IP MIGRATION MADE SIMPLE

Fast Ethernet and PoE+ over Coax Cable with 2,000 ft (609 m) Reach

AWARD WINNING CLEER

The award winning CLEER (Coax Leveraged Ethernet Extended Reach) switch is the world's first 24 port Ethernet over coax managed switch. This powerful enterprise grade switch delivers fast Ethernet and PoE+ over coax cable with 2,000 ft (609 m) reach.

CLEER was designed to make the migration to IP quick, easy and cost effective by leveraging an existing coax infrastructure. Benefits include:

- Accelerating your return on investment by reducing infrastructure costs.
- Collapsing planning and deployment time.
- Eliminating infrastructure barriers, risks, disruption and costs.
- Creating a robust IP platform that is easy to configure, deploy and manage.

Unlike other Ethernet over Coax technologies, the CLEER switch offers:

Speed, Reach and Power
CLEER delivers 100 Mbps (symmetrical, full duplex) and PoE+ over coax cable with 2,000 ft (609 m) reach. It is designed to support the most demanding IP Cameras with plenty of bandwidth to spare. No speed degradation with longer distance.

Industry Leading PowerWISE® Technology
Power sharing for redundancy, load balancing, AC/DC options, hot swappable power supply and auto-sensing 100-240 VAC delivering 500 to 1,000 Watts of power. CLEER is one of the most energy efficient switches on the market, consuming less than 17 Watts of power to operate.

Managed Switch with Plug-and-Play Option
CLEER can either operate in a transparent mode functioning as a bridge, allowing for plug-and-play deployment, or as a fully managed switch with high value features specifically designed for the security industry, including:

- Power management by port for easy reset of ports.
- Port MAC locking for higher security and peace of mind.
- Simple Network Manager, an intuitive Web GUI that makes managing the switch a breeze.
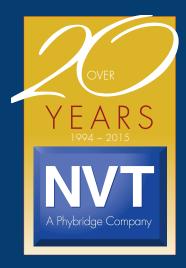
CLEER Switch
At-a-Glance

The CLEER is a high-performing enterprise grade 24 port Ethernet over Coax managed switch that helps maximize your return on investment and reduce your total cost of ownership.

CLEER transforms the existing coax infrastructure into a robust IP platform with power ideal for IP cameras and other IEEE compliant IP devices.

Advantages

- Quick, easy and cost effective IP migration
- Robust enterprise grade switch features ensuring uptime
- Simple GUI interface making configuring, managing and troubleshooting the network a breeze

OVER

20 YEARS
1994 ~ 2015

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A Phybridge Company

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CLEER Switch Technical Specifications
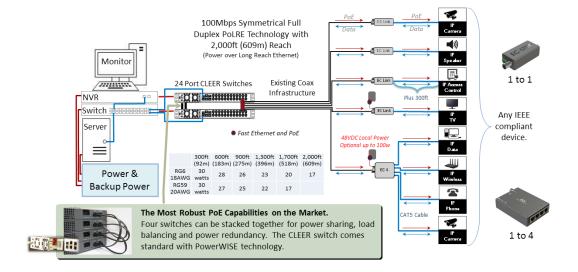
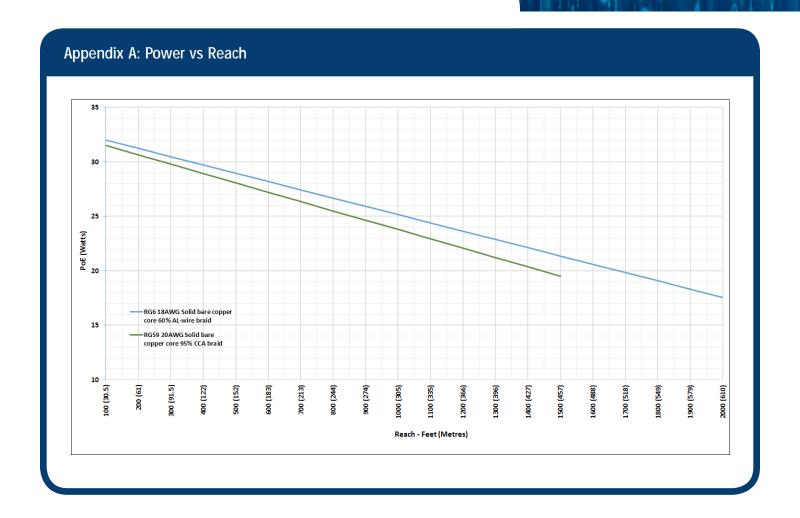|	
Model	NV-CLR-024
Dimensions	19 inches (48.26cm) x 1U without rack ears: • 1.75″ x 17.13″ x 9.92″ (HxWxD) • 4.45cm x 43.5cm x 25.2cm (HxWxD)
Weight	7.94 lbs (3.6 kg)
Mounting	Standalone, rack or shelf-mountable; 2 brackets included for installation
Processor	Broadcom BCM56018 switch processor, 266MHz
Memory	32MB FLASH, 64MB DDR SDRAM
Interface: Ethernet Uplink (Trunk IP)	Maximum 2 uplinks, each 1Gb/s (full duplex), either: • 2 mini-GBIC ports: 1000 Base-TX/SX/LX/EX/ZX/LHX (determined by SFP, transceiver module installed), Ethernet IEEE 802.3z, fiber optic cable; or • 2 RJ45 ports: 10/100/1000 Base-T autosensing, independent speed selection, Ethernet IEEE 802.3, CAT5e/6 copper cable

