
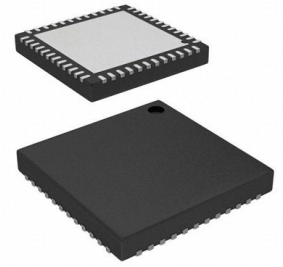


Ethernet CTRLR Single Chip 10Mbps/100Mbps/1000Mbps 1.8V/3.3V Automotive 48-Pin VQFN EP Tray

Manufacturer:	Microchip Technology, Inc
Package/Case:	VQFN48
Product Type:	Communication & Networking ICs
RoHS:	RoHS Compliant/Lead free 
Lifecycle:	Active



Images are for reference only

[Inquiry](#)

General Description

Microchip's LAN7800 is a Super Speed USB 3.1 Gen 1 to 10/100/1000 Gigabit Ethernet bridge providing an ultra high-performance and cost-effective USB to Ethernet connectivity solution. The LAN7800 contains an integrated 10/100/1000 Gigabit Ethernet PHY, USB PHY, Hi-Speed USB 2.0 device controller, SuperSpeed USB3.1 Gen 1 device controller, 10/100/1000 Gigabit Ethernet MAC, Integrated OTP, EEPROM controller. 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 LAN7800 is also available with a wide range of drivers including Windows®, Mac® and Linux®.

The LAN7800 also offers Microchip's NetDetach™ and UniClock™ technologies. NetDetach allows for reduced 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. MSFT QOAC (always On Always Connected) is also supported. These wake events can be programmed to initiate a USB remote wakeup and if desired, also generate a hardware PME event. 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.

For product comparison, please consider:LAN7850,LAN7801

Key Features

Highlights

Single-chip, Super-Speed USB 3.1 Gen 1 to 10/100/1000 Ethernet controller

Fully supports IEEE 802.3/802.3u/802.3ab standards

Diagnostics including cable length measurement

Fully supports transformerless board level links

9K jumbo frames are supported

IEEE 802.3az-2010 - Energy Efficient Ethernet (EEE)

Implements NetDetach™ technology for reduced system power consumption

Provides dedicated PME wake-up signal

Always On Always Connected (AOAC)

Internal OTP memory to remove the need for external EEPROM

Integrated core voltage regulator

Requires only a single 25MHz crystal

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

Industrial temperature range option available. -40°C → +85°C (LAN7800-I)

7x7mm, 48-pin SQFN (0.5mm pitch) , RoHS-compliant package

6x6mm, 48-pin SQFN (0.4mm pitch) , RoHS-compliant package

Target Applications

Embedded Systems

Consumer Electronics Devices

Netbooks/Smartbooks/MIDs

Docking Stations

Cameras

Digital TVs (DTVs)

Set-Top Boxes

Personal Video Recorders (PVRs)

Network Printers

USB Port Replicators

Stand-alone USB to Ethernet Dongles

Industrial Designs

Drivers & software tools

Available via the Documentation link on this page.

A driver supporting this product is already present in the Linux mainline kernel. Specific backports, when available, can be found within the drivers listed here.

Android is supported via Linux mainline or, when applicable, specific backports available via the documentation link on this page.

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

LAN7500i-ABZJ

Microchip Technology, Inc
QFN56

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/Y9X

Microchip Technology, Inc
VQFN48

LAN9514-JZX-TR

Microchip Technology, Inc
QFN-64

LAN9514-JZX

Microchip Technology, Inc
QFN64