

RTL8139C(L)

Enhanced PCI/Mini-PCI/Cardbus 3.3V Single-Chip 10/100M Fast Ethernet Controller with Power Management

General Description

This product is covered by one or more of the following patents:

US5,307,459, US5,434,872, US5,732,094, US6,570,884, US6,115,776, and US6,327,625.

The Realtek RTL8139C(L) is a highly integrated and cost-effective single-chip Fast Ethernet controller. It is enhanced with an ACPI (Advanced Configuration Power Interface) management function for PCI/Mini-PCI/Cardbus in order to provide efficient power management for advanced operating systems with OSPM (Operating System Directed Power Management). The RTL8139C(L) also provides a remote wake-up function by Magic Packet & Wake-up Frame to increase cost-efficiency in network maintenance and management. Furthermore, it supports the Cardbus interface for PC Card applications and is an ideal solution for notebook/motherboard-embedded network design.

Features

- 128-pin PQFP/LQFP to reduce design & manufacturing cost
- Integrates Fast Ethernet MAC, physical chip and transceiver into a single chip
- Supports PCI/Mini-PCI/Cardbus interfaces
- 10 Mb/s and 100 Mb/s operations
- Supports 10 Mb/s and 100 Mb/s N-way auto-negotiation
- Supports 25MHz Crystal/25M OSC to reduce BOM cost
- Compliant to PCI 2.2 Standard and PC99/PC2001 Standards
- Supports ACPI power management
- Provides PCI bus master data transfer
- Provides PCI memory space or I/O space mapped data transfer
- Supports PCI clock 16.75MHz-40MHz
- Advanced power saving mode when LAN function or wakeup function is not used
- Supports Link Change, Microsoft "Wake-up Frame", and AMD "Magic Packet" for WOL function
- Half/Full duplex capability
- Supports Full Duplex Flow Control (IEEE 802.3x)
- Provides interface to 93C46/93C56 EEPROMs to store resource configuration and ID parameters
- Supports up to 128K-byte Flash Memory/Boot-ROM interfaces
- Supports PCI Clock Run pin
- Supports 3 LEDs to indicate traffic, link, speed and collision
- 3.3V CMOS process

Applications

- PCI NIC cards
- Mini-PCI modules
- Cardbus PC cards
- LOM (LAN on motherboards) and LON (LAN on notebooks) applications