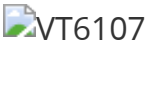
Rhine VT6107 PCI Fast Ethernet Controller



The VIA Rhine VT6107 Fast Ethernet controller is a cutting edge, feature-rich, single-ASIC solution for LAN-on-motherboard applications. By optimizing the throughput between the NIC and the PCI bus, the VT6107 drastically reduces CPU utilization and allows a transfer rate of up to 200 Mbps in full-duplex. The VT6107 supports advanced power management features for low power consumption, including Wake on LAN (WOL), and is implemented in a low power CMOS process.

Key Features

- Pin- to -pin compatible with the VIA Networking Technologies Velocity VT6122 Gigabit Ethernet Controller.
- Single-chip Fast Ethernet network interface controller (NIC) for PCI bus
  - PCI 2.2 specification compliant
  - 10/100 Mbps Ethernet communications
- High Performance PCI Mastering Structure
  - On-chip bus master DMA
  - Transmit data buffer byte-alignment for low CPU utilization
  - Dynamic transmit packet auto-queuing for back-to-back transmission
  - Programmable activity polling intervals for description DMA
  - Programmable DMA arbitration priority to minimize overflow and underflow conditions
  - Supports PCI enhanced commands
- Provides Standard 10Base-T/ 100Base-TX/ PHY Layer and Transceiver
  - Supports 10Base-T/100Base-TX with CAT5 UTP and STP
  - 10/100 Mbps N-way auto-negotiation
  - 10/100 Mbps full/half duplex operation
  - Supports MDI/MDIX auto-crossover
  - Automatic power saving for disconnected cables
  - Programmable LED outputs for link, activity, duplex, speed, and collision

  - Dynamic auto-reload
  - Dynamic direct programming for manufacturing
  - Supports loading from Virtual EEPROM
- emBoot PXE Certification
- Power management
  - Supports PCI Bus Power Management Interface Specification 1.0/1.1
  - Supports Advanced Configuration and Power Interface (ACPI) Specification 2.0
  - Supports Network Device Class Power Management Specification 1.0a
  - Wake-up event support link change / magic packets / unicast physical address / MS-defined pattern match
- Flow Control
  - Supports IEEE 802.3X for full duplex
  - Multiple pause frame Xon/Xoff
- Dual-power design: 3.3V I/O Power and 2.5V Core Power
- 128-pin, 14 x 14 mm, EP-LQFP package