

mbed

LPC1768

Dipl.-Ing. Franz Wolf

Vorteile



“mbed is a tool for Rapid Prototyping with Microcontrollers”

- Download per Drag-and-drop
- Kein Installationsaufwand
- C++ Entwicklungsumgebung
- Geringe Kosten

ebay Stand: 14.07.2012

Warum
mbed ??



Preis + Versand nach DE		Restzeit
2 Artikel von ausländischen eBay-Verkäufern gefunden		
	ARM mbed NXP LPC1768 Development Board Ort: Vereinigte Staaten von Amerika	Sofort-Kaufen EUR 48,96 + EUR 11,39 Versand
	ARM mbed NXP LPC1768 (Cortex-M3) Development Board Ort: Hongkong	Sofort-Kaufen EUR 59,62 Kostenloser Versand



Buchtipps



ARM-Mikrocontroller 1: 35 Einsteiger-Projekte in C
Bert van Dam (Autor)

EUR 39,80



**Fast and Effective Embedded Systems Design:
Applying the ARM mbed [Englisch]**
Rob Toulson, Tim Wilmshurst

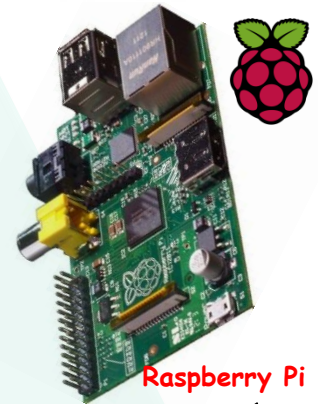
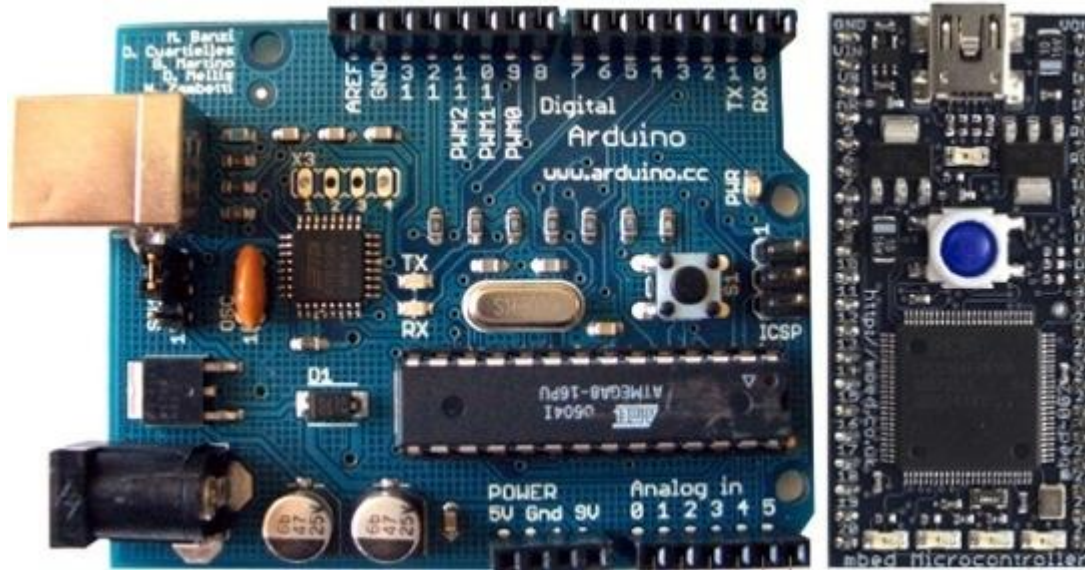
EUR 41,95



Mbed Microcontroller [Englisch] [Taschenbuch] EUR 85,49

Größenvergleich Arduino und mbed

NEU!



Raspberry Pi

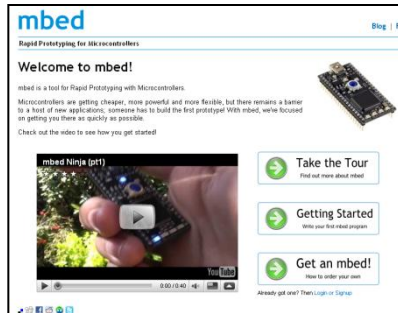
700 MHz

ca. 30€

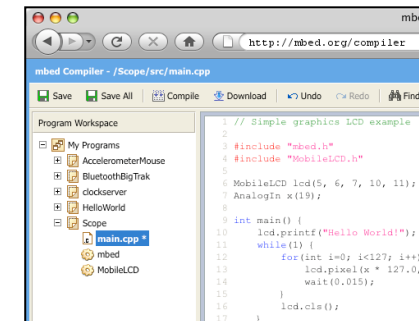
	mbed	Arduino UNO	Arduino Mega	Arduino Mega 2560
Digital I/O	26	14	54	54
Analog In	6	6	16	16
PWM	6	6	14	14
UART	3	1	4	4
Flash	512 KB	32 KB	128 KB	256 KB
RAM	64 KB	2 KB	8 KB	8 KB
Speed	96 MHZ	16 MHZ	16 MHZ	16 MHZ
Preis	60 US\$	30 US\$	50 US\$	65 US\$



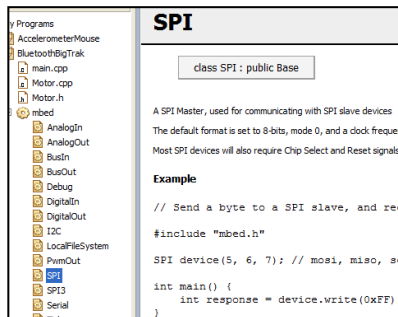
mbed



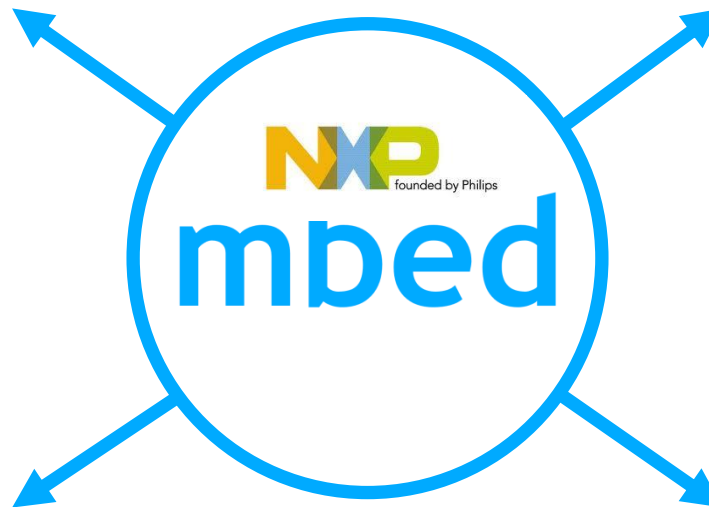
**Developer
Web Platform**



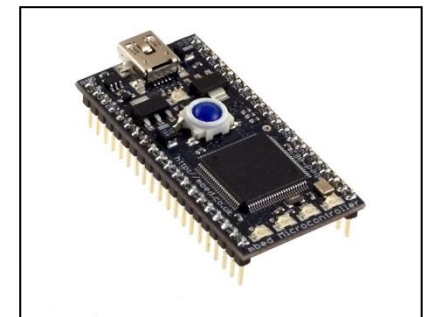
einfacher Online Compiler



High-level Peripheral APIs



**Rapid Prototyping
for Microcontrollers**



**Cortex-M3 MCU für
Prototyping im Rastermaß**

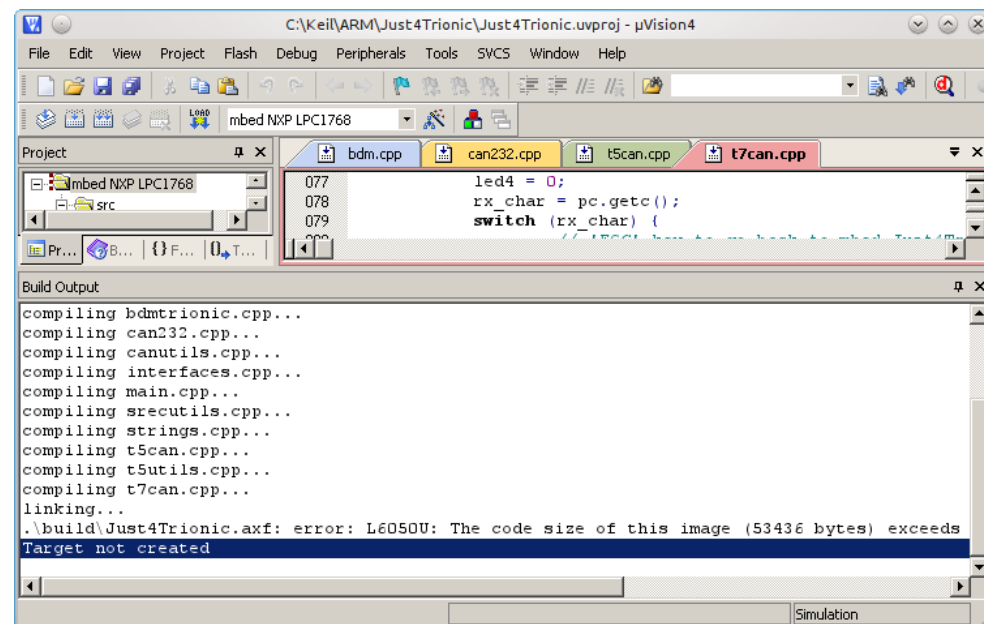
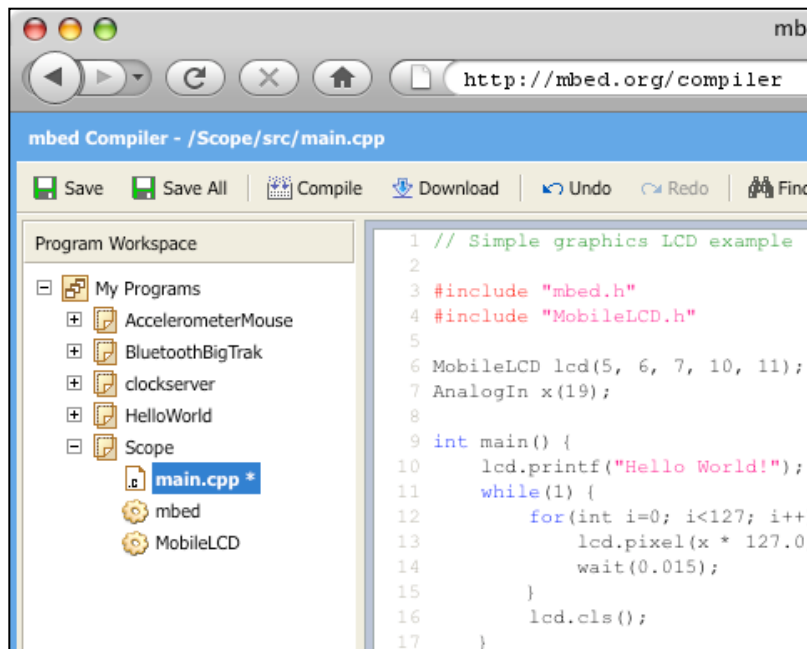
Compiler



