

# GIGAPHY-LAB-KT

## Evaluation Kit for the Am79761 Device

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### DISTINCTIVE CHARACTERISTICS

- **Laboratory level evaluation kit**
  - Single 14mm GigaPHY-SD device
- **SMA outputs drive scope directly**
- **Connections for logic analyzer pods**
- **Switches for driving control lines**
- **LEDs for monitoring control lines**
- **LEDs for monitoring 10-bit receive data**
- **Three modes to test GigaPHY-SD device**
  - 10-bit transmit data DIP switches
  - onboard PAL
  - external pattern generator
- **Internal or external clock source**
- **Onboard 3.3V from external 5-12V supply**

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### GENERAL DESCRIPTION

The GIGAPHY-LAB-KT evaluation kit provides an easy to use tool to evaluate Gigabit Ethernet signal quality and performance of the Am79761 GigaPHY-SD device. The board is a self-contained evaluation unit. In its simplest form, the switches on the board can be used to set the transmit data and control lines while monitoring receive data and status lines with LEDs. In addition to the switch settings, a pre-programmed PAL can generate simple word patterns useful for checking the transmit data.

More in depth evaluations can be implemented by connecting a pattern generator (10-bits at 125 MHz) to pods on the board in order to generate transmit data and control lines. A logic analyzer can be connected to pods on the board to monitor receive data and status signals. With this setup, 8B/10B data can be sent to the GigaPHY-SD transmitter to generate Gigabit data which can be monitored on the logic analyzer.

An onboard voltage regulator is used to provide 3.3 volts to the board with a shutdown switch used to turn off power to all components while changing switch and

PAL settings. It is possible to drive copper Twinax cable directly if the cable uses SMA connectors.

### GIGAPHY-LAB-KT EVALUATION KIT CONTENTS

- **GigaPHY-SD device evaluation board**
- **User Manual with block diagram**
- **Schematics**
- **Bill of Materials**
- **Board artwork, all layers**
- **Fabrication drawings**
- **GigaPHY-SD device data sheet**
- **Design Guide application note**