

Advanced Information

General Description

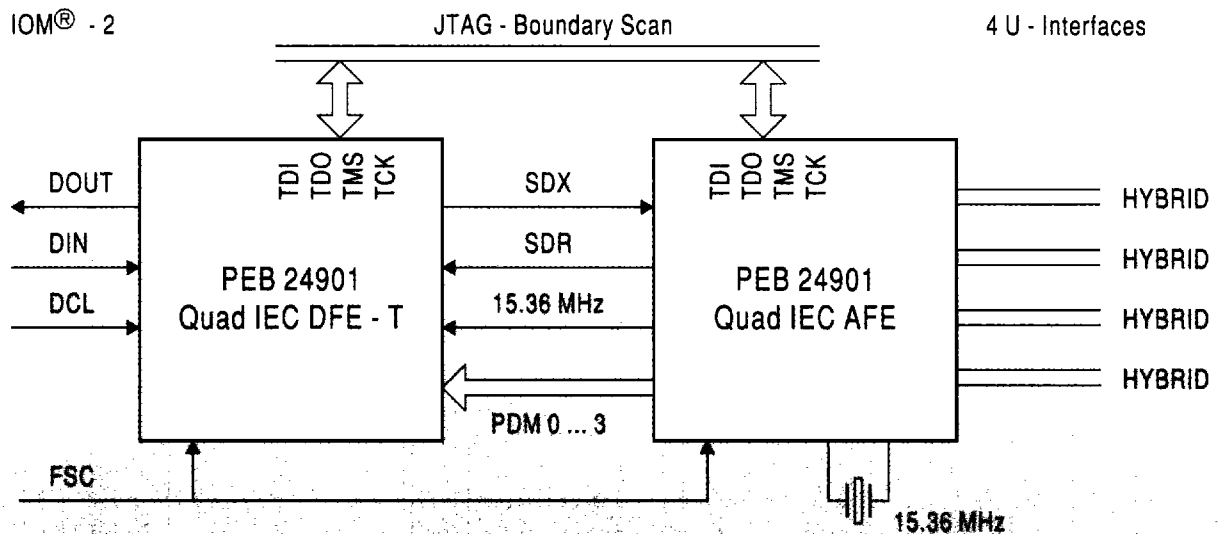
The PEB 24901 4 Channel ISDN Echocancellation Digital Front End (Quad IEC DFE-T) is the digital part of an optimized ISDN 4B3T U-interface line card chip set. It features 4 independent digital signal processors providing, in conjunction with the PEB 24902 ISDN Quad Analog Front End (Quad IEC AFE), full duplex data transmission at the U_{k0} -reference point according to FTZ Guideline 1 TR 220, ETSI ETR80 and CCITT I.430 standards. The PEB 24901/24902 chip set is based on the PEB 20901/20902 IEC-T ISDN U-transceiver chip set. The PEB 24901 comes in a P-MQFP-64 package.

Features

- Full duplex transmission and reception of the U_{k0} -interface signals according to the FTZ Guideline 1 TR 220 of the Deutsche Bundespost Telekom (DBPT).
 - 144-kbit/s user bit rate over standard local telephone loops
 - 1-kbit/s maintenance channel for transmission of data loop back commands and detected transmission errors
 - 4B3T-ternary block code (subscriber line symbol rate 120 kbaud)
 - Monitoring of transmission errors
 - Subscriber loop length without repeater:
 - up to 4.2 km on 0.4 mm wire
 - up to 8.0 km on 0.6 mm wire
- Adaptive echo-cancellation
- Adaptive equalization
- Automatic polarity adaption

Type	Package
PEB 24901	P-MQFP-64-1 (SMD)

- Clock recovery (frame and bit synchronization)
- Transposition of ternary to binary data and vice versa (coding, decoding, scrambling, descrambling, phase adaption)
- Built-in wake-up unit for activation from power-down state
- Activation and deactivation procedure according to CCITT I.430 and to FTZ Guideline 1 TR 210 of the DBPT
- Optimized for working in conjunction with telecom ICs as the IDEC (PEB 2075), EPIC (PEB 2055) and ELIC (PEB 20550) via IOM-2 interface
- Data speed conversion between the U_{k0} frames and the IOM-2 frames. Absorption of received phase-wander of up to 18 μ s peak-to-peak (CCITT Rec. Q.512)
- Handling of commands and indications contained in the IOM-2 C/I-channel for activation, deactivation, supervision of power supply unit and equipment for wire testing
- IOM-2 system interface
- Data availability via the Monitor channel:
 - Accumulated RDS-transmission errors for the whole U_{k0} link
 - Echo canceller coefficients and status values, which can be used to indicate the state of the U_{k0} interface
- Switching of an analog test loop at the U_{k0} interface for testing (loop in LT)
- Remote control of test loop switching via maintenance channel
- 4 relay driver pins per port addressable by Monitor command
- 2 status pin per port reporting to the Monitor channel
- JTAG-boundary scan path



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