

LAN8710/8720



Small-Footprint, Low-Power Consumption, Full-Featured 10/100 Ethernet Transceivers

SMSC's LAN8710 and LAN8720 are high-performance, small-footprint, low-power 10BASE-T/100BASE-TX transceivers specifically designed for today's consumer electronics, industrial and enterprise applications. The LAN8710/8720 are the industry's smallest footprint solutions with up to 40% lower power consumption than existing SMSC transceivers. The LAN8710/8720 have an integrated voltage regulator and ESD protection components to help reduce Bill of Material (BOM) costs.

The LAN8710 connects to the MAC layer using a variable voltage, digital standard MII or RMII interface, while the LAN8720 connects via an RMII interface. Both devices support HP Auto-MDIX*, employ SMSC's proprietary flexPWR® technology and are available in both extended commercial (0° to 85°C) and industrial (-40° to 85°C) temperature range options.

SMSC's complimentary and confidential LANCheck® online design review service is available for customers who have selected our products for their application design-in**.

Highlights

- Excellent ESD protection levels exceed IEC specifications without external protection devices
- Integrated 1.2V linear regulator
- Incorporates flexPWR technology
 - Industry-leading power consumption
 - Up to 40% reduction from existing SMSC solutions
 - Flexible I/O voltage range from 3.6V to 1.6V
 - Extremely low energy detect standby mode
- Low-cost 25MHz crystal for MII/RMII
- Industrial and extended commercial temperature range options available
- Compact package options:
 - LAN8710: 5x5mm, 32-pin QFN package (MII/RMII)
 - LAN8720: 4x4mm, 24-pin QFN package (RMII only)

Target Applications

- High-definition TVs (HDTVs)
- Set-top Boxes (STBs)
- Digital Video Recorders (DVRs)
- Personal Video Recorders (PVRs)
- Network Printers and Servers
- Gaming Consoles
- Telecommunications
- POS Terminals
- Industrial

Features

Integrated ESD Protection	Simplifies PCB design with proven ESD performance
Energy detect power-down mode	Conserves system power by shutting down inactive circuit blocks
Flexible I/O voltage capability	Interfaces to higher performance ASICs, SoCs and FPGAs without the added expense of extended level shifters
Supports Media Independent Interface (MII) and Reduced Media Independent Interface (RMII)	Covers the industry's two most popular interfaces
Low-cost, single 25MHz crystal design for RMII mode	Removes the need for an expensive 50MHz crystal or oscillator for RMII operation
HP Auto-MDIX support	Performs automatic crossover cable detection and correction

