XRT7295AT DS3 SONET STS1 Integrated Line Receiver

General Description:



The XRT7295AT DS3/SONET STS-1 integrated line receiver is a fully integrated receive interface that terminates a bipolar DS3 (44.736Mbps) or Sonet STS-1 (51.84Mbps) signal transmitted over coaxial cable.

The device also provides the functions of receive equalization (optional), automatic-gain control (AGC), clock-recovery and data retiming, loss-of-signal and loss-of-frequency-lock detection. The digital system interface is dual-rail, with received positive and negative 1s appearing as unipolar digital signals on separate output leads. The on-chip equalizer is designed for cable distances of 0 to 450ft. from the cross-connect frame to the device. The receive input has a variable input sensitivity control, providing three different sensitivity settings, to adapt longer cables. High input sensitivity allows for significant amounts of flat loss within the system. *Figure 1* shows the block diagram of the device.

The XRT7295AT device is manufactured using linear CMOS technology. The XRT7295AT is available in a 20-pin plastic SOJ package for surface mounting. Two versions of the chip are available, one is for either DS3 or STS-1 operation (the XRT7295AT, this data sheet), and the other is forE3 operation (the XRT7295AE, refer to the XRT7295AE data sheet). Both versions are pin compatible. For either DS3 or STS-1, an input reference clock at 44.736MHz or 51.84MHz provides the frequency reference for the device.

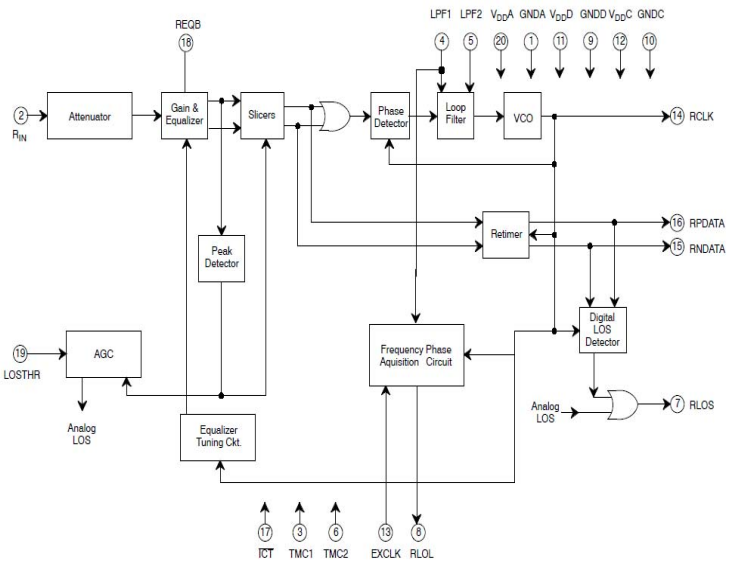


Figure 1. Block Diagram

Key Features:

- Fully Integrated Receive Interface for DS3 and
- STS-1 Rate Signals

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- Integrated Equalization (Optional) and Timing
- Recovery
- Loss-of-Signal and Loss-of-Lock Alarms
- Variable Input Sensitivity Control
- 5V Power Supply
- Pin Compatible with XRT7295AE and XRT7295AC
- Companion Device to T7296 Transmitter

Applications:

- Interface to DS-3 Networks
- Digital Cross-Connect Systems
- CSU/DSU Equipment
- PCM Test Equipment
- Fiber Optic Terminals

Related Products Information:

Mfr Part #	Farnell #	Newark #	Description
XRT7295ATIW-F	1798681	24R1756	DS3/Sonet STS1 Integrated Line Receiver-20 Lead JEDEC SOJ package

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