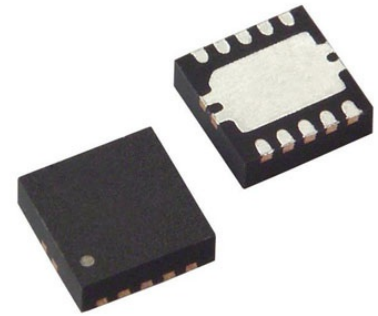


Ethernet Controller, 1 Gbps, IEEE 802.3, IEEE 802.3u, IEEE 802.3ab, 1.14 V, 1.26 V, QFN, 56 Pins

Manufacturers	Microchip Technology, Inc
Package/Case	VQFN-56
Product Type	Interface ICs
RoHS	
Lifecycle	



Images are for reference only

Please submit RFQ for LAN8820I-ABZJ or [Email to us: sales@ovaga.com](mailto:sales@ovaga.com) We will contact you in 12 hours.

[RFQ](#)

General Description

The Microchip LAN8820/LAN8820i is a low-power 10BASE-T/100BASE-TX/1000BASE-T Gigabit Ethernet physical layer (PHY) transceiver that is fully compliant with the IEEE 802.3 and 802.3ab standards.

The LAN8820/LAN8820i can be configured to communicate with an Ethernet MAC via the standard RGMII interface. It contains a full-duplex transceiver for 1000Mbps operation on four pairs of category 5 or better balanced twisted pair cable. Per IEEE 802.3-2005 standards, all digital interface pins are tolerant to 3.6V.

The LAN8820/LAN8820i is configurable via hardware and software, supporting both IEEE 802.3-2005 compliant and vendor-specific register functions via SMI. The LAN8820/LAN8820i implements Auto-Negotiation to automatically determine the best possible speed and duplex mode of operation. HP Auto-MDIX support allows the use of direct connect or cross-over cables.

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

Features

Highlights

Single-Chip Ethernet Physical Layer Transceiver (PHY)

Compliant with IEEE 802.3ab (1000BASE-T), IEEE 802.3u (Fast Ethernet), and ISO 802-3/IEEE 802.3 (10BASE-T)

HP Auto-MDIX support in accordance with IEEE 802.3ab specification at 10/100/1000 Mbps operation

Miniature 56-pin QFN RoHS compliant package with RGMII (8 x 8 x 0.85mm height)

Flexible configurations for LED status indicators

Implements Reduced Power Operating Modes

Key Benefits

High-Performance 10/100/1000 Ethernet Transceiver

Compliant with IEEE 802.3ab (1000BASE-T)

Compliant with IEEE 802.3/802.3u (Fast Ethernet)

Compliant with ISO 802-3/IEEE 802.3 (10BASE-T)

10BASE-T, 100BASE-TX and 1000BASE-T support

Loop-back modes

Auto-negotiation (NEXT page support)

Automatic polarity detection and correction

Link status change wake-up detection

Vendor specific register functions

Supports reduced pin count RGMII interface

Controlled impedance outputs

Supports RGMII ID mode

Four status LED outputs and configurable LED modes with support for tricolor operation

Compliant with IEEE 802.3-2005 standards

RGMII pins tolerant to 3.6V

Integrated DSP implements adaptive equalizer, echo cancellers, and crosstalk cancellers

Efficient digital baseline wander correction

Power and I/Os

Configurable LED outputs

Various low power modes

2.5V I/O supply

Miscellaneous Features

IEEE 1149.1 (JTAG) boundary scan

Multiple clock options - 25MHz crystal or 125MHz clock

Packaging

56-pin QFN (8x8 mm) RoHS compliant package with RGMII

Environmental

Commercial temperature range (0°C to +70°C)

Industrial temperature range (-40°C to +85°C)

Target Applications

Set-Top Boxes

Networked Printers and Servers

Test Instrumentation

LAN on Motherboard

Embedded Telecom Applications

Video Record/Playback Systems

Cable Modems/Routers

DSL Modems/Routers

Digital Video Recorders

IP and Video Phones

Wireless Access Points

Digital Televisions

Digital Media Adaptors/Servers

Gaming Consoles

POE Applications

Related Products



[LAN8740A-EN](#)

Microchip Technology, Inc
QFN-32



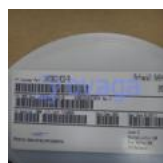
[LAN8700C-AEZG-TR](#)

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[LAN8700C-AEZG](#)

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VQFN-36



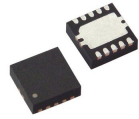
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VQFN-36



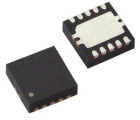
[LAN9303-ABZJ](#)

Microchip Technology, Inc
VQFN-56



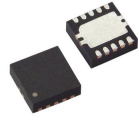
[LAN9303I-ABZJ](#)

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