

Long Range Ethernet (LRE) Switch

- 10Base-T performance over 1000 meters
- 100Base-TX performance over 220 meters
- IEEE 802.3u compliant
- Auto Negotiation support for automatic selection of range, speed and duplex.
- Regular 10/100Base-T mode compatible with existing PHY
- Half duplex and full duplex for both 10Base-T and 100Base-TX
- Proprietary PAM4 encoding for transmission and reception for Long Range Ethernet application
- Parallel detection algorithm for legacy support of non-Auto-Negotiation enabled link partner.
- Adaptive equalization and baseline wander correction
- Repeater mode to bridge regular 10/100Base-T mode to PAM4 mode
- IEEE 1149.1 Standard Test Access Port for boundary scan and core scan.
- Multiple low power modes
- Integrated multiple status LED drivers (10/100, half/full duplex, activity, collision, link, etc.)
- Automatic crossover for MDI and MDIX
- Flexible serial management interface (MDC/MDIO) for control and monitor register access.
- Automatic reversed polarity detection and correction
- Programmable interrupts
- Programmable loop back modes for easy system diagnostics.
- Low power consumption with worst case of 400mW and best case of 200mW each port.
- MII, RMII and SMII for interfacing to MAC, support drive up to 0.5m

Application1: Network Access

- The last 1 km Ethernet Access
- 10M/1000meters or 100M/250 meters network access to residential districts and villa.
- Upgrade the hotel network using LRE converter.
- Support Smart Home by construct the network infrastructure with LRE.

