National Semiconductor

ADVANCE INFORMATION

54ACT/74ACT2726
512 x 9 Bidirectional First In, First Out Memory (BIFIFO)

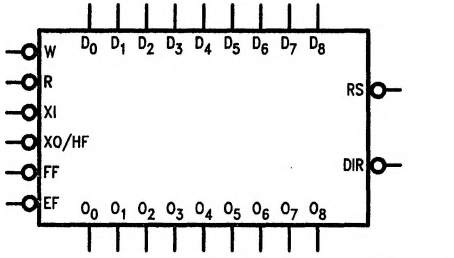
General Description

The 512 x 9 FIFO is a first-in, first-out dual port memory capable of asynchronous, simultaneous read and write. Other important features are: expansion capability in both the word depth and bit width, half-full flag capability in the single device mode, empty and full warning flags, and ring pointers for zero fall-through time. There are two sets of bidirectional ports, each 9 bits wide, through which data flow can be controlled. A direction pin (DIR) controls the direction of the data: when the DIR is HIGH, A is the input port and B is the output port. When the DIR is LOW, the input port is B and output port is A. It is suited for high-speed applications.

Features

- First-in, first-out bidirectional memory
- 512 x 9 organization
- Low power consumption
- Asynchronous and simultaneous read and write
- Fully expandable by word depth and/or bit width
- Half-full flag capability in single device mode
- Master/slave multiprocessing applications
- Bidirectional and rate buffer applications
- Empty and full warning flags
- Outputs source/sink 8 mA
- 'ACT2726 has TTL-compatible inputs

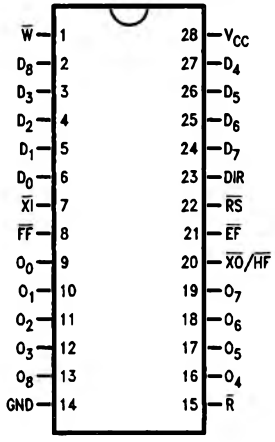
Logic Symbol



TL/F/10656–1

Connection Diagram

Pin Assignment for DIP, Flatpak and SOIC



TL/F/10656–2

Pin Names	Description
D_0–D_8	Data Inputs
O_0–O_8	Data Outputs
$\overline{W}$	Write Enable
$\overline{R}$	Read Enable
$\overline{XI}$	Expansion In
$\overline{XO}/\overline{HF}$	Expansion Out, Half-Full Flag
$\overline{EF}$	Empty Flag
$\overline{FF}$	Full Flag
$\overline{RS}$	Reset
DIR	Direction