

<http://www.arduino.cc>

SIGN IN (HTTPS)

SIGN IN (HTTPS://AUTH.ARDUINO.CC/LOGIN?CLIENT\_ID=FO

Arduino Forum (<https://forum.arduino.cc/index.php>) > Community (<https://forum.arduino.cc/index.php#c5>)> Products and Services (<https://forum.arduino.cc/index.php?board=25.0>)> Digispark ATtiny85 micro USB module (<https://forum.arduino.cc/index.php?topic=442087.0>)

Go Down Pages: [1]

PRINT (HTTPS://FORUM.ARDUINO.CC/INDEX.PHP?ACTION=PRINTPAGE;TOPIC=442087.0)

Topic: Digispark ATtiny85 micro USB module (Read 3458 times)

v Next=Prev#New) - Next Topic (Https://Forum.arduino.cc/Index.php?Topic=442087.0;Prev Next=Next#New)

**HermannSW**  
<https://forum.arduino.cc/index.php?action=profile;u=363771>  
 1)



<https://forum.arduino.cc/index.php?action=profile;u=363771>



Sr. Member

Posts: 435

Karma: 113 [add]

<https://forum.arduino.cc/index.php?action=karma;sa=applaud;uid=363771;da3ba4ec5d=f>

[c50e635e42509ca53e91fc0c707480c](https://forum.arduino.cc/index.php?action=karma;sa=applaud;uid=363771;da3ba4ec5d=f)

**Digispark ATtiny85 micro USB module** (<https://forum.arduino.cc/index.php?topic=442087.msg3043295#msg3043295>)

Dec 15, 2016, 12:22 am (<https://forum.arduino.cc/index.php?topic=442087.msg3043295#msg3043295>) Last Edit: Dec 15, 2016, 12:34 am by HermannSW

Today I received my first Digispark ATtiny85 1\$ modules (with [micro USB connector](https://www.aliexpress.com/item/Digispark-kickstarter-Micro-development-board-ATTINY85-module-for-Arduino-usb/32584975067.html) (<https://www.aliexpress.com/item/Digispark-kickstarter-Micro-development-board-ATTINY85-module-for-Arduino-usb/32584975067.html>), still waiting for Digispark kickstarter version (<https://www.aliexpress.com/item/Digispark-kickstarter-development-board-ATTINY85-module-for-Arduino-usb/32584084654.html>) -- that one can be inserted into Nanopi Neo or Orange Pi Zero USB connector directly).

Installation of board in Arduino IDE was easy following [these instructions](https://digistump.com/wiki/digispark/tutorials/connecting) (<https://digistump.com/wiki/digispark/tutorials/connecting>).

On first upload I ran into a well known problem, the solution for I found in [this](https://digistump.com/board/index.php/topic,106.msg11955.html#msg11955) (<https://digistump.com/board/index.php/topic,106.msg11955.html#msg11955>) digistump forum thread.

The blinking sketch is not named "Blink" but "Start", and I used it as basis for my first ATtiny85 "SOS" sketch:

<https://www.youtube.com/watch?v=s1lcAjMZYp8> (<https://www.youtube.com/watch?v=s1lcAjMZYp8>)

Code: [Select]

(<http://www.arduino.cc>)

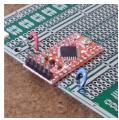
```
// http://morsecode.scphillips.com/morse.html
```

SIGN IN (HTTPS)

```
#define dt 100
#define di { digitalWrite(1, HIGH); delay(dt); }
#define dit { digitalWrite(1, HIGH); delay(3*dt); }
#define dah { digitalWrite(1, HIGH); delay(3*dt); }
#define _ { digitalWrite(1, LOW); delay(dt); }
#define __ { digitalWrite(1, LOW); delay(3*dt); }
#define ___ { digitalWrite(1, LOW); delay(7*dt); }
```

Hermann.

**DrAzzzy**  
(<https://forum.arduino.cc/index.php?action=profile;u=266415>)



(<https://forum.arduino.cc/index.php?action=profile;u=266415>)



ATtiny Obsessee

Tesla Member

Posts: 7,475

**Re: Digispark ATtiny85 micro USB module** (<https://forum.arduino.cc/index.php?topic=442087.msg3043304#msg3043304>)

Dec 15, 2016, 12:34 am (<https://forum.arduino.cc/index.php?topic=442087.msg3043304#msg3043304>)

#1

Did you have a question?

As an aside, the way that #define is being (ab)used there is horrifying.

