

[illegible]

USB、自锁开关、外接电源

超声波发送、接收

差分放大电路

LM324电源接地

VCC	1
IN-	2
IN+	3
GND	4

CON4

负压发生

独立按键、矩阵键盘

The diagram illustrates a 4x4 matrix keypad interface. The keypad consists of 16 keys, labeled S1 through S16, arranged in four columns and four rows. Each key is represented by a switch symbol. The circuit shows the internal wiring connecting these keys to the 8255 PPI's data bus (P3, P4, P5, P6) and control lines (P32, P33, P34, P35, P42, P43, P44, P45). The keys are organized into four columns, each connected to a specific control line, and four rows, each connected to a specific data line. The 8255 PPI is shown as a central component with its various pins connected to the keypad's internal circuitry.

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AD、DA电路 (IIC接口)

The diagram shows two circuit connections. On the left, an AT24C02 EEPROM chip is connected to a microcontroller. The chip's pins are labeled: 1 (A0), 2 (A1), 3 (A2), 4 (A3), 5 (GND), 6 (SCL), 7 (SDA), 8 (VCC). The microcontroller pins are labeled: 8 (VCC), 7 (GND), 6 (P20 SCL), 5 (P21 SDA). A 10K resistor (R9) is connected between VCC and SDA. On the right, a temperature sensor module is connected. The module has pins for GND, VCC, and DQ. A 10K resistor (R11) is connected between VCC and DQ. The module is labeled '温度传感器' (Temperature Sensor) and '排针J3' (Pin Header J3).

排针J3 20PIN

温度传感器

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graph LR
    GND --- R11[10K] --- VCC
    VCC --- U15[U15 18B20]
    GND --- U15
    VCC --- DQ[U15 DQ]
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霍尔传感器接口

The diagram shows a 74HC573 8-bit D-type flip-flop. The chip is connected to a 5V supply (VCC) and ground (GND). The clock input (CLK) is connected to VCC. The data inputs (D0-D7) are connected to a 5V supply through 10k pull-up resistors. The data outputs (Q0-Q7) are connected to a 5V supply through 10k pull-up resistors. The chip is labeled 'M74HC573MIR'.

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ULN2003驱动芯片->控制蜂鸣器、继电器

The diagram illustrates the ULN2003 driver chip's role in controlling a relay and a buzzer. The M74HC595MIR shift register provides digital signals to the ULN2003 inputs. The ULN2003, which has a common GND (pin 8) and VCC (pin 20), drives the relay and buzzer through its open-collector outputs (pins 16-22). The relay is a SPDT type, with one terminal connected to VCC and the other to the buzzer. The buzzer is connected to GND. The ULN2003's output pins are labeled: OUT1 (16) to STEP A, OUT2 (15) to STEP B, OUT3 (14) to STEP D, OUT4 (13) to STEP D, OUT5 (11) to S_RELAY, OUT6 (10) to S_RELAY, and OUT7 (9) to BUZZ. The relay is controlled by OUT1 (N_RELAY) and OUT2 (RELAY:SPDT). The buzzer is controlled by OUT7 (BUZZ).