Lantiq™ OctalLIU

Eight-Channel E1/T1/J1 Line Interface Unit

General Features

- Meets Japanese standards including
- JT G.703, 704, 706, I.431
- Intel® or Motorola® type 8/16-bit microcontroller interface
- Serial SPI bus and serial SCI bus
- Low power consumption (100 mW per channel)
- Dual voltage 1.8 V/3.3 V power supply
- 17 x 17 mm PG-LBGA-256 package with
- 1.0 mm ball pitch
- Operating range from -40°C to 85°C

The OctalLIU is the latest addition to Lantiq's family of sophisticated E1/T1/J1 components. Designed to support both long haul and short haul applications, the eight-channel OctalLIU provides support for all standard E1/T1/J1 Line Interface Unit functions.
As an eight-channel LIU, the OctalLIU is ideally suited to high channel-count applications that do not require E1/T1/J1 framing, or require framing and LIU functions to be in separate devices, such as M13 multiplexers, wireless base stations and routers.
Using Lantiq's EASY 22508 Reference Design System, system vendors can quickly develop OctalLIU-based applications.

Applications

- M13 multiplexers
- Wireless base stations
- Routers
- Voice over packet gateways
- ATM and Frame Relay gateways
- Multi-service Access Platforms
- Digital Loop Carriers
- Digital cross connects
- Switches
- Remote access servers/concentrators
- SONET/SDH Add/Drop Multiplexers
- CSU/DSU equipment

Features

- Eight independent E1/T1/J1 long haul/short haul LIUs
- Software programmable T1/E1/J1 for a single BOM for all applications
- Integrated analog switch for impedance matching or protection switching
- Crystal-less wander and jitter attenuation/compensation according to:
  TR 62411
  ETS-TBR 12/13
- Clock generation unit accepts any reference clock from 1.02 MHz to 20 MHz
- Programmable transmit pulse shape for standard and flexible pulse generation
- Supports automatic protection switching
- Integrated line termination tuning by additional analog switch
- Receiver sensitivity exceeds -36 dB at 772 kHz, and -43 dB at 1024 kHz
- Rx and Tx line monitoring
- Versatile channel configurations
- Dual or single rail digital input and output to the framer interface
- Programmable in-band loop code according to TR62411
- Programmable elastic store for Rx and Tx clock wander and jitter compensation with controlled slip capability and slip indication
- PRBS generation and monitoring
- Detects and generates LOS and AIS alarms

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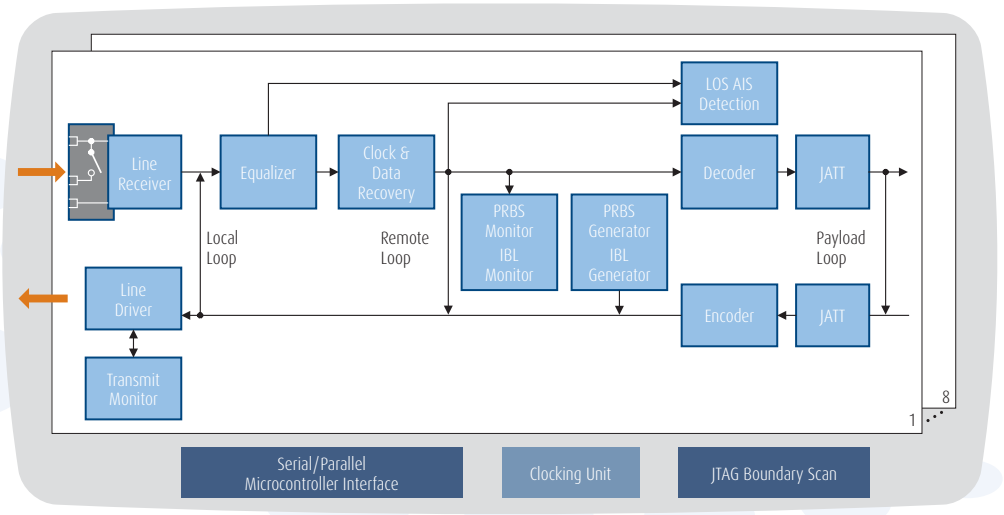
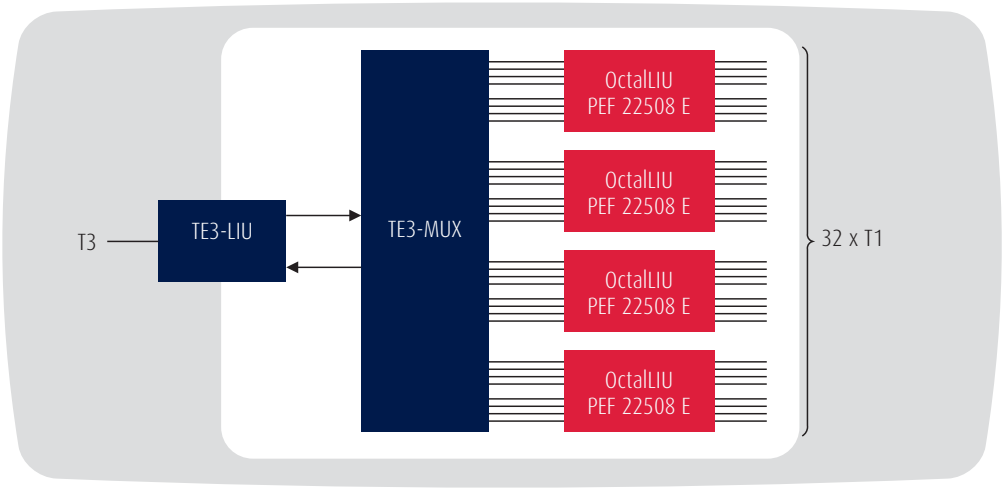
Block Diagram OctalLIU



Application Example 32-Channel E1/T1/J1 Line Card with OctalLIU



Product Summary

Sales Code	Application	Package
PEF 22508 E	OctalLIU Eight-Channel E1/T1/J1 Line Interface Unit	PG-LBGA-256
EASY 22508	OctalLIU Reference Design System	One board, software, and documentation

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