ATtiny core for 841+1634+828 and x313/x4/x5/x61/x7/x8 series Board Manager:

[http://drazzy.com/package\\_drazzy.com\\_index.json](http://drazzy.com/package_drazzy.com_index.json)

ATtiny breakouts (some assembled), mosfets and awesome prototyping board in my store

<http://tindie.com/stores/DrAzzzy>

(<https://www.tindie.com/stores/DrAzzzy/>)

Karma: 1136 [add]

([https://forum.arduino.cc/index.php?action=karma;sa=applaud;](https://forum.arduino.cc/index.php?action=karma;sa=applaud;uid=266415;da3ba4ec5d=f)

[uid=266415;da3ba4ec5d=f](https://forum.arduino.cc/index.php?action=karma;sa=applaud;uid=266415;da3ba4ec5d=f)

[c50e635e42509ca53e91fc](https://forum.arduino.cc/index.php?action=karma;sa=applaud;uid=266415;da3ba4ec5d=f)

[0c707480c](https://forum.arduino.cc/index.php?action=karma;sa=applaud;uid=266415;da3ba4ec5d=f))

[https://www.tindie.com/stores/](https://www.tindie.com/stores/DrAzzzy/)

[DrAzzzy/](https://www.tindie.com/stores/DrAzzzy/)

([https://www.tindie.com/stores/](https://www.tindie.com/stores/DrAzzzy/)

**HermannSW**  
(<https://forum.arduino.cc/index.php?topic=442087.0>)

**Re: Digispark ATtiny85 micro USB module** (<https://forum.arduino.cc/index.php?topic=442087.msg3043327#msg3043327>)

#2

<https://www.arduino.cc/>  
[action=profile;u=363771](https://forum.arduino.cc/index.php?topic=442087.msg3043327#msg3043327)

Dec 15, 2016, 01:34 am (<https://forum.arduino.cc/index.php?topic=442087.msg3043327#msg3043327>) Last Edit: Dec

15, 2016, 01:59 am by HermannSW

SIGN IN (HTTPS)



[https://forum.arduino.cc/i](https://forum.arduino.cc/index.php?)  
[ndex.php?](https://forum.arduino.cc/index.php?)

[action=profile;u=363771](https://forum.arduino.cc/index.php?action=profile;u=363771)



Sr. Member

Posts: 435

Karma: 113 [\[add\]](#)

[https://forum.arduino.cc/i](https://forum.arduino.cc/index.php?)  
[ndex.php?](https://forum.arduino.cc/index.php?)

[action=karma;sa=applaud;](https://forum.arduino.cc/index.php?action=karma;sa=applaud;uid=363771;da3ba4ec5d=f)

[uid=363771;da3ba4ec5d=f](https://forum.arduino.cc/index.php?action=karma;sa=applaud;uid=363771;da3ba4ec5d=f)

[c50e635e42509ca53e91fc](https://forum.arduino.cc/index.php?action=karma;sa=applaud;uid=363771;da3ba4ec5d=f)

[0c707480c](https://forum.arduino.cc/index.php?action=karma;sa=applaud;uid=363771;da3ba4ec5d=f)

No question, just wanted to post (positive) experiences with new ATtiny85 module.

I thought that "Microcontrollers" forum was best match for this.

SIGN IN (HTTPS://AUTH.ARDUINO.CC/LOGIN?CLIENT\_ID=FO

The more I look into the Arduino IDE Digispark demos, the more I am impressed.

Only Due and Leonardo Arduinos support [Keyboard library](#)

(<https://www.arduino.cc/en/Reference/KeyboardBegin>).

But 1\$ ATtiny85 does support similar DigiKeyboard library!

```
Keyboard $
Hello Digispark!
Hello Digispark!
#include "DigiKeyboard.h"

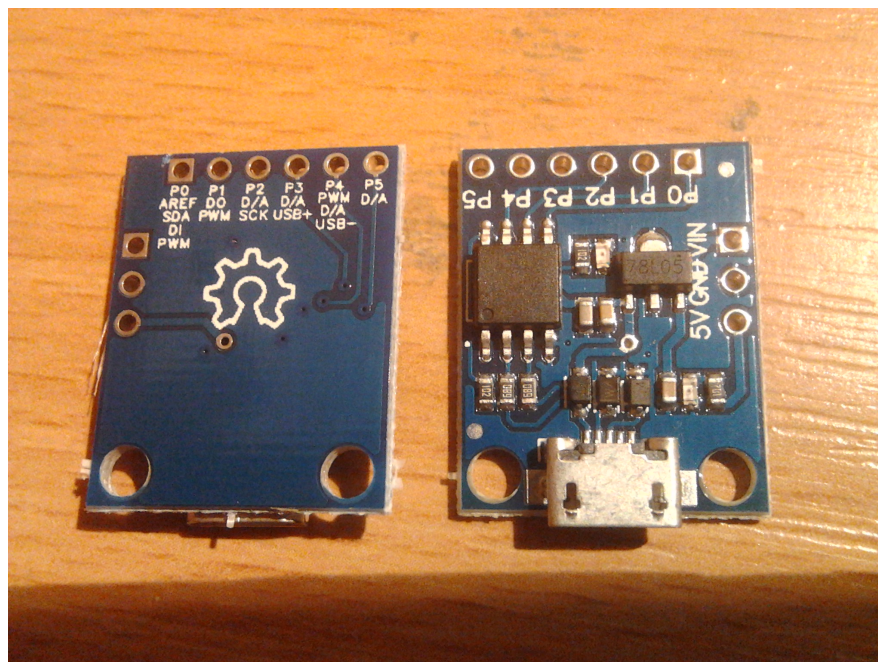
void setup() {
  // don't need to set anything up to use DigiKeyboard
}

void loop() {
  // this is generally not necessary but with some older systems it s
  // prevent missing the first character after a delay:
  DigiKeyboard.sendKeyStroke(0);

  // Type out this string letter by letter on the computer (assumes L
  // keyboard)
  DigiKeyboard.println("Hello Digispark!");

  // It's better to use DigiKeyboard.delay() over the regular Arduino
  // if doing keyboard stuff because it keeps talking to the computer
  // sure the computer knows the keyboard is alive and connected
  DigiKeyboard.delay(5000);
```

