan helyet kell biztosítani a készülék minden oldalán.
- Az ütésveszély vagy a tűzveszély elkerülése érdekében cserélje ki az azonos típusú és minősített biztosítékot.
- Toegang tot het interieur van dit toestel wordt alleen door een gekwalificeerde technicus uitgevoerd.
- Om een adequate afkoeling van de apparatuur te garanderen, moet een 2-inch vrijstaande ruimte rondom alle kanten van het apparaat worden aangebracht.
- Om het risico op schokken of brandgevaar te voorkomen, vervang de zekering met hetzelfde type en de waarde.
- Tilgang til det indre av denne enheten skal kun utføres av en kvalifisert tekniker.
- For å sikre tilstrekkelig kjøling av utstyret, må det være 2 tommers uhindret plass rundt alle sider av enheten.
- For å unngå fare for støt eller brannfare, bytt sikring med samme type og karakter.
- Dostęp do wnętrza tego urządzenia wykonuje tylko wykwalifikowany technik.
- W celu zapewnienia odpowiedniego chłodzenia urządzenia, wokół wszystkich stron urządzenia musi być umieszczona 2- calowa przestrzeń bez przeszkód.
- Aby uniknąć ryzyka porażenia prądem lub pożaru, wymień bezpiecznik na ten sam typ i poziom.

- O acesso ao interior desta unidade deve ser efectuado apenas por um técnico qualificado.
- Para assegurar o resfriamento adequado do equipamento, um espaço sem obstruções de 2 polegadas deve ser fornecido em torno de todos os lados da unidade.
- Para evitar o risco de choque ou incêndio, substitua o fusível pelo mesmo tipo e classificação.
- Accesul la interiorul acestui aparat trebuie efectuat numai de către un tehnician calificat.
- Pentru a asigura o răcire adecvată a echipamentului, trebuie prevăzut un spațiu liber de 2 inci pe toate laturile unității.
- Pentru a preveni riscul de șoc sau de pericol de incendiu, înlocuiți siguranța cu același tip și clasificare.
- Dostop do notranjosti te enote se izvede le strokovnjak.
- Da bi zagotovili ustrezno hlajenje opreme, mora 2-palčni neoviran prostor, je treba zagotoviti okoli vse strani enote.
- Da bi preprečili nevarnost udara ali nevarnosti požara, zamenjajte varovalko iste vrste in jakosti.
- Prístup do interiéru tohto prístroja môže vykonať iba kvalifikovaný technik.
- Aby bolo zabezpečené dostatočné chladenie zariadenia, musí byť okolo všetkých strán jednotky 2-palcový neobmedzený priestor.
- Aby ste zabránili nebezpečenstvu výbuchu alebo požiaru, vymeňte poistku rovnakého typu a typu.
- Tämän laitteen sisätilojen saa suorittaa ainoastaan pätevä teknikko.
- Laitteen riittävän jäähdytyksen varmistamiseksi on järjestettävä 2 tuuman esteettömät tilat laitteen kaikkien puolien ympärille.
- Vaihda sulake saman tyyppisellä ja luokalla, jotta iskun tai tulipalon vaara ei onnistu.
- Tillgång till det inre av denna enhet ska endast utföras av en kvalificerad tekniker.
- För att säkerställa tillräcklig kylning av utrustningen måste ett 2-tums fritt utrymme tillhandahållas runt alla sidor av enheten.
- För att undvika risk för chock eller brandfara, byt ut säkring med samma typ och betyg.
- Prístup do interiéru tohoto přístroje může provádět pouze kvalifikovaný technik.
- Aby bylo zajištěno dostatečné chlazení zařízení, musí být kolem všech stran jednotky k dispozici 2-palcový neomezený prostor.
- Abyste zabránili nebezpečí výbuchu nebo požáru, vyměňte pojistku stejného typu a typu
- Aðgangur að innanverðu þessa eininga skal aðeins gerð af viðurkenndum tæknimanni.
- Til að tryggja fullnægjandi kælingu búnaðarins verður að vera með 2 tommu óhindrað pláss fyrir alla hliðum tækisins.
- Til að koma í veg fyrir hættu á losti eða eldhættu skal skipta um öryggi með sömu tegund og einkunn.
- Access għall-intern ta 'din l-unità għandha ssir biss minn tekniku kkwalifikat.
- Biex jiġi żgurat tkessiġ adegwat tat-tagħmir, 2-pulzier spazju mhux mfixkel għandhom ikunu provduti madwar naħat kollha tal-unità.
- Biex ikun evitat ir-riskju ta 'xokk jew perikolu ta' nar, jissostitwixxu f'juss bil istess tip u ratifika.
- Adgang til det indre af denne enhed skal kun foretages af en kvalificeret tekniker.
- For at sikre tilstrækkelig afkøling af udstyret skal der være en 2-tommers uhindret plads på alle sider af enheden.
- For at undgå risiko for stød eller brandfare udskiftes sikringen med samme type og rating.

COMPLIANCE AND ENVIRONMENTAL INFORMATION

All the compliance and environmental information is available on our website www.nvtphybridge.com.

TECHNICAL SUPPORT

The **NVT Phybridge Technical Support Group** is available to assist you with product installation, configuration, monitoring and troubleshooting procedures. Should you experience trouble with this equipment or for repair or warranty information, please contact NVT Phybridge Inc. at **+1 905.901.3633** or support@nvtphybridge.com.