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.

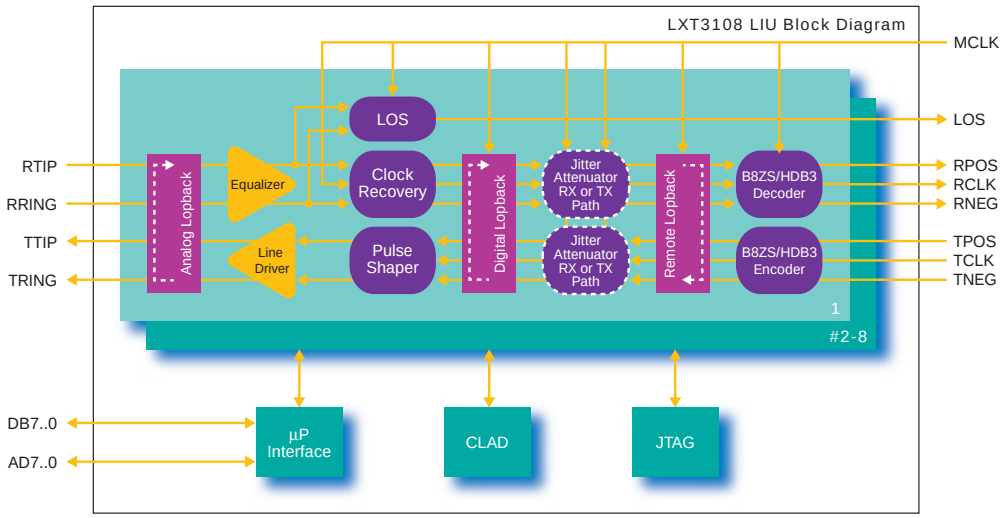
The Intel LXT3108 LIU incorporates a crystal-less digital jitter attenuator that can be placed in either the receive or transmit signal paths, B8ZS/HDB3 encoders and decoders, and selectable unipolar or bipolar I/O modes.

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

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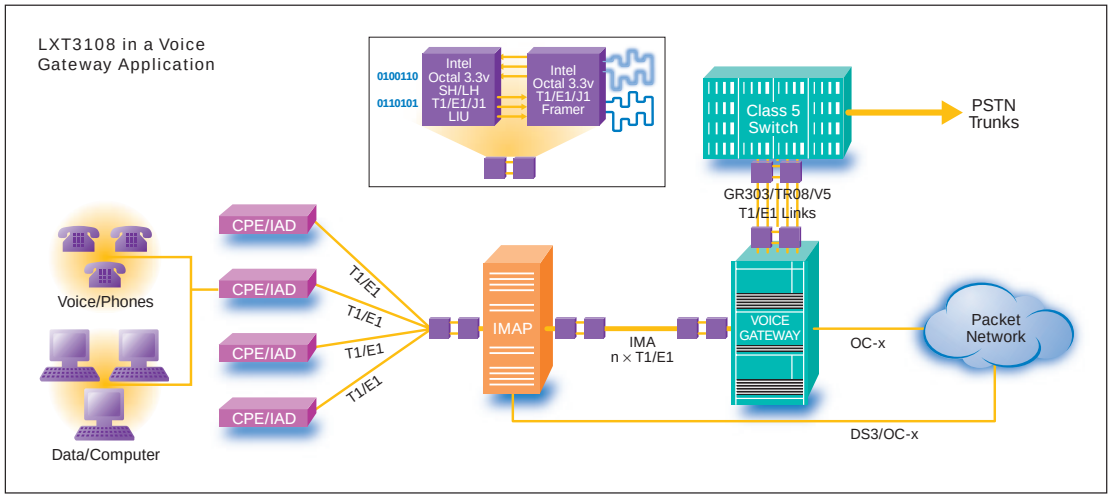

Features

Benefits

Features	Benefits
■ T1/E1/J1 selectability	■ Design of multi-service platforms with one bill-of-material and one card for LH/SH T1/E1/J1 designs
■ Adaptive DSP	■ 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
■ Intel® Hitless Protection Switching (Intel® HPS)	■ Allows design of redundant cards ensuring high system reliability without the use of relays
■ One master clock for T1, J1, and E1 operation	■ Helps eliminate the need for multiple crystals/clocks
■ 16-bit BPV and Excess Zero counters	■ Provides convenient performance monitoring without external components
■ Software for GUI and Intel PTM	■ 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
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