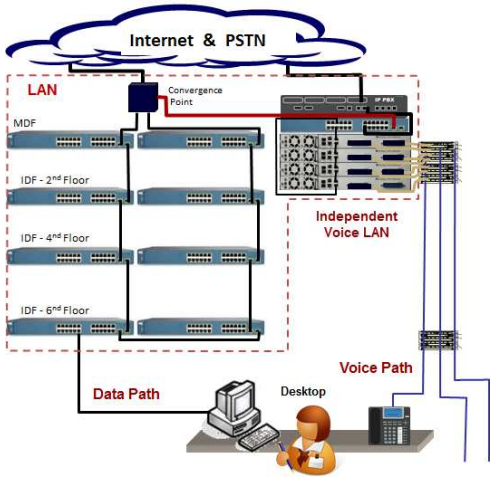
Phybridge

PoLRE™ Managed Switches

Beyond PoE: Delivering Power over Long Reach Ethernet

Why PoLRE?

Phybridge **Power over Long Reach Ethernet** (PoLRE) switches go beyond traditional PoE. PoLRE switches are specifically designed to allow businesses to optimize their converged LAN platform. This game-changing switch innovation moves the convergence point from every desktop to a single point in the central closet—greatly reducing costs, risk and complexity while eliminating many of the compromises associated with layering voice on your data switch fabric.



With a PoLRE backbone complementing the data switch fabric, you are guaranteed voice quality of service, voice continuity with no data LAN dependencies, and a highly secure topology with the physical separation of voice communications. Best of all, there's no need to replace the IP phone or power source when upgrading your data speeds to the desktop: The separate PoLRE backbone supports your bandwidth and power requirements today and in the future.

What is PoLRE?

The PoLRE switch innovation delivers Ethernet and Power over Ethernet over a single pair of cable with four times the reach of traditional switches. You can transform your existing voice infrastructure into an IP path with power, ideal for IP telephony deployment. The two most important aspects businesses can't compromise when delivering a robust voice platform are power and the availability of uninterrupted bandwidth: The PoLRE switch has both covered, with 24-port and 48-port configurations and the ability to scale to thousands of users.

The Most Robust PoE Switch Offering Available

PoLRE comes standard with PowerWise™ technology. High performance PoLRE switches are equipped with industry leading power capabilities found in switches twice the price. Power sharing, load balancing, AC/DC options, and hot swappable power supply make the PoLRE switch one of the most robust PoE switches available today.

Quality of Service Guaranteed

Phybridge offers an industry leading QoS guarantee. We can do this with confidence because we leverage the existing, proven reliable point-to-point voice infrastructure to create a dedicated physical path for every IP phone, ensuring data traffic has no impact on the user's voice experience.

PoLRE Highlights

- **Highly resilient** and **robust** PoLRE switches have been designed from the ground up to meet the "five nines" high availability of service required in telephony. Solid and dependable, PoLRE switches are built to withstand tough operating environments.
- Create the **ideal converged LAN topology** by optimizing your LAN for voice and data convergence with a separate voice path.
- Point-to-point topology provides dedicated physical bandwidth for voice, **ensuring QoS and voice continuity** with no data LAN dependencies.
- Leveraging your existing voice infrastructure makes **migrating to IP telephony simple**, and the quick and **easy plug-and-play deployment** saves you time while minimizing network and business disruption.
- **Simplify network management**. Physically separating voice traffic eliminates the complexities of managing constantly changing voice, video, and data traffic that share a single path.
- **Monitor, update and troubleshoot** switches in real-time with the Simple Network Manager, an easy-to-use and easy-to-learn tool.
- Easily **identify end point locations**, essential for location identification methods such as E911 and asset tracking.
- Operate the switch in **secure transparent mode** with management still available over the console port.
- **48-port PoE switch in a stackable 1U chassis** with a compact and sleek design.
- Energy efficiency design makes PoLRE one of the **lowest power consuming data switches** in the industry. PowerWise technology and features such as power/load sharing, hot swappable and redundant power supplies ensure voice continuity.
- Optimizing your converged LAN network **increases your return on investment** and **decreases your total cost of ownership**, greatly reducing management complexity and requirements.

PoLRE Switch Features

General + L2 Managed Switch

- PowerWise low power switches
- Efficient and easy web design
- Full WEB, CLI and SNMP management
- Port control
- Port speed, duplex mode, and flow control
- Port frame size (jumbo frames)
- Port state (administrative status)
- Port status (link monitoring)
- Port statistics (MIB counters)
- Power savings
- POE with LLDP
- LED power management

QoS

- Point-to-point topology

L2 Switching

- IEEE 802.1Q static VLAN
- Private VLAN (static)
- Port isolation (static)

L3 Switching

- Thermal protection
- Topology
- HTTP server
- CLI console port
- CLI telnet
- Configuration download and upload
- Remote logging
- Software download through web
- Web and CLI authentication and authorization

Power/Load Sharing

PoLRE switches are among the lowest power consuming data switches in the industry, with features including power/load sharing, hot swappable power supply, and AC/DC options. PoLRE switches come standard with PowerWise technology, providing the flexibility to use either AC or DC power sources with the same switches. PoLRE provides you with the most robust PoE platform in the industry: a highly reliable local area switch network powered by PowerWise with multiple sources of redundancy.