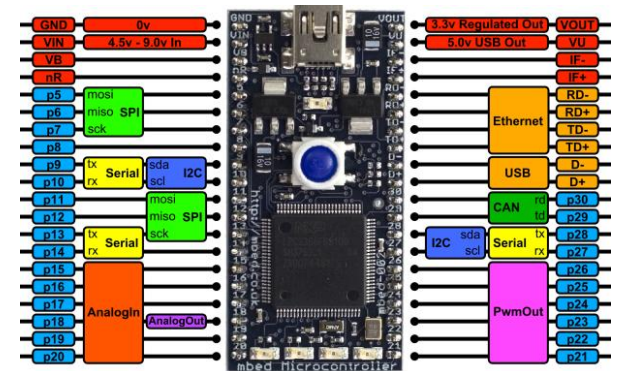
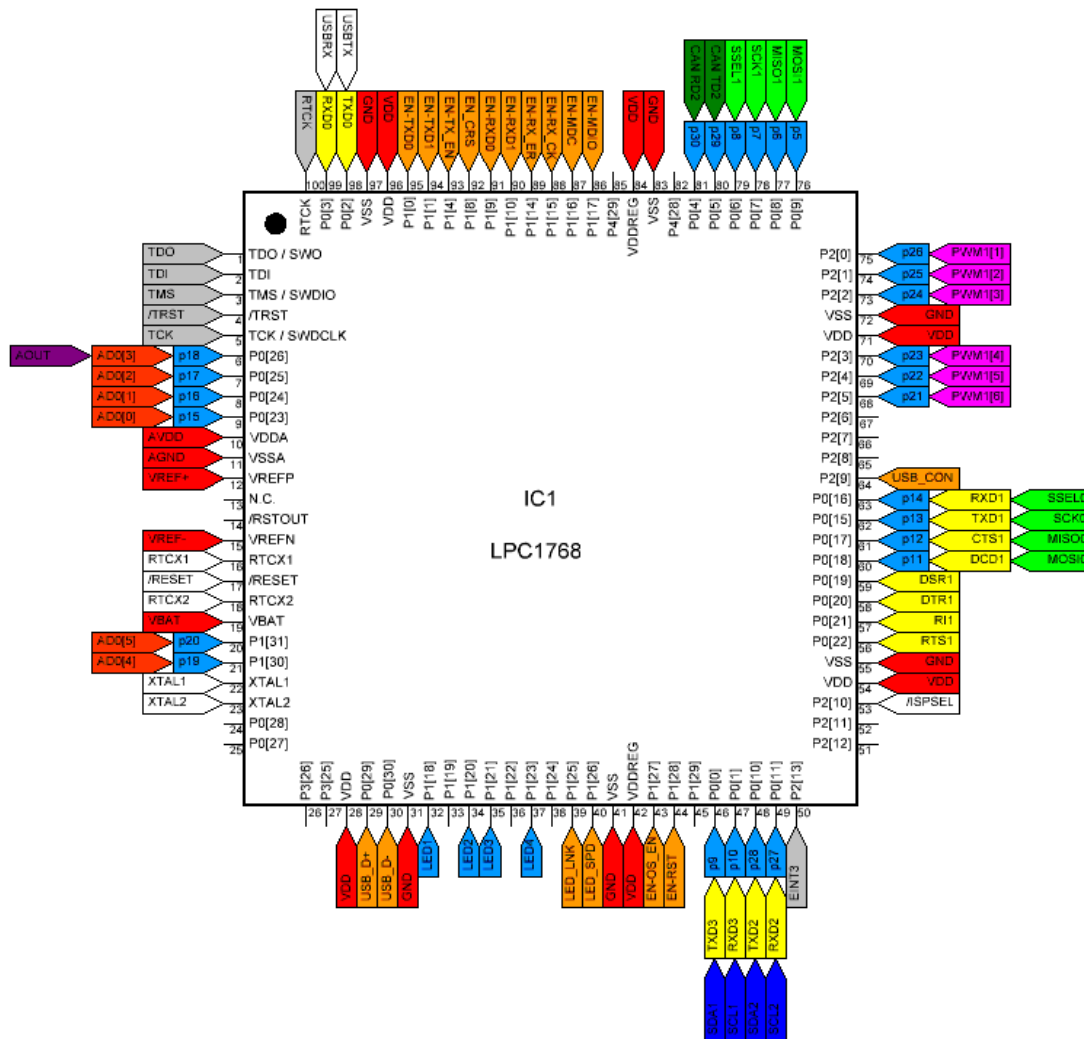
Online Compiler

Offline Keil μVision compiling

<https://mbed.org/compiler/>



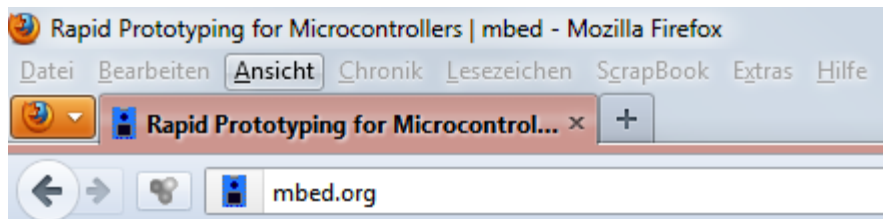
µC LPC1768



E-Blocks

mbed is a tool for Rapid Prototyping with Microcontrollers

Cortex-M3 Mikrocontroller-Modul mit Web-Toolchain (deutsch: *Werkzeugkette*)



mbed - Internet

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Rapid Prototyping for Microcontrollers

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mbed is a tool for Rapid Prototyping with Microcontrollers

Prototyping hardware | C++ SDK | Powerful online tools | Active community



The new mbed NXP
LPC1114U24 »

Hardware

The mbed Microcontrollers are a series of ARM-based microcontroller development boards designed for fast, flexible and low-risk professional rapid prototyping.



» Full hardware specification

Standard library

The mbed SDK provides a solid C/C++ startup environment and peripheral abstraction libraries to enable clean API-driven coding for microcontrollers.



» The mbed SDK

Getting started

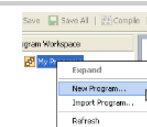
How to set up your mbed microcontroller, create your mbed.org account, and write your first program!



» Get started

Online IDE

The mbed Compiler provides a lightweight online C/C++ IDE that is pre-configured to let you quickly write programs and compile and download them to run on your mbed Microcontroller.



» The mbed Compiler

Community

The mbed.org developer website is home to a friendly and active community. As well as the [Forum](#) and the [Community wiki](#), there are thousands of user contributed [Programs and libraries](#).



» Explore mbed.org

Where to buy mbed

The mbed microcontroller range is available from over 30 different distributors all over the world.



» Find a distributor

Recent entries on the [mbed blog](#)

Search mbed

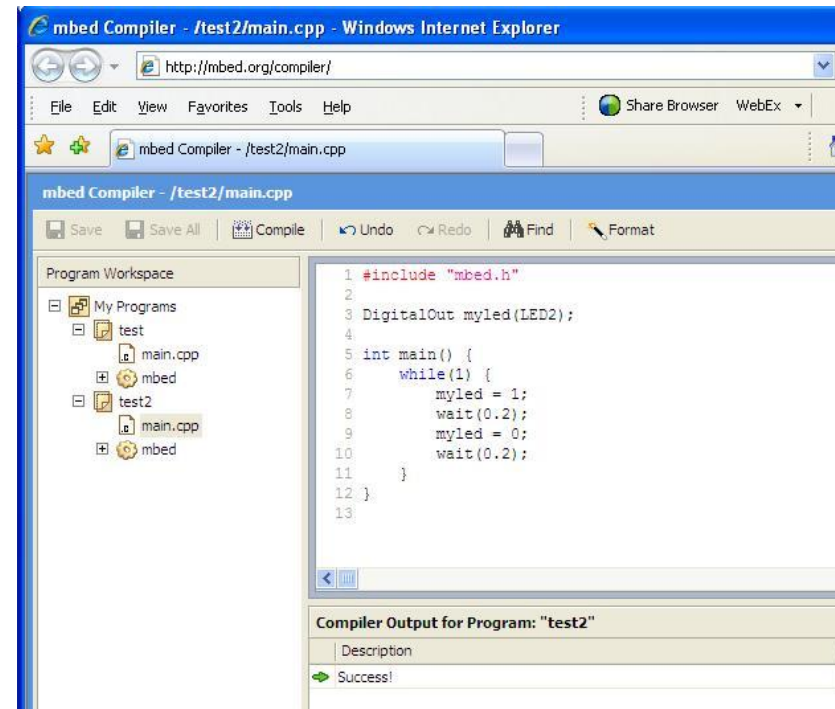
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Udomsak Boonprasert - about 3 hours ago
- Comment on: [Exporting to offline toolchains](#) - Are there any plans ...
Dean Bell - about 6 hours ago
- Notebook: [Links to Modserial explanation](#)
Tobias Piroth - about 11 hours ago
- Notebook update: [Level shifting/translation](#)
Oliver Broad - about 14 hours ago
- Reply to [compiling problem with mbed website updates](#) - Hi Jeff, There was ...
Dan Ros - about 15 hours ago
- [CMSIS RTOS](#) was updated
Emilio Monti - about 16 hours ago
- Program pushed: [cmsis_rtos_isr](#) -



Getting Started

- Erzeuge ein neues Projekt
- Code im Text Editor eingeben
- Save and compile
- Compiler outputs
- Save to the USB flash disk



Einstieg in die Programmierung

① <http://mbed.org/>

mbed

Rapid Prototyping for Microcontrollers

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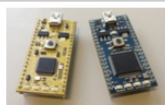
✓ Sie wurden abgemeldet.

mbed is a tool for Rapid Prototyping with Microcontrollers

[Prototyping hardware](#) [C++ SDK](#) [Powerful online tools](#) [Active community](#)

Hardware

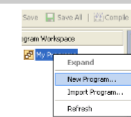
The mbed Microcontrollers are a series of ARM-based microcontroller development boards designed for fast, flexible and low-risk professional rapid prototyping.



[» Full hardware specification](#)

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[Simon Ford](#) - about an hour ago

[Comment on: BMP085 Pressure](#)



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Technische Informatik mbed
Dipl.-Ing. Franz Wolf

Einstieg in die Programmierung

② Login

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mbed, the fastest way to prototype with ARM based microcontrollers.



