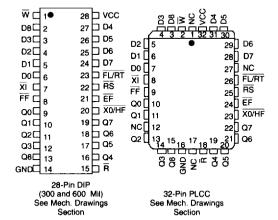


# **DS2011** 2048 x 9 FIFO Chip

### **FEATURES**

- First-in, first-out memory-based architecture
- Flexible 2048 x 9 organization
- Low-power HCMOS technology
- · Asychronous and simultaneous read/write
- · Bidirectional applications
- · Fully expandable by word width or depth
- Empty and full warning flags
- · Half-full flag capability in single-device mode
- Retransmit capability
- High performance
- Available in 50 ns, 65 ns, 80 ns, and 120 ns access times
- Optional industrial temperature range -40°C to +85°C available, designated N

### PIN ASSIGNMENT



#### PIN DESCRIPTION

 W
 WRITE

 R
 READ

 RS
 RESET

FL/RT - First Load/Retransmit

 $\begin{array}{cccc} D_{0\text{-}8} & & - & \text{Data In} \\ Q_{0\text{-}8} & & - & \text{Data Out} \\ \hline \overline{\text{XI}} & & - & \text{Expansion In} \end{array}$ 

XO/HF - Expansion Out/Half Full

 FF
 - Full Flag

 EF
 - Empty Flag

 V<sub>CC</sub>
 - 5 Volts

 GND
 - Ground

 NC
 - No Connect

## DESCRIPTION

The DS2011 FIFO Chip implements a first-in, first-out algorithm featuring asynchronous read/write operations, full, empty, and half-full flags, and unlimited expansion capability in both word size and depth. The DS2011 is functionally and electrically equivalent to the

DS2009 512 x 9 FIFO Chip, with the exceptions listed in the notes for DC Electrical Characteristics of the DS2009 data sheet. Refer to the DS2009 data sheet for detailed device description.