

High-Performance MII and RMI 10/100 Ethernet PHY with HP Auto-MDIX, Ethernet IC  
HiPerfm Ethrnt PHY

Manufacturers	<a href="#">Microchip Technology, Inc</a>
Package/Case	LQFP-64
Product Type	Interface ICs
RoHS	Rohs
Lifecycle	



Images are for reference only

Please submit RFQ for LAN8187I-JT or [Email to us: sales@ovaga.com](mailto:sales@ovaga.com) We will contact you in 12 hours.

[RFQ](#)

## General Description

The Microchip LAN8187/LAN8187i is a low-power industrial temperature (LAN8187i), variable I/O voltage, Ethernet Transceiver (PHY) with HP Auto-MDIX for high-performance embedded Ethernet applications. The LAN8187/LAN8187i can be configured to operate on a single 3.3V supply utilizing an integrated 3.3V to 1.8V linear regulator. An option is available to disable the linear regulator to optimize system designs that have a 1.8V power plane available.

The LAN8187/LAN8187i consists of an encoder/decoder, scrambler/descrambler, wave-shaping transmitter, output driver, twisted-pair receiver with adaptive equalizer and baseline wander (BLW) correction, and clock and data recovery functions. The LAN8187/LAN8187i can be configured to support either the Media Independent Interface (MII) or the Reduced Media Independent Interface (RMII).

The LAN8187/LAN8187i is compliant with IEEE 802.3-2005 standards (MII Pins tolerant to 3.6V) and supports both IEEE 802.3-2005 compliant and vendor-specific register functions. It contains a full-duplex 10-BASE-T/100BASE-TX transceiver and supports 10-Mbps (10BASE-T) operation on Category 3 and Category 5 unshielded twisted-pair cable, and 100-Mbps (100BASE-TX) operation on Category 5 unshielded twisted-pair cable.

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Please consider this device LAN8710A, LAN8720A, LAN8740A, LAN8742A

## Features

Note: The LAN8187/LAN8187i are not recommended for new designs. The LAN8710A/LAN8720A/LAN8740A/LAN8742A are the suggested replacement devices for these products.

Features

Single-Chip Ethernet Physical Layer Transceiver (PHY)

ESD Protection levels of  $\pm 8$ kV HBM without external protection devices

## Application

Set-Top Boxes

Network Printers and Servers

LAN on Motherboard

10/100

ESD protection levels of IEC61000-4-2, ±8kV contact mode, and ±15kV for air discharge mode per independent test facility	PCMCIA/CardBus Applications
Comprehensive flexPWR® Technology	Embedded Telecom Applications
Flexible Power Management Architecture	Video Record/Playback Systems
LVC MOS Variable I/O voltage range: +1.6V to +3.6V	Cable Modems/Routers
Integrated 3.3V to 1.8V regulator for optional single supply operation	DSL Modems/Routers
Regulator can be disabled if 1.8V system supply is available	Digital Video Recorders
Performs HP Auto-MDIX in accordance with IEEE 802.3ab specification	Personal Video Recorders
Automatic Polarity Correction	IP and Video Phones
Latch-Up Performance Exceeds 150mA per EIA/JESD 78, Class II	Wireless Access Points
Energy Detect power-down mode	Digital Televisions
Low Current consumption power-down mode	Digital Media Adaptors/Servers
Low operating current consumption:	POS Terminals
39mA typical in 10BASE-T and	Gaming Consoles
79mA typical in 100BASE-TX mode	Security Systems
Supports Auto-negotiation and Parallel Detection	Access Control
Supports the Media Independent Interface (MII) and Reduced Media Independent Interface (RMII)	
Compliant with IEEE 802.3-2005 standards	
MII Pins tolerant to 3.6V	
IEEE 802.3-2005 compliant register functions	
Integrated DSP with Adaptive Equalizer	
Baseline Wander (BLW) Correction	
Vendor Specific register functions	
Low profile 64-pin TQFP RoHS compliant package (10 x 10 x 1.4mm)	
4 LED status indicators	
Commercial Operating Temperature 0° C to 70° C	
Industrial Operating Temperature -40° C to 85° C version available (LAN8187i)	

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#### Related Products



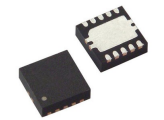
[LAN8740A-EN](#)

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QFN-32



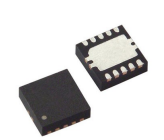
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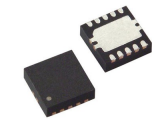
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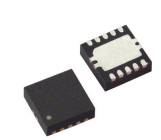
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