

DS3/STS-1/E3 Line Interface Unit

The TE3-LIU (former PUCCINI; PEB 3452) is a DS3 / STS-1 / E3 Line Interface Unit. It interfaces DS3 / STS-1 / E3 framer device to the analog transmission line. It fulfills the relevant standards for DS3 (44.736 Mbit/s), STS-1 (51.840 Mbit/s) and E3 (34.368 Mbit/s) systems. The TE3-LIU is a low power 3.3 V device and provides an integrated jitter attenuator for transmit direction.

It includes an integrated pulse shaper to drive any line length within the range of up to 1100 ft without the need for external length selection. The hardware configuration mode allows low cost systems with flexible device setting without the need for a microprocessor. An optional microprocessor mode allows the connection to a standard microprocessor bus to control hardware settings.



Applications

Channelized or unchannelized DS-3 (T3), E3 and STS-1 linecards.

- Routers
- Remote Access Systems
- WAN Access
- WAN Switches
- Public Transmission Systems

Features

- Single chip analog interface for all DS3/STS-1/E3 applications
- No external components required for clock and data recovery and receive equalizer
- Integrated receive equalization network
- Integrated noise and crosstalk filter
- DSX receive line monitor (additional 20 dB gain according to ANSI T1.102)

- Transmit pulse shaper to fulfill requirements of ANSI T1.404, Bellcore GR-499-CORE, ANSI T1.102 and ITU-T G.703 (E3)
- Maximum line length up to 1100 ft (using standard coaxial cable AT&T 728A/734A)
- No external line length select required
- Jitter specifications of GR-499-CORE and ITU-T G.823 are met
- Integrated jitter attenuator is included in the transmit direction to meet CBR/TBR-24 and E3/T3 loop timing requirements
- Selectable line codes (HDB3 (E3), B3ZS (DS3/STS-1), AMI)

Programming Modes

- Hardware interface mode
 - Stand-alone operation

- Microprocessor interface mode
 - Programmable from μP
 - Hardware control lines directly accessible

General

- P-MQFP-44-2 package (body size 10 mm $\times$ 10 mm, lead pitch 0.8 mm)
- Single power supply: 3.3 V $\pm$ 5%
- 5 V - tolerant digital input lines
- Temperature range of -40 °C to +85 °C

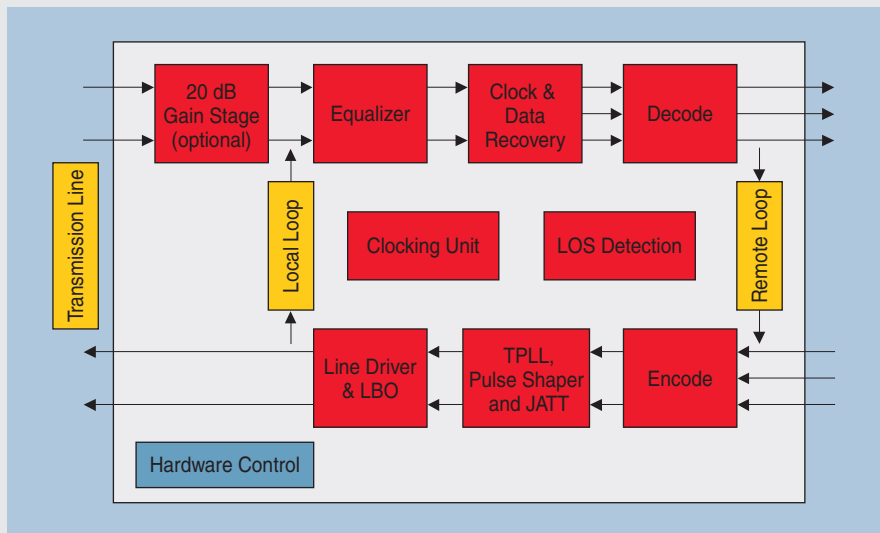
Documentation and Support Package

- Product Overview
- Data Sheet
- Evaluation System EASY3452

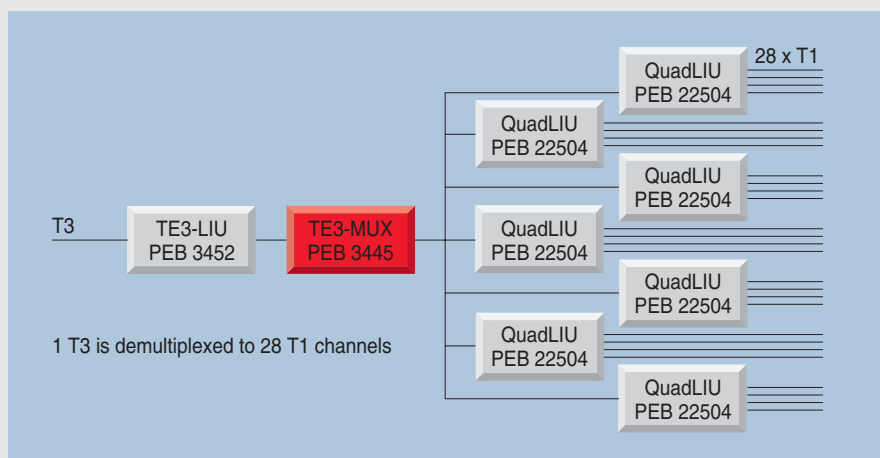
TE3 - LIU
PEB 3452

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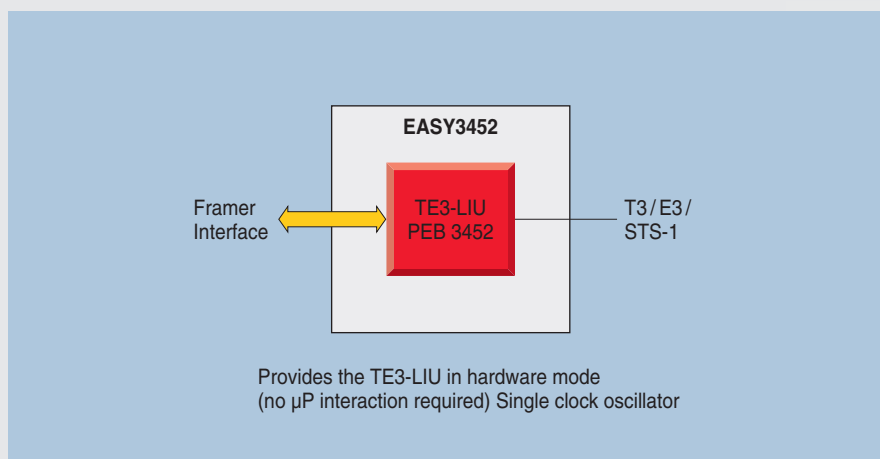




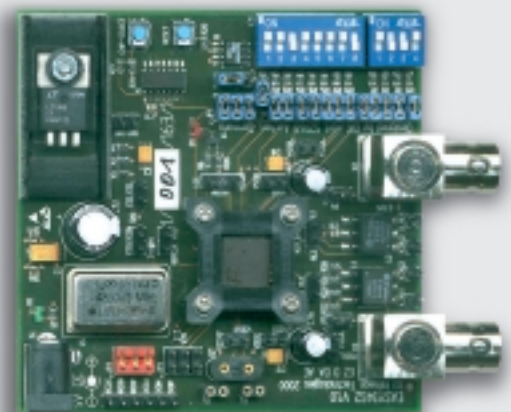
**TE3-LIU PEB 3452
Block Diagram**



**TE3-LIU PEB 3452
Application Example
T1 - T3 Multiplexer**



Evaluation Board EASY3452



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