Industry-Leading Network Services

PoLRE switches support industry-leading network services (such as VLAN, SNMP and STP/RSTP), providing you with comprehensive and effective management of the switch.

Secure Transparent Mode (Bridge Mode)

Operate the switch in secure transparent mode with management still available over the console port. When operating in transparent mode, the PoLRE switch functions as a bridge and is not visible on the network.

E911 Support

PoLRE switches support E911, an enhancement to the 911 service that allows the user's location to be identified. The fixed nature of the PoLRE telephony infrastructure makes it easy to determine end point locations, required for E911 location identification.

Simplify Management with the PoLRE Simple Network Manager

Managing your PoLRE switches is quick and easy with the Simple Network Manager. Instantly get a complete picture of your PoLRE switch network, perform real-time updates and dynamically control services. Key information, such as bandwidth consumption and ethernet port status, is available at a glance.

The PoLRE Simple Network Manager is so easy to understand, you can start using it right away—no training required.

Easy to Navigate

Finding your way around is easy. There's no complicated navigation system to learn: Just click the **System**, **Ethernet**, **VLAN** and **Admin** navigation buttons at the top of the screen to move through the Simple Network Manager pages.

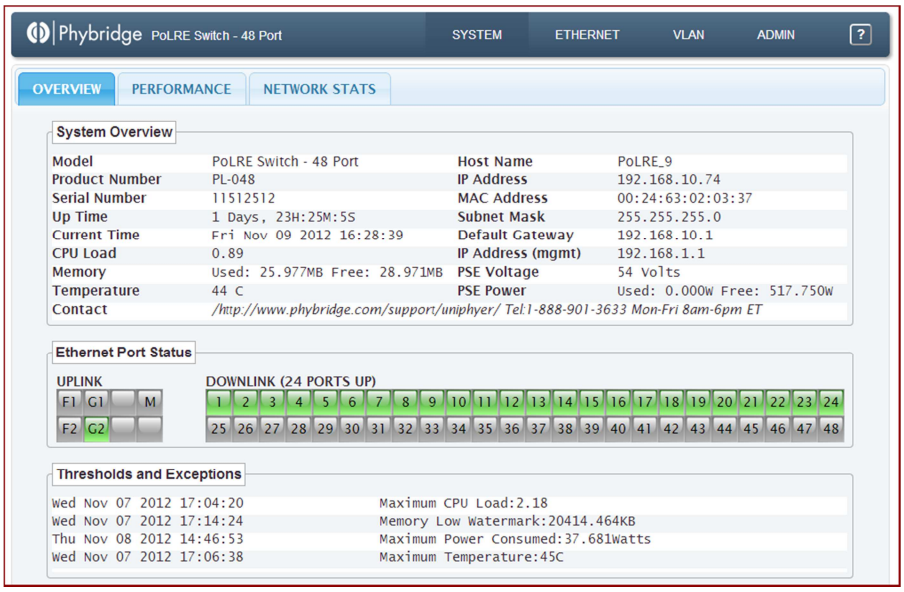
Easy to Find Information

Information is grouped logically, making switch details and controls easy to find. For example, when working with a service, you can see the status of all other services at the same time; when viewing details for a VLAN, you can also see information for all VLANs on the network.

Monitor and Control the System

Quickly view key switch information all in one place.

Monitor the overall network health, configure the network, and control ethernet uplink and downlink ports.

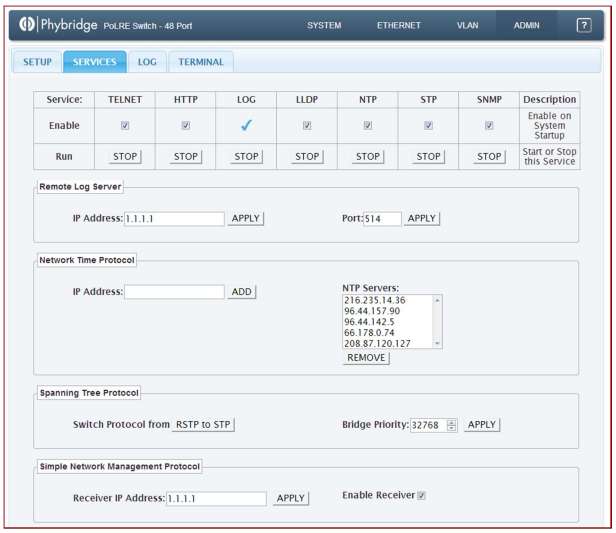


Monitor Network Status in Real-Time

Monitor the network end-to-end in real-time, including switch capacity, bandwidth consumption, utilization, ethernet port status and overall network performance. Quickly troubleshoot and resolve any issues that arise.

