

## 74LVXC164245 16-Bit Dual Supply Configurable Voltage Interface Transceiver with TRI-STATE® Outputs

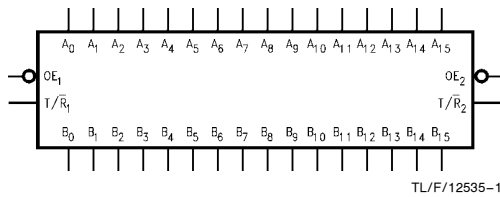
### General Description

The LVXC164245 is a 48-pin dual-supply, 16-bit configurable voltage interface transceiver suited for PCMCIA and other real time configurable I/O applications. The  $V_{CCB}$  pin accepts a 5V supply level. The "B" port is a dedicated 5V port. The  $V_{CCA}$  pin accepts a 3V-to-5V supply level. The "A" port is configured to track the  $V_{CCA}$  supply level respectively. A 5V level on the  $V_{CC}$  pin will configure the I/O pins at a 5V level and a 3V  $V_{CC}$  will configure the I/O pins at a 3V level. This device will allow the  $V_{CCA}$  voltage source pin and I/O pins on the "A" port to float when  $\overline{OE}$  is HIGH. This feature is necessary to buffer data to and from a PCMCIA socket that permits PCMCIA cards to be inserted and removed during normal operation.

### Features

- Power up/down high impedance provides glitch-free bus loading
- Allows A port and  $V_{CCA}$  to float simultaneously when  $\overline{OE}$  is HIGH
- Bidirectional interface between 5V and 3V-to-5V buses
- Inputs compatible with TTL level
- Allow dual  $V_{CC}$  supplies power up/down easily when  $\overline{OE}$  is HIGH
- Guaranteed simultaneous switching noise level and dynamic threshold performance
- Available in SSOP and TSSOP packages
- Implements patented Quiet Series™ EMI reduction circuitry
- Flexible  $V_{CCA}$  operating range
- Functionally compatible with the 74 series 16245

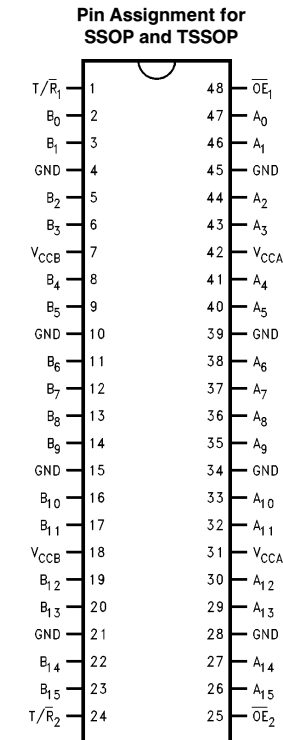
### Logic Symbol



Pin Names	Description
$\overline{OE}_n$	Output Enable Input (Active Low)
$T/\overline{R}_n$	Transmit/Receive Input
$A_0-A_{15}$	Side A Inputs/TRI-STATE Outputs
$B_0-B_{15}$	Side B Inputs/TRI-STATE Outputs

	SSOP	TSSOP JEDEC
Order Number	74LVXC164245MEA 74LVXC164245MEAX	74LVXC164245MTD 74LVXC164245MTDX
See NS Package Number	MS48A	MTD48

### Connection Diagram



## Functional Description

The LVXC164245 contains sixteen non-inverting bidirectional buffers with TRI-STATE outputs. The device is byte controlled with each byte functioning identically, but independent of the other. The control pins can be shorted together to obtain full 16-bit operation.

## Truth Tables

Inputs		Outputs
$\overline{OE}_1$	$T/\overline{R}_1$	
L	L	Bus B <sub>0</sub> -B <sub>7</sub> Data to Bus A <sub>0</sub> -A <sub>7</sub>
L	H	Bus A <sub>0</sub> -A <sub>7</sub> Data to Bus B <sub>0</sub> -B <sub>7</sub>
H	X	HIGH-Z State on A <sub>0</sub> -A <sub>7</sub> , B <sub>0</sub> -B <sub>7</sub>

H = High Voltage Level

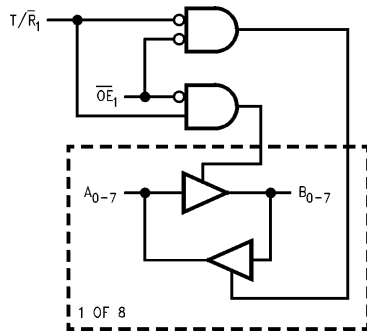
L = Low Voltage Level

Inputs		Outputs
$\overline{OE}_2$	$T/\overline{R}_2$	
L	L	Bus B <sub>8</sub> -B <sub>15</sub> Data to Bus A <sub>8</sub> -A <sub>15</sub>
L	H	Bus A <sub>8</sub> -A <sub>15</sub> Data to Bus B <sub>8</sub> -B <sub>15</sub>
H	X	HIGH-Z State on A <sub>8</sub> -A <sub>15</sub> , B <sub>8</sub> -B <sub>15</sub>

