Lantiq™ FALC56™

Leading Edge E1/T1/J1 Designs

Frame Aligner

- ITU-T G.704 frame alignment/ synthesis for 2048/1544 kbit/s
- Programmable frame formats
- Detects and generates LOS, AIS and RAI alarms
- Scalable system bus data and clock rate

Signal Controller

- Three HDLC/LAPD controllers with 64-byte FIFO buffers
- CAS controller with serial CAS
- I/O system interface or in microprocessor access mode only
- Supports signaling system #7
- ANSI T1.403 Bit-Oriented Messages (BOM), generates periodical performance reports
- Time-slot 0 Sa8- 4-bit or DL-channel handling via FIFOs
- System side signalling controller access (inverse HDLC)

General Features

- Intel® or Motorola® type 8/16-bit microcontroller interface
- Meets Japanese standards including JT G.703, 704, 706, I.431
- 32 maskable interrupt sources
- Internal/external second timer
- Real software switchable E1/T1/J1 device by integrated switchable termination resistance (E1-75/120 W, T1-100 W, J1-110 W)
- Glueless cascading of several FALC56s
- Dual voltage (1.8 V/3.3 V) or single voltage (3.3 V) power supply

The FALC56™ is the latest addition to Lantiq's FALC™ family of sophisticated E1/T1/J1 framer and Line Interface Unit (LIU) transceivers.
The FALC56 is ideal for use in state-of-the-art wireless base stations, switches, and Internet access equipment, and is also highly suited for ISDN applications. Designed for both long and short haul applications, the FALC56 supports all standard E1/T1/J1 functions. The FALC56 comes with a wide range of support tools, designed to assist rapid hardware and software design.
A complete software package with all driver source code written in C, as well as complete hardware and software documentation are provided with the FALC56 CD-ROM package. Use the EASY2256 Evaluation system to investigate the communication subsystem capabilities. The WinEasy and Application Wizard are also available to fully investigate FALC56 and QUADFALC™ capabilities.

Applications

- Wireless base stations
- E1/T1/J1 ATM and Frame Relay Gateways
- E1/T1/J1 Channel and Data Service Units (CSU, DSU)
- ISDN PRI, PBXs
- E1/T1/J1 Internet Access Equipment
- LAN/WAN router
- SONET/SDH Add/Drop MUXs
- Remote Access Server/Concentrator
- Digital Access Cross-Connect Systems (DACS)

Features

- Multi-purpose analog switch
- Crystal-less wander and jitter attenuation/compensation according to TR 62411 and ETS-TBR 12/13
- Clock generation unit accepts flexible frequency reference clocks from 1.02 MHz to 20 MHz
- Receive and transmit line monitoring
- Programmable transmit pulse shape for flexible pulse generation
- Supports automatic protection switching
- Integrated line termination tuning and additional analog switch

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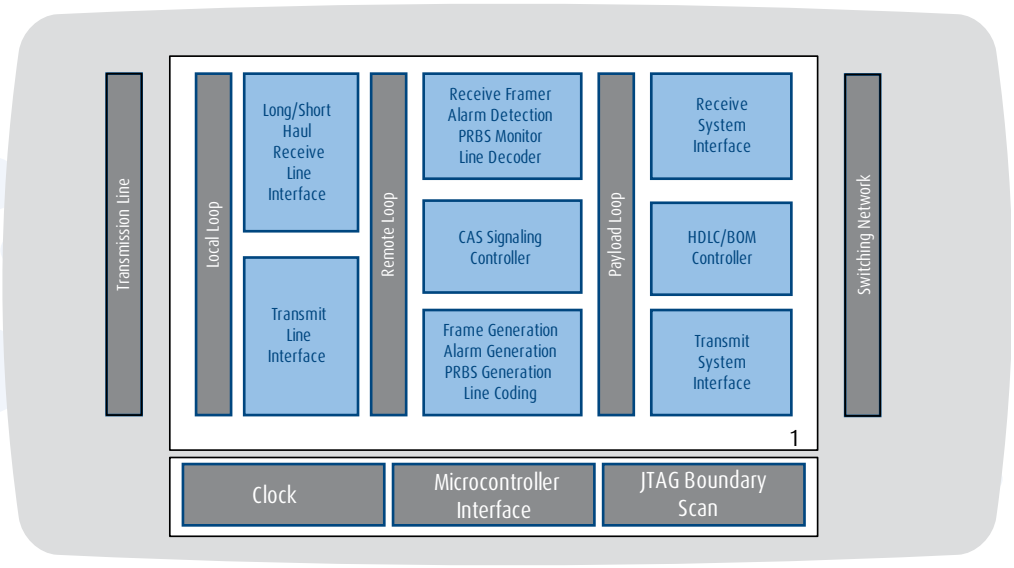
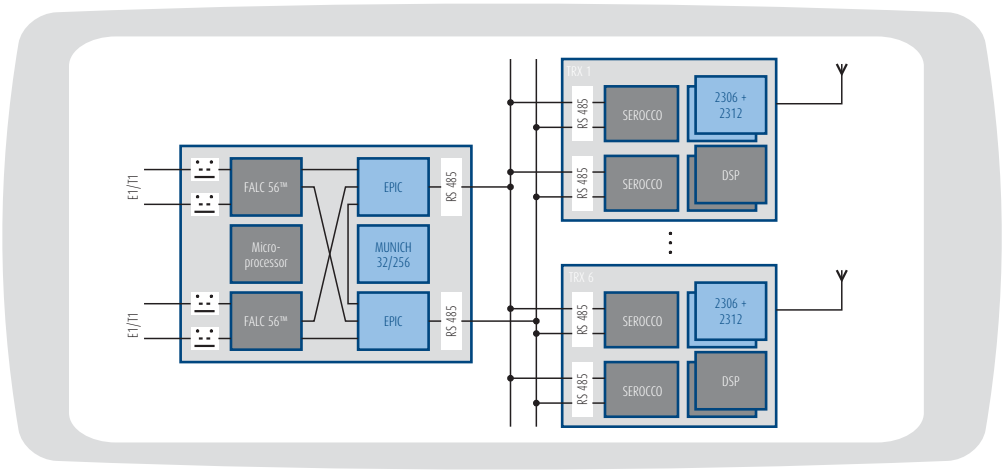
FALC56™ Block Diagram



GSM Base Transceiver Station with FALC56™ Application Example



Product Summary

Product	Sales Code	Application	Package
FALC56™	PEF 2256 E	E1/T1/J1 framer and Line Interface Unit	P-LBGA-81-1
FALC56™	PEF 2256 H	E1/T1/J1 framer and Line Interface Unit	P-MQFP-80-1
EASY 2256 E	EASY 2256 E	Evaluation system for the PEF 2256 E	One board, software, and documentation
EASY 2256	EASY 2256	Evaluation system for the PEF 2256 H	One board, software, and documentation

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