
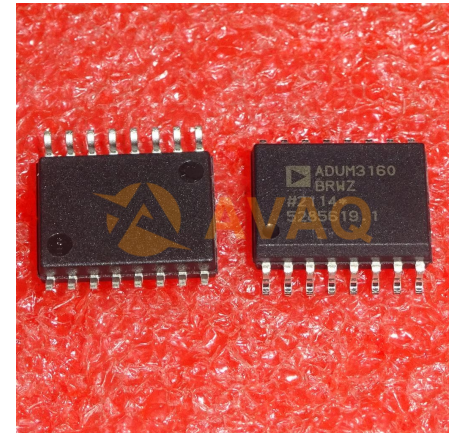


Digital Isolator CMOS 2-CH 12Mbps 16-Pin SOIC W T/R

| | |
|----------------------|--|
| Manufacturer: | Analog Devices, Inc |
| Package/Case: | SOP16 |
| Product Type: | Drivers |
| RoHS: | RoHS Compliant/Lead free  |
| Lifecycle: | Active |



Images are for reference only

[Inquiry](#)

General Description

The ADuM3160 is a USB port isolator, based on Analog Devices, Inc., iCoupler® technology. Combining high speed CMOS and monolithic air core transformer technology, this isolation component provides outstanding performance characteristics and is easily integrated with low and full speed USB-compatible peripheral devices.

Many microcontrollers implement USB so that it presents only the D+ and D- lines to external pins. This is desirable in many cases because it minimizes external components and simplifies the design; however, this presents particular challenges when isolation is required. Because the USB lines must switch between actively driving D+/D- and allowing external resistors to set the state of the bus, the ADuM3160 provides mechanisms for detecting the direction of data flow and control over the state of the output buffers. Data direction is determined on a packet-by-packet basis.

The ADuM3160 uses the edge detection based iCoupler technology in conjunction with internal logic to implement a transparent, easily configured, upstream-facing port isolator. Isolating the upstream port provides several advantages in simplicity, power management, and robust operation.

The isolator has propagation delay comparable to that of a standard hub and cable. It operates with the supply voltage on either side ranging from 3.0 V to 5.5 V, allowing connection directly to VBUSx by internally regulating the voltage to the signaling level. The ADuM3160 provides isolated control of the pull-up resistor to allow the peripheral to control connection timing. The device draws low enough idle current that a suspend state is not required.

Applications
 USB peripheral isolation
 Isolated USB hub
 Repeaters

Key Features

USB 2.0 compatible

Enhanced system-level ESD performance per IEC 61000-4-x

4.0 V to 5.5 V operation 7 mA maximum upstream supply current at 1.5 Mbps 8 mA maximum upstream supply current at 12 Mbps 2.5 mA Isolated USB hub maximum upstream idle current

Bidirectional communication

Upstream short-circuit protection

High temperature operation: 105°C

Low and full speed data rate: 1.5 Mbps and 12 Mbps

High common-mode transient immunity: >25 kV/μs

16-lead SOIC wide body package

Safety and regulatory approvals UL recognition: 2500 V rms for 1 minute per UL 1577

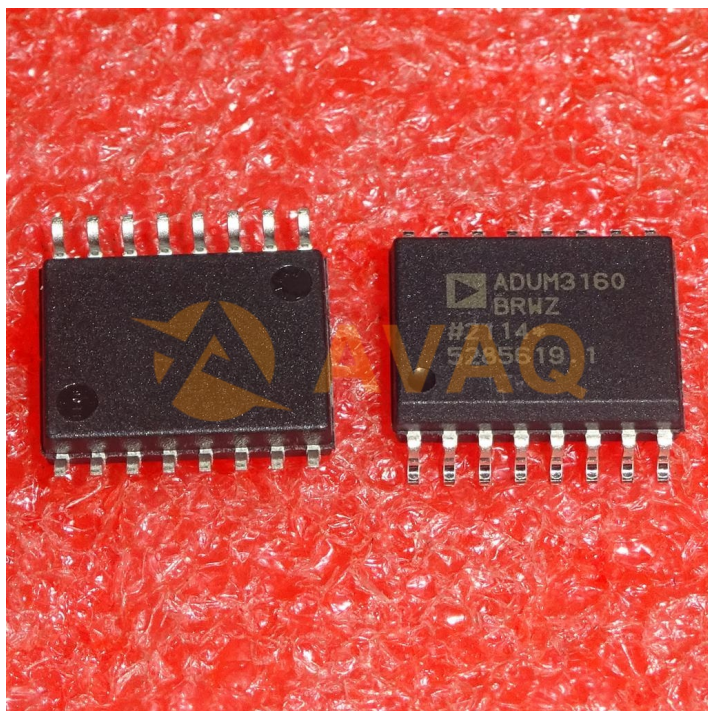
CSA Component Acceptance Notice #5 AIEC 60950-1: 400 V rms (reinforced)

VDE certificate of conformity DIN V VDE V 0884-10 (VDE V 0884-10):2006-12 VIORM = 560 V peak

Application

USB peripheral
isolation

Repeaters



Recommended For You

ADM3490EARZ

Analog Devices, Inc

SOP-8

ADM3232EARUZ

Analog Devices, Inc

TSSOP-16

ADuM5211ARSZ

Analog Devices, Inc

SSOP20

ADuMI201BRZ-RL7

Analog Devices, Inc
SOP8

ADV7623BSTZ

Analog Devices, Inc
LQFP144

ADuMI410BRWZ

Analog Devices, Inc
SOP16

AD698APZ

Analog Devices, Inc
PLCC28

ADMB251EARWZ

Analog Devices, Inc
SOP20

ADM485ANZ

Analog Devices, Inc
DIP

ADuM6400ARWZ

Analog Devices, Inc
SOP16

ADuMI281BRZ

Analog Devices, Inc
SOP8

ADUM142E0BRZ

Analog Devices, Inc
SOP-16

ADuMI412BRWZ

Analog Devices, Inc
SOP16

ADV7622BSTZ

Analog Devices, Inc
TQFP144

ADAU1328BSTZ

Analog Devices, Inc
QFP