RB-Dfr-174

8 Channel 24MHz Logic Analyser

Introduction

This is a very affordable 24Mhz 8 Channel USB Logic analyzer. This is a hobbyist level analyzer, ideal for testing your Arduino or other hobbyist microcontroller's communications. A logic analyzer is a must have tool for any serious electronics hobbyist. With a logic analyzer it is possible to see a visual representation of the zeros and ones that are flashing by between two components. A logic analyzer is different from an oscilloscope because the analyzer allows you to capture the data on a PC for a more detailed analysis of the data which is being transmitted and received. This logic analyzer supports 10 different communications standards (see Specifications below). with 8 channels it will allow you to monitor upto 8 differnet wires. So on an Arduino you could monitor the Serial port (tx/Rx pins), the I2C port (pins A4, A5), and the SPI port (pins 10, 11, 12, and 13) all at the same time.

Specifications

8 Channels
Supports triggering (rising, high, falling, low)
Up to 24Mhz sampling
Up to 10 Billion samples
Max Voltage: 5.25Vdc
supports:

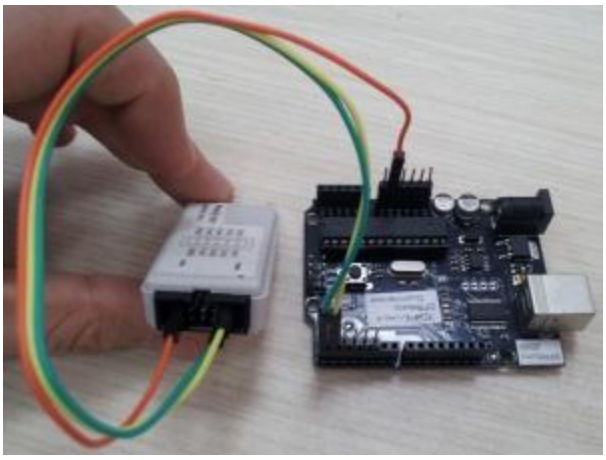
- CAN
- DMX-512
- I2C
- I2S/PCM
- Manchester
- 1-Wire
- Async Serial
- Simple Parallel
- SPI
- UNI/O
- Fully compatible with the Saleae Logic software

Connection diagrams

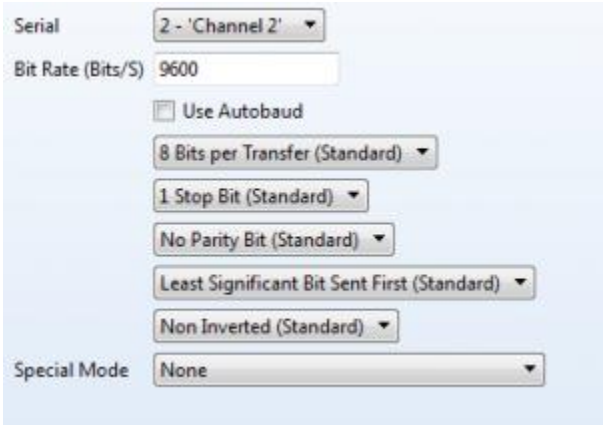
I2C

config:

Serial TTL



config:


Serial
2 - 'Channel 2'
Bit Rate (Bits/S)
9600
Use Autobaud
8 Bits per Transfer (Standard)
1 Stop Bit (Standard)
No Parity Bit (Standard)
Least Significant Bit Sent First (Standard)
Non Inverted (Standard)
Special Mode
None

SPI

config:


MOSI
2 - 'Channel 2'
MISO
3 - 'Channel 3'
Clock
4 - 'Channel 4'
Enable
5 - 'Channel 5'
Most Significant Bit First (Standard)
8 Bits per Transfer (Standard)
Clock is Low when inactive (CPOL = 0)
Data is Valid on Clock Leading Edge (CPHA = 0)
Enable line is Active Low (Standard)

NOTE: It does not matter to which pin on the analyzer you connect each signal. This will be configured in the logic analyzer software later, as shown in the screen shots above.