

MODERNIZATION TO IP MADE SIMPLE

NVT PHYBRIDGE EC-BASE EXTENDER DATA SHEET



Fast Ethernet and PoE+ over Coax with up to 4,000ft (1,220m) Reach

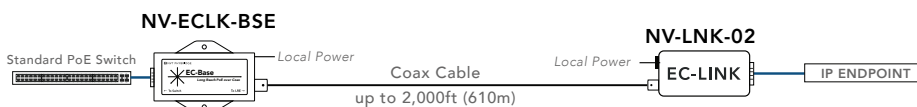
EC-Base Extender Solution

The NVT Phybridge EC Extender Solution is designed to supercharge the downlink ports of a standard Ethernet switch delivering 10/100Mbps symmetrical (full duplex) and PoE over Coax infrastructure with distances up to 4,000ft (1,220m). That's 12X the reach of standard Ethernet switches, thus removing the costs and disruptions associated with multiple IDF closet requirements.

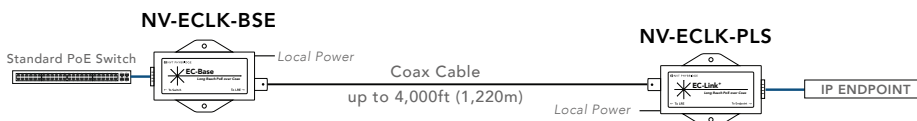
With the EC Extender Solution, IP IoT devices can be connected to the existing Coax cabling infrastructure, delivering optimal performance, while saving cost, time, and environmental e-waste. Furthermore, the cost savings realized by using EC Extender Solution can enable system designers to transfer budget and resources towards higher-quality, applications and IEEE-compliant IoT devices, including IP-enabled phones, cameras, access control, speakers, and even facilities lighting.

Extend the reach of standard PoE switches with the EC Extender Solution

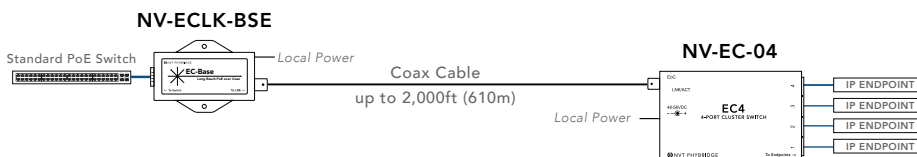
EC-Base Paired with the EC-Link Enable 1 IP endpoint from a single long run Coax cable with up to 30W of power



***EC-Base Paired with the EC-Link+ Enable 1 IP endpoint from a single long run Coax cable with up to 50W of power**



***EC-Base Paired with the EC4 Enable 4 IP endpoints from a single long run Coax cable with up to 50W of power per port**



**Pairing options available in conveniently packaged EC-Extender Kits*

EC-EXTENDER KITS

Each EC Extender Kit is conveniently packaged and includes an EC-Link+ or EC4 Adapter, an EC-Base Extender, and an external power supply.

1-Port EC Extender Kit

NV-ECLK-PLS-XKIT

- Extend reach of standard PoE switch
- Single port coax extender solution enabling 1 endpoint from a single long run Coax cable
- 10/100Mbps symmetrical (full duplex) and PoE+ (up to 50W) with up to 4,000ft (1,220m) reach
- Up to 50W of power available for the endpoint
- Adapters can be locally powered
- Includes: EC-Base Extender, EC-Link+ Adapter, and 60W, 55V external power supply
- EN 50121-4 Standard for Railway/ Subway environments

4- Port EC Extender Kit

NV-EC-04-XKIT

- Extend reach of standard PoE switch
- Single port coax extender solution enabling 4 IP endpoints from a single long run Coax cable
- 10/100Mbps symmetrical (full duplex) and PoE+ (up to 30W) with up to 2,000ft (610m) reach
- Delivers up to 30W of power per downlink port
- Adapters can be locally powered
- Includes: EC-Base Extender, EC4, Adapter, and 110W, 55V external power supply
- EN 50121-4 Standard for Railway/ Subway environments



EC Adapter Options

There are three media converter options available to pair with the EC-Base Extender and extend PoE over Coax. The EC-Link and EC Link+ are single endpoint solutions and the EC4 enables 4 IP endpoints from a single long Coax cable.

EC-Link



EC-Link+



EC4



	EC-Link	EC-Link+	EC4
Power	<ul style="list-style-type: none"> Maximum 30W, delivered on 2-pairs (spare pairs) Local power option Does not negotiate power requirements with IP device Device should be IEEE 802.3 af/at compliant 	<ul style="list-style-type: none"> Maximum 50W (If locally powered and 30W if power provided from switch) delivered on 4 pairs Local power option Adapter is IEEE 802.3af/at compliant and will negotiate power requirements with IP device. 	<ul style="list-style-type: none"> Maximum 50W, delivered on 4 pairs (local power required) Local power option to support greater power delivery to IP devices Does not negotiate power requirements with IP device Device must be IEEE 802.3 af/at compliant.
Casing	Plastic	Metal	Plastic
EN 50121-4 Standard	Yes – approved to operate in a railway/subway environment		

