


## Digital Isolator CMOS 2-CH 12Mbps 16-Pin SOIC W Tube

<b>Manufacturer:</b>	<a href="#">Analog Devices, Inc</a>
<b>Package/Case:</b>	SOP16
<b>Product Type:</b>	Drivers
<b>RoHS:</b>	RoHS Compliant/Lead free 
<b>Lifecycle:</b>	Active



Images are for reference only

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### 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

Maximum full speed data rate of 12Mbps

Maximum full speed propagation delay of 70ns

Maximum full speed jitter of 3ns

Supply voltage range from 3V to 5.5V

Bidirectional communication

4.5V to 5.5V Vbus operation

High common mode transient immunity of greater than 25KV/ $\mu$ s

UL 1577, CSA and VDE approved

USB 2.0 compatible

Operating temperature range from -40°C to 105°C

## Application

USB peripheral isolation

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Repeaters

## Recommended For You

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### **ADM3490EARZ**

Analog Devices, Inc

SOP-8

### **ADuM3160BRWZ-RL**

Analog Devices, Inc

SOP16

### **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

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### **AD698APZ**

Analog Devices, Inc

PLCC28

### **ADM3251EARWZ**

Analog Devices, Inc

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### **ADM485ANZ**

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DIP

### **ADuM6400ARWZ**

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### **ADuMI281BRZ**

Analog Devices, Inc

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### **ADUMI42E0BRZ**

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### **ADuMI412BRWZ**

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### **ADV7622BSTZ**

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TQFP144