Marvell® Alaska® 88E1322

Integrated 10/100/1000 Mbps Energy Efficient Ethernet Transceivers

Product Overview

Marvell® Alaska® 88E1322 Gigabit Ethernet (GbE) transceiver is a physical layer device containing 2 Gigabit Ethernet transceivers. The transceivers implement the Ethernet physical layer portion of the 1000BASE-T, 100BASE-TX, 10BASE-T, 1000BASE-X, and 100BASE-FX standards.

The device supports SGMII (Serial Gigabit Media Independent Interface for direct connection) to Copper/Fiber/100BASE- FX and Copper/Fiber with Auto-Media Detect. The device also integrates MDI interface termination resistors into the PHY. This resistor integration simplifies board layout and reduces board cost by reducing the number of external components. The new Marvell calibrated resistor scheme will achieve and exceed the accuracy requirements of the IEEE 802.3 return loss specifications.

This device uses advanced mixed-signal processing to perform equalization, echo and crosstalk cancellation, data recovery, and error correction at a gigabit per second data rate. The 88E1322 achieves robust performance in noisy environments with very low power dissipation.

The Alaska family of transceiver products provides the ideal solution for rapid development and deployment of gigabit standalone and switching systems for the Enterprise, embedded, consumer, and Metro/service provider market segments.

Application Block Diagrams

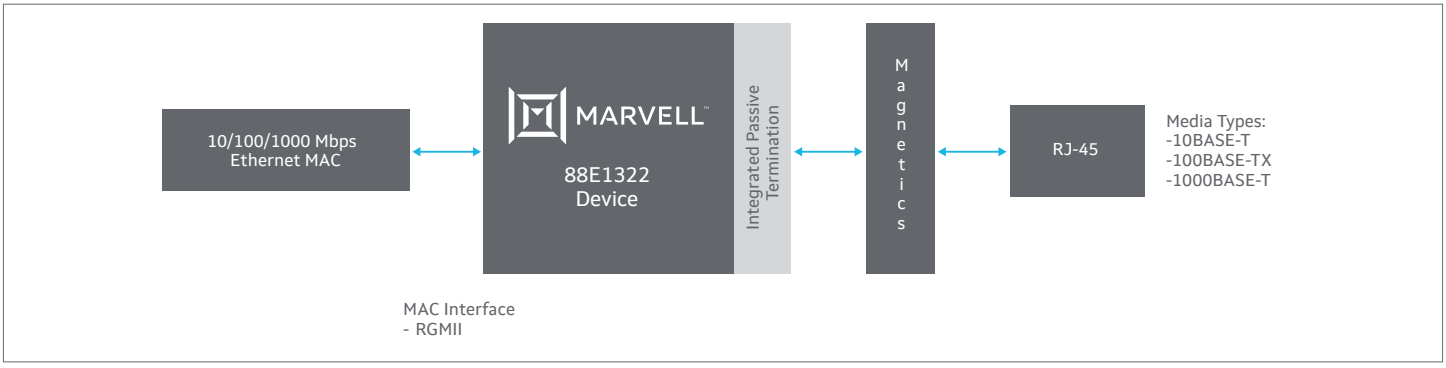

Fig 1. Alaska 88E1322 Application

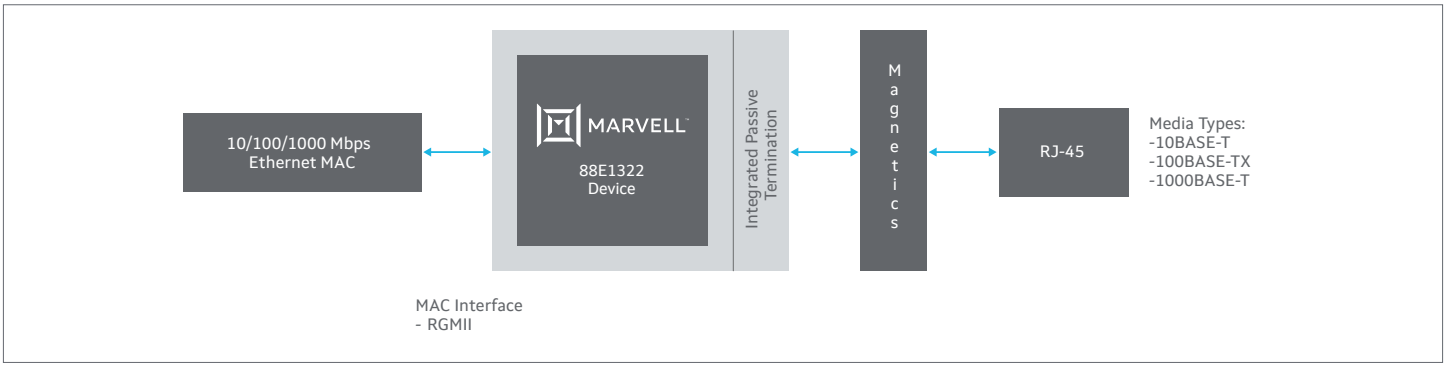

Fig 2. Alaska 88E1322 Application

Key Features and Benefits

Features	Benefits
• IEEE1588 version 2 Time Stamping and Synchronous Ethernet (SyncE) Clock Recovery	• Enabling frequency and/or clock synchronization for time sensitive applications and environments
• Advanced Virtual Cable Tester® (VCTTM)	• Detects and reports potential cabling issues to within one meter of the distance to the fault
• 196-pin TFBGA 15mm x 15mm (including i-Temp) and 128-pin LQFP 14mm x 20mm RoHS 5/6 and Green packages	• Environmentally friendly, small form factor for minimal real estate requirements

Target Applications

The Alaska 88E1322 Transceiver delivers optimal physical layer interfacing and features for a broad range of applications within the Enterprise, embedded, consumer, and Metro/service provider market segments.

The Alaska 88E1322 family provides complete GbE transceiver solutions with complete software compatibility. To shorten system manufacturers design cycles and accelerate time-to-market, Marvell provides complete Alaska reference designs and supporting docs with schematics, layout files and other documentation.

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