


## Digital Isolator CMOS 4-CH 150Mbps 16-Pin SOIC N Tube

<b>Manufacturer:</b>	<a href="#">Analog Devices, Inc</a>
<b>Package/Case:</b>	SOP-16
<b>Product Type:</b>	Drivers
<b>RoHS:</b>	RoHS Compliant/Lead free 
<b>Lifecycle:</b>	Active



Images are for reference only

[Inquiry](#)

## General Description

The ADuM142E is a quad-channel digital isolator based on Analog Devices, Inc., iCoupler® technology. Combining high speed, complementary metal-oxide semiconductor (CMOS) and monolithic air core transformer technology, these isolation components provide outstanding performance characteristics superior to alternatives such as optocoupler devices and other integrated couplers. The maximum propagation delay is 13 ns with a pulse width distortion of less than 3 ns at 5 V operation. Channel matching is tight at 3.0 ns maximum.

The ADuM142E data channels are independent and are available in a variety of configurations with a withstand voltage rating of 3.0 kV rms or 3.75 kV rms. The devices operate with the supply voltage on either side ranging from 1.8 V to 5 V, providing compatibility with lower voltage systems as well as enabling voltage translation functionality across the isolation barrier.

Unlike other optocoupler alternatives, dc correctness is ensured in the absence of input logic transitions. Two different fail-safeoptions are available, by which the outputs transition to a predetermined state when the input power supply is not applied or the inputs are disabled. The

ADuM140E1/ADuM141E1/ADuM142E1 is pin-compatible with the ADuM1400/ADuM1401/ADuM1402.

## Key Features

High common-mode transient immunity: 100 kV/μs

High robustness to radiated and conducted noise

Low propagation delay

13 ns maximum for 5 V operation

15 ns maximum for 1.8 V operation

150 Mbps maximum guaranteed data rate

Safety and regulatory approvals

UL recognition

3000 V rms/3750 V rms for 1 minute per UL 1577

CSA Component Acceptance Notice 5A

VDE certificate of conformity

DIN V VDE V 0884-10 (VDE V>

CQC certification per GB4943.1-2011

Backward compatibility

ADuM140E1/ADuM141E1/ADuM142E1 pin-compatible with ADuM1400/ADuM1401/ADuM1402

Low dynamic power consumption

1.8 V to 5 V level translation

High temperature operation: 125°C

Fail-safe high or low options

16-lead, RoHS compliant, SOIC package

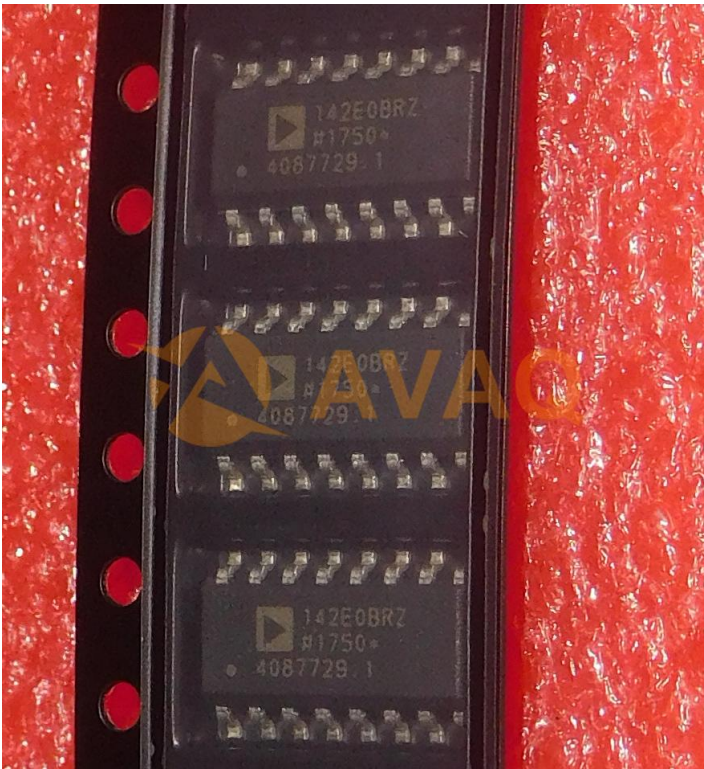
Qualified for automotive applications

## Application

General-purpose multichannel isolation

Serial peripheral interface (SPI)/data converter isolation

Industrial field bus isolation



## 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  
SOP16

### **AD698APZ**

Analog Devices, Inc  
PLCC28

### **ADM3251EARWZ**

Analog Devices, Inc  
SOP20

### **ADM485ANZ**

Analog Devices, Inc  
DIP

### **ADuM6400ARWZ**

Analog Devices, Inc  
SOP16

### **ADuMI281BRZ**

Analog Devices, Inc  
SOP8

### **ADuMI412BRWZ**

Analog Devices, Inc  
SOP16

### **ADV7622BSTZ**

Analog Devices, Inc  
TQFP144

### **ADAU1328BSTZ**

Analog Devices, Inc  
QFP