

Overview

The JL1101BR is a single-port Fast Ethernet PHY transceiver. It is a small form factor required for space-sensitive applications in embedded systems.

The JL1101BR offers performance far exceeding the IEEE specifications, with superior interoperability and industry leading performance beyond 200 meters of Cat5e cable. It features Auto-MDIX, eliminating cabling complications. With superior ESD protection, greater than 8 KV Human Body Model, the JL1101BR provides extremely high reliability and robust operation, ensuring a high-level performance in all applications.

The JL1101BR integrates an internal regulator to generate 1.2V. It can run off a single 3.3V supply to simplify design.

Based on a simplified yet advanced mixed-signal architecture, the JL1101BR provides robust long range wired networking capacity at low cost and industry-leading low power consumption, making it ideal for a wide range of applications.

Typical Applications

- Video surveillance
- Industrial controls and automation
- Power acquisition system
- Access control system

Features

- 100BASE-TX IEEE 802.3u Compliant
- 10BASE-T IEEE 802.3 Compliant
- Supports 100BASE-FX
- Supports RMII mode
- Supports RMII back-to-back mode
- IEEE 802.3az-2010 (EEE) Compliant
- Supports Link Down Low Power (LDLP)
- Supports industrial applications and is EtherCAT® compliant
 - Microsecond-level fast link loss with several types of detection mode
 - Nanosecond-level transmit/receive latency
 - Fixed phase XI to TX_CLK relationship $< \pm 2$ ns
- Supports Signal-to-Noise Ratio (SNR) indicator
- Supports Virtual Cable Test (VCT)
- Supports Baseline Wander (BLW) compensation
- Supports Auto-MDIX
- Supports Interrupt function
- Supports several types of Wake-on-LAN (WOL)
- Automatic Polarity Correction
- LEDs for Network Status
- Supports 25-MHz External Crystal or OSC
- Supports 50-MHz External OSC Clock Input
- Provides 50-MHz Clock Source for MAC
- Low Power Consumption
- 3.3V/2.5V/1.8V MAC Interface VDDIO power supply
- Single 3.3V power supply
- 24-pin RMII QFN 4 mm x 4 mm Package

