

?:coopermaa and thx

????????? Atmega 168 LCD ?? ??Arduino bootloader ??????????

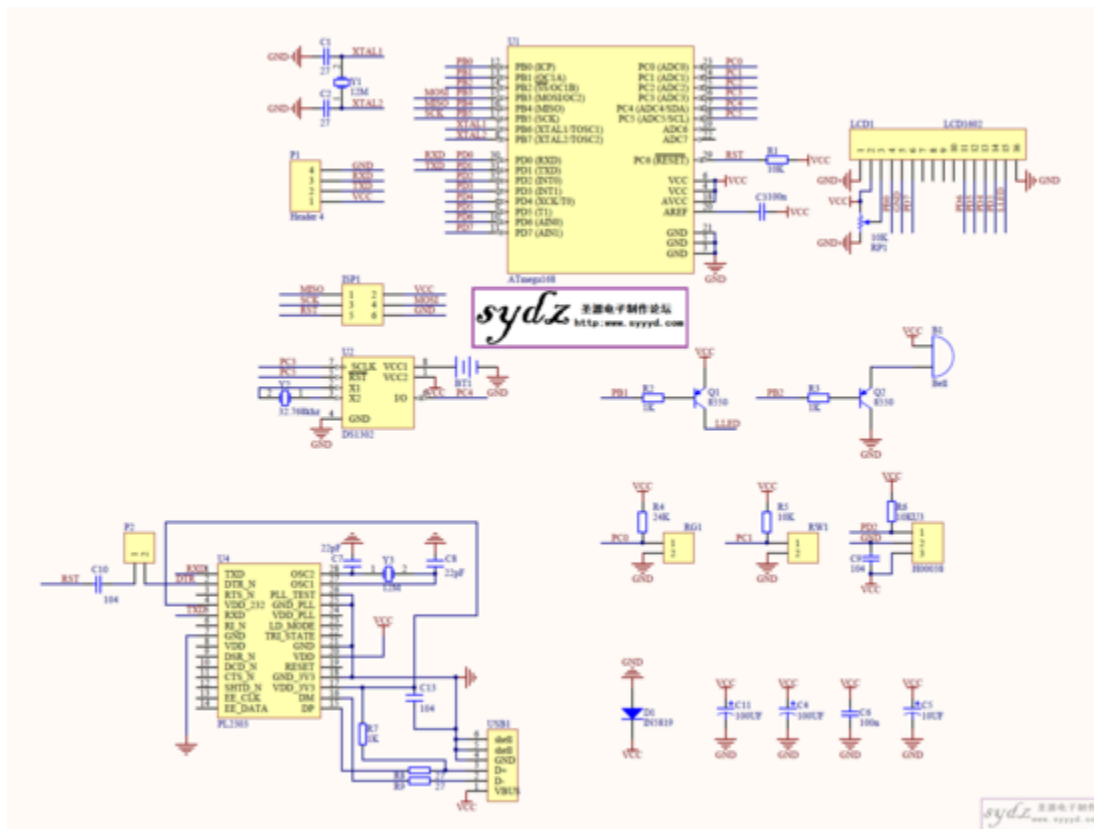
?????:

