

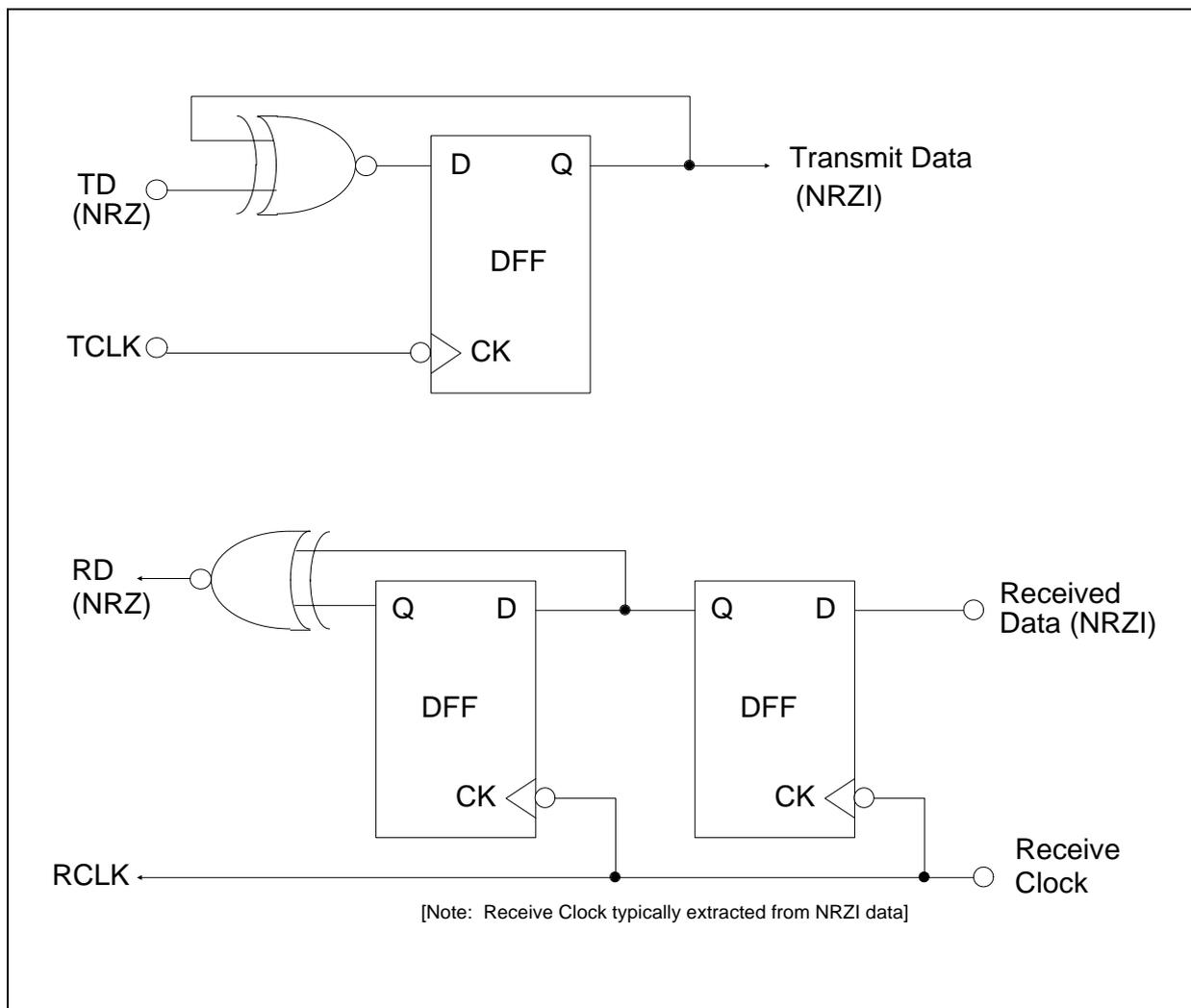
**MK5025**  
**NRZ TO NRZI CONVERSION**

The SGS-Thomson MK5025 link level controller is a versatile device providing complete link level data communication control conforming to the 1984 version of CCITT X.25. The MK5025 also supports X.32 and X.75 as well as single channel LAPD for ISDN with its UI frames and extended addressing capabilities. The MK5025 also features a transparent mode of operation for implementation of customized protocols using HDLC framing.

27 and 29 - 31 (TCLK, DTR/RTS, RCLK, and TD, DSR/CTS, RD respectively). The transmit data (TD) is NRZ encoded and the receive data (RD) is NRZ decoded. To interface to other line code formats some conversion is necessary. The following figure shows one method for doing NRZ to NRZI conversion so that the MK5025 may be able to transmit and receive NRZI encoded data. It should be noted that the receive clock would typically be extracted from the received NRZI data, using a phase locked loop approach.

The MK5025 serial interface consists of pins 25 -

**Figure 1:** NRZ to NRZI Conversion



## APPLICATION NOTE

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