

Intel® LXT3108

Octal 3.3V Long-haul/Short-haul T1/E1/J1 Line Interface Unit

Product Description

The Intel® LXT3108 is an octal 3.3V long-haul/short-haul T1/E1/J1 Line Interface Unit (LIU). The LXT3108 LIU allows the design of T1/E1/J1 multi-service cards with T1/E1/J1 switchability and a single bill-of-material. Intel's proven robust design makes the LXT3108 LIU the ideal device for high-density T1/E1/J1 applications.

To increase network reliability, Intel's LXT3108 incorporates a DSP-based architecture with features such as Intel® Hitless Protection Switching (Intel® HPS) and an Arbitrary Transmit Waveform Generator (ATWG). The DSP-based architecture is less sensitive to power supply and temperature variations and allows the LIU to adapt to varying line conditions. Intel® HPS allows the design of 1+1 redundant cards without the use of relays as well as the ability to switch from one card to another without a loss of frame synchronization. ATWG allows the transmitter to shape the output wave-form using the Intel® Pulse Template Matching (Intel® PTM) software to meet varying board conditions, without the need to change any external components.

The Intel LXT3108 supports both twisted-pair and coaxial cable applications, offering line build outs and pulse shaping for all T1, E1, and J1 applications. The LXT3108 is programmed through an 8-bit microprocessor bus that supports both Intel and Motorola® micro processors, including multiplexed and non-multiplexed busses.

The Intel LXT3108 LIU incorporates a crystal-less digital jitter attenuator that can be placed in either the receive or transmit signal paths, B8ZS/HDB3 encoders and decoders, and selectable unipolar or bipolar I/O modes.

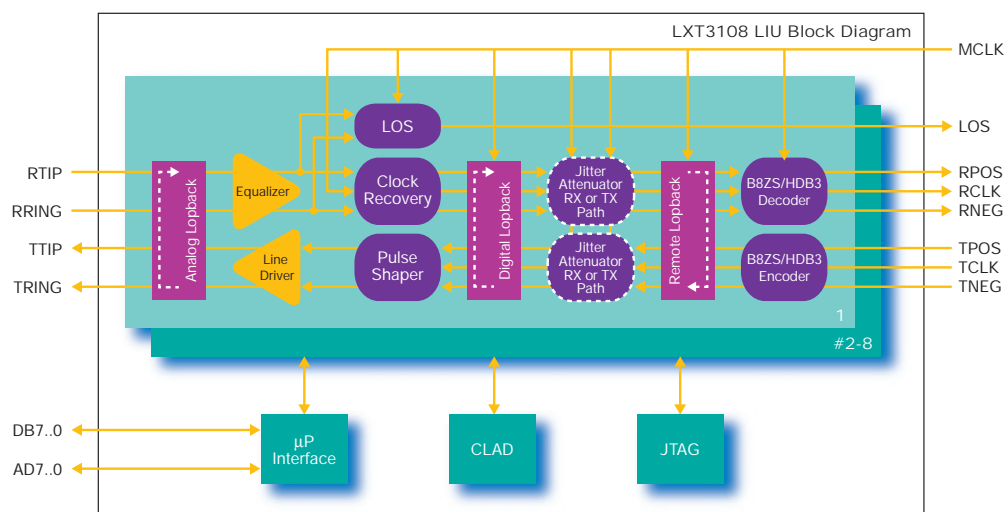


Key Applications

- Integrated Multi-service Access Platforms (IMAPs)
- Integrated Access Devices (IADs)
- Inverse Multiplexing for ATM (IMA)
- ATM Gateways
- Wireless Base Stations
- Routers
- Frame Relay Access Devices, CSU/DSU
- Voice Gateways