<http://www.syyyd.com/forum.php?mod=v...extra=page%3D1>

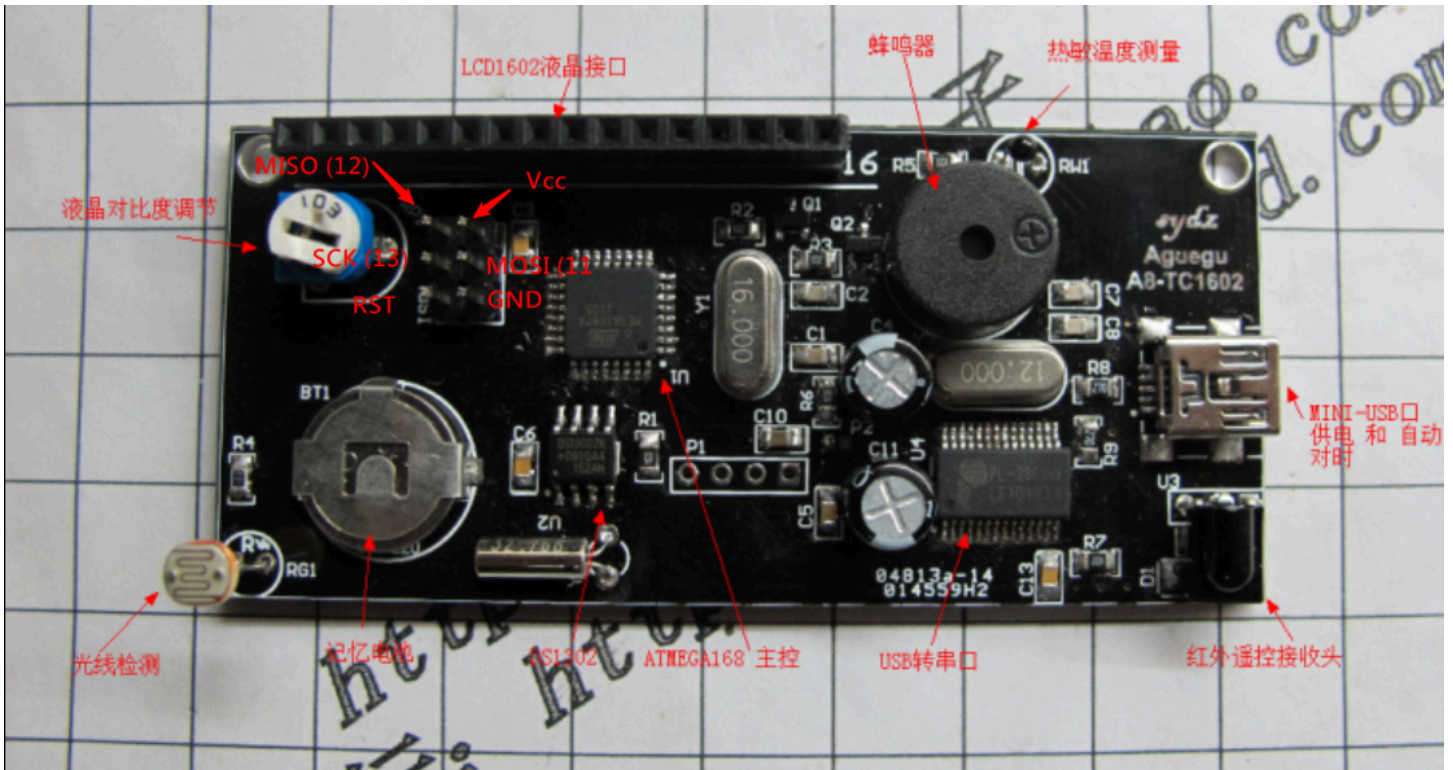
???????:

- 1.????????????????????
- 2.???????,?????
- 3.????????????????????

???: ?????



?????:



OSSLab ??????

1.IRDA ??? ?????? Sling box ??????????

2.?????????.

3.?????embedded ?? (WR703 ?ARM ??) ???????LCD ?????

??Router ??

????????..

????

???Auto reset J4 enable ? ???P1 ? ??(???)

???????Arduino uno ??Arduino nano 16Mhz bootloader ??????? (???)

????????????? ??????????????????

LCD ??



/* ? 2x16 LCD ??? "Hello World" ??

The circuit ??:

- * LCD RS pin to digital pin 8
- * LCD Enable pin to digital pin 7
- * LCD D4 pin to digital pin 6
- * LCD D5 pin to digital pin 5
- * LCD D6 pin to digital pin 4
- * LCD D7 pin to digital pin 3
- * 10K Potentiometer:
- * ends to +5V and ground
- * wiper to LCD VO pin (pin 3)

This example code is in the public domain.

