

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

### Product Overview

The M2937x is a family of T1/E1/J1 transceivers that range in densities from single, 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
<ul style="list-style-type: none"> <li>Complete family of software compatible densities</li> </ul>	<ul style="list-style-type: none"> <li>Supports a range of applications and line card densities for optimized design</li> </ul>
<ul style="list-style-type: none"> <li>Selectable per channel impedance matching for 75, 100, 110 and 120 <math>\Omega</math> terminations</li> </ul>	<ul style="list-style-type: none"> <li>Offers worldwide protocol support with a single line card design and bill of materials</li> </ul>
<ul style="list-style-type: none"> <li>Per channel configuration for J1/E1/T1 frame formatting, line coding and line build out</li> </ul>	<ul style="list-style-type: none"> <li>Provides unmatched flexibility for multi- and mixed protocol line card designs with a single device</li> </ul>
<ul style="list-style-type: none"> <li>Dual 128-bit jitter attenuators per channel</li> </ul>	<ul style="list-style-type: none"> <li>Reduces both line and system jitter and enables loop retiming</li> </ul>
<ul style="list-style-type: none"> <li>3 HDLC controllers per channel with SS7 support and V5.2 link ID</li> </ul>	<ul style="list-style-type: none"> <li>Enables design of signaling interfaces without requiring external HDLC resources</li> </ul>
<ul style="list-style-type: none"> <li>Hitless protection switching</li> </ul>	<ul style="list-style-type: none"> <li>Enables redundant line card designs for 1:1 protection without relays</li> </ul>

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.



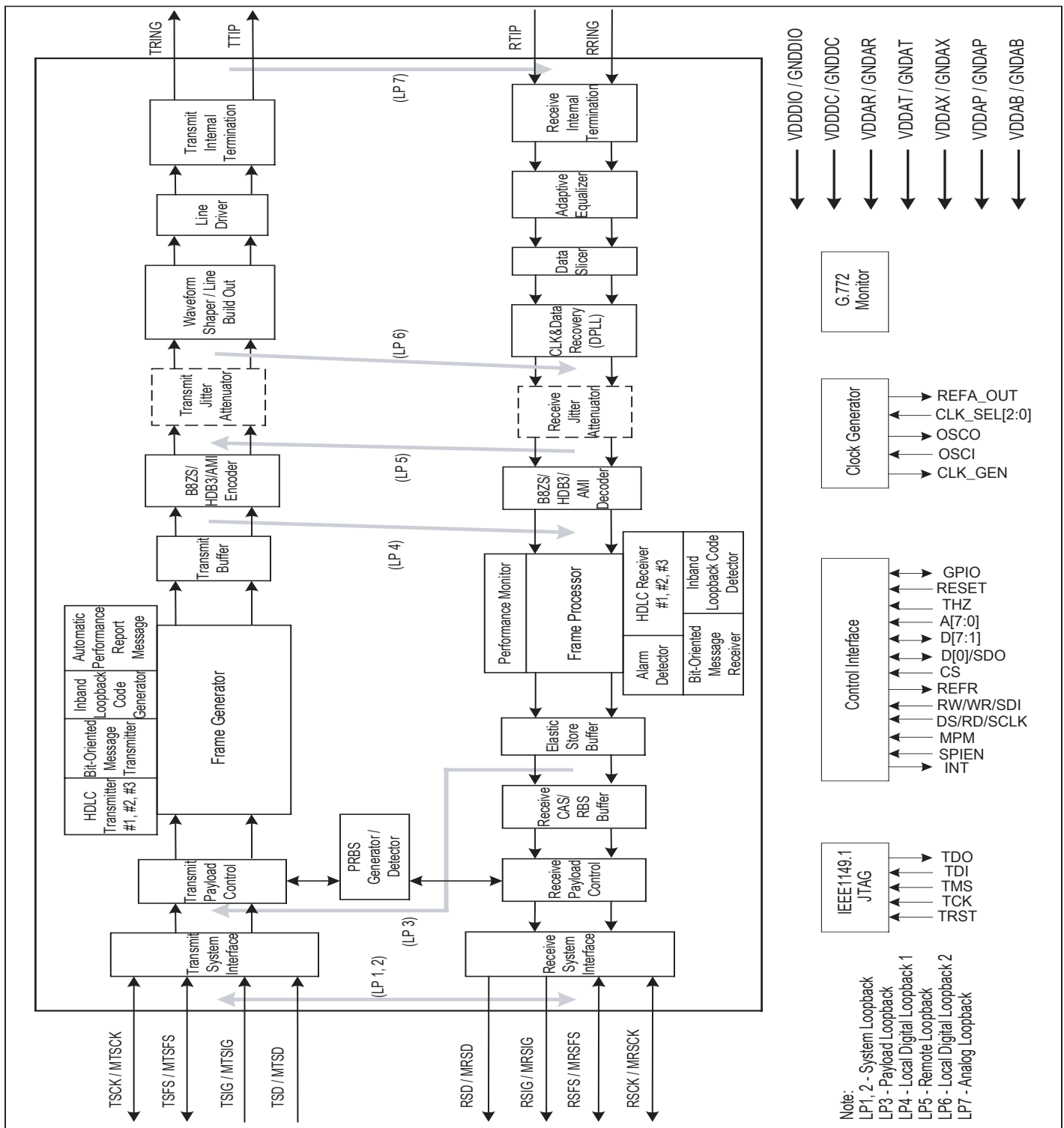


Fig. 1 - M2937x Functional Block Diagram

Your contact: [www.codico.com](http://www.codico.com) mailto: [office@codico.com](mailto:office@codico.com) phone: +43/1/86305-0 fax: +43/1/86305-5000

For more product information, please visit [www.mindspeed.com](http://www.mindspeed.com)

[www.mindspeed.com/salesoffices](http://www.mindspeed.com/salesoffices)  
 General Information: (949) 579-3000  
 Headquarters – Newport Beach  
 4000 MacArthur Blvd., East Tower  
 Newport Beach, CA 92660-3007  
 M2937x-BRF-001-B.pdf

© 2007 Mindspeed Technologies, Inc. All rights reserved. Mindspeed and the Mindspeed logo are trademarks of Mindspeed Technologies. All other trademarks are the property of their respective owners. Although Mindspeed Technologies strives for accuracy in all its publications, this material may contain errors or omissions and is subject to change without notice. This material is provided as is and without any express or implied warranties, including merchantability, fitness for a particular purpose and non-infringement. Mindspeed Technologies shall not be liable for any special, indirect, incidental or consequential damages as a result of its use.

**Ordering Info:**

M29378-11; M29378G-11  
 M29374-11; M29374G-11  
 M29371-11; M29371G-11