



The PCF8591 is a monolithically integrated, and a separate power supply, low-power, 8-bit CMOS data acquisition devices. The PCF8591 has the four analog inputs, one analog output and a serial I2C bus interface. PCF8591 three address pins A0, A1 and A2 can be used in hardware address programmed 8 PCF8591 device allows access to the same I2C bus, without the need for additional hardware. On the PCF8591 device input and output of

the address, 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 chip using PCF8951
- Module supports external voltage input of the 4-way acquisition (voltage input range of 0-5v)

- The module **integrated photoresistor** by AD collection precise value of the ambient light intensity
- Module integrated thermistor by the precise value of the ambient temperature of the AD acquisition
- Module integrated 1 channel 0-5V voltage input acquisition (the blue potentiometer to adjust the input voltage)
- Modules with power indicator (for the module power supply indicator lights)
- Modules with DA output indicator, when the module DA output interface voltage reaches a certain value, will be lit panel the DA output indicator, the higher the voltage, the more obvious indicator brightness;
- Module PCB size: 3.6cm * 2.3cm
- Standard double panel, thickness 1.6mm, nice layout, surrounded by a through-hole, aperture: 3mm, convenient fixed

Module interface specification

The module on the left and right, respectively, to expand outside the 2-way pin header, respectively, as follows:

The left

- 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 right

- 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