Einstieg in die Programmierung

③ Compiler



mbed

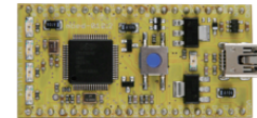
Rapid Prototyping for Microcontrollers

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LPC1114 »

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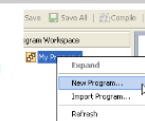
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Lucas Ezequiel Blanco - 5 minutes ago

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 Comment on: [BMP085 Pressure Sensor - Do your firmware have ...](#)
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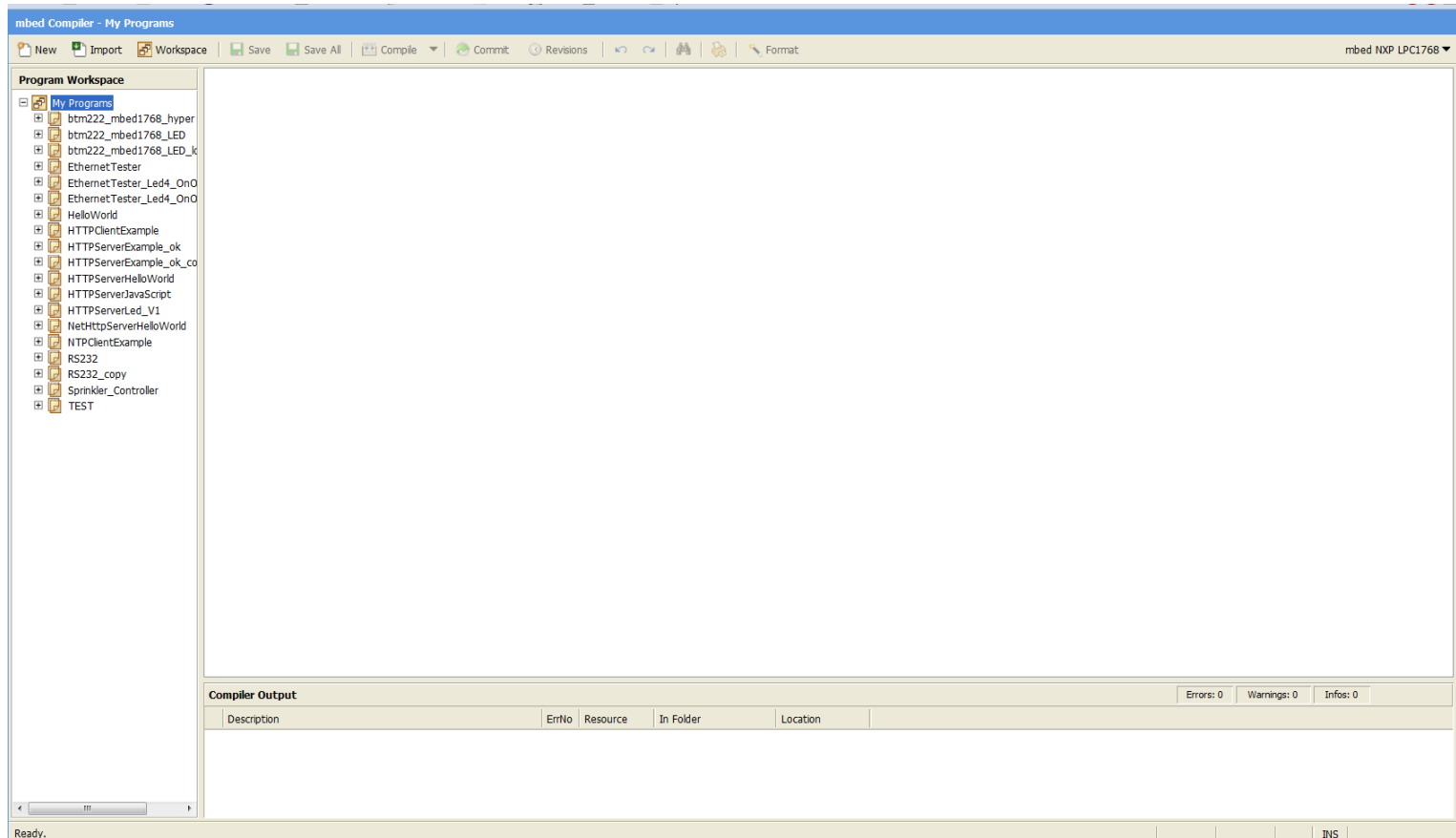
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 Notebook: [Links to Modserial explanation](#)