Hermann.



([//www.arduino.cc](http://www.arduino.cc))

**dmjlambert**  
**(<https://forum.arduino.cc/index.php?action=profile;u=376297>)**



(<https://forum.arduino.cc/index.php?action=profile;u=376297>)



Edison Member

Posts: 1,593

Karma: 448 [\[add\]](#)

(<https://forum.arduino.cc/index.php?action=karma;sa=applaud;uid=376297;da3ba4ec5d=f50e635e42509ca53e91fc0c707480c>)

**HermannSW**  
**(<https://forum.arduino.cc/index.php?action=profile;u=363771>)**



(<https://forum.arduino.cc/index.php?action=profile;u=363771>)



Sr. Member

Posts: 435

Karma: 113 [\[add\]](#)

(<https://forum.arduino.cc/index.php?action=karma;sa=applaud;uid=363771;da3ba4ec5d=f50e635e42509ca53e91fc0c707480c>)

SIGN IN (HTTPS

**Re: Digispark ATtiny85 micro USB module (<https://forum.arduino.cc/index.php?topic=442087.msg3043441#msg3043441>)**

Dec 15, 2016, 06:41 am (<https://forum.arduino.cc/index.php?topic=442087.msg3043441#msg3043441>) #3  
 SIGN IN (HTTPS://AUTH.ARDUINO.CC/LOGIN?CLIENT\_ID=FO

Yes, those are a little bit interesting. I have a couple of them laying around, although I don't use them very often. Beetles are about the same size but are the equivalent of a Leonardo. They cost about \$7. Of course, they are 7 times more interesting... :-)

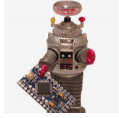
**Re: Digispark ATtiny85 micro USB module (<https://forum.arduino.cc/index.php?topic=442087.msg3043961#msg3043961>)**

Dec 15, 2016, 03:08 pm (<https://forum.arduino.cc/index.php?topic=442087.msg3043961#msg3043961>) #4

For 7\$ there is much more fun (<https://www.aliexpress.com/item/New-Orange-Pi-Zero-H2-Quad-Core-Open-source-development-board-beyond-Raspberry-Pi/32760774493.html>) on the other side of the spectrum ;-)  
 [quad core 1.2GHz+USB+ethernet+wifi]

(<http://www.arduino.cc>)

**dmjlambert**  
**(<https://forum.arduino.cc/index.php?action=profile;u=376297>)**



(<https://forum.arduino.cc/index.php?action=profile;u=376297>)



Edison Member

Posts: 1,593

Karma: 448 [\[add\]](#)

(<https://forum.arduino.cc/index.php?action=karma;sa=applaud;uid=376297;da3ba4ec5d=f50e635e42509ca53e91fc0c707480c>)

**HermannSW**  
**(<https://forum.arduino.cc/index.php?action=profile;u=363771>)**



(<https://forum.arduino.cc/index.php?action=profile;u=363771>)



Sr. Member

Posts: 435

Karma: 113 [\[add\]](#)

(<https://forum.arduino.cc/index.php?action=karma;sa=applaud;uid=363771;da3ba4ec5d=f50e635e42509ca53e91fc0c707480c>)



**Re: Digispark ATtiny85 micro USB module** (<https://forum.arduino.cc/index.php?topic=442087.msg3044581#msg3044581>)

Dec 16, 2016, 01:02 am (<https://forum.arduino.cc/index.php?topic=442087.msg3044581#msg3044581>)

#5

SIGN IN (HTTPS://AUTH.ARDUINO.CC/LOGIN?CLIENT\_ID=FO  
 That does look good, in a different category and larger size I suppose. It reminds me of the Raspberry Pi Zero, except larger and more stuff on the board.



**Re: Digispark ATtiny85 micro USB module** (<https://forum.arduino.cc/index.php?topic=442087.msg3045604#msg3045604>)

Dec 17, 2016, 12:33 am (<https://forum.arduino.cc/index.php?topic=442087.msg3045604#msg3045604>) Last Edit: #6

Dec 17, 2016, 12:39 am by HermannSW

Took a while to find a TM1637 library that works with Digispark ATtiny85.

