Quake Technologies

THE HIGHLY INTEGRATED SINGLE-CHIP QT2021 LOWERS COST, REDUCES POWER AND IMPROVES RELIABILITY WHILE OFFERING UNPRECEDENTED 10 GB/S PERFORMANCE AND SUPERB JITTER TOLERANCE

ADVANCED
PRODUCT SHEET

QT2021

10 GB/S SERIAL TO XAUI TRANSCEIVER FOR ETHERNET AND FIBRE CHANNEL APPLICATIONS

WHAT IT GIVES YOU:

A high level of integration and an array of well-planned, high-performance, fully IEEE 802.3ae, XENPAK, XPAK and X2 compliant features facilitate the design of 10 Gb/s Ethernet and Fibre Channel systems.

WHAT IT DOES:

The QT2021 converts a 10 Gb/s serial data stream into four 3.125/3.1875 Gb/s serial lanes via the IEEE specified XAUI (10 Gb/s attachment unit interface) data bus.

The QT2021 exceeds the IEEE 802.3ae requirements for receiver jitter tolerance, with the demonstrated ability to successfully recover clock and data in stressed eye testing. Superior fiber and XAUI eye quality ensure best overall system performance.

Support for EEPROM interface provides rapid, easy initialization of the device.

Fully integrated test features enable quick evaluation and faster time to market. Five loopback modes are available to facilitate lab and system diagnostics. PC-based GUI available for graphical MDIO access.

SOME KEY FEATURES:

— Operation at 10.3 and 10.5 Gb/s data rates
— On-chip clock generation and data recovery
— XAUI interface with channel skew control and adjustable output amplitude
— Differential 10 Gb/s output with adjustable amplitude
— 64b/66b and 8b/10b encoding and decoding
— Integrated limiting amplifier (LA) and built-in equalization on receiver side
— MDC/MDIO and EEPROM interfaces
— Support for IEEE 802.3ae and XENPAK alarms (LASI)
— Support for Digital Optical Monitoring (DOM)
— Low power mode, power supply monitoring
— BER monitor, synchronization/lock indicator
— Multiple testability and loopback features
— CJPAT generator for XAUI testing
— Scrambler/descrambler bypass mode
— Transmit and recovered 156 MHz PECL output clock
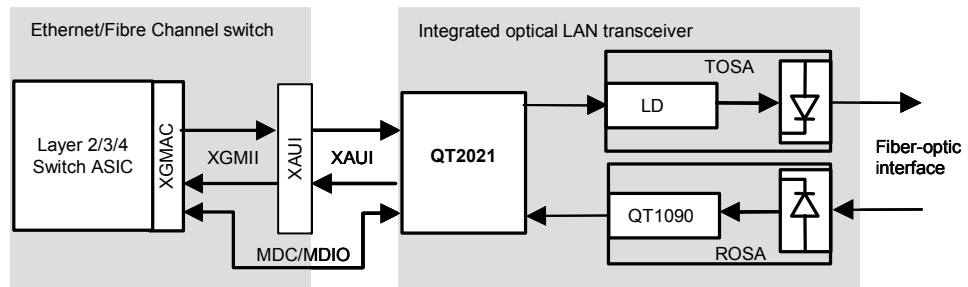— 15x15mm or 19x19mm BGA package

IDEAL FOR:

10 Gb/s Ethernet (IEEE 802.3ae) and Fibre Channel (10GFC) applications. XENPAK, XPAK and X2 modules. Can be used on line cards that incorporate XFP module.
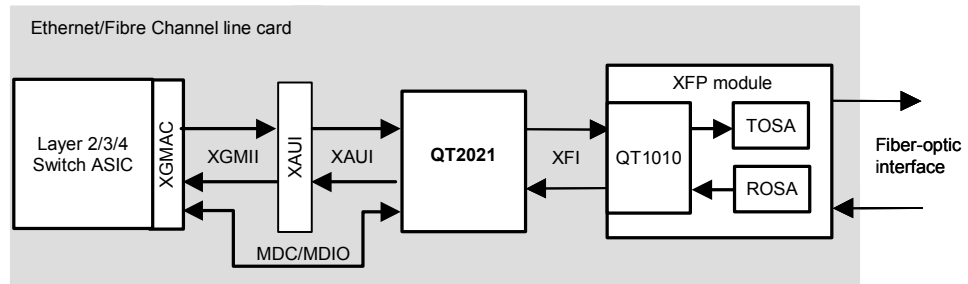
Product Sheet Rev 1.1

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BLOCK DIAGRAM:
MODULE APPLICATION

BLOCK DIAGRAM:
LINE CARD APPLICATION

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www.quaketech.com
sales@quaketech.com