# KS8761 – 10/100 PHY

## Introduction

The KS8761 is a 10/100BaseTX Physical Layer Transceiver which provides a 5B symbol interface to the transmit and receive data. It contains the 100BaseTX Physical Medium Attachment (PMA) and Physical Medium Dependent (PMD) sub-layer functions. Input buffering and output filtering for an external 10BaseT transceiver are already built into the KS8761.

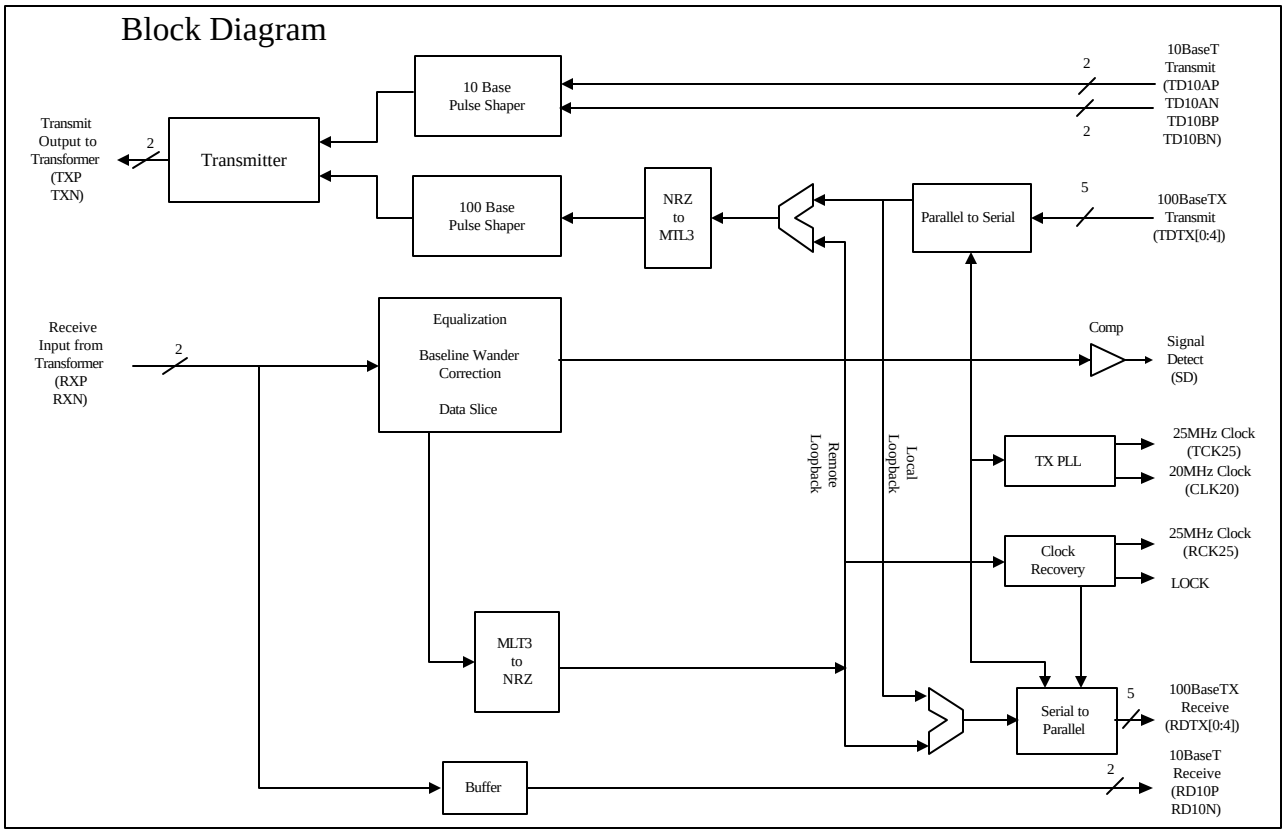
On the media side, the MLT3 transmission and reception comply with IEEE 802.3u standard. The transformer ratio for receiving is 1:1 and that for transmitting is 1.414 : 1. A transformer ratio of 1.25:1 for transmitting is also supported. Please see the application circuit for details.