DigitalTube library does:

<https://github.com/reecedstudio/libraries/tree/master/DigitalTube>

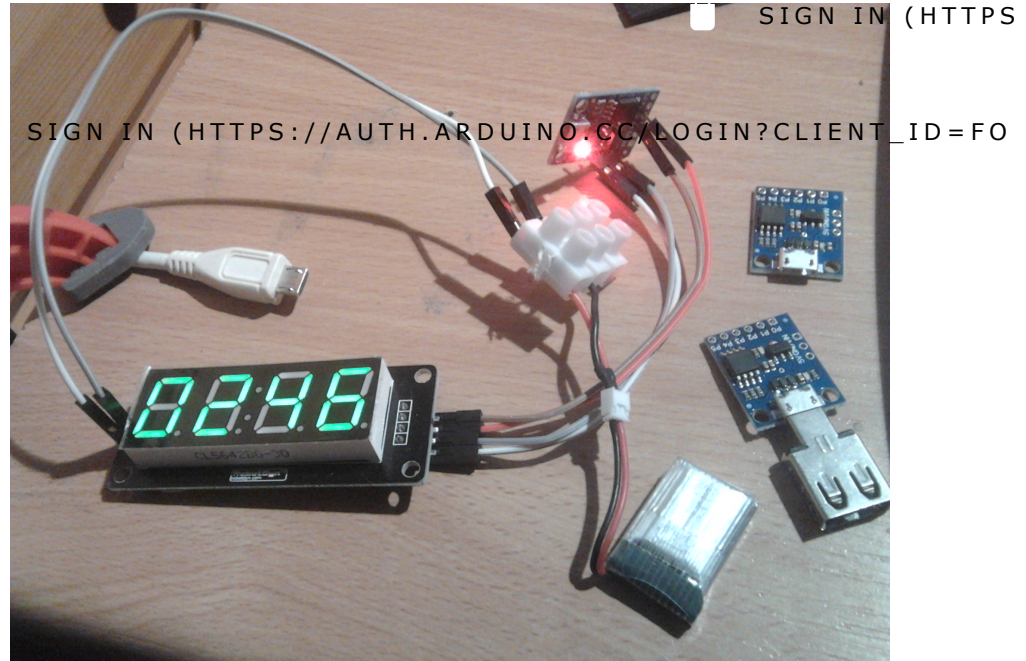
(<https://github.com/reecedstudio/libraries/tree/master/DigitalTube>)

<https://www.youtube.com/watch?v=aUAacSjXYms> (<https://www.youtube.com/watch?v=aUAacSjXYms>)



(<http://www.arduino.cc>)

Hermann.



**HermannSW**  
**(<https://forum.arduino.cc/index.php?action=profile;u=363771>)**



(<https://forum.arduino.cc/index.php?action=profile;u=363771>)



Sr. Member

Posts: 435

Karma: 113 [\[add\]](#)

(<https://forum.arduino.cc/index.php?action=karma;sa=applaud;uid=363771;da3ba4ec5d=f50e635e42509ca53e91fc0c707480c>)

**Re: Digispark ATtiny85 micro USB module (<https://forum.arduino.cc/index.php?topic=442087.msg3050436#msg3050436>)**

Dec 20, 2016, 11:10 pm (<https://forum.arduino.cc/index.php?topic=442087.msg3050436#msg3050436>) Last Edit: #7

Dec 20, 2016, 11:22 pm by HermannSW

When installing Digispark ATtiny85 board in Arduino IDE you get quite some libraries ready to use.

"TinyRTClib.h" library allows to interface with DS3231 real time clock module ([has accuracy of 5s/month \(http://forum.arduino.cc/index.php?topic=267625.msg3047461#msg3047461\)](http://forum.arduino.cc/index.php?topic=267625.msg3047461#msg3047461)).

The lipo is backed up by a CR2032 battery on DS3231 module.

Clock displays hh:mm for 2 seconds, then mm:ss for 5 seconds, and then repeats.

This definitely needs scrunch up in order to be used as wristwatch.

