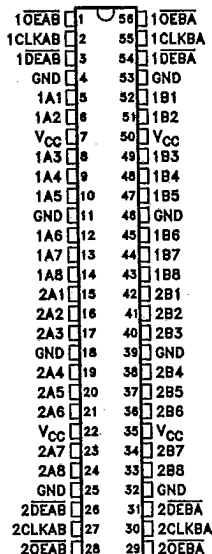


T-52-31
54AC16470, 54ACT16470
74AC16470, 74ACT16470
16-BIT REGISTERED BUS TRANSCEIVERS WITH 3-STATE OUTPUTS
 TI0246—D3569, JUNE 1990

- Members of Texas Instruments Widebus™ Family
- Packaged in Shrink Small-Outline 300-mil Packages (SSOP) and 380-mil Fine-Pitch Ceramic Flat Packages Using 25-mil Center-to-Center Pin Spacings
- Inputs are TTL- or CMOS-Voltage Compatible
- 3-State Outputs Drive Bus Lines Directly
- Flow-Through Architecture Optimizes PCB Layout
- Distributed V_{CC} and GND Pin Configuration Minimizes High-Speed Switching Noise
- EPIC™ (Enhanced-Performance Implanted CMOS) 1-μm Process
- 500-mA Typical Latch-Up Immunity at 125°C

54AC16470, 54ACT16470 ... WD PACKAGE
 74AC16470, 74ACT16470 ... DL PACKAGE
 (TOP VIEW)



description

The 'AC16470 and 'ACT16470 are noninverting 16-bit registered bus transceivers composed of two 8-bit sections with separate control signals. For either 8-bit transceiver section, data flow in the A-to-B mode is controlled by output enable (1OEAB or 2OEAB), direction enable (1DEAB or 2DEAB), and clock (1CLKAB or 2CLKAB) inputs.

When 1DEAB (or 2DEAB) is high, storage of the current A-bus data is inhibited and the corresponding B outputs are in the high-impedance state. When 1DEAB (or 2DEAB) is low, the register contents and the output buffers are controlled by 1CLKAB (or 2CLKAB) and 1OEAB (or 2OEAB). A low level on 1CLKAB (or 2CLKAB) inhibits register loading; a low-to-high transition on 1CLKAB (or 2CLKAB) causes loading of the corresponding registers with the current A-bus data. If 1OEAB (or 2OEAB) is low, the corresponding B outputs reflect the contents of the registers. A high level on 1OEAB (or 2OEAB) causes the B outputs to be in the high-impedance state.

FUNCTION TABLE, EACH SECTION†

INPUTS			LATCH DATA	B OUTPUTS
DEAB	CLKAB	OEAB		
H	X	X	Previous A Data	Z
L	L	H	Previous A Data	Z
L	L	L	Previous A Data	Previous A Data
L	↑	H	Current A Data	Z
L	↑	L	Current A Data	Current A Data

† A-to-B data flow is shown. B-to-A data flow is controlled analogously by DEBA, CLKBA, and OEBA.

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54AC16470, 54ACT16470
74AC16470, 74ACT16470

16-BIT REGISTERED BUS TRANSCEIVERS WITH 3-STATE OUTPUTS

TI0248—D3569, JUNE 1990

Data flow from B to A is similar, but uses $\overline{1OEBA}$ and/or $2OEBA$, $\overline{1DEBA}$ and/or $2DEBA$, and $1CLKBA$ and/or $2CLKBA$.

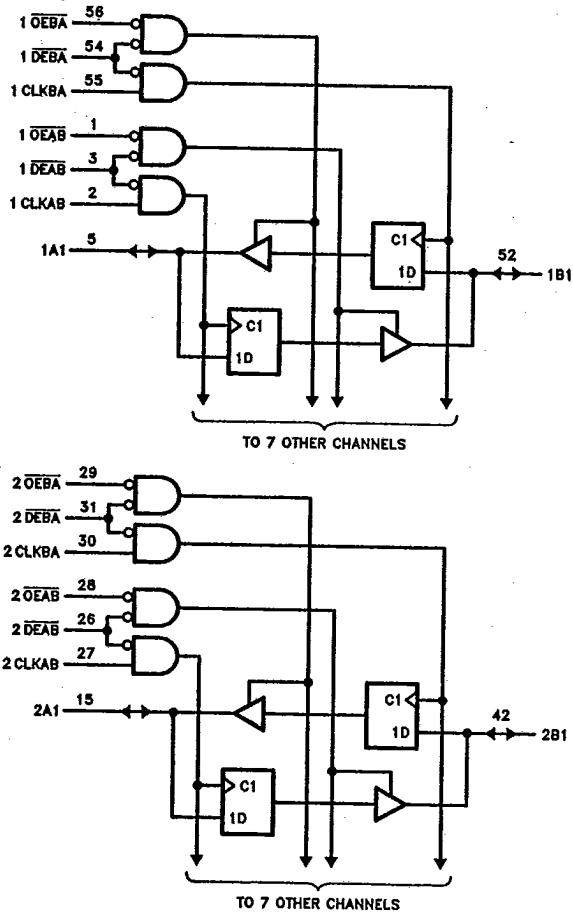
The 74AC16470 and 74ACT16470 are packaged in TI's shrink small-outline package (SSOP) with 25-mil center-to-center pin spacings. This package provides twice the I/O pin count and functionality of a standard small-outline package in the same printed-circuit-board area.

The 'AC16470 has CMOS-compatible input thresholds. The 'ACT16470 has TTL-compatible input thresholds.

The 54AC16470 and 54ACT16470 are characterized over the full military temperature range of -55°C to 125°C . The 74AC16470 and 74ACT16470 are characterized for operation from -40°C to 85°C .

logic diagram (positive logic)

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PRODUCT PREVIEW