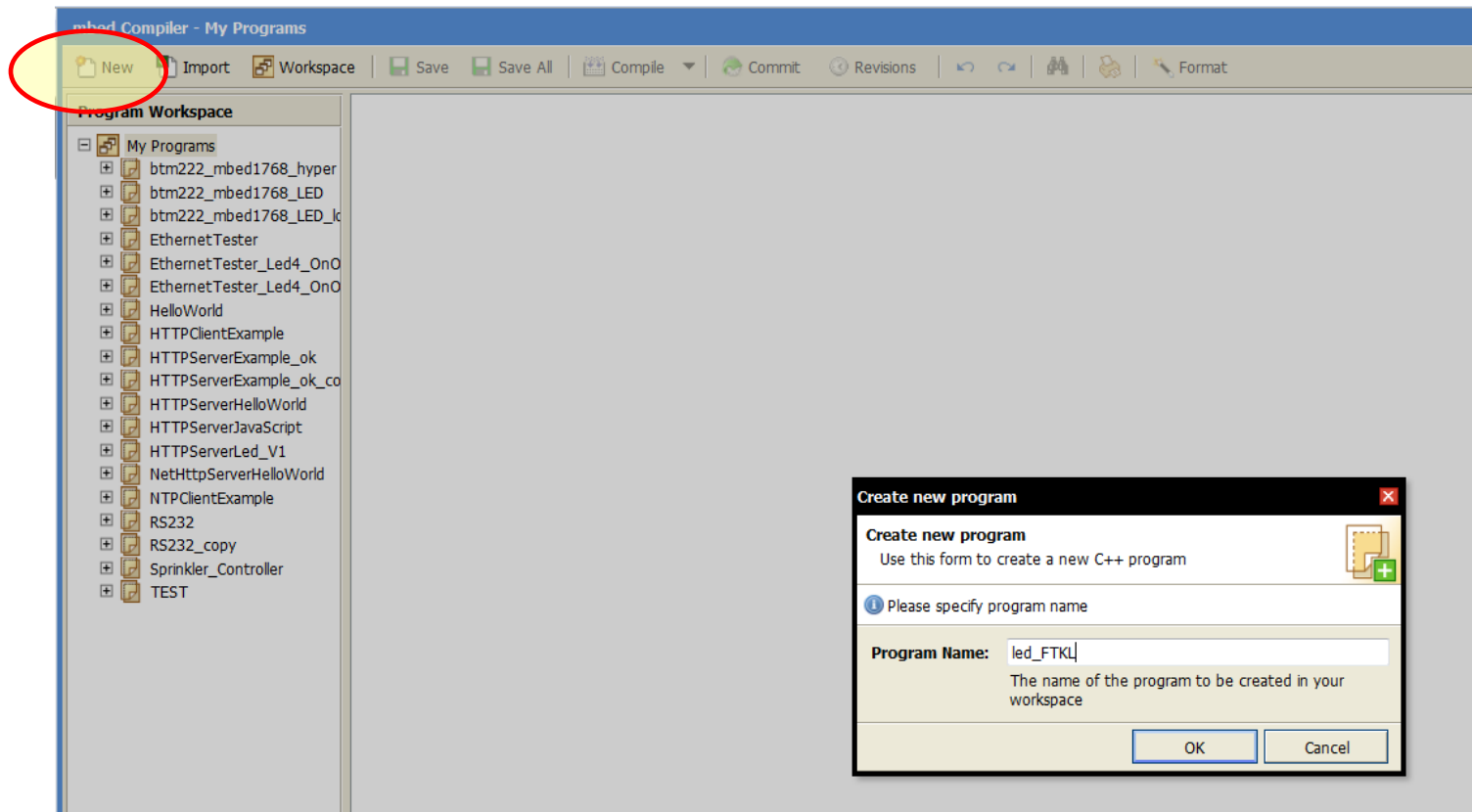
Einstieg in die Programmierung

④ Compiler



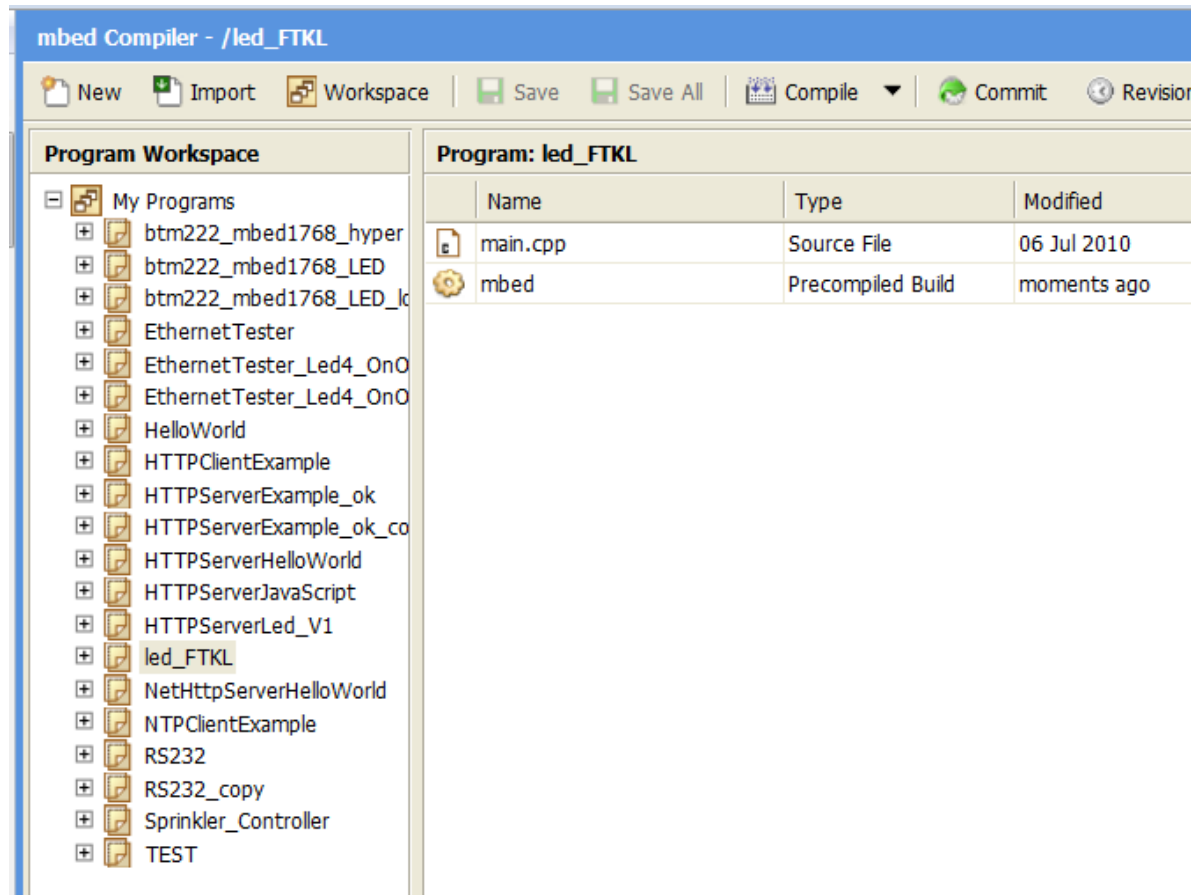
Einstieg in die Programmierung

⑤ Projekt anlegen „new“



Einstieg in die Programmierung

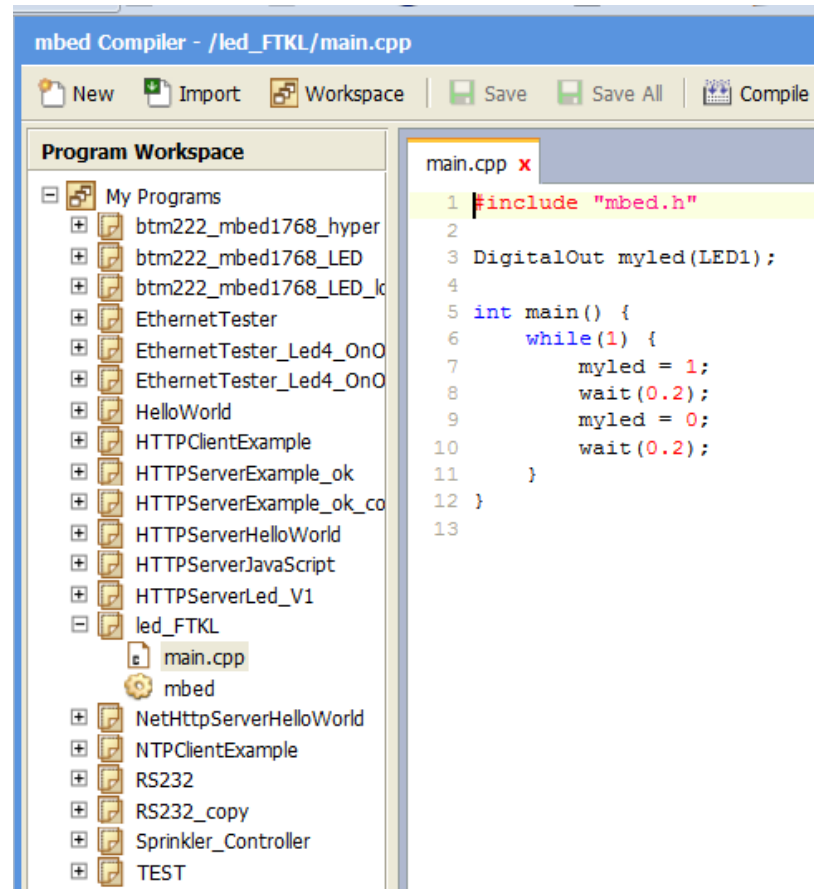
⑥ Projekt ist nun anlegt



Einstieg in die Programmierung

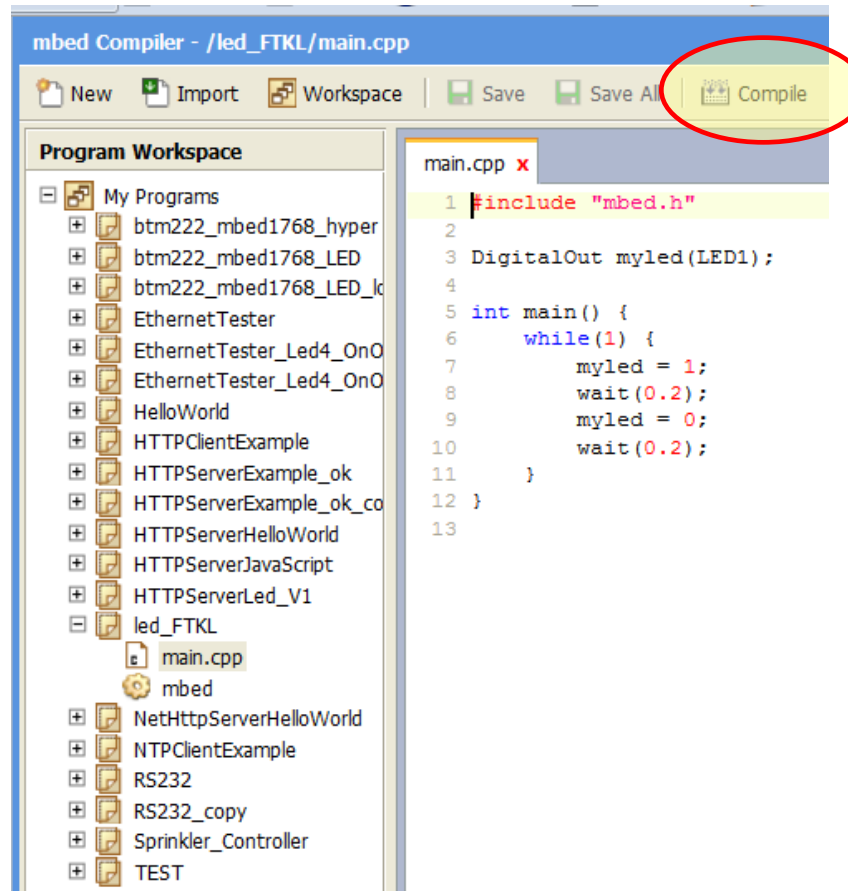
⑦ main.cpp öffnen

Dieser Code wurde
automatisch erzeugt



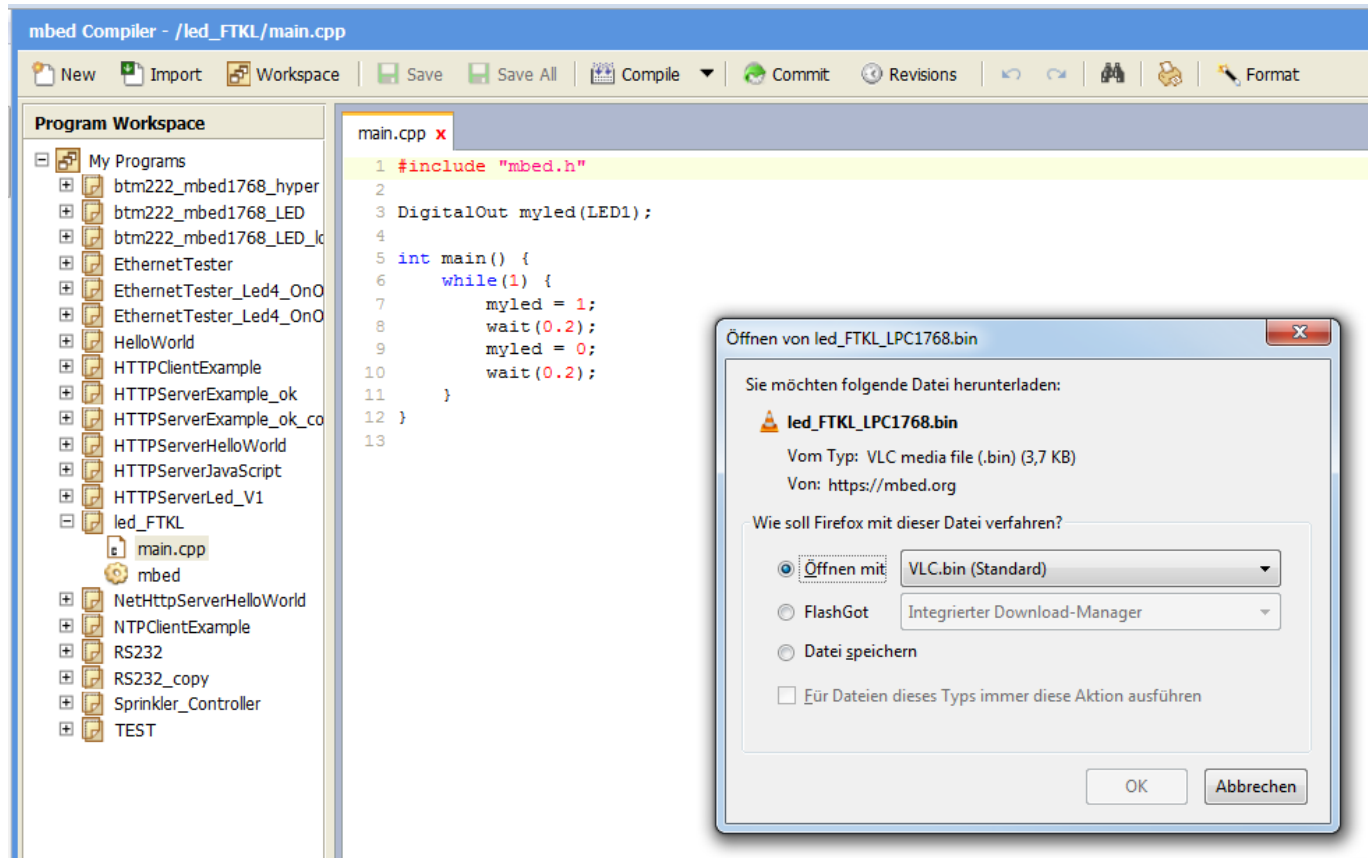
Einstieg in die Programmierung

⑧ Compile drücken



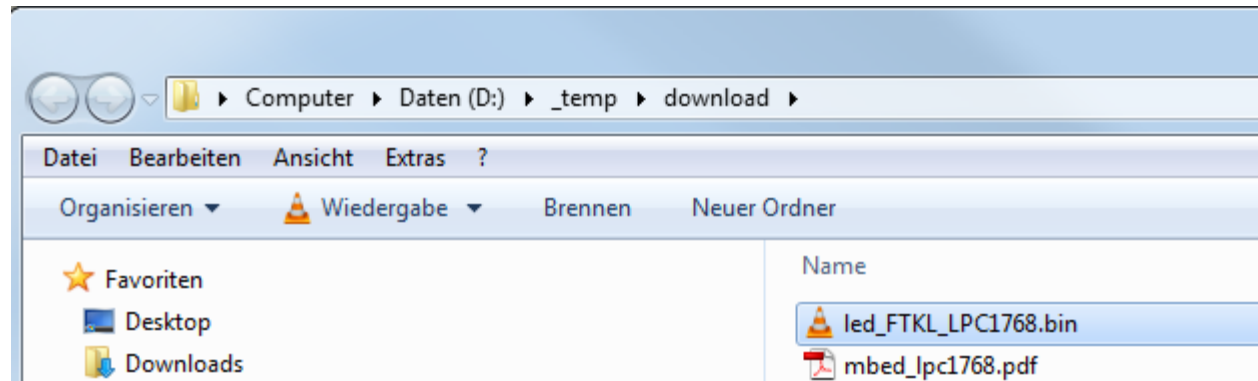
Einstieg in die Programmierung

⑨ Download File wird generiert



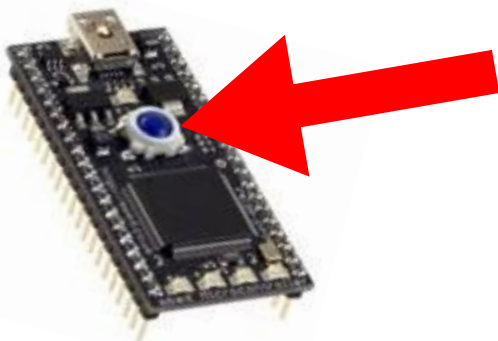
Einstieg in die Programmierung

⑩ Explorer öffnen



led_FTKL_LPC1768.bin

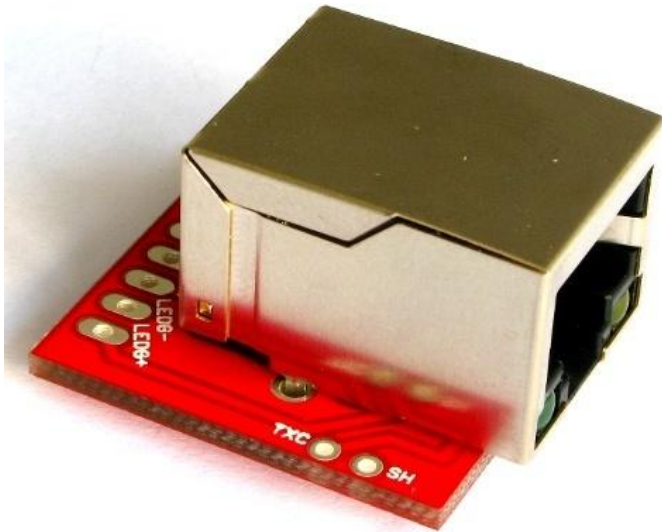
wird direkt auf die Hardware per “**drag and drop**” kopiert !!



Nach dem speichern auf das mbed
“**Press the button**” am mbed module
Das Programm läuft nun !!

RJ45 Ethernet mit mbed Teil 1

Breakout Board for Ethernet Magjack



3,29€

The screenshot shows the Cool Components website. The top navigation bar includes links for Info, Contact Us, My Account, Community, Checkout, Log In, and Payment. The main header displays the Cool Components logo and a shopping cart icon showing 0 items for a total of £0.00 (inc VAT). The breadcrumb trail indicates the location: Home » Dev Boards » Breakout Boards ».