<https://www.youtube.com/watch?v=nWZcf7Kr3Gw&feature=youtu.be>  
<https://www.youtube.com/watch?v=nWZcf7Kr3Gw&feature=youtu.be>

Code: [\[Select\]](#)

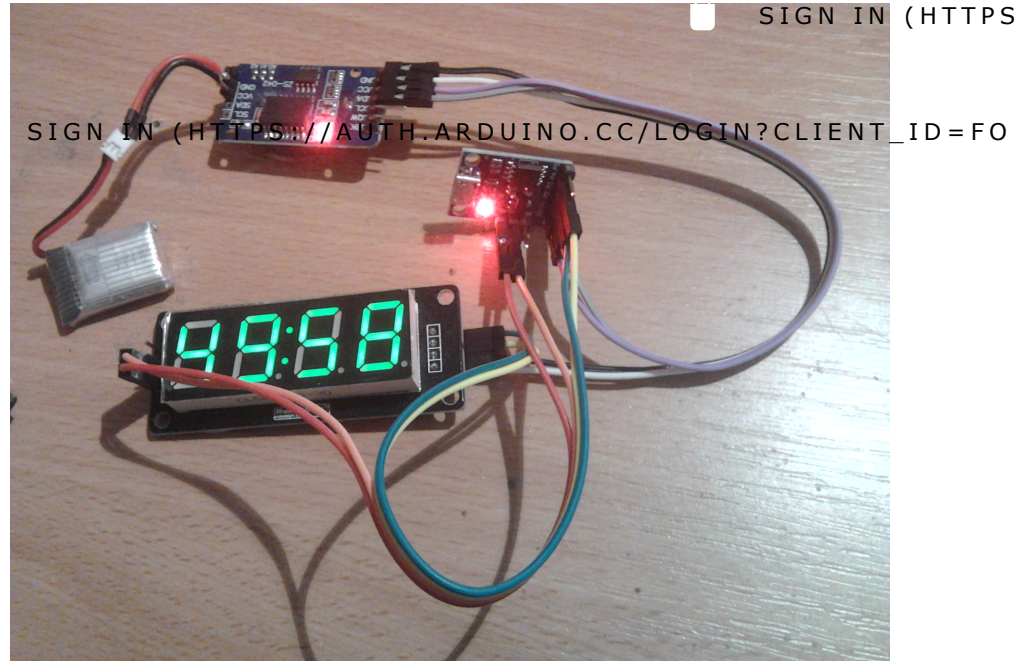
```
// "ATtiny85+TM1637+DS3231+H20 lipo" wristwatch v0.1
//
#include <TinyWireM.h>
#include "TinyRTClib.h"
#include "TM1637.h"

TM1637 tm1637(3 /*CLK*/, 4/*DIO*/);

RTC_DS1307 RTC;    // SDA=0, SCL=2
```

(<http://www.arduino.cc>)

Hermann.



**HermannSW**  
(<https://forum.arduino.cc/index.php?action=profile;u=363771>)



(<https://forum.arduino.cc/index.php?action=profile;u=363771>)



Sr. Member

Posts: 435

Karma: 113 [\[add\]](#)

(<https://forum.arduino.cc/index.php?action=karma;sa=applaud;uid=363771;da3ba4ec5d=f>

[c50e635e42509ca53e91fc0c707480c](https://forum.arduino.cc/index.php?action=karma;sa=applaud;uid=363771;da3ba4ec5d=f))

**Re: Digispark ATtiny85 micro USB module** (<https://forum.arduino.cc/index.php?topic=442087.msg3061318#msg3061318>)

Dec 29, 2016, 10:19 pm (<https://forum.arduino.cc/index.php?topic=442087.msg3061318#msg3061318>)

#8

Today I wanted to program ATtiny85 with an old 2007 Eee PC, and wanted to try that with Arduino Create. But that was foredoomed by Create plugin being available for 64bit architecture only.

OK, then I installed 1.8.0 IDE, added board and added the digispark.rule.

Programming ATtiny85 worked as before, but I was surprised on the "Eep!" message:

Code: [\[Select\]](#)

```
Running Digispark Uploader...
Plug in device now... (will timeout in 60 seconds)
> Please plug in the device ...
> Press CTRL+C to terminate the program.
> Device is found!
connecting: 16% complete
connecting: 22% complete
connecting: 28% complete
connecting: 33% complete
> Device has firmware version 1.6
```

Hermann.

**HermannSW**  
(<https://forum.arduino.cc/index.php?action=profile;u=363771>)

**Re: Digispark ATtiny85 micro USB module** (<https://forum.arduino.cc/index.php?topic=442087.msg3061377#msg3061377>)

[cc/index.php?  
\(https://www.arduino.cc\)  
action=profile;u=363771](https://www.arduino.cc/index.php?action=profile;u=363771)  
**1)**



[https://forum.arduino.cc/i  
ndex.php?](https://forum.arduino.cc/index.php?)

[action=profile;u=363771\)](https://forum.arduino.cc/index.php?action=profile;u=363771)



Sr. Member

Posts: 435

Karma: 113 [\[add\]](#)

[https://forum.arduino.cc/i  
ndex.php?](https://forum.arduino.cc/index.php?)