<http://www.arduino.cc/en/Tutorial/LiquidCrystal>

*/

// ?? LiquidCrystal Library

```
#include <LiquidCrystal.h>

// ?? LiquidCrystal ??? lcd
//      LCD ??: rs, enable, d4, d5, d6, d7
//      LCD pin 4, 6, 11, 12, 13, 14
//      ??? Arduino ??: 8, 7, 6, 5, 4, 3
LiquidCrystal lcd(8, 7, 6, 5, 4, 3);
```

```
void setup() {
  // ?? LCD ????? (2 x 16)
  lcd.begin(16, 2);

  // ?? "Hello World" ??? LCD ?
  lcd.print("hello, world!");
}
```

```
void loop() {
  // ????? column 0, line 1
  // (?: line 1 ????(row), ??? 0 ????):
  lcd.setCursor(0, 1);

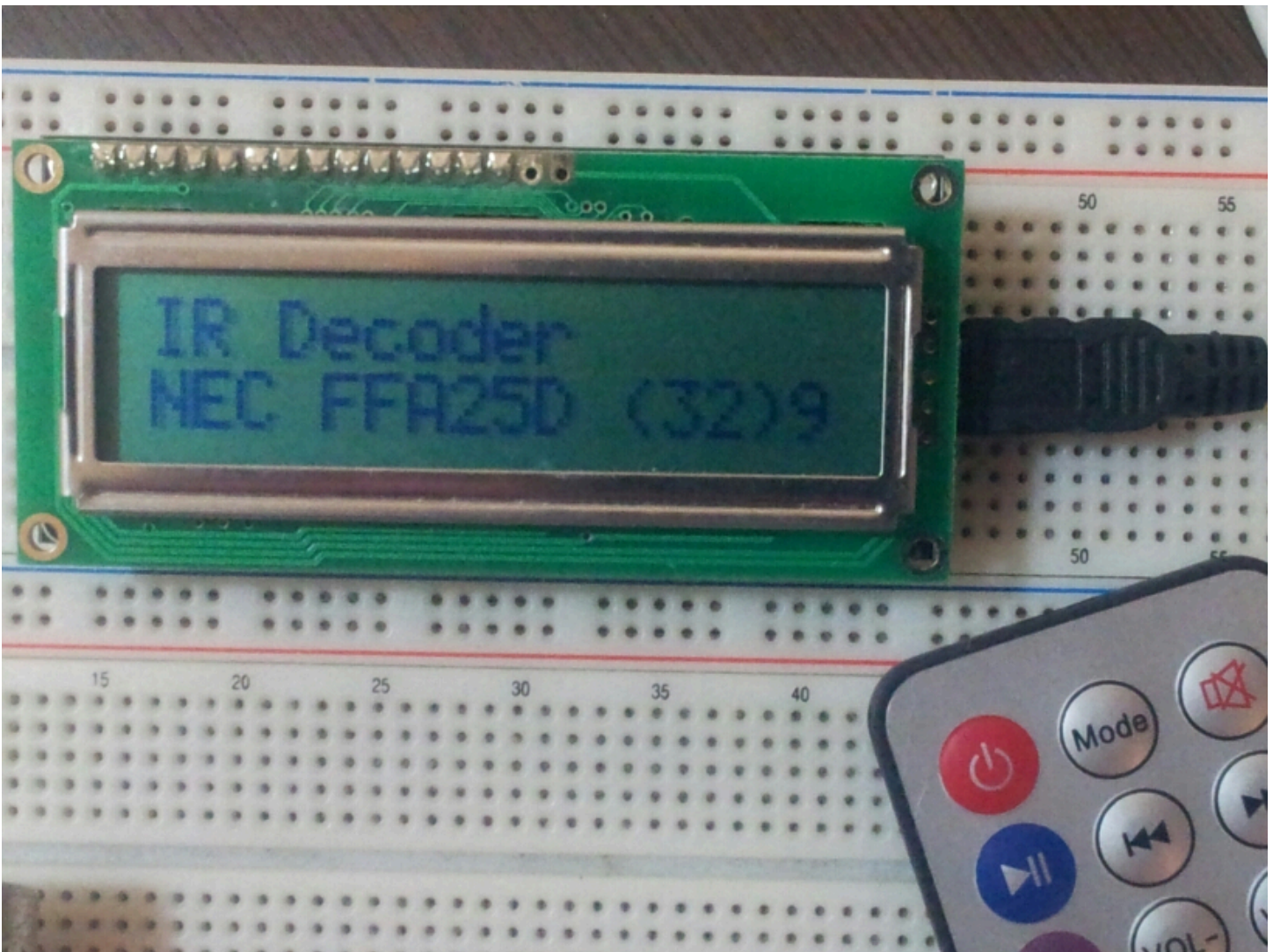
  // ?? Arduino ??????????
  lcd.print(millis()/1000);
}
```

