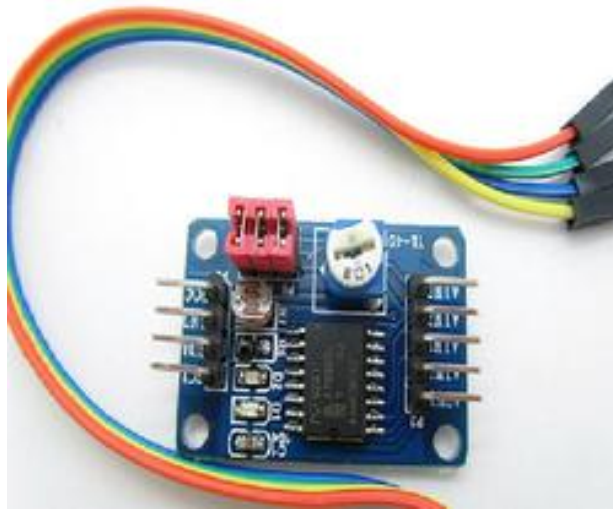


PCF8591-ADC-DAC Analog Digital Converter Module



Description:

The PCF8591 is a 8-bit CMOS data acquisition device. The PCF8591 has the four analog inputs, one analog output and a serial I2C bus interface. PCF8591 has three address pins A0, A1 and A2 that can be used to set the I2C hardware address, 8 PCF8591 could be on the same I2C bus, without the need for additional hardware. On the PCF8591 control and data signals are transmitted in serial fashion via the two-wire bidirectional I2C bus.

PCF8591 IC Features

- Single power supply
- PCF8591 operating voltage range of 2.5V-6V
- Low standby current
- Via I2C bus serial input / output
- PCF8591 by 3 hardware address pins addressing
- PCF8591 I2C bus speed sampling rate decided
- 4 analog inputs programmable single-ended or differential input
- Automatic incremental channel selection
- PCF8591 analog voltage range from VSS to VDD
- PCF8591 built-in track-and-hold circuit
- 8-bit successive approximation A / D converter
- 1 analog output DAC gain

Module Features

- Module uses PCF8951
- Module supports external voltage input of the 4-way acquisition (voltage input range of 0-5v)
- The module has an integrated photoresistor connected to one A - D port allowing you access to the precise value of the ambient light falling on the LDR. Disconnect it by removing one of the on board jumpers.
- The module has a thermistor to measure the precise value of the ambient temperature, remove a jumper to disable.
- The module also has 1 variable resistor 0-5V volts can be sent to one of the A - D pins (the blue potentiometer adjusts the voltage)
- Power indicator LED
- 1 LED connected to the D- A port pin (Digital to Analog pin)
- Module PCB size: 3.6cm * 2.3cm
- Standard double panel, thickness 1.6mm, 4 x 3mm holes

Module interface specification:

One end of the board

- AOUT chip DA output interface
- AINO chip analog input interface 0
- AIN1 chip analog input interface 1
- AIN2 chip analog input interface 2
- AIN3 chip analog input interface 3

The other end

- SCL – IIC clock interface connected to microcontroller IO port
- SDA – IIC digital interface connected to microcontroller IO port
- GND – connected to ground
- VCC – connected to 3.3v-5v

Four red jumper-cap instruction

- P4 – connected to P4 shorting cap, select thermistor access circuit
- P5 – connect P5 shorting cap, select photoresistor access circuit
- P6 – connected to P6 shorting cap, select 0-5V adjustable voltage access circuit