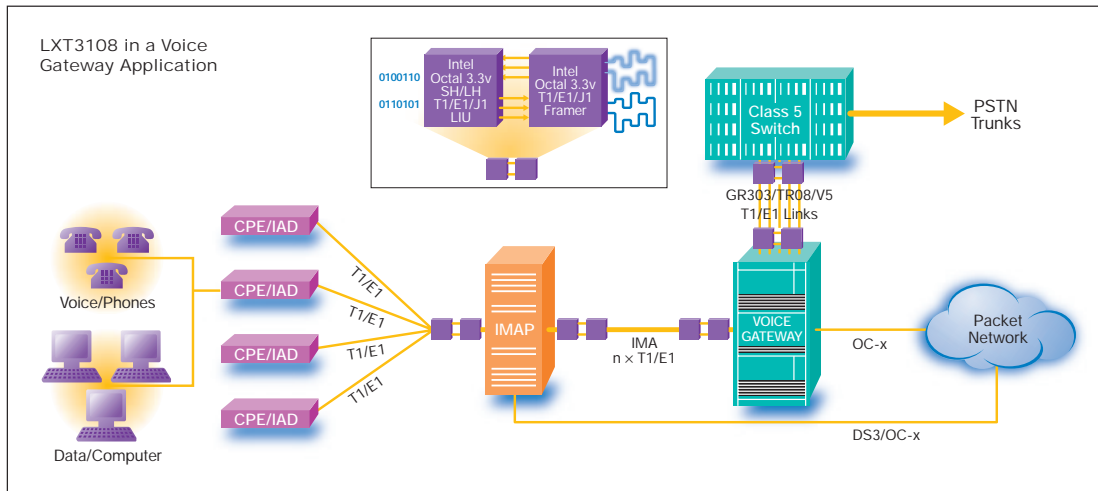
Support Collateral

- LXT3108 LIU Data Sheet
- LXT3108 Demonstration Board and Users Guide
- Design Assistant will include:
 - Reference designs
 - Schematics, Gerber Files, Bill of Materials
 - Application notes, FAQs, Data Sheet
 - GUI, Device Drivers, API



Intel®
Internet Exchange
Architecture

intel®



Features

- T1/E1/J1 selectability
- Adaptive DSP
- Intel® Hitless Protection Switching (Intel® HPS)
- One master clock for T1, J1, and E1 operation
- 16-bit BPV and Excess Zero counters
- Software for GUI and Intel PTM

Benefits

- Design of multi-service platforms with one bill-of-material and one card for LH/SH T1/E1/J1 designs
- Less sensitive to power supply and temperature variations, and more immune to ground and power noise. Handles difficult circuits in real world applications and allows Intel® PTM software to adjust the output pulse to meet the pulse template mask, without having to change any external components
- Allows design of redundant cards ensuring high system reliability without the use of relays
- Helps eliminate the need for multiple crystals/clocks
- Provides convenient performance monitoring without external components
- Accelerates system development

Intel® Internet Exchange Architecture

Intel® Internet Exchange Architecture is an end-to-end family of high-performance, flexible and scalable hardware and software development building blocks designed to meet the growing performance requirements of today's networks. Based on programmable silicon and software building blocks, Intel® IXA solutions enable faster development, more cost-effective deployment and future upgradability of network and communications systems. Additional information can be found at www.intel.com/IXA

Intel Access

Developer's Site	http://developer.intel.com
Intel® Internet Exchange Architecture Home Page	http://www.intel.com/IXA
Networking Components Home Page	http://developer.intel.com/design/network
Other Intel Support: Intel Literature Center	http://developer.intel.com/design/litcenter (800) 548-4725 7 a.m. to 7 p.m. CST (U.S. and Canada) International locations please contact your local sales office.
General Information Hotline	(800) 628-8686 or (916) 356-3104 5 a.m. to 5 p.m. PST

Intel is a trademark or registered trademark of Intel Corporation or its subsidiaries in the United States and other countries. Information in this document is provided in connection with Intel products. No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document. Except as provided in Intel's Terms and Conditions of Sale for such products, Intel assumes no liability whatsoever, and Intel disclaims any express or implied warranty, relating to sale and/or use of Intel products including liability or warranties relating to fitness for a particular purpose, merchantability, or infringement of any patent, copyright, or other intellectual property right. Intel products are not intended for use in medical, life saving or life sustaining applications. Intel may make changes to specifications and product descriptions at any time, without notice.

Designers must not rely on the absence or characteristics of any features or instructions marked "reserved" or "undefined." Intel reserves these for future definition and shall have no responsibility whatsoever for conflicts or incompatibilities arising from future changes to them.

* Other names and brands may be claimed as the property of others.



UNITED STATES AND CANADA
Intel Corporation
Robert Noyce Bldg.
2200 Mission College Blvd.
P.O. Box 58119
Santa Clara, CA 95052-8119
USA

EUROPE
Intel Corporation (UK) Ltd.
Pipers Way
Swindon
Wiltshire SN3 1RJ
UK

ASIA-PACIFIC
Intel Semiconductor Ltd.
32/F Two Pacific Place
88 Queensway, Central
Hong Kong

JAPAN
Intel Japan (Tsukuba HQ)
5-6
Tokodai Tsukuba-shi
300-2635 Ibaraki-ken
Japan

SOUTH AMERICA
Intel Semicondutores do Brasil Ltda
Av. Dr. Churci Zaidan, 940-10° andar
04583-904 São Paulo, SP
Brazil