embeddist

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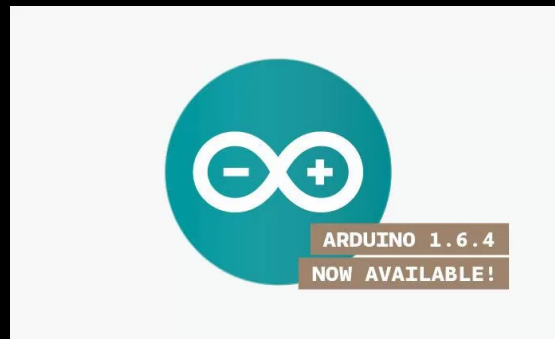3D printer

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WIZ Ethernet Library for Arduino IDE-1.6.4

Posted on May 21, 2015 by embeddist

Download Arduino IDE-1.6.4

WIZ Ethernet Library

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WIZnet Ethernet Lib

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DoS Ethenret Shield
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The Ethernet library lets you connect to the Internet or a local network.

- Supported devices

  W5500 : ioShield, WIZ550io, W5500 Ethernet Shield, Arduino Ethernet Shield 2

  W5200 : W5200 Ethernet Shield, WIZ820io

  W5100 : Arduino Ethernet Shield

- Software

- Install WIZ Ethernet library IDE-1.6.4
- Download all files
- Overwrite "Ethernet" folder onto the "Arduino\libraries\Ethernet" folder in Arduino sketch.

- Select device(shield)

- Uncomment device(shiel) you want to use in **$/Ethernet/src/utility/w5100.h**

```
1   //#define W5100_ETHERNET_SHIELD // Arduino Ethenret Shield and C
2   //#define W5200_ETHERNET_SHIELD // WIZ820io, W5200 Ethernet Shie
3   #define W5500_ETHERNET_SHIELD // WIZ550io, ioShield series of WI
```

- If WIZ550io used, uncommnet "#define WIZ550io_WITH_M...
  $/Ethernet/src/utility/w5100.h

```
1   #if defined(W5500_ETHERNET_SHIELD)
2   //#define WIZ550io_WITH_MACADDRESS // Use ass
```

```
3   #include "w5500.h"
4   #endif
```

- Using the WIZ Ethernet library and evaluate existing Ethern
  All other steps are the same as the steps from the Arduino
  can use examples in ./Ethernet/examples folder for the Ard
  to Files->Examples->Ethernet, open any example, then cop
  file and change configuration values properly.
  After that, you can check if it is work well. For example, if you choose
  'WebServer', you should change IP Address first and compile and download it.
  Then you can access web server page through your web browser of your PC
  or something.

What is new ?

- **Added new functions**
- sockStatus(SOCKET s) = readSnSR(SOCKET s)

```
1   uint8_t socketStatus(SOCKET s)
2   {
3   SPI.beginTransaction(SPI_ETHERNET_SETTINGS);
4   uint8_t status = W5100.readSnSR(s);
5   SPI.endTransaction();
6   return status;
7   }
```

- reavAvalable(SOCKET s) = getRxReceiveSize(SOCKET s)

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괜스레 나같은 한국사람은 어려
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```
1  int16_t recvAvailable(SOCKET s)
2  {
3  SPI.beginTransaction(SPI_ETHERNET_SETTINGS);
4  int16_t ret = W5100.getRXReceivedSize(s);
5  SPI.endTransaction();
6  return ret;
7  }
```

- **Added SPI Transaction APIs**
  To solve conflicts that sometimes occur between multiple SPI devices when using SPI from interrupts and/or different SPI settings, SPI Transcation APIs use between between read and write SPI functions.