[action=karma;sa=applaud;](https://forum.arduino.cc/index.php?action=karma;sa=applaud;uid=363771;da3ba4ec5d=f)

[uid=363771;da3ba4ec5d=f](https://forum.arduino.cc/index.php?uid=363771;da3ba4ec5d=f)

[c50e635e42509ca53e91fc](https://forum.arduino.cc/index.php?uid=363771;da3ba4ec5d=f)

[0c707480c\)](https://forum.arduino.cc/index.php?uid=363771;da3ba4ec5d=f)

**HermannSW**  
[https://forum.arduino.  
cc/index.php?  
action=profile;u=363771](https://forum.arduino.cc/index.php?action=profile;u=363771)  
**1)**



[https://forum.arduino.cc/i  
ndex.php?](https://forum.arduino.cc/index.php?)

[action=profile;u=363771\)](https://forum.arduino.cc/index.php?action=profile;u=363771)



Sr. Member

Posts: 435

Karma: 113 [\[add\]](#)

[https://forum.arduino.cc/i  
ndex.php?](https://forum.arduino.cc/index.php?)

[action=karma;sa=applaud;](https://forum.arduino.cc/index.php?action=karma;sa=applaud;uid=363771;da3ba4ec5d=f)

[uid=363771;da3ba4ec5d=f](https://forum.arduino.cc/index.php?uid=363771;da3ba4ec5d=f)

[c50e635e42509ca53e91fc](https://forum.arduino.cc/index.php?uid=363771;da3ba4ec5d=f)

[0c707480c\)](https://forum.arduino.cc/index.php?uid=363771;da3ba4ec5d=f)

Dec 29, 2016, 10:59 pm (<https://forum.arduino.cc/index.php?topic=442087.msg3061377#msg3061377>)

#9

SIGN IN (HTTPS)

Below is small sketch demonstrating 1/8/16 MHz processing for ATtiny85.

Slow Led flickering with 1, fast flickering with 8 and always on Led with 16 MHz.

Just select board "Digispark (Xmhz - No USB)" with X ∈ {1, 8, 16}.

SIGN IN (HTTPS://AUTH.ARDUINO.CC/LOGIN?CLIENT\_ID=FO


Hermann.

Code: [\[Select\]](#)

```
void setup() {
  pinMode(0, OUTPUT); //LED on Model B
  pinMode(1, OUTPUT); //LED on Model A or Pro
}

int i;

void loop() {
  digitalWrite(0, HIGH);
  digitalWrite(1, HIGH);
}
```

 **Re: Digispark ATtiny85 micro USB module** (<https://forum.arduino.cc/index.php?topic=442087.msg3062839#msg3062839>)

Dec 30, 2016, 11:41 pm (<https://forum.arduino.cc/index.php?topic=442087.msg3062839#msg3062839>) Last Edit: #10

Dec 30, 2016, 11:47 pm by HermannSW

[Digispark quickref \(http://digistump.com/wiki/digispark/quickref\)](http://digistump.com/wiki/digispark/quickref) shows two functions, one to read the internal temperature sensor, and the other reading Digispark input voltage. The sketch uses a LCD to display.

I only have a Digispark ATtiny85 module and a USB cable currently, so made use of DigiKeyboard library as before.

I compiled below sketch, and when prompted to insert USB cable, I click into an empty gedit window first before inserting the USB cable with Digispark module. After the module has been flashed the sketch runs and gives temperature and voltage output in gedit window:

Code: [\[Select\]](#)

```
3C 4.89V
5C 4.89V
4C 4.89V
5C 4.89V
13C 4.87V
3C 4.89V
5C 4.89V
5C 4.89V
5C 4.87V
7C 4.89V
```



([//www.arduino.cc](http://www.arduino.cc))

SIGN IN (HTTPS

Internal temperature sensor shows 7°C working temperature.

Next I disconnected the USB cable, opened an Arduino IDE, connected the USB cable and pressed my thumb firmly on the ATtiny85. As you can see the internal temperature measured raises slowly up to 20°C:

```
Code: [Select]

7C 4.89V
9C 4.89V
9C 4.87V
9C 4.89V
9C 4.87V
11C 4.87V
11C 4.89V
11C 4.87V
11C 4.87V
11C 4.89V
```

Using gedit window for Digispark output display is not perfect, but works for easy cases.

Hermann.

```
Code: [Select]

#include <TinyWireM.h>
#include "DigiKeyboard.h"

void setup()
{
  TinyWireM.begin(); // initialize I2C lib
  DigiKeyboard.sendKeyStroke(0);
  delay(1000);
}
```

**HermannSW**  
(<https://forum.arduino.cc/index.php?action=profile;u=363771>)



(<https://forum.arduino.cc/index.php?action=profile;u=363771>)

**Re: Digispark ATtiny85 micro USB module** (<https://forum.arduino.cc/index.php?topic=442087.msg3076335#msg3076335>)

Jan 09, 2017, 02:52 pm (<https://forum.arduino.cc/index.php?topic=442087.msg3076335#msg3076335>)

#11

The [other Digispark ATtiny85 1\\$ module](https://www.aliexpress.com/item/1pcs-Digispark-kickstarter-development-board-ATTINY85-module-for-Arduino-usb/32584084654.html) (<https://www.aliexpress.com/item/1pcs-Digispark-kickstarter-development-board-ATTINY85-module-for-Arduino-usb/32584084654.html>) can be powered & programmed without any cables.

