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M2937X Single, Dual, Quad, Octal T1/E1/J1 Transceivers

Product Brief

Product Overview

The M2937x is a family of T1/E1/J1 transceivers that range in densities from single, dual, quad or octal that integrate the framer and short/long haul line interface unit (LIU) into a single chip. The M2937x is based on a common architecture and register set, the family provides software compatibility across every density. The M2937x family offers a feature set designed for universal line card applications such as software line impedance matching, per-link line build-out selection, frame formatting and line coding. These capabilities empower designers to create multi-protocol platforms with a single bill of materials (BOM) and provide industry-leading support for signaling, performance monitoring and jitter reduction.

Features	Benefits
Complete family of software compatible densities	Supports a range of applications and line card densities for optimized design
Selectable per channel impedance matching for 75, 100, 110 and 120 Ω terminations	Offers worldwide protocol support with a single line card design and bill of materials
Per channel configuration for J1/E1/T1 frame formatting, line coding and line build out	Provides unmatched flexibility for multi- and mixed protocol line card designs with a single device
Dual 128-bit jitter attenuators per channel	Reduces both line and system jitter and enables loop retiming
3 HDLC controllers per channel with SS7 support and V5.2 link ID	Enables design of signaling interfaces without requiring external HDLC resources
Hitless protection switching	Enables redundant line card designs for 1:1 protection without relays

The framer block frames to popular T1/E1/J1 standards (per ITU-T G.704, TA-TSY-000278, TR-TSY-000008), E1 (per ITU-T G.704), J1 (per JT G.704) and un-framed mode. The framer supports CAS/RBS signaling, three HDLC controllers per link with separate 128-byte transmit and receive FIFOs per controller. The framer also supports BOM generation/detection, automatic performance report message (APRM) generation/detection, alarm (RAI,AIS) detection/generations, per-channel bit insertion/inversion, PRBS detection/generation, and diagnostic loopbacks: system, payload, digital, and inband loopback. The M2937x family also provides programmable system interface supporting Mitel STbus, AT&T CHI and MVIP bus, 8.192 Mbps multiplexed bus and 1.544 Mbps or 2.048 Mbps non-multiplexed bus.

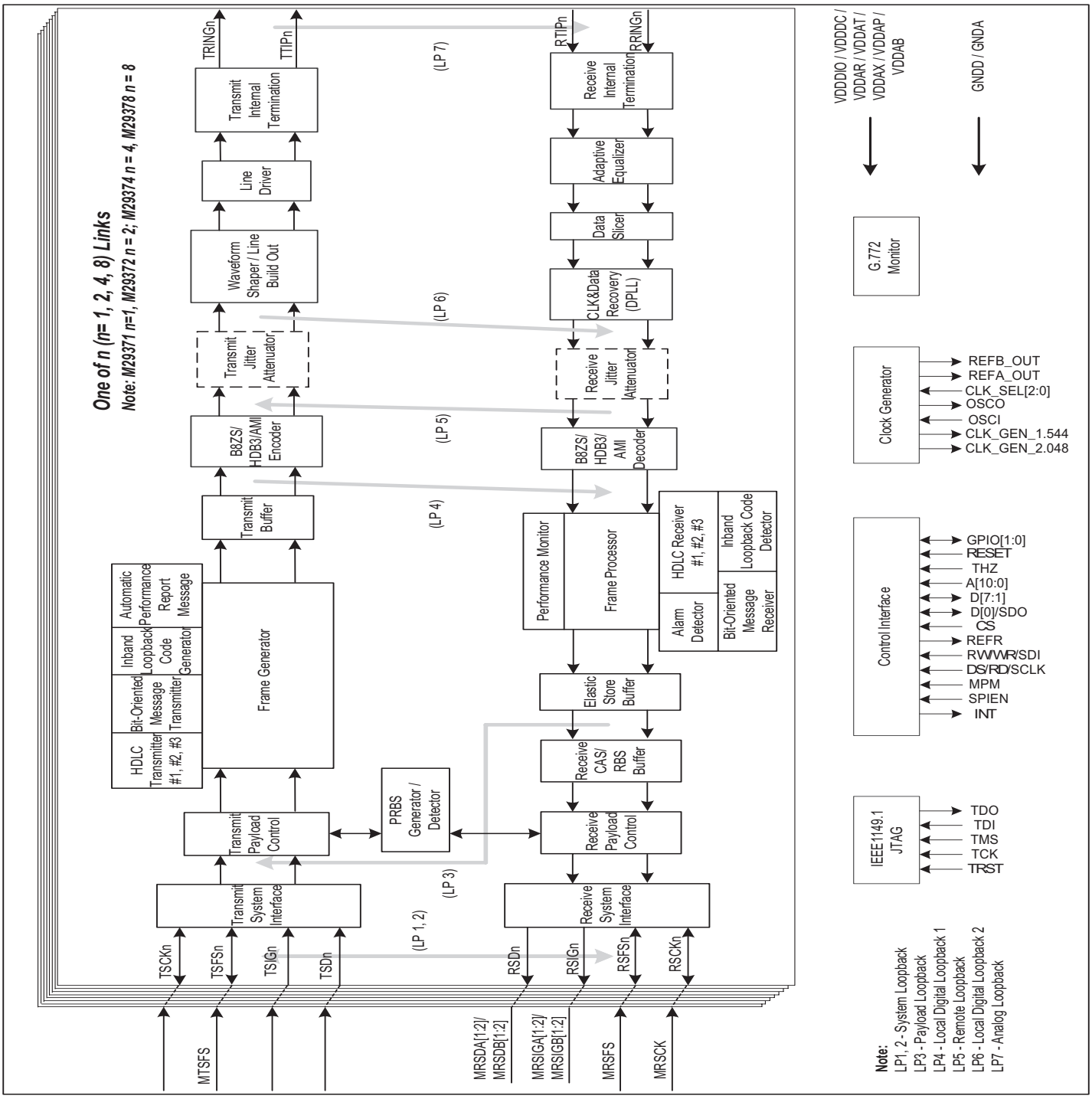

Fig. 1 – M2937x Functional Block Diagram

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Ordering Info:
M29378-11; M29378G-11
M29374-11; M29374G-11
M29372-11;M29372G-11
M29371-11; M29371G-11