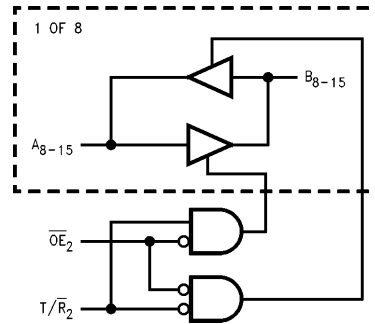
X = Immaterial

Z = High Impedance

## Logic Diagrams



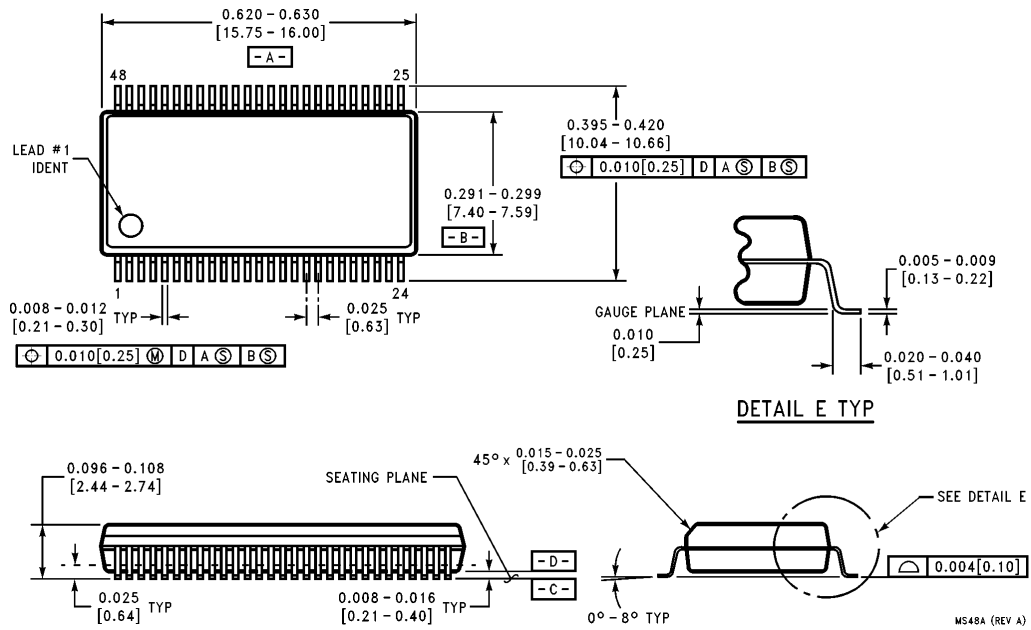
TL/F/12535-3



TL/F/12535-4

Please note that these diagrams are provided only for the understanding of logic operations and should not be used to estimate propagation delays.

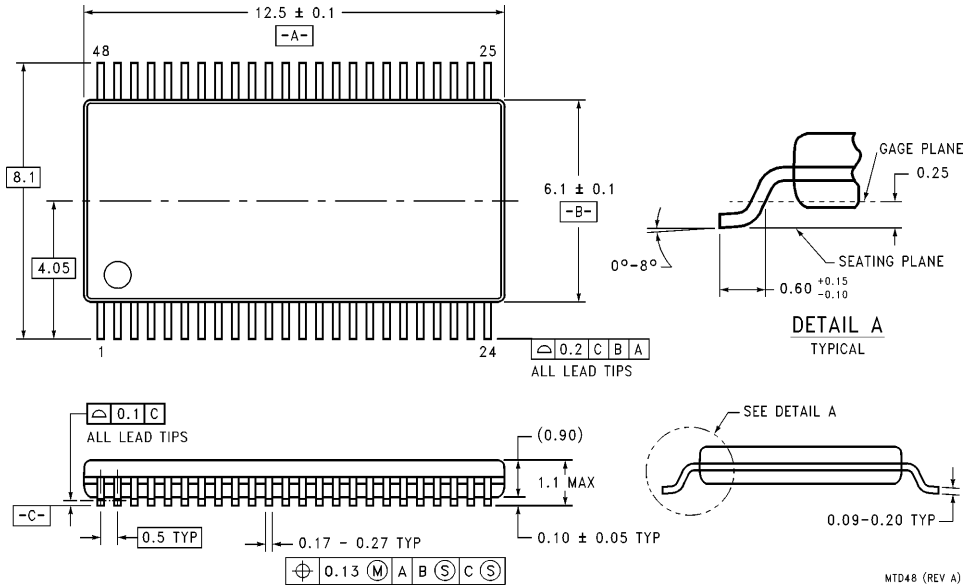
**Physical Dimensions** inches (millimeters) unless otherwise noted



**48-Lead Molded Shrink Small Outline Package, EIAJ**  
**Order Number 74LVXC164245MEA or 74LVXC164245MEAX**  
**NS Package Number MS48A**

**74LVXC164245 16-Bit Dual Supply Configurable Voltage Interface Transceiver with TRI-STATE Outputs**

**Physical Dimensions** millimeters (Continued)




**48-Lead Molded Thin Shrink Small Outline Package, JEDEC, 6.1 mm Body Width**  
**Order Number 74LVXC164245MTD or 74LVXC164245MTDX**  
**NS Package Number MTD48**

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