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Infineon Technologies
PEF 22558 E V1.1-G

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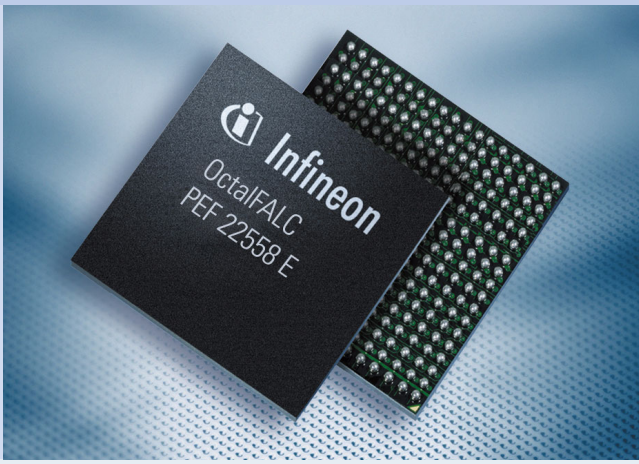
Product Brief



OctalFALC™

Eight-channel E1/T1/J1 Framer and LIU PEF 22558 E

The OctalFALC™ is the latest addition to Infineon's market-leading FALC® family of sophisticated E1/T1/J1 transceivers.
As an eight port E1/T1/J1 framer and Line Interface Unit (LIU), the OctalFALC is optimized for all kinds of network equipment including Radio Network Controllers, Node B line cards, and PBX or SDH/SONET add/drop multiplexers.
The OctalFALC features a unique clock generation unit that accepts any reference clock between 1.02 and 20 MHz, as well as a very compact 17 x 17 mm PG-LBGA-256 package.
Using the industry-leading OctalFALC reference design support tools, system developers can shorten design cycles while creating a wide range of highly flexible, low BOM E1/T1/J1 line cards.
The OctalFALC is highly suited for wireless networks, as well as ISDN PRI, LAN/WAN and Internet access networks.

Applications

- Wireless Base Stations
- Routers
- Multi-service Access Platforms
- Digital Loop Carriers
- Remote access servers/concentrators
- SONET/SDH Add/Drop Multiplexers

Analog Line Interfaces

- Eight independent E1/T1/J1 long haul / short haul LIUs
- Software programmable T1/E1/J1
- 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 flexible pulse generation
- Receiver sensitivity values exceed -36 dB at 772 kHz, or -43 dB at 1024 kHz

Frame Aligners

- ITU-T G.704 frame alignment/ synthesis for 2048/1544 kbit/s
- Programmable frame formats include:
  - E 1 - double and CRC4 multi-frame
  - T1 - F4, F12 (D4) ext. super frame (ESF), F72 (SLC96)
- Detects and generates LOS, AIS and RAI alarms
- CRC-4 performance monitoring
- PRBS generation and monitoring
- Scalable system bus data rate from 1.544 MHz up to 16 MHz

HDLC Controllers

- 24 HDLC controllers (three per channel) including 128-byte FIFO buffers
- CAS controller with microprocessor or system interface serial access
- Supports signaling system #7
- ANSI T1.403 bit-oriented messages (BOM), generates periodical performance reports

General Features

- QuadFALC® compatibility mode
- 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 (150 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

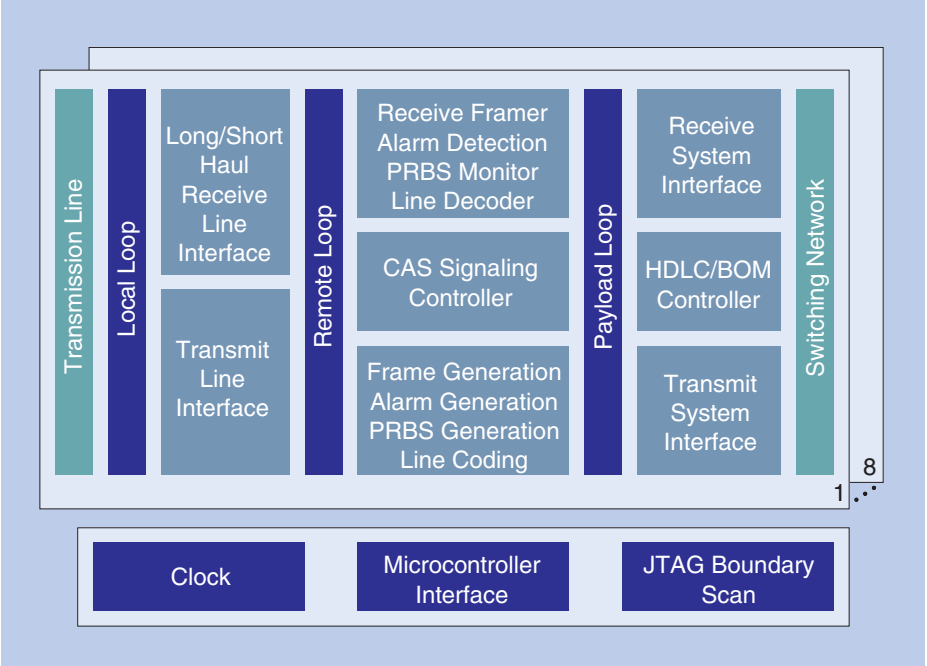
www.infineon.com/falc

Wireline Communications

Infineon technologies

Product Brief

Block Diagram OctalFALC



Ordering Information

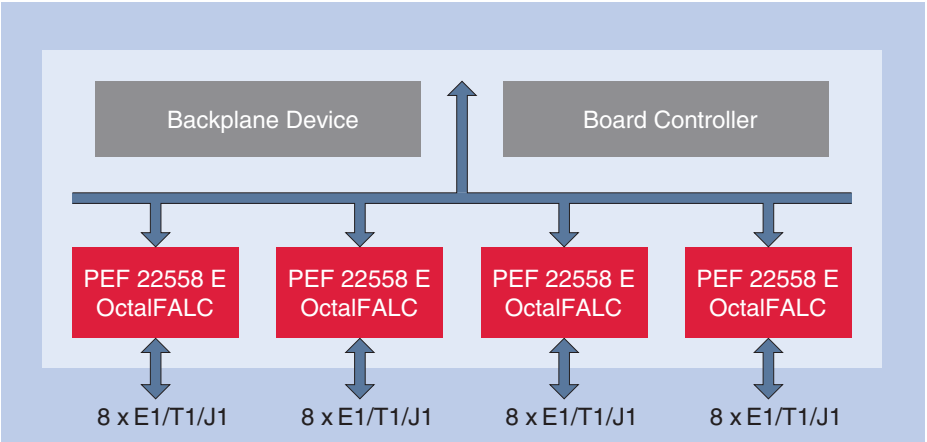
OctalFALC IC

Product Sales Code	Description	Package
PEF 22558 E	OctalFALC eight-channel E1/T1/J1 Framer and Line Interface Unit	PG-LBGA-256

OctalFALC Reference Design System

Product Sales Code	Description	Package
EASY 22558	OctalFALC reference design system	One board, software, and documentation

Application Example 32-channel E1/T1/J1 Line Card with OctalFALC



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