



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 for E3 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.

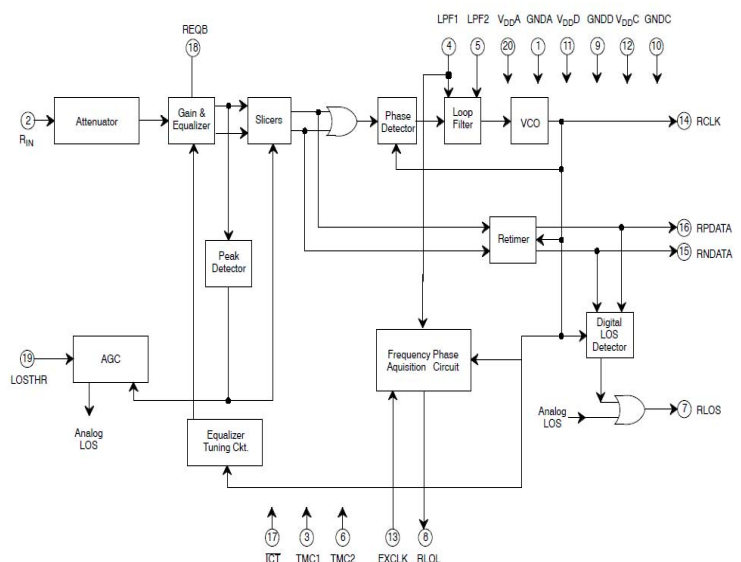


Figure 1. Block Diagram

Key Features:

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

- 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