

DS90LV031 3V LVDS Quad CMOS Differential Line Driver

General Description

The DS90LV031 is a quad CMOS differential line driver designed for applications requiring ultra low power dissipation and high data rates. The device is designed to support data rates in excess of 100 Mbps (50 MHz) utilizing Low Voltage Differential Signaling (LVDS) technology.

The DS90LV031 accepts TTL/CMOS input levels and translates them to low voltage (350 mV) differential output signals. In addition the driver supports a TRI-STATE® function that may be used to disable the output stage, disabling the load current, and thus dropping the device to an ultra low idle power state of 11 mW typical.

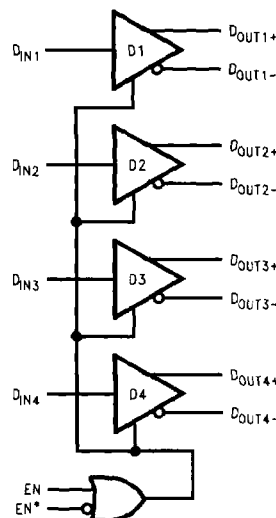
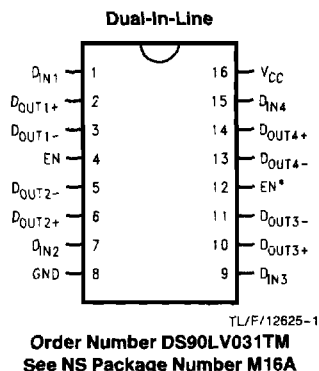
The DS90LV031 and companion line receiver (DS90LV032) provide a new alternative to high power psuedo-ECL devices for high speed point-to-point interface applications.

Features

- 3.3V power supply design
- >100 Mbps (50 MHz) switching rates
- ± 350 mV differential signaling
- Ultra low power dissipation
- TBD ps maximum differential skew (3.3V, 25°C)
- TBD ns maximum propagation delay
- Industrial operating temperature range (-40°C to $+85^{\circ}\text{C}$)
- Available in surface mount packaging (SOIC)
- Pin compatible with DS26C31, MB571 (PECL), 41LG (PECL), and DS90C031
- Compatible with IEEE 1596.3 SCI LVDS standard
- Compatible with TIA/EIA-644 LVDS standard

Connection Diagram

Functional Diagram and Truth Tables



DRIVER

Enables		Input	Outputs	
EN	EN*	D _{IN}	D _{OUT} +	D _{OUT} -
L	H	X	Z	Z
All other combinations of ENABLE inputs		L	L	H
		H	H	L