

AR8033-AL1A is a Fast Ethernet physical layer transceiver (PHY) chip manufactured by Atheros. It supports 10/100Mbps data rates and is designed to operate over a variety of media including CAT5 twisted pair cable, fiber optic cable, and coaxial cable. The chip also incorporates advanced features such as auto-negotiation, auto-MDI/MDIX, and energy-efficient Ethernet (EEE) to optimize power consumption. It is commonly used in networking devices such as routers, switches, and network interface cards.

The AR8033-AL1A is a high-performance Ethernet Physical Layer (PHY) integrated circuit designed to deliver reliable and efficient Ethernet connectivity. With advanced features and a robust design, this IC is a fundamental component for electronic systems requiring Ethernet communication.

Pinout

AR8033-AL1A Pin Configuration

Detailed Pin Description:

- Pin 1 (TXP): Transmit Positive.
- Pin 2 (TXN): Transmit Negative.
- Pin 3 (RXN): Receive Negative.
- Pin 4 (RXP): Receive Positive.
- Pin 5 (REFCLK): Reference Clock Input.
- Pin 6 (GND): Ground Pin.
- Pin 7 (MODE0): Mode Selection 0.
- Pin 8 (MODE1): Mode Selection 1.
- Pin 9 (MDIO): Management Data Input/Output.
- Pin 10 (MDC): Management Data Clock.
- Pin 11 (LED1): LED Indicator 1.
- Pin 12 (LED2): LED Indicator 2.
- Pin 13 (GND): Ground Pin.
- Pin 14 (AVDD): Analog Power Supply.
- Pin 15 (DVDD): Digital Power Supply.
- Pin 16 (GND): Ground Pin.

Note: The pin configuration above is a general representation. Refer to the specific datasheet for precise details.

Circuit Diagram

Include a simple circuit diagram showcasing the AR8033-AL1A in a typical Ethernet application.

Feature

- Compliant with IEEE 802.3 10BASE-T, 100BASE-TX, and 1000BASE-T standards
- Supports Auto-Negotiation, Auto-MDI/MDIX, and Energy Efficient Ethernet (EEE) modes
- Supports multiple power management modes for power-saving operations
- Supports Wake-on-LAN (WoL) and Link Loss Return (LLR) features
- Provides integrated programmable LED drivers
- Offers advanced cable diagnostics and loopback modes

Note: Comprehensive technical details can be available in the AR8033-AL1A datasheet.

Applications

- Network interface cards (NICs)
- LAN-on-motherboard (LOM) designs
- Embedded networking applications
- Industrial and automation control systems
- Home and office networking equipment

