

# Communications

## XRT5897

### Seven-Channel E1 Line Interface

#### Features

- Compliant with ITU G.703 Pulse Mask Template for 2.048Mbps (E1) Rates
- Seven Independent CEPT Transceivers
- Supports Differential Transformer Coupled Receivers and Transmitters
- On-chip Pulse Shaping for Both 75W and 120W Line Drivers
- Compliant with ITU G.775 LOS Declaration/Clearing Recommendation
- Optional User Selectable LOS Declaration/Clearing Delay
- Logical Inputs Accept either 3.3V or 5.0V Levels
- Ultra-Low Power Dissipation
- +3.3V Supply Operation
- Individual Transmit Channel Over Temperature Protection

#### Applications

- SDH Multiplexer
- Digital Cross Connects

The XRT5897 is an optimized seven channel 3.3V line interface unit fabricated using low power CMOS technology. The device contains seven independent E1 channels. It is primarily targeted toward SDH multiplexers that accommodate TU12 Tributary Unit Frames. Line cards in these units multiplex 21 E1 interfaces into higher SDH rates. Devices with seven E1 interfaces such as the XRT5897 provide the most efficient method of implementing 21 channel line cards. Each channel performs the driver and receiver functions necessary to convert bipolar signals to logical levels and vice versa. The device requires transformers on both receiver and transmitter sides, and supports both balanced and unbalanced interfaces.

The device offers two distinct modes of LOS detection. The first method, which does not require an external clock, provides an LOS output indication signal with thresholds and delay that comply with the ITU G.775 requirements. In the second mode, the user provides an external clock that increases the delay for LOS declaration and clearing. This feature provides the user with the flexibility to implement LOS specifications that require a delay greater than the G.775 requirements.