An on-chip built-in 10BaseT filter eliminates the need for external filters, which allows a single set of line magnetics to be used for both 100BaseTX and 10BaseT applications. In addition, a "Fast Link Pulses" path is provided to support the auto-negotiation function. As an extra cost saving feature, an on-chip built-in 20 MHz clock output is also available from KS8761 for 10BaseT timing.

## Highlights

- Supports DECchip™ 21143 and other 5-bit symbol interfaces to PCS controllers
- Fully compliant to IEEE 802.3u standard
- Fully supports Wake-on-LAN features with DECchip™ 21143
- 140 mA typical operating current @ 5 Volt (excluding Transmit output driver current)
- On-chip built-in filtering for both 100BaseTX and 10BaseT
- Both 20 MHz and 25 MHz clock outputs available from an external 25 MHz crystal
- 64-pin TQFP surface mount package (10 mm x 10 mm x 1 mm)

## Block Diagram

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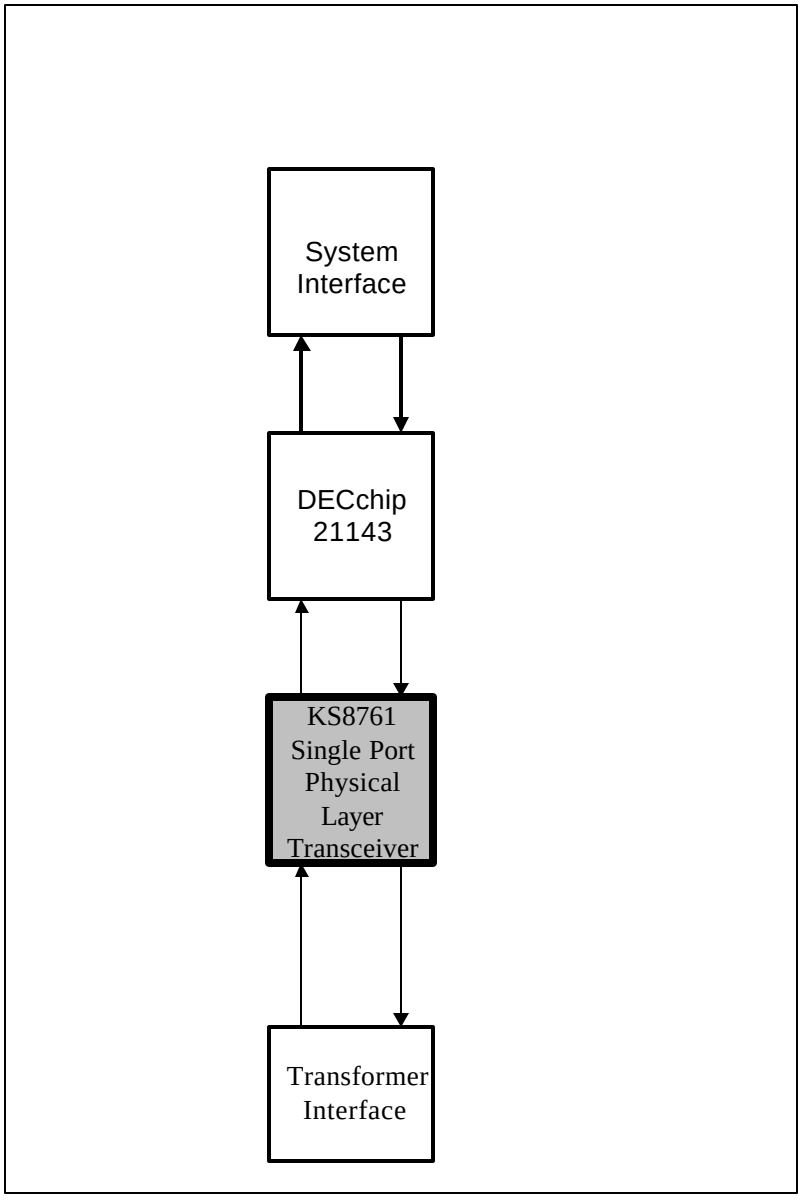
## System Level Applications

The KS8761 is ideal for 5V applications where power and cost are important issues. Two 5 bit interfaces are provided for receiving and transmitting the raw symbol data stream. A single port example of the KS8761 usage is shown below.




Request full datasheet.