A media converter (EC-Link or EC4) is required at the device end.
Please refer to Media Converter data sheet.

Specifications subject to change without notice.

Interface: Downlink (PoE and IP to Adapter)	24 x BNC Jacks Speed: 100Mbps (full duplex) PoE Power: 30 Watts Maximum (See Appendix) Maximum Distance: • 1500ft (457m) over RG59 COAX Cable • 2000ft (609m) over RG6 COAX Cable 24 x Status LEDs: • Configuration Options: Link Activity / Link / Off
Management	1 LAN port (MGMT): RJ45, 10/100 Base-T autosensing, IEEE 802.3 1 UART console port: RJ45 (RJ45 to DB9 cable included)
Power Supply	Hot-Swappable Power Supply Unit Autosensing 100-240VAC, 50/60 Hz Power Output: 500W max at 100VAC, 1000W max at 240VAC
Power Consumption	16.5W
Power Injection (PoE)	DC voltage: 48VDC to 56VDC Endpoint devices must be compliant with IEEE 802.3af/at
PowerWISE® Power Sharing	2 male connectors (rear) DC IN and DC OUT: 48VDC to 56VDC
Operating Temperature	14°F to 122°F (-10°C to 50°C)
Humidity	10% to 95% (non-condensing) at 95°F (35°C)

100Mbps Symmetrical Full Duplex PoLRE Technology with 2,000ft (609m) Reach
(Power over Long Reach Ethernet)

Monitor

NVR
Switch
Server

Power & Backup Power

24 Port CLEER Switches

Existing Coax Infrastructure

● Fast Ethernet and PoE

	300ft (92m)	600ft (183m)	900ft (275m)	1,300ft (396m)	1,700ft (518m)	2,000ft (609m)
RG6 18AWG	30 watts	28	26	23	20	17
RG59 20AWG	30 watts	27	25	22	17	

The Most Robust PoE Capabilities on the Market.
Four switches can be stacked together for power sharing, load balancing and power redundancy. The CLEER switch comes standard with PowerWISE technology.

PoE
Data
EC Link

PoE
Data
EC Link

IP Camera
IP Speaker
IP Access Control
IP TV
IP Data
IP Wireless
IP Phone
IP Camera

Plus 300ft

48VDC Local Power Optional up to 100w

EC4

CAT5 Cable

EC-LINK
1 to 1

Any IEEE compliant device.

1 to 4

Appendix A: Power vs Reach

Chart axes: PoE (Watts) vertical axis from 10 to 35. Horizontal axis "Reach - Feet (Metres)" from 100 (30.5) to 2000 (610).

Legend:
- RG6 18AWG Solid bare copper core 60% AL-wire braid
- RG59 20AWG Solid bare copper core 95% CCA braid