


**Ethernet CTRLR Single Chip 10Mbps/100Mbps/1000Mbps
1.2V/2.5V/3.3V 56-Pin QFN EP Tray**

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|----------------------|--|
| Manufacturer: | Microchip Technology, Inc |
| Package/Case: | QFN56 |
| Product Type: | Communication & Networking ICs |
| RoHS: | RoHS Compliant/Lead free  |
| Lifecycle: | Active |



Images are for reference only

[Inquiry](#)

General Description

Microchip's LAN7500 is a Hi-Speed USB 2.0 to 10/100/1000 Gigabit Ethernet controller providing a high-performance and cost-effective USB to Ethernet connectivity solution. The LAN7500 contains an integrated 10/100/1000 Gigabit Ethernet PHY, USB PHY, Hi-Speed USB 2.0 device controller, 10/100/1000 Gigabit Ethernet MAC, TAP controller, EEPROM controller and a FIFO controller with a total of 32KB internal packet buffering. The device supports 10BASE-T, 100BASE-TX and 1000BASE-T Ethernet and implements Control, Interrupt, Bulk-in and Bulk-out USB endpoints. The Ethernet controller supports auto-negotiation, auto-polarity correction, HP Auto-MDIX† support and is compliant with IEEE 802.3/802.3u/802.3ab standards.

USB-based networking provides flexibility for the routing and placement of network connections anywhere in the system. USB-based solutions leverage the existing USB stack for the Ethernet driver. The LAN7500 is also available with a wide range of drivers including Windows®, Mac® and Linux®.

The LAN7500 also offers Microchip's NetDetach™ and UniClock™ technologies. NetDetach allows for up to a 25% reduction in power by enabling the host CPU to enter a low-power state when Ethernet is inactive. UniClock simplifies the clocking scheme and reduces system BOM cost by using a single 25MHz crystal for both USB and Ethernet connectivity. Multiple power management features are provided, including various low-power modes and Magic Packet™, Wake-on-LAN (WoL) and Link Status Change wake events. These wake events can be programmed to initiate a USB remote wakeup. The device is available in commercial (0° to 70°C) and industrial temperature range (-40° to 85°C) options.

Microchip's complimentary and confidential LANCheck® and USBCheck™ online design review services are available for customers who have selected our products for their application design-in*.

†HP Auto-MDIX eliminates the need for special "crossover" cables when connecting LAN devices together.

*The LANCheck online design review service is subject to Microchip's Program Terms and Conditions and requires a myMicrochip account.

Key Features

Highlights

Single-chip, Hi-Speed USB 2.0 to 10/100/1000 Gigabit Ethernet controller

Implements NetDetach™ technology for reduced system power consumption

Supports EEPROM-less operation for reduced BOM costs

Requires only a single 25MHz crystal

Easy upgrade for USB-based 10/100 Ethernet (LAN9500/9500A) to 10/100/1000 Gigabit Ethernet

Supports IEEE 802.3/802.3u/802.3ab standards

Industrial temperature range option available (LAN7500i)

8x8mm, 56-pin QFN, RoHS-compliant package

Target Applications

Embedded Systems

Consumer Electronics Devices

Netbooks/Smartbooks/MIDs

Docking Stations

Digital TVs (DTVs)

Set-Top Boxes

Personal Video Recorders (PVRs)

Network Printers

USB Port Replicators

Stand-alone USB to Ethernet Dongles

Industrial Designs

Recommended For You

LAN7500-ABZJ

Microchip Technology, Inc

QFN56

LAN9514i-JZX

Microchip Technology, Inc

QFN64

LAN7500-ABZJ-TR

Microchip Technology, Inc

QFN56

LAN7800/Y9X

Microchip Technology, Inc

VQFN-48

LAN9730-ABZJ

Microchip Technology, Inc

QFN56

LAN9513i-JZX

Microchip Technology, Inc

QFN64

LAN7500I-ABZJ-TR

Microchip Technology, Inc
QFN-56

LAN9512-JZX

Microchip Technology, Inc
QFN64

LAN7850-I/8JX

Microchip Technology, Inc
VQFN56

LAN9512i-JZX

Microchip Technology, Inc
QFN64

LAN7800/VSX

Microchip Technology, Inc
VQFN48

LAN7800-I/VSX

Microchip Technology, Inc
VQFN48

LAN7800-I/Y9X

Microchip Technology, Inc
VQFN48

LAN9514-JZX-TR

Microchip Technology, Inc
QFN-64

LAN9514-JZX

Microchip Technology, Inc
QFN64