

Atmel ??? AVR V-USB???

????? Attiny85

<http://www.obdev.at/products/vusb/index.html>

V-USB ???????? (??USB??) ????????

<http://codeandlife.com/topics/v-usb-electronics/>

(?????vusbcode ?? ???Vender ID and Product ID)

???????

1.????(?????????????????)

http://www.frank-zhao.com/cache/usbb...rd_details.php

2.?????????

<http://hackaday.com/2012/03/05/usb-d...-dont-have-to/>

<http://codeandlife.com/2012/03/03/di...ord-generator/>

(???? ?? usb key ?????????????? ??????????V-USB ?)

3.???? I/O??MIDI ??

<http://www.obdev.at/products/vusb/projects.html>

4.????????? ????????????

Attiny85 ??

Summary. 8K Bytes of In System Self-Programmable Flash, 512 Bytes In-System Programmable EEPROM

<http://www.workinprogress.ca/v-usb-t...for-mega-tiny/>

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1. 3.6V Zener diodes ??????

2. 1k8 ??????

3.68 ?? ??

4.Attiny85 (????????????dip???? ??TSOP???)

5.PCB

6.Tsop ?DIP +??

7. USB ???

?.??Tsop Atiny85 to Dip

?. ??????

AVR In-system programming interface ,Arduino ISP 0.22 ,0.23 1.0 code

<http://coopermaa2nd.blogspot.com/201...ock-speed.html>

ISP

<http://coopermaa2nd.blogspot.com/201...oisp.html#more>

Arduino Code

<http://hlt.media.mit.edu/?p=1229>

<http://provideyourown.com/2011/ardui...rogram-attiny/>

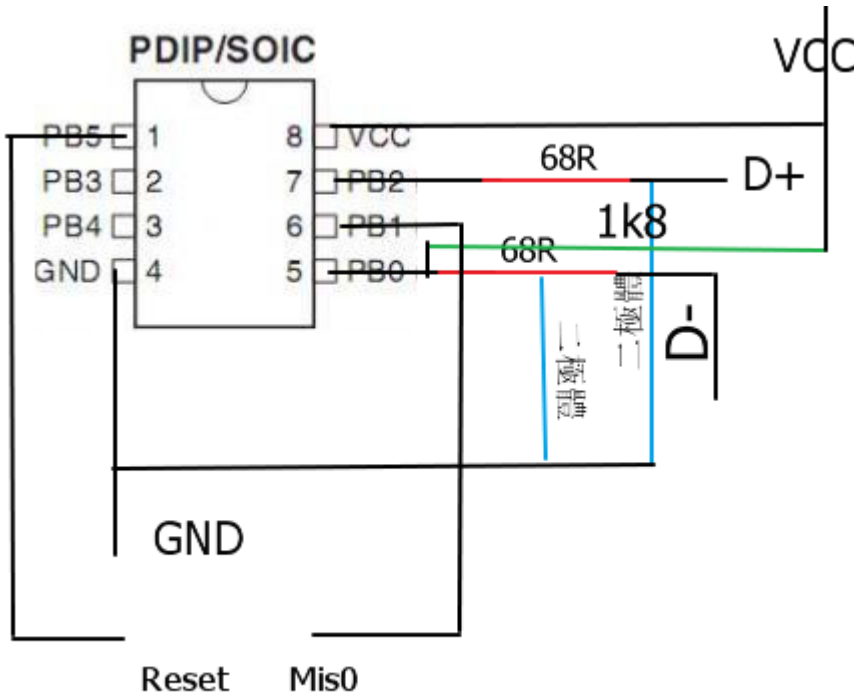
http://wiki.sgmk-ssam.ch/index.php/Hands_On_AVR

<http://coopermaa2nd.blogspot.com/201...no-sketch.html>

<http://coopermaa2nd.blogspot.com/201...no-attiny.html>

```
avrdude -q -c stk500v1 -P com4 -b 57600 -p atmega328p -U flash:w:Blink.cpp.hex:i
```

V USB USB GND () ,VCC () , D+ ,D-



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68???: D+ D- USB Host ??:

1K8 ??

???: Zener diode USB 5V 3.3V

<http://zh.wikipedia.org/zh-hant/%E9...A5%B5%E9%AB%94>

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