Breakout Board for Ethernet Magjack

Stock Code : 000558
LIVE - 18 units currently available

ADD TO CART

This is a breakout board for a RJ45 ethernet socket with magnetics and status LEDs. The board offers all signals, but offers the possibility of only connecting the bare essential signals. Signal names are clearly marked. Signal pins are on a 0.1" breadboard friendly spacing. TXC/RXC/SH/SH2 are situated away from the main row of pins, but are still on a 0.1" spacing.

Available Signals

- TX+
- TX-
- TXC
- RX+
- RX-
- RXC
- LEDG+ (green LED)
- LEDG- (green LED)
- LEDY+ (yellow LED)
- LEDY- (yellow LED)
- SH (shield1)
- SH (shield2)

Please note, this board is not supplied with pin headers.

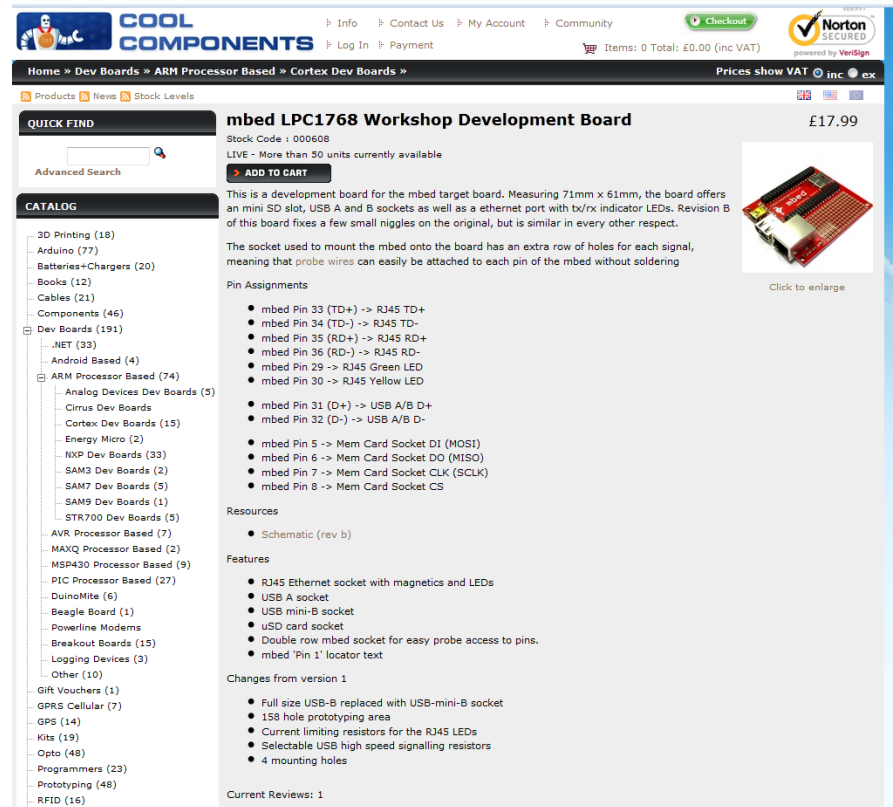
The left sidebar contains a 'QUICK FIND' search bar and a 'CATALOG' menu with the following categories and item counts:

- 3D Printing (18)
- Arduino (77)
- Batteries+Chargers (20)
- Books (12)
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- Components (46)
- Dev Boards (191)
 - .NET (33)
 - Android Based (4)
 - ARM Processor Based (74)
 - AVR Processor Based (7)
 - MAXQ Processor Based (2)
 - MSP430 Processor Based (9)
 - PIC Processor Based (27)
 - DuinoMite (6)
 - Beagle Board (1)
 - Powerline Modems

RJ45 Ethernet mit mbed Teil 2



mbed LPC1768 Workshop Development Boar



COOL COMPONENTS

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 - SAM2 Dev Boards (2)
 - SAM7 Dev Boards (5)
 - SAM9 Dev Boards (1)
 - STR700 Dev Boards (5)
 - AVR Processor Based (7)
 - MAXQ Processor Based (2)
 - MSP430 Processor Based (9)
 - PIC Processor Based (27)
 - DuinoMite (6)
 - Beagle Board (1)
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 - Other (10)
- Gift Vouchers (1)
- GPRS Cellular (7)
- GPS (14)
- Kits (19)
- Opto (48)
- Programmiers (23)
- Prototyping (48)
- RFID (16)

mbed LPC1768 Workshop Development Board

Stock Code : 000608
LIVE - More than 50 units currently available

ADD TO CART

£17.99

This is a development board for the mbed target board. Measuring 71mm x 61mm, the board offers an mini SD slot, USB A and B sockets as well as a ethernet port with tx/rx indicator LEDs. Revision B of this board fixes a few small niggles on the original, but is similar in every other respect.

The socket used to mount the mbed onto the board has an extra row of holes for each signal, meaning that probe wires can easily be attached to each pin of the mbed without soldering

Pin Assignments

- mbed Pin 33 (TD+) -> RJ45 TD+
- mbed Pin 34 (TD-) -> RJ45 TD-
- mbed Pin 35 (RD+) -> RJ45 RD+
- mbed Pin 36 (RD-) -> RJ45 RD-
- mbed Pin 29 -> RJ45 Green LED
- mbed Pin 30 -> RJ45 Yellow LED
- mbed Pin 31 (D+) -> USB A/B D+
- mbed Pin 32 (D-) -> USB A/B D-
- mbed Pin 5 -> Mem Card Socket DI (MOSI)
- mbed Pin 6 -> Mem Card Socket DO (MISO)
- mbed Pin 7 -> Mem Card Socket CLK (SCLK)
- mbed Pin 8 -> Mem Card Socket CS

Resources

- Schematic (rev b)

Features

- RJ45 Ethernet socket with magnetics and LEDs
- USB A socket
- USB mini-B socket
- uSD card socket
- Double row mbed socket for easy probe access to pins.
- mbed 'Pin 1' locator text

Changes from version 1

- Full size USB-B replaced with USB-mini-B socket
- 158 hole prototyping area
- Current limiting resistors for the RJ45 LEDs
- Selectable USB high speed signalling resistors
- 4 mounting holes

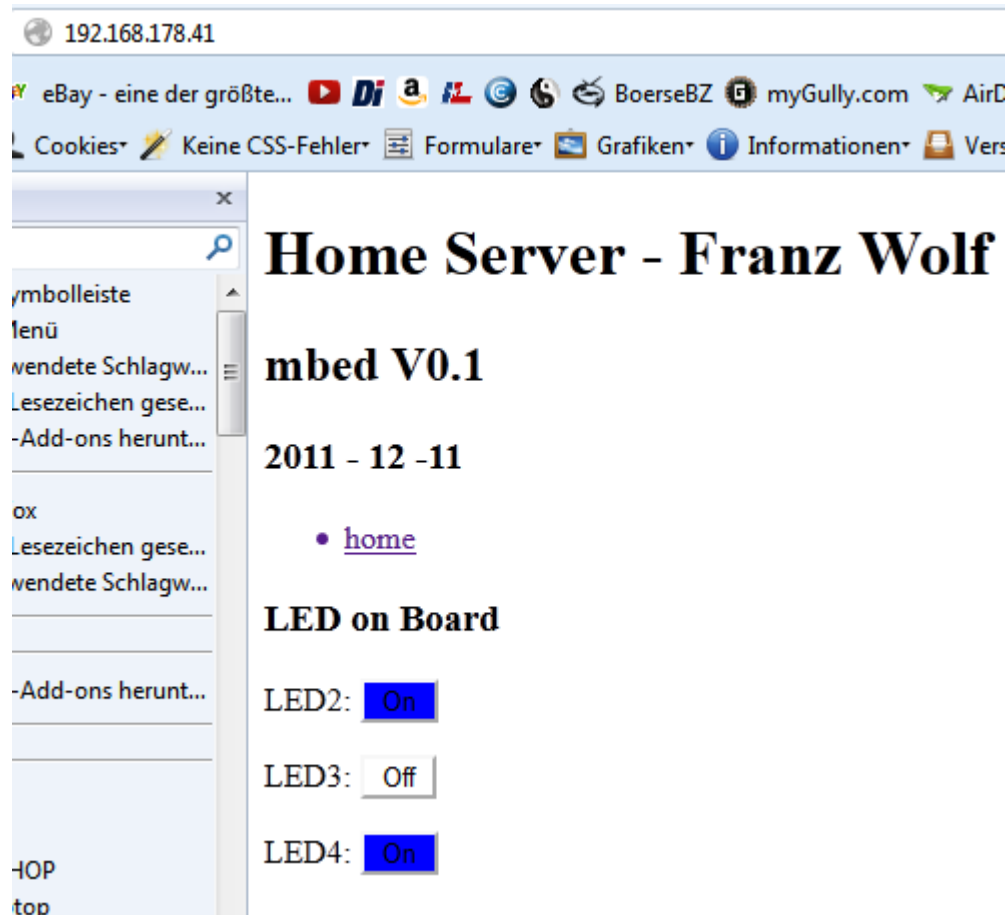
Current Reviews: 1

22,94€



Minimal HTTP Server

Adresse des servers



Minimal HTTP Server

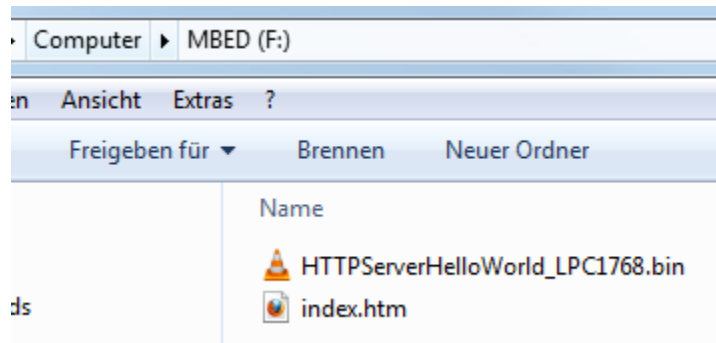
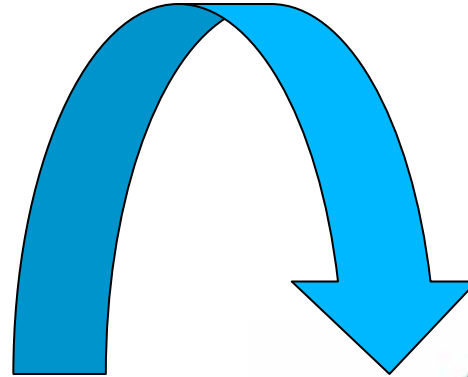
HTTPServerHelloWorld.cpp x

```
1 #include "mbed.h"
2 #include "EthernetNetIf.h"
3 // #include "HTTPClient.h"
4 #include "HTTPServer.h"
5
6
7 #if 0
8 /*
9  * Use "DHCP"
10 */
11 EthernetNetIf eth;
12 #else
13 /*
14  * Use "static IP address" (Parameters:IP, Subnet mask, Gateway, DNS)
15 */
16
17 EthernetNetIf eth(
18     IpAddr(192,168,178,41), //IP Address
19     IpAddr(255,255,255,0), //Network Mask
20     IpAddr(192,168,178,1), //Gateway
21     IpAddr(192,168,178,1) //DNS
22 );
23
24 #endif
25
26 HTTPServer svr;
27
28 DigitalOut myled(LED1);
29
30 DigitalOut led1(LED1, "led1");
31 DigitalOut led2(LED2, "led2");
32 DigitalOut led3(LED3, "led3");
33 DigitalOut led4(LED4, "led4");
34
35 LocalFileSystem fs("webfs");
36
37 int main() {
38     Base::add_rpc_class<DigitalOut>();
39     EthernetErr ethErr = eth.setup();
40     if (ethErr) {
41         printf("Error %d in setup.\n", ethErr);
42         return -1;
43     }
44     printf("\r\nSetup OK\r\n");
45
46     FSHandler::mount("/webfs", "/files"); //Mount /webfs path on /files web path
47     FSHandler::mount("/webfs", "/"); //Mount /webfs path on web root path
48
49     svr.addHandler<SimpleHandler>("/hello");
50     svr.addHandler<RPCHandler>("/rpc");
51     svr.addHandler<FSHandler>("/files");
52     svr.addHandler<FSHandler>("/"); //Default handler
53     //Example : Access to mbed.htm : http://a.b.c.d/mbed.htm or http://a.b.c.d/files/mbed.htm
54     svr.bind(80);
55
56     printf("Listening...\n");
57
58     Timer tm;
59     tm.start();
60     //Listen indefinitely
61     while (1) {
62         Net::poll();
63         if (tm.read() > .5) {
64             myled=!myled; //Show that we are alive
65             tm.start();
66         }
67     }
68 }
```



Minimal http Server

Dateien am mbed gespeichert



http Server mit ein wenig mehr Pep !!!