I played with ATtiny85 generating PWM and used [5\\$ 24Msps logic analyzer](https://www.aliexpress.com/item/1sets-New-Arrival-USB-Logic-Analyze-24M-8CH-MCU-ARM-FPGA-DSP-debug-tool/32246802326.html) (<https://www.aliexpress.com/item/1sets-New-Arrival-USB-Logic-Analyze-24M-8CH-MCU-ARM-FPGA-DSP-debug-tool/32246802326.html>) to visualize:



(<https://www.arduino.cc/>)  
Sr. Member

Posts: 435

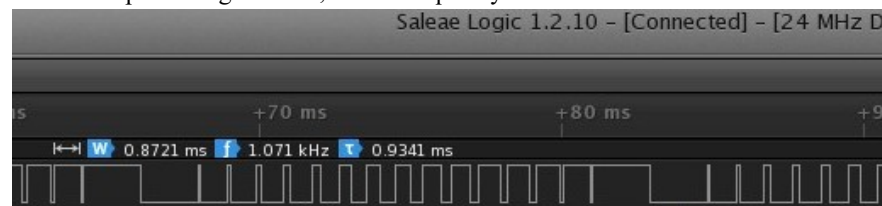
Karma: 113 [\[add\]](#)

([https://forum.arduino.cc/index.php?](https://forum.arduino.cc/index.php?action=karma;sa=applaud;uid=363771;da3ba4ec5d=f50e635e42509ca53e91fc0c707480c)

[action=karma;sa=applaud;uid=363771;da3ba4ec5d=f50e635e42509ca53e91fc0c707480c](https://forum.arduino.cc/index.php?action=karma;sa=applaud;uid=363771;da3ba4ec5d=f50e635e42509ca53e91fc0c707480c))



This is the pattern I generated, PWM frequency is 1Khz:



This was the sketch I used, based on cool Technoblogy [Four PWM Outputs from the ATtiny85](http://www.technoblogy.com/show?LE0) (<http://www.technoblogy.com/show?LE0>) posting:

Code: [\[Select\]](#)

```
// Based on "Three PWM Outputs"
// http://www.technoblogy.com/show?LE0
//
volatile uint8_t* Port[] = {&OCR0A, &OCR0B, &OCR1B};
int Pin[] = {0, 1, 4};

void setup() {
  pinMode(Pin[0], OUTPUT);
  pinMode(Pin[1], OUTPUT);
  pinMode(Pin[2], OUTPUT);
}
```

Hermann.

**HermannSW**  
(<https://forum.arduino.cc/index.php?action=profile;u=363771>)

**Re: Digispark ATtiny85 micro USB module** (<https://forum.arduino.cc/index.php?topic=442087.msg3168143#msg3168143>)

Mar 09, 2017, 09:16 pm (<https://forum.arduino.cc/index.php?topic=442087.msg3168143#msg3168143>)

#12

<http://www.arduino.cc>



<https://forum.arduino.cc/index.php?>

[action=profile;u=363771](https://forum.arduino.cc/index.php?action=profile;u=363771)



Sr. Member

Posts: 435

Karma: 113 [\[add\]](#)

[https://forum.arduino.cc/index.php?](https://forum.arduino.cc/index.php?action=karma;sa=applaud;uid=363771;da3ba4ec5d=f)

[action=karma;sa=applaud;](https://forum.arduino.cc/index.php?action=karma;sa=applaud;uid=363771;da3ba4ec5d=f)

[uid=363771;da3ba4ec5d=f](https://forum.arduino.cc/index.php?action=karma;sa=applaud;uid=363771;da3ba4ec5d=f)

[c50e635e42509ca53e91fc](https://forum.arduino.cc/index.php?action=karma;sa=applaud;uid=363771;da3ba4ec5d=f)

[0c707480c](https://forum.arduino.cc/index.php?action=karma;sa=applaud;uid=363771;da3ba4ec5d=f)