? LCD ??????????

????:

<http://coopermaa2nd.blogspot.tw/2011...r-decoder.html>

<http://coopermaa2nd.blogspot.tw/2011/03/irremote.html>



????: <http://coopermaa2nd.blogspot.tw/2011/03/14-lcd-ir-decoder.html>

???PCB???:

```

/*
 * IRDecoder_LCD.pde: ?? LCD ??????????(IR Decoder)
 */
#include <LiquidCrystal.h>          // ?? LiquidCrystal ???
#include <IRremote.h>              // ?? IRRemote ???

// ?? LiquidCrystal ??? lcd
//      LCD ??: rs, enable, d4, d5, d6, d7
//      LCD pin  4,  6,  11, 12, 13, 14
//      ??? Arduino ??: 8,  7, 6, 5, 4, 3
LiquidCrystal lcd(8, 7, 6, 5, 4, 3);
const int irReceiverPin = 2;      // ?????? OUTPUT ??? pin 2

IRrecv irrecv(irReceiverPin);    // ?? IRrecv ??????????

```

```
decode_results results;          // ??????? decode_results ??? result ???
```

```
void setup() {
  lcd.begin(16, 2);              // ?? LCD ????? (2 x 16)
  lcd.print("IR Decoder");      // ?? "IR Decoder" ??? LCD ?

  irrecv.blink13(true);        // ??????, ??? pin 13 ????????
  irrecv.enableIRIn();        // ???????
}
```

```
// ??????????
void showIRProtocol(decode_results *results)
{
  // ??????????
  switch(results->decode_type) {
    case NEC:
      lcd.print("NEC");
      break;
    case SONY:
      lcd.print("SONY");
      break;
    case RC5:
      lcd.print("RC5");
      break;
    case RC6:
      lcd.print("RC6");
      break;
    default:
      lcd.print("Unknown");
  }
}
```

```
// ?????????? LCD ?
lcd.print(" ");
lcd.print(results->value, HEX); // ??????
lcd.print(" (");
lcd.print(results->bits);      // ??????????
lcd.print(")");
}
```

```
void loop() {
  // ?????? column 0, line 1
  // ???: line 1 ????(row)&#65292;line 0 ????(row)
  lcd.setCursor(0, 1);
}
```

```

if (irrecv.decode(&results)) { // ???&#65292;????????
  if (results.value != -1) {
    showIRProtocol(&results); // ?????????
  }
  irrecv.resume(); // ?????????
}
}

```

???

1.?????Led ?? ???

??IRremote Lib ?Pin 3? IRDA PWM out
LCD Lib ???... ??Lib

2.?? Linux LCD to Kenrel ??

<http://www.harbaum.org/till/lcd2usb/index.shtml>
<http://ssl.bulix.org/projects/lcd4linux/>

...porting ?mips or arm? ???Arduino code ??????

?? ??openwrt ????? ?LCD ?? IP ,router ??,?????? ?IP ??????????

http://milesburton.com/USD_LCD_Displ...ux_via_Arduino