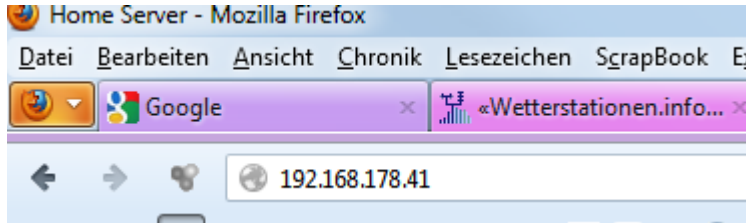


Schlagwörter:

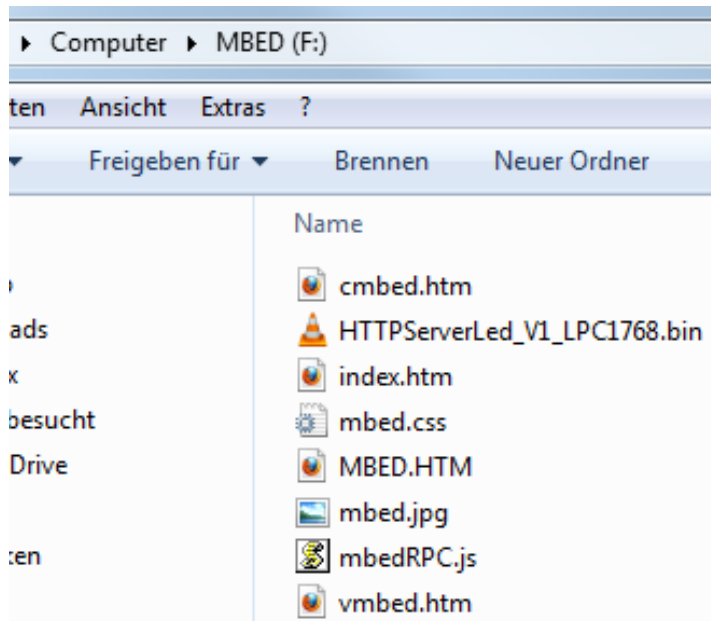
CSS (Cascading Style Sheets) und
js (*JavaScript*) Dateien



homeserver

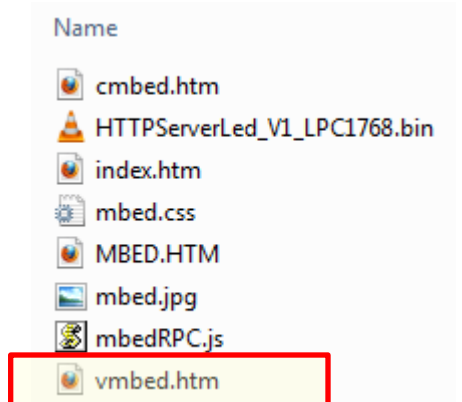
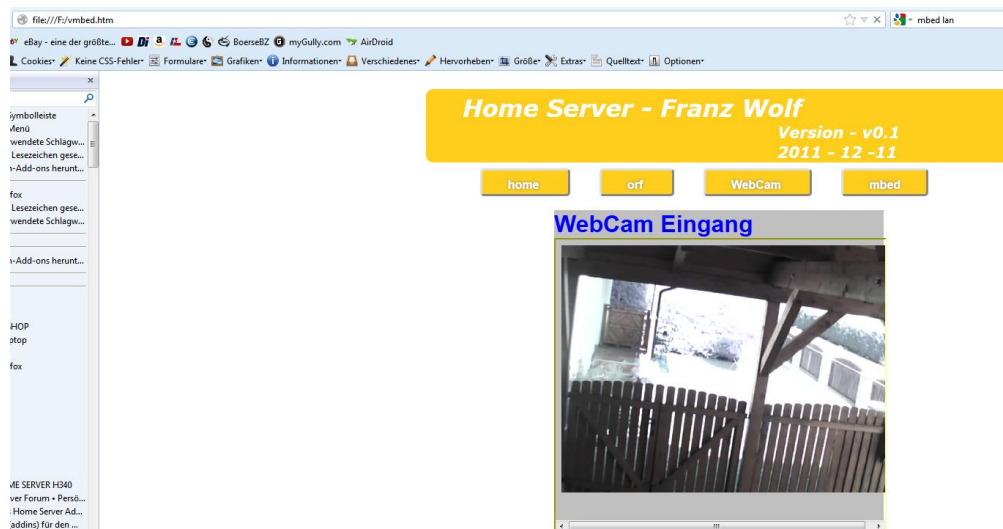
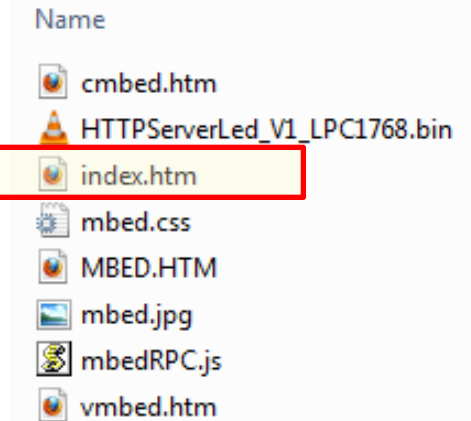
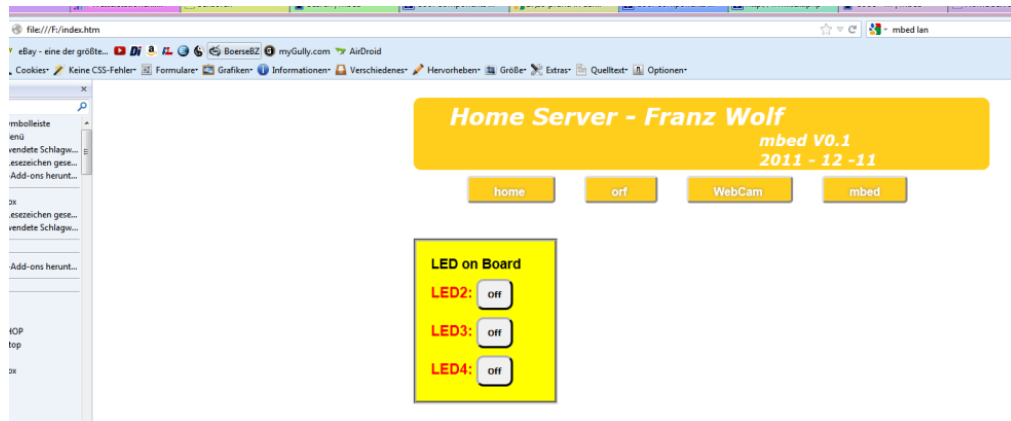


Adresse des servers

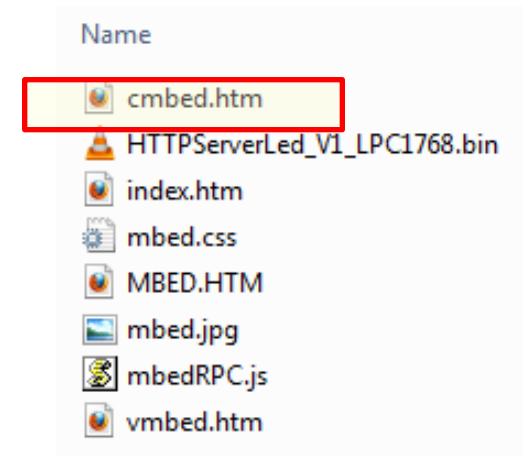
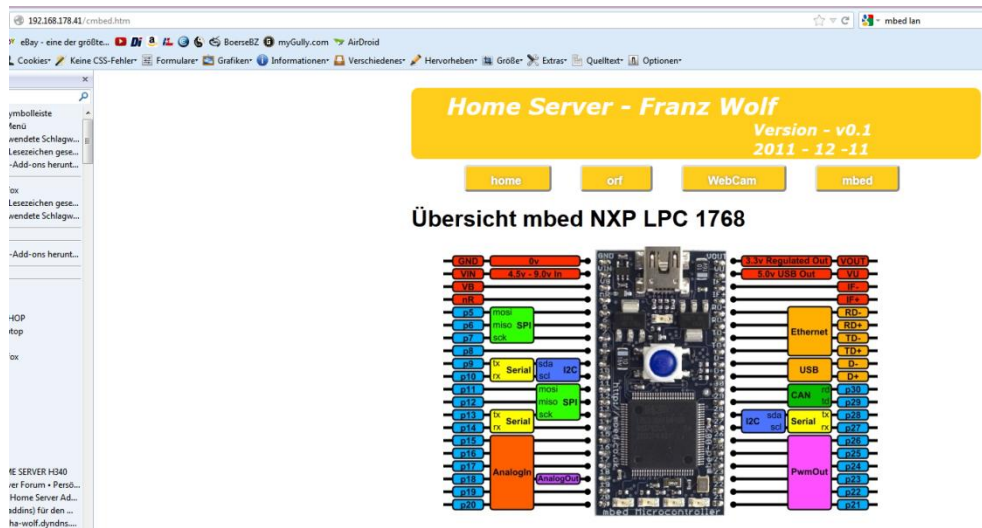


