


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



Images are for reference only

[Inquiry](#)

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

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

Single chip Hi-speed USB 2.0 to 10/100/1000 Ethernet controller

10/100/1000 Ethernet MAC with full-duplex support

10/100/1000 Ethernet PHY with HP Auto-MDIX

Implements reduced power operating modes

Supports EEPROM-less

Operation for reduced BOM

NetDetach provides automatic USB attach/detach when Ethernet cable is connected/removed

Four endpoints supported

Supports vendor specific commands

Remote wakeup supported

Full-duplex flow control

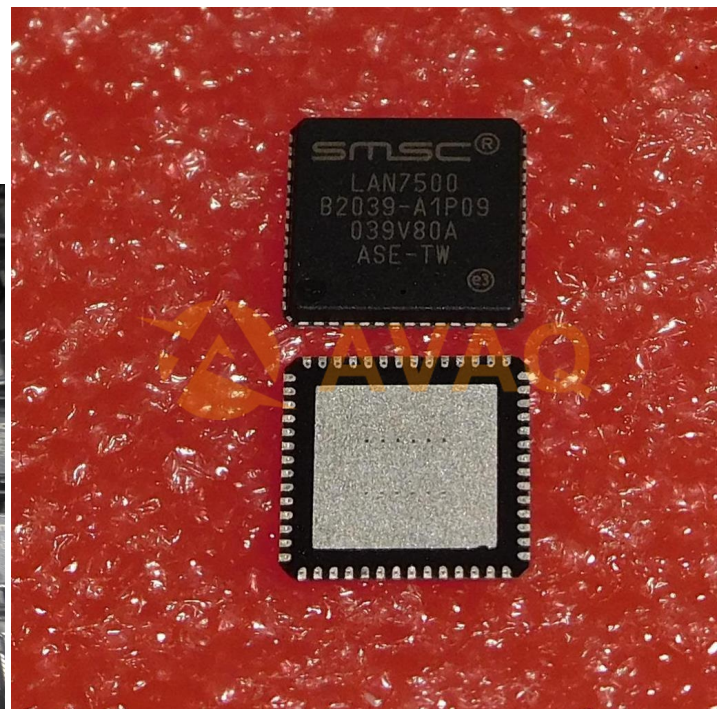
Preamble generation and removal

Automatic 32-bit CRC generation and checking

9kB Jumbo frame support

Automatic payload padding and pad removal

Loop-back modes



Recommended For You

LAN9514i-JZX

Microchip Technology, Inc
QFN64

LAN7500-ABZJ-TR

Microchip Technology, Inc
QFN56

LAN7800/Y9X

Microchip Technology, Inc
VQFN-48

LAN7500i-ABZJ

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LAN9730-ABZJ

Microchip Technology, Inc
QFN56

LAN9513i-JZX

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QFN64

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LAN9512-JZX

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QFN64

LAN7850-I/8JX

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LAN7800/VSX

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