EC-Base Technical Specifications

Model Number	EC-Base
Part Number	NV-ECLK-BSE
Dimensions	10.09cm x 5.03cm x 2.57cm (LxWxH); 3.97" x 1.98" x 1.01" (LxWxH)
Weight	108g (3.81oz.)
Interface: Network Infrastructure side (CLEER)	1 BNC port: Coax cable (RG59, RG6, RG11)
Interface: IEEE Side (IP Device)	(For General/PoE Switch) 1 RJ45 port: supports negotiation with IEEE 802.3 af/at switches
Power Supply	PoE from standard PoE switch, or external power supply; maximum 50W if locally powered.
DC IN (Barrel Connector)	Optional (sold separately) 48V – 56VDC via an external AC/DC Power Adapter (IEC Class II isolated only) NOTE 1: Local power supply used must have its output isolated from Earth potential. NOTE 2: If voltage of local power supply is lower than the power voltage provided from the PoE switch, then power on the PoE switch should be turned off.
Power Consumption	1W
Operating Temperature	-58°F to +158°F (-50°C to +70°C) Tests conducted against international safety standard at maximum ambient temperatures of 60°C at 30W and 55°C at 50W
Mean Time Before Failure (MTBF)	20+ years
Humidity	10% to 95% (non-condensing) at 35° C

EC Adapters Technical Specifications

Model Number	EC-Link	EC-Link+	EC4
Part Number	NV-LNK-02	NV-ECLK-PLS	NV-EC-04
Dimensions	8.8cm x 3.2cm x 2.1cm (LxWxH); 3.46" x 1.23" x 0.83" (LxWxH)	10.09cm x 5.03cm x 2.57cm (LxWxH); 3.97" x 1.98" x 1.01" (LxWxH)	11cm x 7cm x 2.5cm (LxWxH); 4.3" x 2.75" x 0.98" (LxWxH)
Weight	42g (1.48oz.)	108g (3.81oz.)	96g (3.38oz.)
Interface: Network Infrastructure side (CLEER)	1 BNC port: Coax cable (RG59, RG6, RG11)	1 BNC port: Coax cable (RG59, RG6, RG11)	1 BNC port: Coax cable (RG59, RG6, RG11)
Interface: IEEE Side (IP Device)	1 RJ45 port; device should be IEEE 802.3 af/at compliant	1 RJ45 port; adapter is IEEE 802.3af/at compliant and will negotiate power requirements with IP end device.	4 RJ45 ports: device must be IEEE 802.3 af/at compliant, 10/100Mbps connection to IP end device
Power Supply	PoE from the CLEER / EC switch or local power from EC-Base, maximum 30W (over 2-pairs)	Maximum 50W (if locally powered and 30W if power provided from switch) delivered on 4 pairs.	PoE from the CLEER / EC switch, or external power supply; maximum 50W (over 4-pairs) each port
DC IN (Barrel Connector)	Optional (sold separately) 48V – 56VDC via an external AC/DC Power Adapter with phoenix connector (IEC Class II isolated only) NOTE 1: Local power supply used must have its output isolated from Earth potential. NOTE 2: If voltage of local power supply is lower than the power voltage provided from the PoE switch, then power on the PoE switch should be turned off.	Optional (sold separately) 48V – 56VDC via an external AC/DC Power Adapter (IEC Class II isolated only) NOTE 1: Local power supply used must have its output isolated from Earth potential. NOTE 2: If voltage of local power supply is lower than the power voltage provided from the PoE switch, then power on the PoE switch should be turned off.	Optional (sold separately) 48V – 56VDC via an external AC/DC Power Adapter (IEC Class II isolated only) NOTE 1: Local power supply used must have its output isolated from Earth potential. NOTE 2: If voltage of local power supply is lower than the power voltage provided from the PoE switch, then power on the PoE switch should be turned off.
Power Consumption	0.9W	1.1W	1W
Operating Temperature	-58°F to +158°F (-50°C to +70°C) Tests conducted against international safety standard at maximum ambient temperatures of 50°C	-58°F to +158°F (-50°C to +70°C) Tests conducted against international safety standard at maximum ambient temperatures of 60°C at 30W and 55°C at 50W	-58°F to +158°F (-50°C to +70°C) Tests conducted against international safety standard at maximum ambient temperatures of 50°C
Mean Time Before Failure (MTBF)	20+ years	20+ years	20+ years
Humidity	10% to 95% (non-condensing) at 35° C	10% to 95% (non-condensing) at 35° C	10% to 95% (non-condensing) at 35° C

CLEER Family Compliance and Agency Approval

EMC	Emissions: FCC Part 15, ICES-003, EN 55032:2012, EN 50121-4:2015 Class A (EC-Link, EC4, EC10 and CLEER24), Class B (EC-Link+ and EC-Base) Immunity: EN 55024:2010, EN 50121-4:2015
Safety	UL 60950-1 2nd Ed 2014-10-14, CAN/CSA C22.2 No. 60950-1-07 2nd Ed 2014-10 IEC 60950-1:2005+A1+A2, EN 60950-1:2006+A1+A2+A11+A12
Environment	RoHS Directive 2011/65