Dateien die am MBED
gespeichert sind

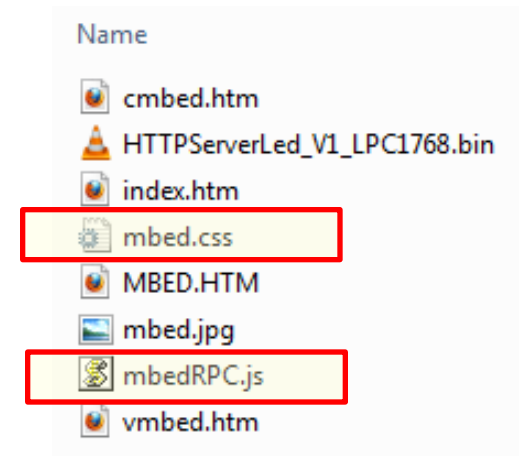
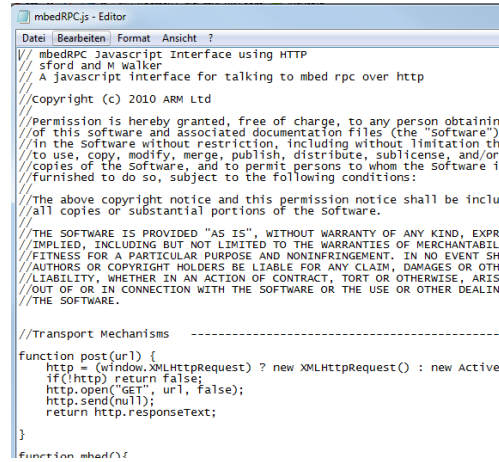
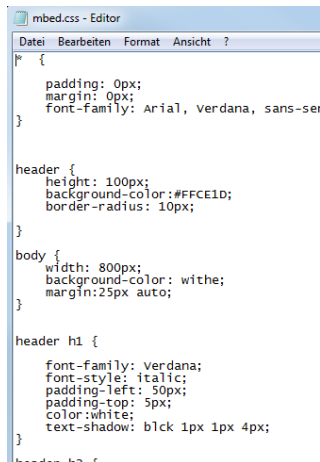
homeserver



homeserver



CSS (Cascading Style Sheets) und js (JavaScript) Dateien



dyndns

The screenshot shows the Fritz!Box 7390 web interface. The top header features the 'FRITZ!' logo and the model name 'FRITZ!Box 7390'. On the right, there are links for 'Abmelden', 'Ansicht: Erweitert', 'Inhalt', and 'Hilfe'. The left sidebar contains a navigation menu with categories like 'Übersicht', 'Internet', 'Telefonie', 'Heimnetz', 'WLAN', 'DECT', and 'System'. The 'Freigaben' (Port Forwarding) section is active, with sub-tabs for 'Portfreigaben', 'Speicher', 'Fernwartung', 'Dynamic DNS', and 'VPN'. The 'Dynamic DNS' tab is selected, showing a configuration page for Dynamic DNS. It includes a checkbox 'Dynamic DNS benutzen' which is checked, and a text input for the provider 'dyndns.org'. Below this are fields for 'Domainname:', 'Benutzername:', and 'Kennwort:'. A button 'Neuen Domainnamen anmelden' is next to the provider dropdown. At the bottom right of the configuration area are buttons 'Übernehmen', 'Abbrechen', and 'Hilfe'.

FRITZ! **FRITZ!Box 7390**

Abmelden Ansicht: Erweitert Inhalt Hilfe

Übersicht
Internet
Online-Monitor
Zugangsdaten
Filter
Freigaben
MyFRITZ!
Telefonie
Heimnetz
WLAN
DECT
System

Assistenten
Einrichten, Update, Telefone

MyFRITZ!
Anrufe, Nachrichten

Freigaben
Portfreigaben Speicher Fernwartung **Dynamic DNS** VPN

Über Dynamic DNS können Anwendungen und Dienste, für die in der FRITZ!Box-Firewall Portfreigaben eingerichtet wurden, unter einem festen Domainnamen aus dem Internet erreicht werden, obwohl sich die öffentliche IP-Adresse der FRITZ!Box mit jeder Internetwahl ändert.

☒ Dynamic DNS benutzen
Geben Sie die Anmeldedaten für Ihren Dynamic DNS-Anbieter an.

Dynamic DNS-Anbieter: dyndns.org **Neuen Domainnamen anmelden**

Domainname:

Benutzername:

Kennwort:

Übernehmen Abbrechen Hilfe

Ist leider nicht mehr gratis, es gibt die Möglichkeit sich anzumelden, und sich danach „downgraden“ zu lassen! Stand: 08/2012



http server mit FritzBox und dyndns

Freigaben

Portfreigaben Speicher Fernwartung Dynamic DNS VPN

An FRITZ!Box angeschlossene Computer sind sicher vor unerwünschten Zugriffen aus dem Internet. Für einige Anwendungen wie z.B. Online-Spiele oder das Filesharing-Programm eMule muss Ihr Computer jedoch für andere Teilnehmer des Internets erreichbar sein. Durch Portfreigaben erlauben Sie solche Verbindungen.

Liste der Portfreigaben

Aktiv	Bezeichnung	Protokoll	Port	an Computer	an Port
<input checked="" type="checkbox"/>					
<input checked="" type="checkbox"/>					
<input checked="" type="checkbox"/>					
<input checked="" type="checkbox"/>					
<input checked="" type="checkbox"/>					
<input checked="" type="checkbox"/>					
<input checked="" type="checkbox"/>					
<input checked="" type="checkbox"/>					
<input checked="" type="checkbox"/>					
<input checked="" type="checkbox"/>	mbed	TCP	85	mbed	80

Neue Portfreigabe

☒ Änderungen der Sicherheitsprogramme mit UPnP verändern. Aktivieren Sie Internet gestatten mö

Über UPnP geöffnet

Die aktuelle Konfiguration UPnP-Unterstützung könn

Protokoll
TCP
TCP



FRITZ!Box 7390

Abmelden Ansicht: Erweitert Inhalt Hilfe

Übersicht Internet

Online-Monitor
Zugangsdaten
Filter
Freigaben
MyFRITZ!

Telefonie
Heimnetz
WLAN
DECT

Portfreigabe

☒ Portfreigabe aktiv für Andere Anwendungen
Bezeichnung mbed
Protokoll TCP
von Port 85 bis Port
an Computer mbed
an IP-Adresse 192.168.178.41
an Port 80

OK

Abbrechen

Hilfe



Aufruf aus dem Internet mittels dyndns

alpha-wolf.dyndns.org:85

eBay - eine der größte...

Cookies* Keine CSS-Fehler* Formulare* Grafiken* Informationen* Verschie

Home Server - Franz Wolf

mbed V0.1

2011 - 12 -11

- [home](#)

LED on Board

LED2:

LED3:

LED4:

symbolleiste

menü

verwendete Schlagw...

Lesezeichen gese...

Add-ons herunt...

ox

Lesezeichen gese...

verwendete Schlagw...

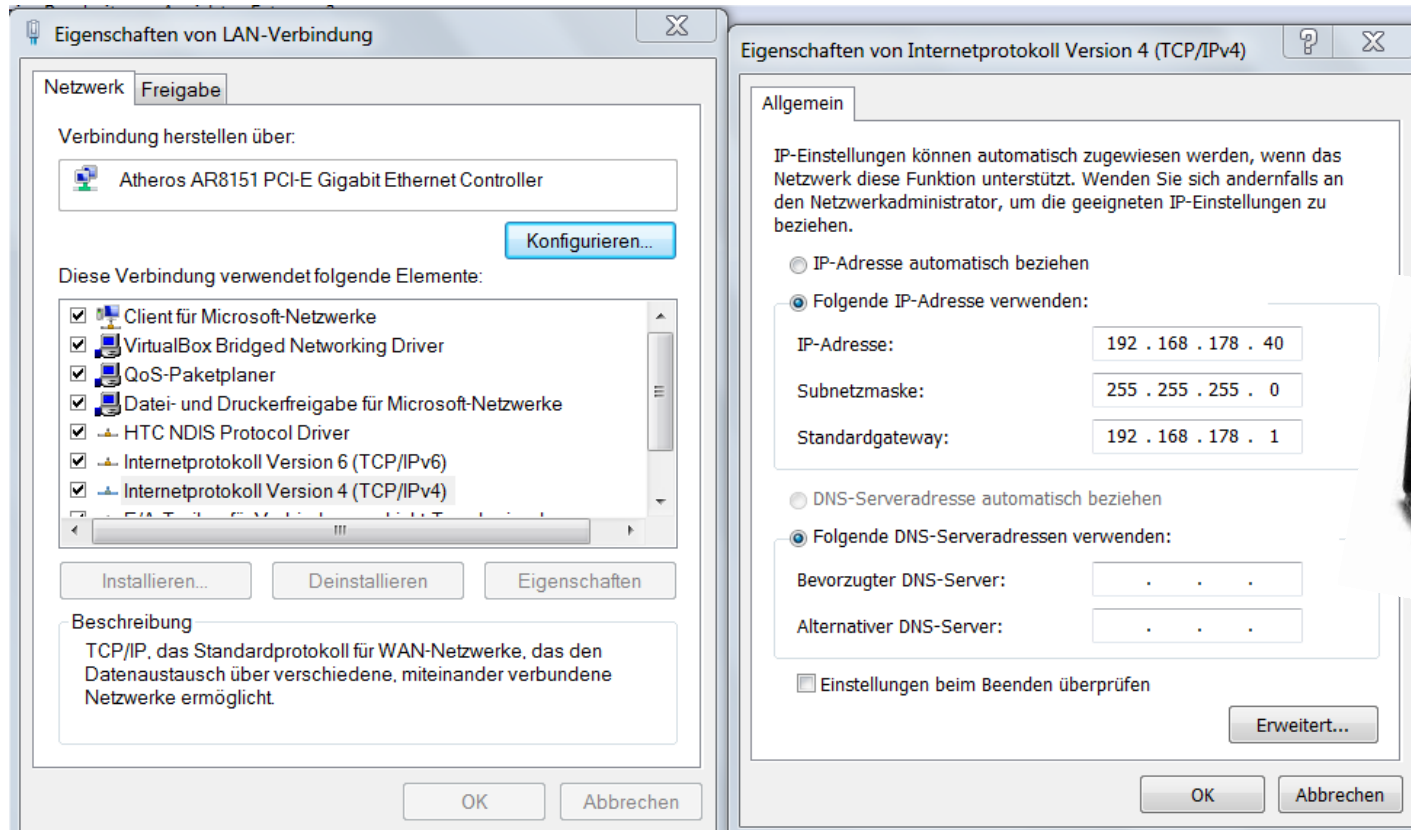
Add-ons herunt...

HOP

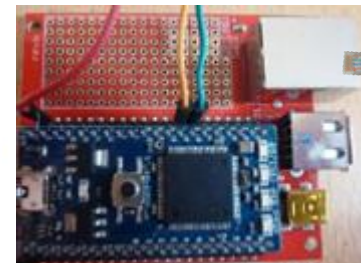
top




Mbed - Crossoverkabel - PC



```
EthernetNetIf eth(  
    IpAddr(192,168,178,41), //IP Address  
    IpAddr(255,255,255,0), //Network Mask  
    IpAddr(192,168,178,1), //Gateway  
    IpAddr(192,168,178,1) //DNS  
);
```



<http://www.coolcomponents.co.uk>

**COOL
COMPONENTS**

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Items: 0 Total: £0.00 (exc VAT)

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Norton
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Home » Sensors » Pressure / Temperature »

Prices show VAT inc ex

ProductsNewsStock Levels

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CATALOG

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Gift Vouchers (1)
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GPS (14)
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 Biometric (3)
 Current (6)
 Gyro/Compass (8)
 Infrared (7)

Digital Temperature Sensor Breakout - TMP102

Stock Code : 000478
LIVE - 10 units currently available

ADD TO CART

This is a breakout board for the incredibly small TMP102 digital temperature sensor. The TMP102 is a digital sensor (I2C a.k.a. TWI), has a resolution of 0.0625°C, and is accurate up to 0.5°C. The sensor requires very low-current, and is loaded with features.

