PRODUCT OVERVIEW

The Marvell® Alaska® 88E1112 Gigabit Ethernet (GbE) transceiver is a fully compliant IEEE 802.3 physical layer device for Ethernet 1000BASE-T, 100BASE-TX, and 10BASE-T applications, with additional functionality of 1000BASE-X and 100BASE-FX in SFP applications. The 88E1112 supports the SGMII (Serial Gigabit Media Independent Interface) to connect to the MAC or switch.

The 88E1112 offers the unique capability of auto-media detect. On the line side, in addition to supporting standard copper applications on Cat 5 twisted pair cable, the 88E1112 incorporates an additional SERDES (serializer/deserializer) that can operate at 1.25 GHz for connection to a fiber-optic transceiver for 1000BASE-X applications, or 125 MHz operation for 100BASE-FX applications. The 88E1112 is also an ideal device for media-conversion applications that require SERDES/fiber-to-SGMII conversion.

The full flexibility of the 88E1112 enables multiple applications:

- Simple copper connections for line-side 1000BASE-T, 100BASE-TX, and 10BASE-T applications.
- Auto-media detect for direct multimedia support in uplink applications. The end consumer may opt to plug in a RJ45 copper connection or an SFP module for copper or fiber 1000BASE-X/100BASE-X connection to the same PHY port.
- Multiple SFP module implementations with a single 88E1112 device to target Copper SFP (10/100/1000BASE-T) and Fiber SFP (1000BASE-X/100BASE-FX) applications.
- Media converter applications from fiber transceivers to copper and fiber to SGMII.

The 88E1112 also incorporates Marvell’s Virtual Cable Tester (VCT™) technology for diagnosing cable faults that include opens, shorts, and impedance mismatches.

Housed in a small, 64-pin QFN package, the 88E1112 requires only two power supplies and is offered in both commercial and industrial grade temperatures.

APPLICATIONS

The Alaska 88E1112 10/100/1000 Mbps Ethernet PHY offers an integrated, flexible solution for system level or SFP module applications. Supporting both copper and fiber media applications, with additional SFP module support, the 88E1112 is a key ingredient for any type of SGMII/SERDES/copper combination application. The small footprint facilitates SFP module applications, while the auto-media detect capability offers flexible media support.

SFP modules: copper and fiber

Auto-Media detect UpLink for copper or fiber
THE MARVELL ADVANTAGE: Marvell chipsets come with complete reference designs which include board layout designs, software, manufacturing diagnostic tools, documentation, and other items to assist customers with product evaluation and production. Marvell’s worldwide field application engineers collaborate closely with end customers to develop and deliver new leading-edge products for quick time-to-market. Marvell utilizes world-leading semiconductor foundry and packaging services to reliably deliver high-volume and low-cost total solutions. For more information, visit our Web site at www.marvell.com.

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