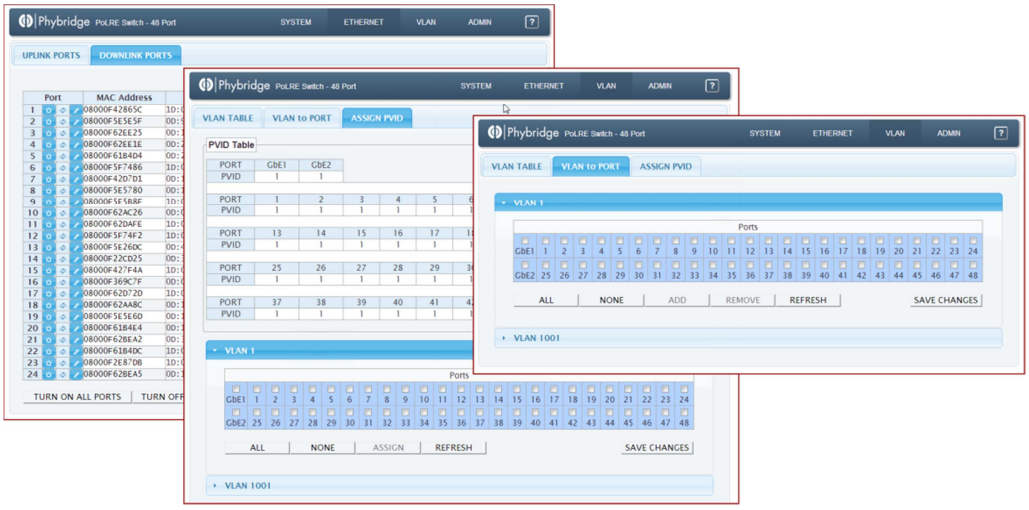
Control and Configure Services

Update critical parameters in real-time, including switch counters, switch configuration settings and services. View and record comments in system logs, creating a lasting information trail.



Update the Network Immediately

Configure the switch network interface, manage ethernet uplink/downlink ports, add and remove VLANs, assign ports to VLANs, and manage port PVIDs.



PoLRE Switch Technical Specifications: Models PL-024 and PL-048	
Models	PL-024: Can drive up to 24 Phylink Adapters (model PL-PA011) PL-048: Can drive up to 48 Phylink Adapters (model PL-PA011)
Dimensions	19 inches x 1U Without rack ears: 4.45cm x 43.5cm x 25.2cm (HxWxD),1.75” x 17.13” x 9.92” (HxWxD)
Weight	3.61 kg (7.96 lb.)
Chassis	Aluminum
Mounting	Standalone or 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 copper cable
Interface: Downlink (PoE and IP to adapter)	Model PL-024: 1 RJ21 male telco connector (standard), 24 pairs used Model PL-048: 2 RJ21 male telco connectors (standard), 48 pairs used Maximum distance: 1200' (365.76m) CAT3 UTP cable, 24 AWG Speed: 10Mb/s (full duplex) PoE power: 10 Watts
Management	1 LAN port (MGMT): RJ45, 10/100 Base-T autosensing, IEEE 802.3 1 UART console port: RJ45 to DB9 cable
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	Model PL-024: 16.5W Model PL-048: 22W
Power injection (PoE)	DC voltage: -54VDC Endpoint devices must be compliant with IEEE 802.3af
PowerWise power/load sharing	2 male connectors (rear), DC IN and DC OUT: -52VDC
Fans	2 on chassis, 2 on power supply unit
Operating temperature	-10° C to 50° C
Humidity	10% to 95% (non-condensing) at 35° C

Phylink Adapter Technical Specifications: Model PL-PA011	
Dimensions	1.8cm x 2.8cm x 6.5cm (HxWxD); 0.71” x 1.1” x 2.56” (HxWxD)
Weight	22 g (0.78 oz.)
Enclosure	ABS (AF-312B)
Mounting	Inline between the CAT5 cable (to IP endpoint) and the CAT3 cable (to RJ11 jack)
Interface PoLRE Switch side	1 RJ11 port: CAT3 unshielded single twisted pair cable. Between the wall plate and adapter, you can reuse the existing silver satin when doing a DNIC/POTS displacement.
Interface Ethernet side: for IP end point device	1 RJ45 port: 10/100 Base-T autosensing, IEEE 802.3af, 10 Mb connection to IP end device
Power injection (PoE)	DC voltage on RJ45 port: • 54V max • 37V when 1200' (365.76m) away from its PoLRE Switch Powers Class 1, Class 2 and some Class 3 IEEE 802.3af compliant IP devices
Power consumption	0.9W
Operating temperature	0° C to 40° C
Humidity	10% to 95% (non-condensing) at 35° C