

Low Power 10/100 PHY Transceiver

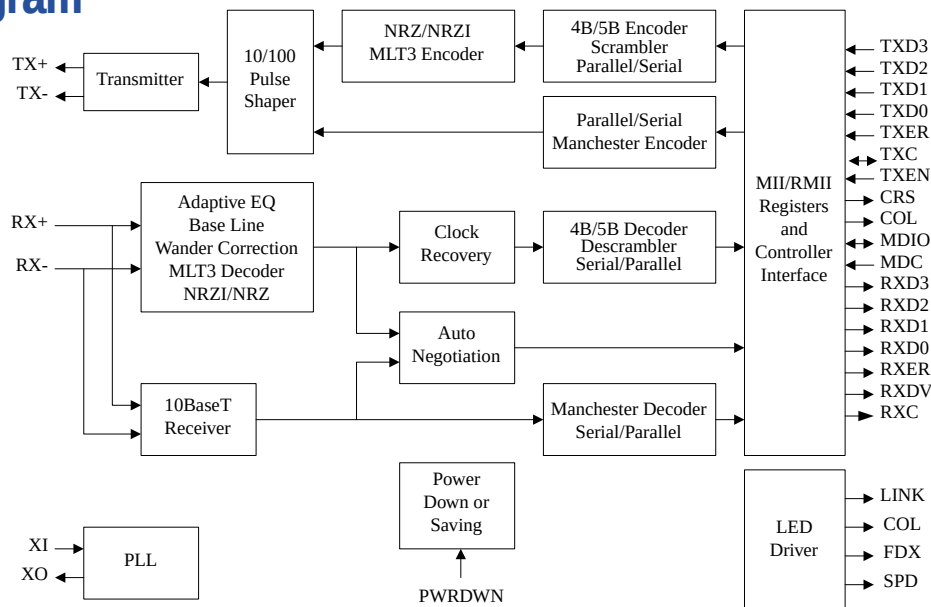
Operating at 2.5 volts to meet low voltage and low power requirements, the KS8721B is a 10BaseT/100BaseTX/FX Physical Layer Transceiver, which provides an MII to transmit and receive data. It contains the 10BaseT Physical Medium Attachment (PMA), Physical Medium Dependent (PMD), and Physical Coding Sub-layer (PCS) functions. Moreover, the KS8721B has on-chip 10BaseT output filtering, which eliminates the need for external filters and allows a single set of line magnetics to be used to meet requirements for both 100BaseTX and 10 BaseT.

The KS8721B can automatically configure itself for 100Mbps or 10Mbps and full or half duplex operation, using on-chip Auto-Negotiation algorithm. It is an ideal choice of physical layer transceiver for 100BaseTX/10BaseT.

Features

- Single chip 100BaseTX/100BaseFX/10BaseT physical layer solution
- 2.5V CMOS design, power consumption < 200mW (excluding output driver current)
- Fully compliant to IEEE 802.3u standard
- Supports Media Independent Interface (MII) and Reduced MII (RMII)
- Supports 10BaseT, 100BaseTX and 100Base-FX with Far_End_Fault Detection
- Supports power down mode and power saving mode
- Configurable through MII serial management ports or via external control pins
- Supports auto-negotiation and manual selection for 10/100Mbps speed and full/half-duplex mode
- On-chip built-in analog front end filtering for both 100BaseTX and 10BaseT
- LED outputs for link, activity, full/half duplex, collision and speed
- Supports back to back, FX to TX for media converter applications
- Supports MDI/MDI-X auto crossover
- 2.5V/3.3V tolerance on I/O
- Available in 48-pin SSOP

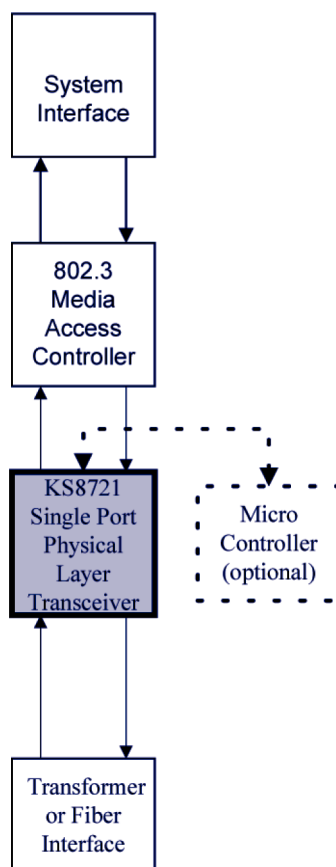
Block Diagram



System Level Applications

The KS8721B is ideal for data communication applications where power and cost are important issues. A standard MII port is supplied for easy MAC integration.

Management can be controlled by either strapping control pins or using the MII management port.



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