```
1  SPI.beginTransaction(SPI_ETHERNET_SETTINGS);
2  W5100.setIPAddress(_dhcp->getLocalIp().raw_address());
3  W5100.setGatewayIp(_dhcp->getGatewayIp().raw_address());
4  W5100.setSubnetMask(_dhcp->getSubnetMask().raw_address());
5  SPI.endTransaction();
```

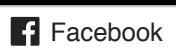- **Removed Twitter.cpp / Twitter.h**

Code on Github

- HTTPS clone URL – https://github.com/embeddist/WIZ_Ethernet_Library-IDE1.6.x.git
- Download ZIP – https://github.com/embeddist/WIZ_Ethernet_Library-IDE1.6.x/archive/master.zip

Version History

- Initial Release : 21 May. 2015

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12 thoughts on "WIZ Ethernet Library for Arduino IDE-1.6.4"

Rony says:

[May 31, 2015 at 5:09 pm](#)

Hi,

Thank you for the WIZ Ethernet Library for Arduino IDE-1.6.4. I successfully downloaded and tested it with the Ethernet shield W5100. However, with the W5200 Ethernet shield (from Elecrow) I could compile the project but did not get any IP address (Arduino example DhcpAddressPrinter). Have you tested the library with all Ethernet shield?

Best regards

Reply

embeddist says:

[June 1, 2015 at 11:57 pm](#)

Hi Rony,

This problem has relevance to the timing of PHY link.

I thought that DISCOVER packet in UDP could be send before PHY link_done.

Unfortunaly, Ethernet library does not povides the API for PHY status.

I added delay time of 3seconds and fixed arduion/libraries/Ethernet/src/utility/W5200.cpp is fixed as below,

26 //#define W5500_ETHERNET_SHIELD // WIZ550io, ioShield series of WIZnet

27 void W5200Class::init(void)

28 {

29 //delay(300);

30 delay(3000);

Then, DhcpAddressPrinter runs smoothly.

Thanks,

Reply

Rony says:
June 2, 2015 at 7:48 pm

Hi,

Thank you for your help. I added the 3s break, but it did not work.

—

//delay(300);

delay(3000);

—

I realized that in my "W5200.cpp" file row 26 is empty (no "//#define W5500_ …"), therefore I was wondering whether I have to latest library or not. Since I downloaded it from this site, however, it should be the latest. Any other ideas?

Regards,
Rony

embeddist says:

June 2, 2015 at 10:49 pm

Hi,
Have you tested other examples expect DhcpAddressPrinter?
How about other examples?
Thanks,

Rony says:

June 3, 2015 at 7:17 pm

Hi,

I tested also other examples, e.g. DhcpChatServer. With the W5100 it works, but with the W5200 it doesn't (no IP address retrieved from DHCP).

To make sure that it is not a hardware defect, I tried a second W5200 board, without success.

For clarification, when I switch between the two boards I only change the definition in the w5100.h file, correct?

//#define W5100_ETHERNET_SHIELD // Arduino Ethenret Shield and Compatibles …
#define W5200_ETHERNET_SHIELD // WIZ820io, W5200 Ethernet Shield
//#define W5500_ETHERNET_SHIELD // WIZ550io, ioShield series of WIZnet

Thanks

Rony says:
June 10, 2015 at 7:03 am

Hi embeddist,

Do you have any other ideas what the problem could be?

Thanks

Reply

embeddist says:
June 11, 2015 at 2:00 am

Hi Rony,

I have tested DhcpAddressPrinter and DhcpChatServer several times over (with
W5200 Ethernet Shield: http://www.amazon.com/Wiznet-W5200-Ethernet-Shield-
Arduino/dp/B00IY09MWK?tag=duckduckgo-d-20).
However, I don't find any problem.

Please, check as below list,
– Is dhcp server in your network ok ?
– Set more than delay(3000) to avoid UDPsending before PHY link_done
– Remove previous WIZ ehternet library and IDE to avoid conflicing with Library
Thanks

Reply

Rony says:
June 28, 2015 at 1:28 pm

Hi embeddist,

Thank you for your support.

– DHCP server works fine.

– I tried different delay times (1000…10000) but none of it worked.

– I reinstalled Arduino and completely deleted all WIZ libraries. However, it still did not work with the W5200.

I use the W5200 from elecrow (http://www.elecrow.com/w5200-ethernet-shield-p-367.html), but I will order the W5200 from Amazon and let you know if it solves the problem.

Regards,
Rony

Reply

Rony says:
July 7, 2015 at 4:58 pm

HI embeddist,

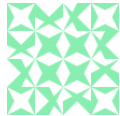I just received and tested the W5200 from Amazon –> it works!

Since you did not test the library with the W5200 from elecrow, I assume that it is not compatible with your library (I tested several boards from elecrow, also with other libraries, no success at all).

Anyway, thanks a lot for your support!

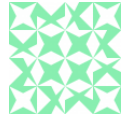Regards,

Rony

Reply

John KIM says:

July 23, 2015 at 4:08 am

Hi, Rony,

As far as I know, several ethernet shields product and specific library use bellow code under "void setup()"

pinMode(SDCARD_CS,OUTPUT);

digitalWrite(SDCARD_CS,HIGH);//Deselect the SD card

i guess that certain ethernet shield needs to disable other spi device

explicitly.

John KIM says:

July 23, 2015 at 4:16 am

And Hi, embeddist,

I did not yet test the library for IDE 1.6.5 but I am sure it works. I think recent IPAddress library in recent IDE has been changed into using an union and it could make trouble when we use new library on new IDE but no trouble new library on old IDE.

But unfortunately Wiznet Wiki site library url points only the library for old IDE and there is no link and no comments for new IDE like 1.6.5 that you have done.

And I have a favor. Could you edit the wiki to add your work. The wiki URL is http://wizwiki.net/wiki/doku.php?id=osh:ioshield-a:updatelib

Thank you.

Reply

embeddist says:

July 27, 2015 at 12:51 am

Hi John,

Thank you for your comments.

We will add wiki pages for Arduino Ethernet Interface.

Thank you.

Reply

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