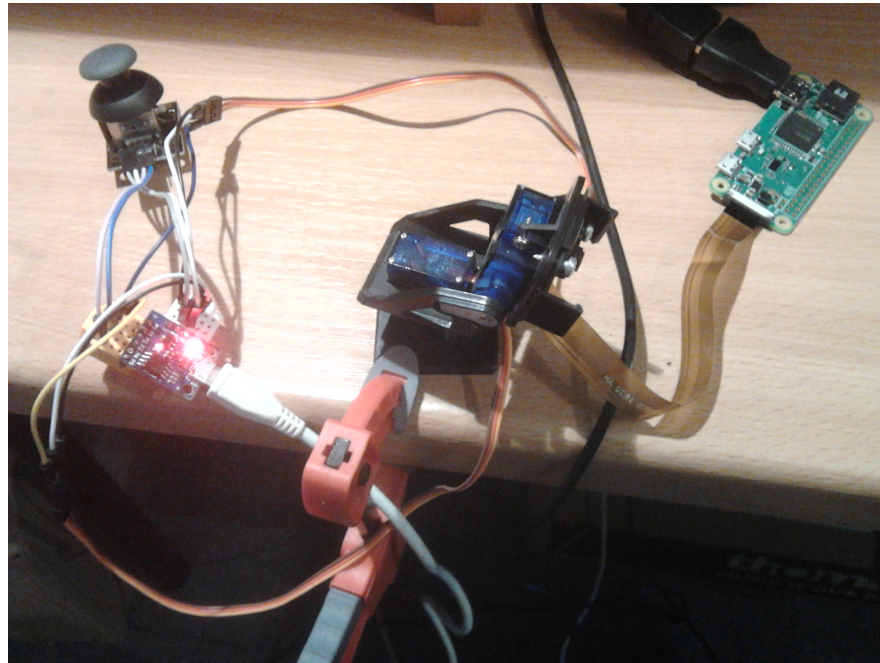
Today I combined my Arduino pan/tilt system from last year with Raspberry camera and my new PiZeroW (Pi Zero wireless, 11.70\$, available since a week): [SIGN IN \(HTTPS](#)

<https://www.raspberrypi.org/forums/viewtopic.php?f=63&t=176788>

<https://www.raspberrypi.org/forums/viewtopic.php?f=63&t=176788>

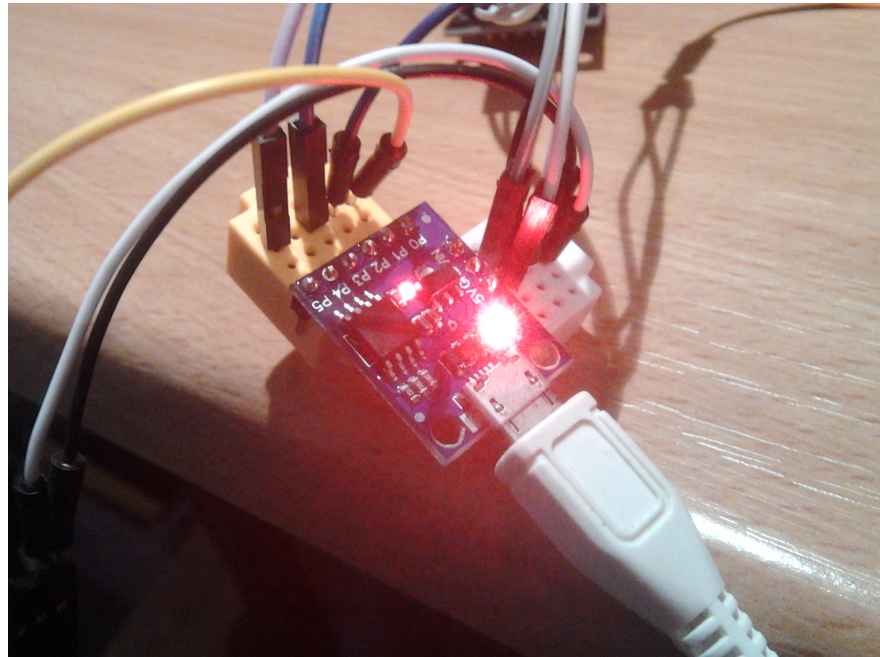
[SIGN IN \(HTTPS://AUTH.ARDUINO.CC/LOGIN?CLIENT\\_ID=FO](#)

The bill of material for the Arduino pan/tilt part was 7\$ with free shipping. The biggest part was with 3\$ the Arduino Uno used. Now I replaced that with 1\$ ATTiny85 and it works. This drops "Arduino pan/tilt system for Raspberry camera" to 5\$ in total ! Here is the complete setup, just the Uno replaced by ATTiny85 (click on photos for more details):



[https://stamm-wilbrandt.de/en/forum/IMG\\_20170309\\_205220.jpg](https://stamm-wilbrandt.de/en/forum/IMG_20170309_205220.jpg)

This is just the ATTiny85 with two mini breadboards:



SIGN IN (HTTPS

add SoftRcPulseOut::refresh(NOW) after 20ms delay

```
#include <SoftRcPulseOut.h>

SoftRcPulseOut myservo1, myservo2;
#define NOW 1

int potpin1 = A1, potpin2 = A2;
int val1, val2;

void setup() {
  myservo1.attach(1);
```

Hermann.

[PRINT \(HTTPS://FORUM.ARDUINO.CC/INDEX.PHP?ACTION=PRINTPAGE;TOPIC=442087.0\)](https://forum.arduino.cc/index.php?action=printpage;topic=442087.0)

Go

Careers ([//www.arduino.cc/Careers](http://www.arduino.cc/Careers))

9/16/2017