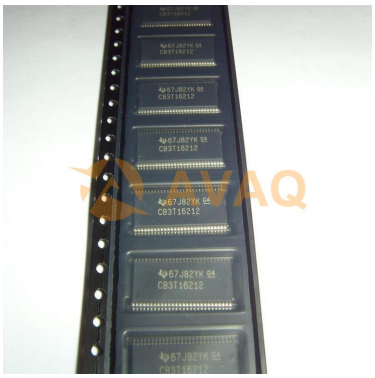
SN74CB3T16212DGGR

12-CHBus Exchange Switch 1-Element 24-IN- 24-OUT 56-Pin TSSOP T/R



Images are for reference only

Inquiry

Manufacturer:	Texas Instruments, Inc
Package/Case:	TSSOP-56
Product Type:	Switches
RoHS:	RoHS Compliant/Lead free
Lifecycle:	Active

General Description

The SN74CB3T16212 is a high-speed TTL-compatible FET bus-exchange switch, with low ON-state resistance (ron), allowing for minimal propagation delay. The device fully supports mixed-mode signal operation on all data I/O ports by providing voltage translation that tracks VCC. The SN74CB3T16212 supports systems using 5-V TTL, 3.3-V LVTTL, and 2.5-V CMOS switching standards, as well as user-defined switching levels (see Figure 1).

The SN74CB3T16212 operates as a 24-bit bus switch or as a 12-bit bus exchange that provides data exchanging between four signal ports. The select (S0, S1, S2) inputs control the data path of the bus-exchange switch. When the bus-exchange switch is ON, the A port is connected to the B port, allowing bidirectional data flow between ports. When the bus-exchange switch is OFF, a high-impedance state exists between the A and B ports.

This device is fully specified for partial-power-down applications using Ioff. The Ioff feature ensures that damaging current will not backflow through the device when it is powered down. The device has isolation during power off.

To ensure the high-impedance state during power up or power down, each select input should be tied to GND through a pulldown resistor; the minimum value of the resistor is determined by the current-sourcing capability of the driver.

Key Features

Member of the Texas Instruments Widebus Family

Output Voltage Translation Tracks VCC

Supports Mixed-Mode Signal Operation on All Data I/O Ports

5-V Input Down to 3.3-V Output Level Shift With 3.3-V VCC

5-V/3.3-V Input Down to 2.5-V Output Level Shift With 2.5-V VCC

5-V-Tolerant I/Os With Device Powered Up or Powered Down

Bidirectional Data Flow, With Near-Zero Propagation Delay

Low ON-State Resistance (ron) Characteristics (ron = 5Typ)

Low Input/Output Capacitance Minimizes Loading (Cio(OFF) = 9 pF Typ)

Data and Control Inputs Provide Undershoot Clamp Diodes

Low Power Consumption (ICC = 70 μA Max)

VCC Operating Range From 2.3 V to 3.6 V

Data I/Os Support 0- to 5-V Signaling Levels (0.8 V, 1.2 V, 1.5 V, 1.8 V, 2.5 V, 3.3 V, 5 V)

Control Inputs Can Be Driven by TTL or 5-V/3.3-V CMOS Outputs

Ioff Supports Partial-Power-Down Mode Operation

Latch-Up Performance Exceeds 250 mA Per JESD 17

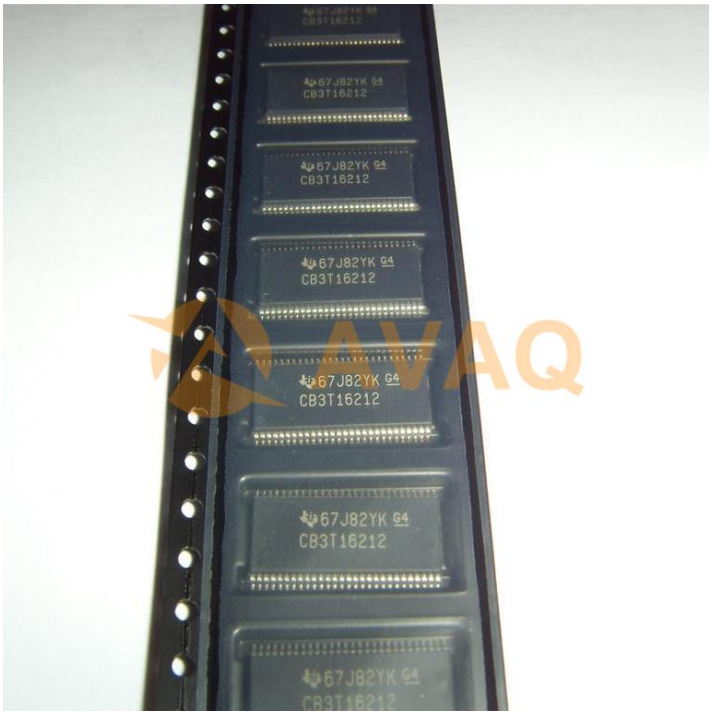
ESD Performance Tested Per JESD 22

2000-V Human-Body Model (A114-B, Class II)

1000-V Charged-Device Model (C101)

Supports Digital Applications: Level Translation, PCI Interface, USB Interface, Memory Interleaving, and Bus Isolation

Ideal for Low-Power Portable Equipment



Recommended For You

SN74HC4066N

Texas Instruments, Inc

DIP14

SN74CBTD3384DW

Texas Instruments, Inc

SOIC

SN74CBT3306PWR

Texas Instruments, Inc

TSSOP8

SN74CBT3244PWR

Texas Instruments, Inc

TSSOP20

SN74CBT3253CD

Texas Instruments, Inc

SOIC-16

SN74CB3T3306DCUR

Texas Instruments, Inc

VSSOP-8

SN74LVC2G53DCUR

Texas Instruments, Inc

VSSOP8

SN74LVC2G53DCTR

Texas Instruments, Inc

TSSOP8

SN74CB3T3245PW

Texas Instruments, Inc

TSSOP20

SN74CB3Q16211DGVR

Texas Instruments, Inc

TSSOP

SN74CBTLV3251PWR

Texas Instruments, Inc

TSSOP-16

SN74HC4851QPWRQ1

Texas Instruments, Inc

TSSOP16

SN3257QPWRQ1

Texas Instruments, Inc

TSSOP16

SN74LVC2G66QDCURQ1

Texas Instruments, Inc

VSSOP8

SN74CBT3345PW

Texas Instruments, Inc

TSSOP20