

3.3V 10/100BASE-TX/FX Physical Layer Transceiver

Description

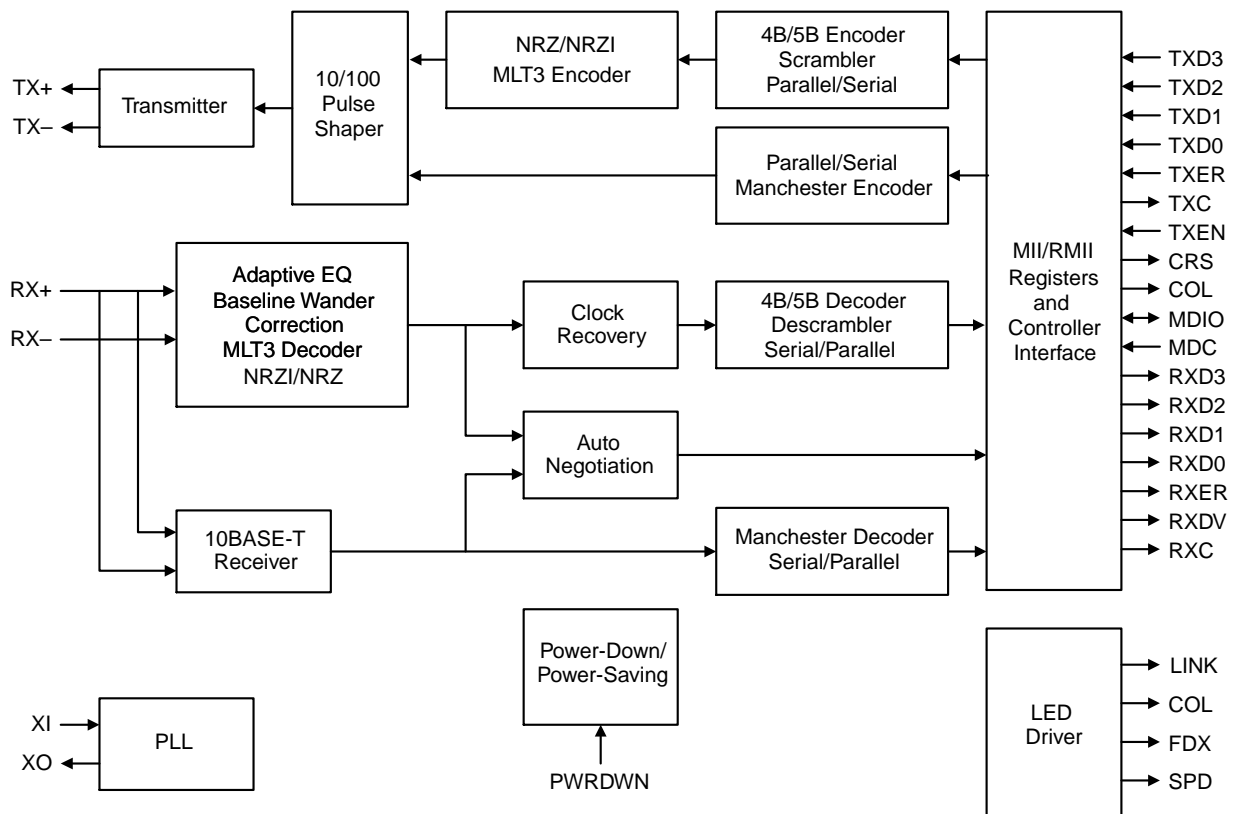
The KS8721BL/SL is a 10BASE-T, 100BASE-TX, and 100BASE-FX physical layer transceiver providing MII/RMII interfaces to MACs and switches. Using a unique mixed-signal design that extends signaling distance while reducing power consumption, the KS8721BL/SL represents Micrel's fourth generation single-port Fast Ethernet PHY.

Micrel's architecture dissipates an ultra-low 275mW in power, including transmit output drivers. This translates to increased reliability while enabling deployment in today's power-sensitive applications. Multiple power-down modes, accessed via configuration pins or registers, allow further levels of power saving through manual selection or automatic detection of cable energy.

The KS8721BL/SL automatically configures itself for 100Mbps or 10Mbps and full- or half-duplex operation, using an on-chip auto-negotiation algorithm. Combined with Auto MDI/MDIX for automatic correction and detection of crossover and straight-through cables, the KS8721BL/SL provides an easy-to-use, high performance solution for 10BASE-T, 100BASE-TX, and 100BASE-FX applications.

For additional information, contact your local Micrel Field Application Engineer or salesperson.

