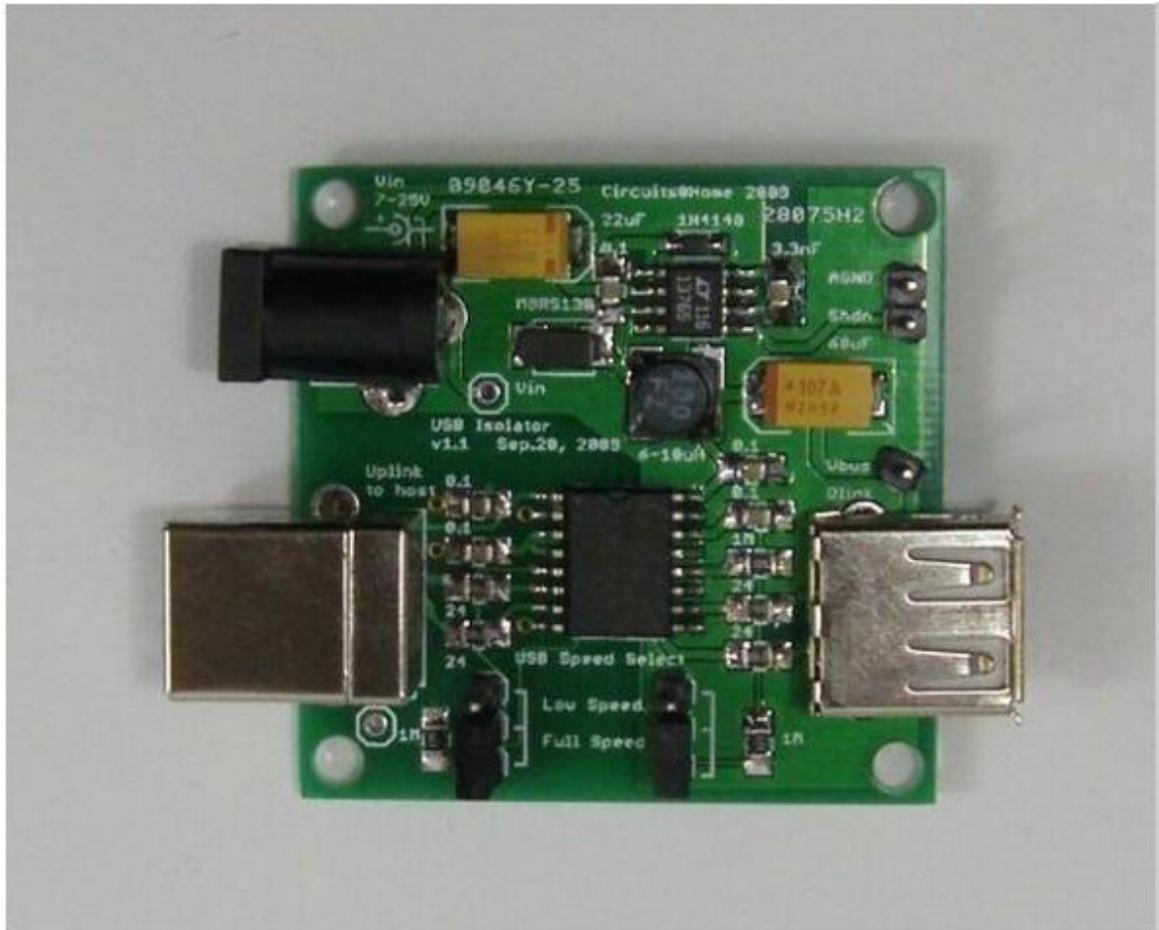


ADUM4160 USB Isolator Board / ADI USB Port Isolator Protection



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Description

USB port isolation board, ADI's latest USB protection device ADUM4160, to protect the safety of the computer USB port!

Introduction to use

The necessity of a USB isolation

USB as the standard interface to adapt to various system platforms, and a wide variety of devices are connected, the operation is very simple and to the external power supply. However, USB has deficiencies in the peripheral and host, can work. The host computer is a desktop computer. Such a case, the ground line of USB often and chassis ground connected together, which may caused by the use of hidden.

In addition, a lot of the time, isolated USB signal and computer

the presence of high-voltage circuit board debugging, due to design or operational errors, the debugger will burn out, and even computer USB port; Some audio signal circuit, computer GND is not clean, there is clutter, it will interfere with the signal playback qua

lity; the application of some longer USB cable, the computer GND GND target board pressure difference caused by the

ground circulation. Integrated above, requires isolation of USB signal processing, in order to ensure safety and normal working of the

system.

. ADUM4160 Introduction

ADuM4160 is a USB port isolation using ADI's iCoupler technology, it will combine high-speed CMOS and monolithic air core transformer technology, can provide excellent performance, and is easy to integrate with low-speed and full-speed USB-compatible peripherals .

ADuM4160 will be based on the iCoupler technology with the internal logic of the edge detector used in combination, can achieve transparent, easy to configure, in the face of the upstream port isolation. The isolated upstream port has a simple circuit, power management, and robust operation several advantages.

Propagation delay of this isolator with standard hub and cable propagation delay considerable. It can be used on either end of the 3.0 V to 5.5 V supply voltage, and internally the voltage regulator to the signal level, which is directly connected to the VBUS. ADuM4160 isolated control the pull-up resistor, so that the peripheral to control connection timing. The current consumption of the device is in an idle state is very low, so there is no need to suspend state.

Application

USB peripherals isolated. Isolated USB hub Repeater

Isolation plate function

Usually industrial USB isolate equipment, many USB first turn the signal of the other agreements, and isolation, and then converted to USB signals, is the price of a few hundred dollars. Using the latest ADuM4160, to meet the requirements of many situations, and reduced costs. The isolation board computer side by computer USB port power supply, the output side by the target board power supply to the USB interface. Otherwise the power input interface board, with the board 5VDCDC switching power supply chip LT1376, to the output side of the p