

XRT83VSH316

16-Channel T1/E1/J1 Short-Haul Line Interface Unit

Ideal for Cost-Sensitive Transport Applications Including Multi-service Provisioning Platforms and Routers

The XRT83VSH316 is a fully integrated 16-channel short-haul line interface unit (LIU) that operates from a 1.8V Inner Core and 3.3V I/O power supplies. Using internal termination, the LIU provides one bill of materials to operate in T1, E1, or J1 mode independently on a per channel basis with minimum external components. The LIU features are programmed through a standard parallel microprocessor interface or SPI (Serial Mode). EXAR's LIU has patented high impedance circuits that allow the transmitter outputs and receiver inputs to be high impedance when experiencing a power failure or when the LIU is powered off. Key design features within the LIU optimize 1:1 or 1+1 redundancy and non-intrusive monitoring applications to ensure reliability without using relays.

The on-chip clock synthesizer generates T1/E1/J1 clock rates from a selectable external clock frequency and has five output clock references that can be used for external timing (8kHz, 1.544Mhz, 2.048Mhz, nxT1/J1, nxE1).

Additional features include System Side LOS, AIS, QRSS/PRBS and Line Side RLOS, AIS, QRSS/PRBS, DMO with 16-bit LCV counters and diagnostic loopback modes for each channel.

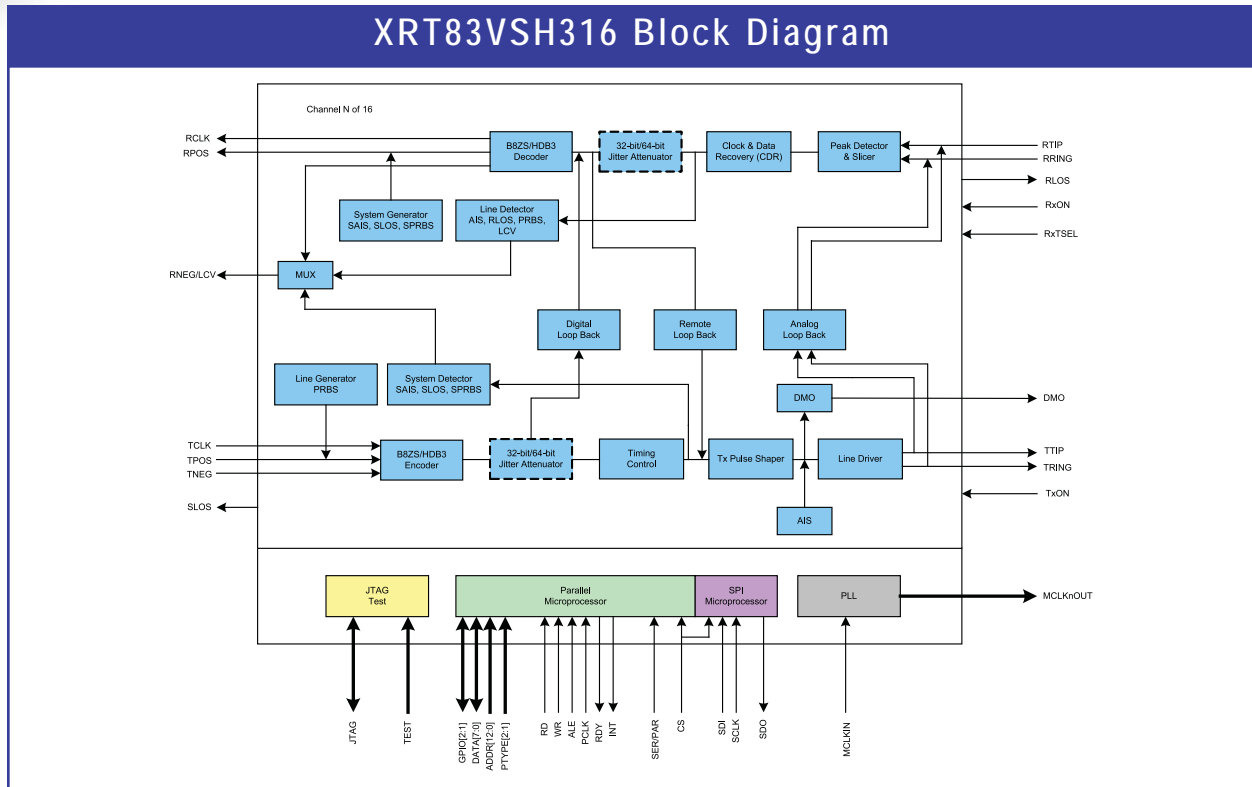


Major Features

- Fully integrated 16-Channel shorthaul transceivers for T1/J1 (1.544 MHz) and E1 (2.048 MHz) applications
- Parallel or SPI Microprocessor Interface
- T1/E1/J1 short haul and clock rate are per port selectable through software without changing components
- Internal Impedance matching on both receive and transmit for 75 Ohms (E1), 100 Ohms (T1), 110 Ohms (J1), and 120 Ohms (E1) applications are per port selectable through software without changing components
- Power down on a per channel basis with independent receive and transmit selection
- Five pre-programmed transmit pulse settings for T1 short haul applications per channel

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Features

- User programmable Arbitrary Pulse mode for T1 & E1
- On-Chip transmit short-circuit protection and limiting protects line drivers from damage on a per channel basis
- Crystal-Less digital jitter attenuators (JA) with 32-Bit or 64-Bit FIFO for the receive or transmit path per channel
- Driver failure monitor output (DMO) alerts of possible system or external component problems
- Transmit outputs and receive inputs may be "High" impedance for protection or redundancy applications on a per channel basis
- Support for automatic protection switching
- 1:1 and 1+1 protection without relays
- Receive monitor mode handles 0 to 6dB resistive attenuation (flat loss) along with 0 to 6dB cable loss for both T1 and E1
- Loss of signal (LOS) according to ITU-T G.775/ETS300233 (E1) and ANSI T1.403 (T1/J1) for system (SLOS) and line (RLOS) side diagnostics
- Programmable data stream muting upon RLOS detection

Applications

- T1 Digital Cross Connects (DSX-1)
- ISDN Primary Rate Interface
- CSU/DSU E1/T1/J1 Interface
- T1/E1/J1 LAN/WAN Routers
- Public Switching Systems and PBX Interfaces
- T1/E1/J1 Multiplexer and Channel Banks
- Integrated Multi-Service Access Platforms (IMAPs)
- Integrated Access Devices (IADs)
- Inverse Multiplexing for ATM (IMA)
- Wireless Base Stations

Ordering Information		
Product No.	Package	Operating Temp. Range
XRT83VSH316IB	316 STBGA	-40°C to +85°C