Block Diagram



Features

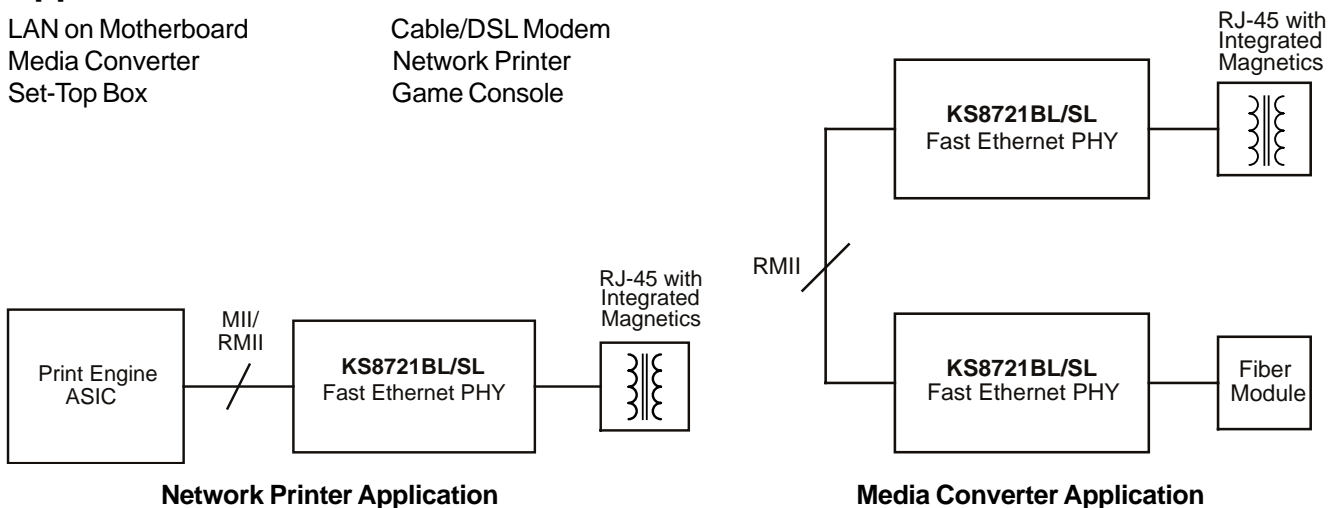
Benefits

<ul style="list-style-type: none"> • Single chip 10BASE-T, 100BASE-TX, and 100BASE-FX physical layer solution 	<ul style="list-style-type: none"> • Supports back-to-back operation for copper-to-fiber media converter applications.
<ul style="list-style-type: none"> • Fully compliant to IEEE802.3u standards 	<ul style="list-style-type: none"> • Designed to operate with link partners at all speeds.
<ul style="list-style-type: none"> • Low-power CMOS design, power consumption 	<ul style="list-style-type: none"> • Increased reliability, greater range of power-sensitive < 275mW (including output driver current) applications.
<ul style="list-style-type: none"> • Supports media independent interface (MII) and reduced MII (RMII) 	<ul style="list-style-type: none"> • Flexible switch/MAC interfacing options. Optimized pin count interfaces lower cost through reduced trace/simplified routing.
<ul style="list-style-type: none"> • Delivers robust operation (130 meters+) 	<ul style="list-style-type: none"> • Operation over the widest variety of cabling plants.
<ul style="list-style-type: none"> • Furnishes Auto MDI/MDI-X 	<ul style="list-style-type: none"> • Automatic detection and correction for straight-through or crossover cables.
<ul style="list-style-type: none"> • Offers both power-down and power-saving modes 	<ul style="list-style-type: none"> • Automatically shuts down upon cable removal extending battery life for mobile applications.
<ul style="list-style-type: none"> • Single 3.3V power supply 	<ul style="list-style-type: none"> • Easy migration from earlier KS8721B/BT family members.
<ul style="list-style-type: none"> • Configurable through MII serial management ports or via external control pins 	<ul style="list-style-type: none"> • Programmable in environments with and without CPU.
<ul style="list-style-type: none"> • Available in lead-free and industrial temperature versions 	<ul style="list-style-type: none"> • Environmentally friendly and rugged.
<ul style="list-style-type: none"> • Offered in flexible package options 	<ul style="list-style-type: none"> • KS8721BL in 48-pin LQFP for space-constrained and KS8721SL in mainstream 48-pin SSOP.

Applications

LAN on Motherboard
Media Converter
Set-Top Box

Cable/DSL Modem
Network Printer
Game Console



Contact Micrel Semiconductor

Location	Address		Telephone	Fax
Corporate HQ	1849 Fortune Drive	San Jose, CA 95131 USA	+1 (408) 944-0800	+1 (408) 474-1000
Eastern USA	93 Branch Street	Medford, NJ 08055 USA	+1 (609) 654-0078	+1 (609) 546-0989
Central USA	722 S. Denton Tap Suite 130	Coppell, TX 75019 USA	+1 (972) 393-2533	+1 (972) 393-2540
Western USA	2180 Fortune Drive	San Jose, CA 95131 USA	+1 (408) 944-0800	+1 (408) 914-7878
China	Room 712, Block B, Intl. Chamber of Commerce Bldg., Fuhua Rd 1, Futian	ShenZhen, PR China 518026	+86 (755) 8302-7618	+86 (755) 8302-7637
Korea	4F, KTB Building, 826-14, Yeoksam-dong, Kangnam-ku	Seoul 135-080 Korea	+82 (2) 3466-3000	+82 (2) 3466-2999
Taiwan	4F, No. 18, Lane 321, Yang-Guang Street, Nei-Hu Chu	Taipei, 11475 Taiwan, R.O.C.	+886 (2) 8751-0600	+886 (2) 8751-0746
Singapore	8 Temasek Blvd., #42-01 Suntec Tower Three	Singapore 038988	+65-6832-7692	+65-6832-7693
Japan	1-16-15 Dogenzaka, Shibuyaku	Tokyo 150-0043 Japan	+81 (3) 5428-0871	+81 (3) 5428-0872
Europe	1st Floor, 3 Lockside Place, Mill Lane	Newbury, Berks RG14 5QS UK	+44 1635 524455	+44 1635 524466
Western Europe	10, avenue du Quebec, Villebon BP116	Courtaboeuf Cedex 91944 France	+33 (0) 1-6092-4190	+33 (0) 1-6092-4189



Micrel Semiconductor

TEL: 1.408.944.0800 FAX: 1.408.474.1000

HTTP:// www.micrel.com
Stock Code: M1016-070604