Benefits

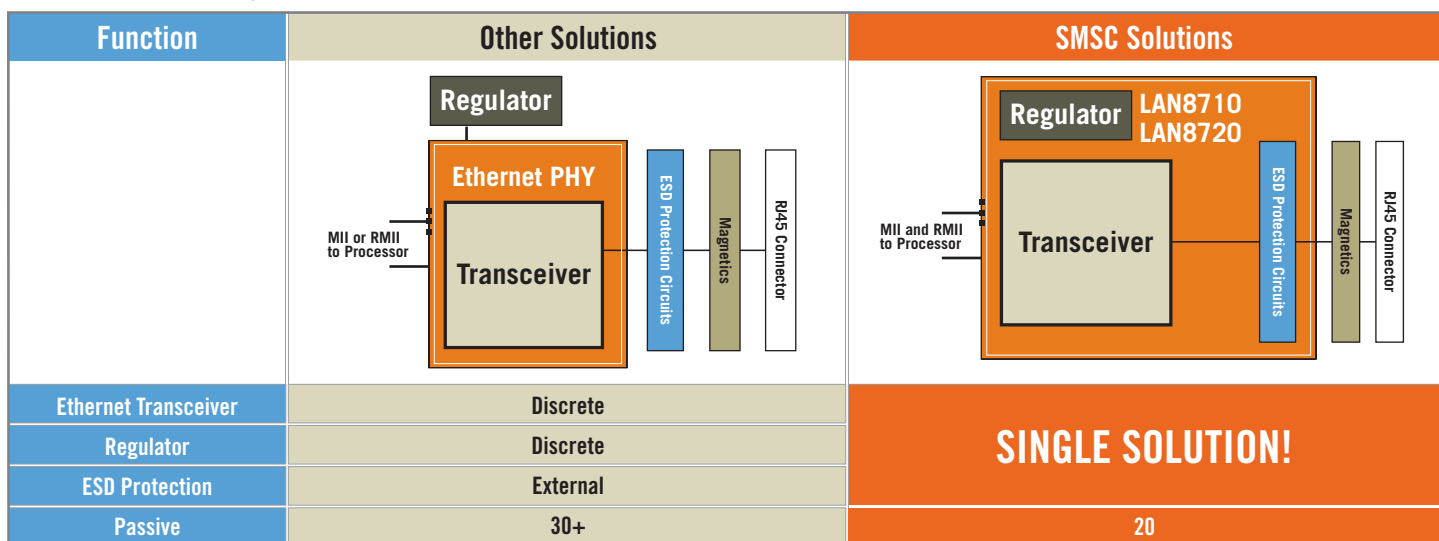


SMSC FULL-FEATURED TRANSCEIVERS VS. THE COMPETITION

	MAC Interface	I/O Voltage Range	Integrated 1.2V Linear Reg w/ Reg Disable	ESD Performance w/o External Protection Circuitry	Energy Detect Power Down Capability	Temperature Range
SMSC LAN8710/LAN8710i	MII and RMII	1.6V to 3.6V Range	Yes	Yes	Yes	Extended Commercial or Industrial
SMSC LAN8720/LAN8720i	RMII					
Other Partial-Featured Competitive Transceivers	MII Only	I/O Voltage Range	No	No	No	Commercial Only

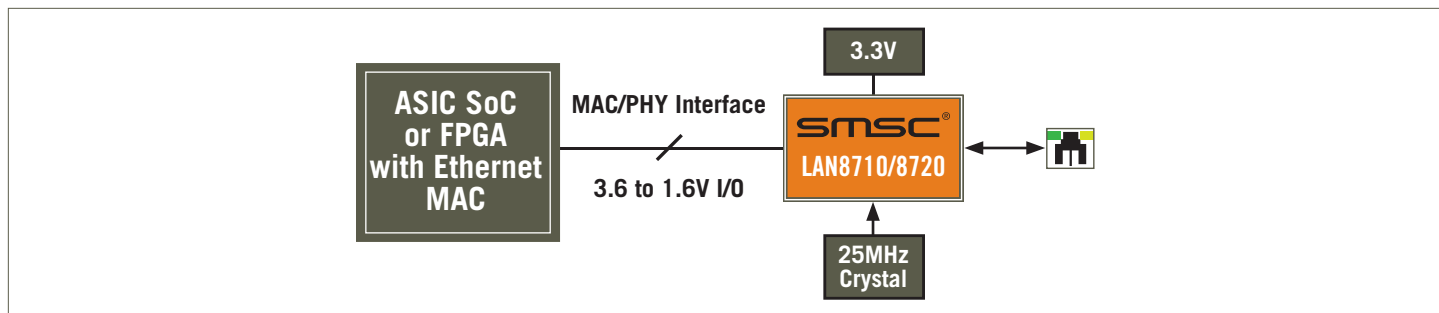
LAN8710/8720 HELPS TRIM YOUR DESIGN

Reduces external components by integrating the highest ESD protection and a voltage regulator



Reduces power consumption by 25% when the 1.2V on-chip regulator is disabled and 1.2V is supplied by the system

Reduces BOM cost by incorporating a low-cost 25MHz crystal for both MII/RMII interfaces



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

**LANCheck online design review service requires an SMSC e-Services account and is subject to the terms and conditions listed on SMSC's website.

Copyright ©2009 SMSC or its subsidiaries. All rights reserved. Although the information in this document has been checked and is believed to be accurate, no responsibility is assumed for inaccuracies. SMSC reserves the right to make changes to product descriptions and specifications at any time without notice. Contact your local SMSC sales office to obtain the latest specifications before placing your product order. The provision of this information does not convey any licenses under any patent rights or other intellectual property rights of SMSC or others. All sales are expressly conditional on your agreement to the terms and conditions of the most recently dated version of SMSC's standard Terms of Sale Agreement dated before the date of your order. Products may contain design defects or errors known as anomalies which may cause a product's functions to deviate from published specifications. Anomaly sheets are available upon request. SMSC products are not designed, intended, authorized or warranted for use in any life support or other application where product failure could cause or contribute to personal injury or severe property damage. Any and all such uses without prior written approval of an Officer of SMSC and further testing and/or modification will be fully at the risk of the customer. Copies of this document or other SMSC literature, as well as the Terms of Sale Agreement, may be obtained by visiting SMSC's website at <http://www.smc.com>. SMSC, the SMSC logo, LANCheck, flexPWR and the flexPWR logo are registered trademarks of Standard Microsystems Corporation ("SMSC"). Other names mentioned may be trademarks of their respective holders. All claims made herein speak as of the date of this material. The company does not undertake to update such statements. (05/09)

For more information visit www.smc.com or call 1.800.443.SEMI

SMSC 80 Arkay Drive, Hauppauge, NY 11788

For RoHS compliance and environmental information, please visit www.smc.com/rohs