Communication with the TMP102 is achieved through a two-wire serial interface. There is no on-board voltage regulator, so supplied voltage should be between 1.4 to 3.6VDC. Filtering capacitors and pull-up resistors are included as shown.

Features:

- 12-bit, 0.0625°C resolution
- Accuracy: 0.5°C (-25°C to +85°C)
- Low quiescent current
 - 10µA Active (max)
 - 1µA Shutdown (max)
- 1.4V to 3.6VDC supply range
- Two-wire serial interface

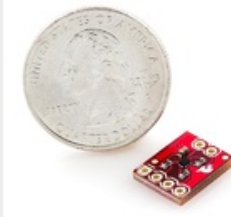
Documents:

- Schematic
- TMP102 Datasheet
- Example Code (ATmega128)
- mbed example

REVIEWS

ADD TO CART

Quantity	Price
1+	£3.93
10+	£3.53
100+	£3.14



Click to enlarge

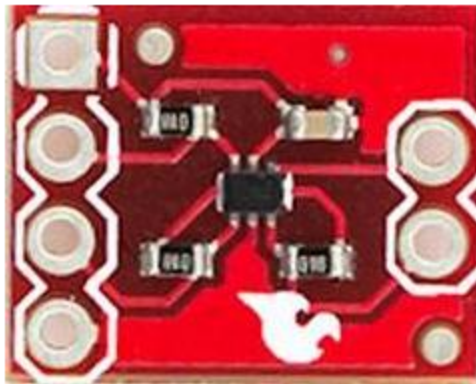
Texas Instrument Temperatur Sensor

Cookbook » TMP102 Temperature Sensor

TMP102 Temperature Sensor

import libraries : **tmp102**

The TMP102 is an I2C digital temperature sensor in a small SOT563 package, with a 0.0625C resolution and 0.5C accuracy.



ADD0=GND

- [TMP102 Datasheet](#)
- Available as a [Sparkfun TMP102 Breakout Board](#)

Hello World!

TMP102	mbed
1 - Vcc (square pad)	Vout
2 - SDA	p9
3 - SCL	p10
4 - Gnd	Gnd

Import

Import a program, a library or files from mbed.org

Enter a URL or select from the list

Source URL:

Import As: ☐ Program ☒ Library

Target Path:

Target Name:

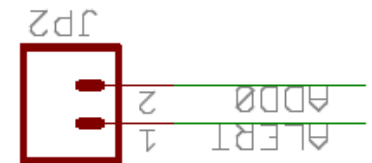
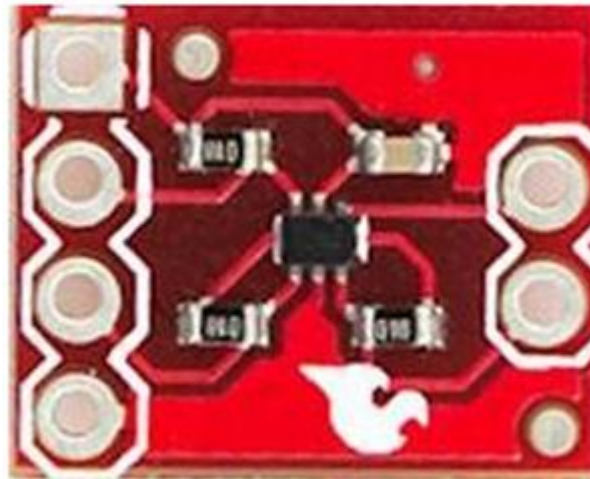
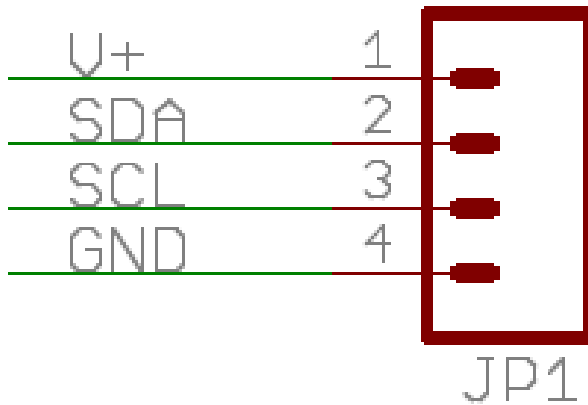
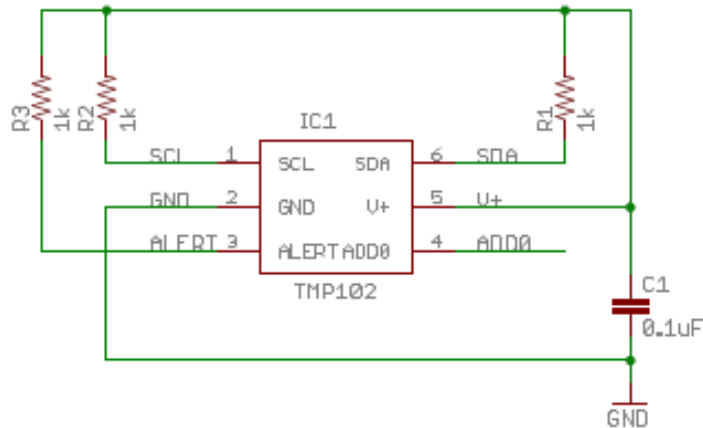
Listing published programs on mbed.org

Programs	Libraries	Bookmarked
Name	Tags	User
☆ mbed		gokmen.ascigok
☆ MessageHandler		BlazeX
☆ Base		BlazeX
☆ XBeePro668		BlazeX
☆ Servo	Servo	Tyler Weaver
☆ SPI_TFT1	display graphic LCD QVGA TFT	Peter Drescher
☆ TMP36 GZ	sensor Temperature TMP36	Tyler Weaver
☆ Terminal		Chris BAYLEY
☆ HBridge	H-bridge library motor motor dht	Giles Barton-Owver
☆ XBee	api mode xbee xbee	Hiroshi Yamauchi
☆ FatFileSystem		Giles Barton-Owver
☆ WavePlayer	audio files I2C I2S olavina RS lat	Giles Barton-Owver
☆ TLV320	audio CODEC I2C TLV320	Giles Barton-Owver
☆ I2S	audio I2S library tested TLV320	Giles Barton-Owver
☆ ANSTerm	ANSI Terminal	Dan Summers
☆ iniparser	iniparser	Toby Harris
☆ VodafoneK3770Lib	AT commands control door mode	Nicholas Herriot
☆ MSCFileSystem		Carlos Alberto Na
☆ FatFileSystemSD		Carlos Alberto Na
☆ DactLc2606	dac I2C LTC	Reed Kimble
☆ MX28	dynamixel MX28 Servo	Georgios Petrou
☆ MOOSESERIAL		Plot: Sladek
☆ MPU6050	MPU6000 MPU6050 MPU60x0	Erik Olemann
☆ SerialFlow	Serial	Oleg Evseev
☆ LED_CUBE	I2C led cube	Bas van Drunen Li
☆ PCF8575	I2C IO expander	Bas van Drunen Li
☆ PCF8574	I2C IO expander	Bas van Drunen Li
☆ LaserProjectorHardware		Alvaro CASSINELLI

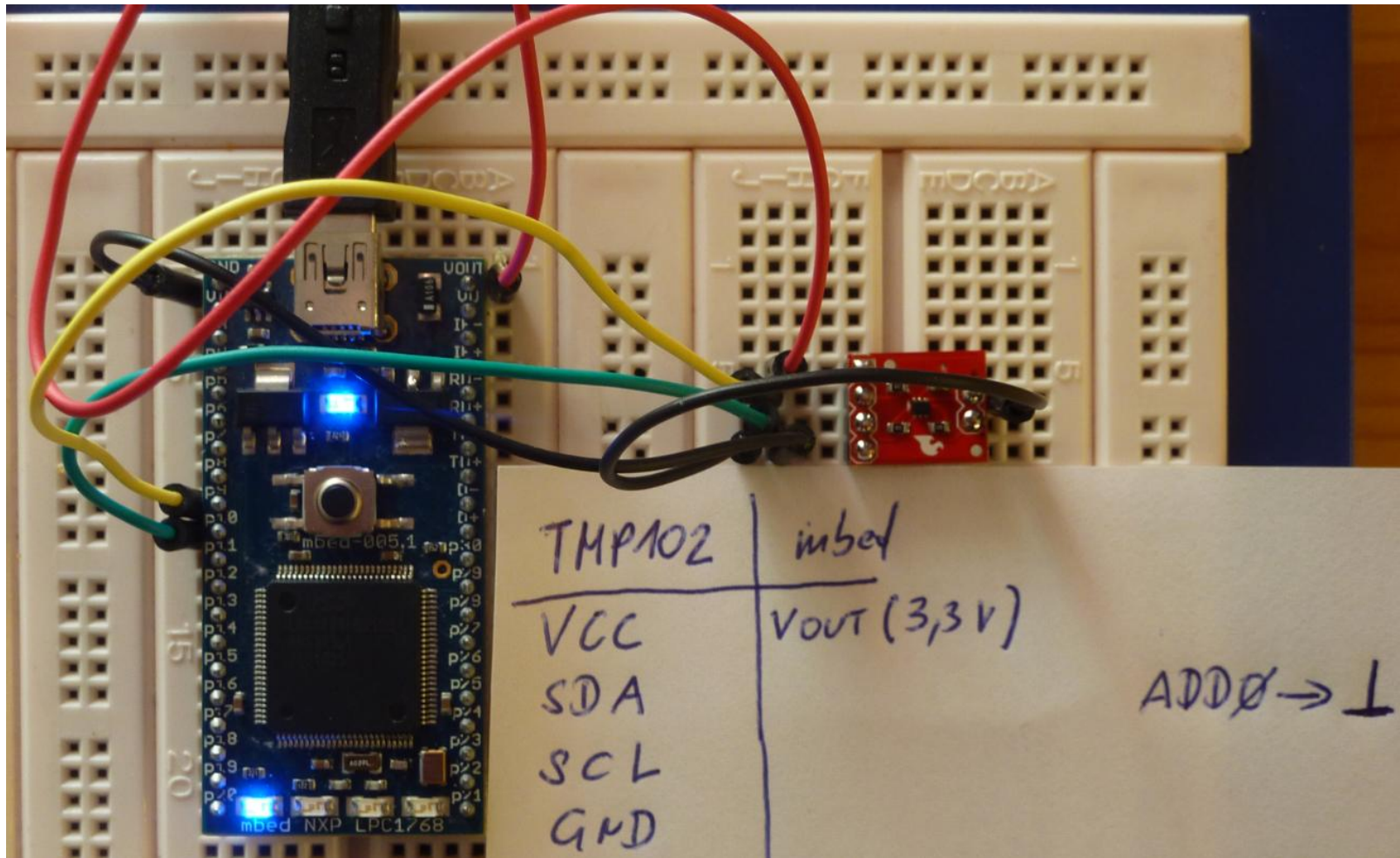
Page 1 of 30 | tmp102 Search



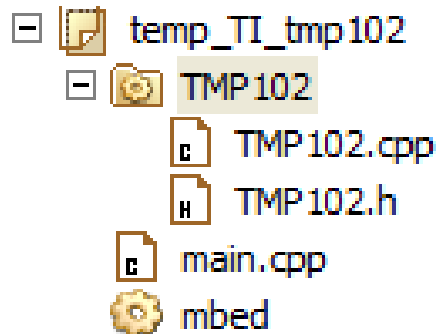
tmp102



Tmp102 HW Aufbau



Texas Instrument Temperatur Sensor

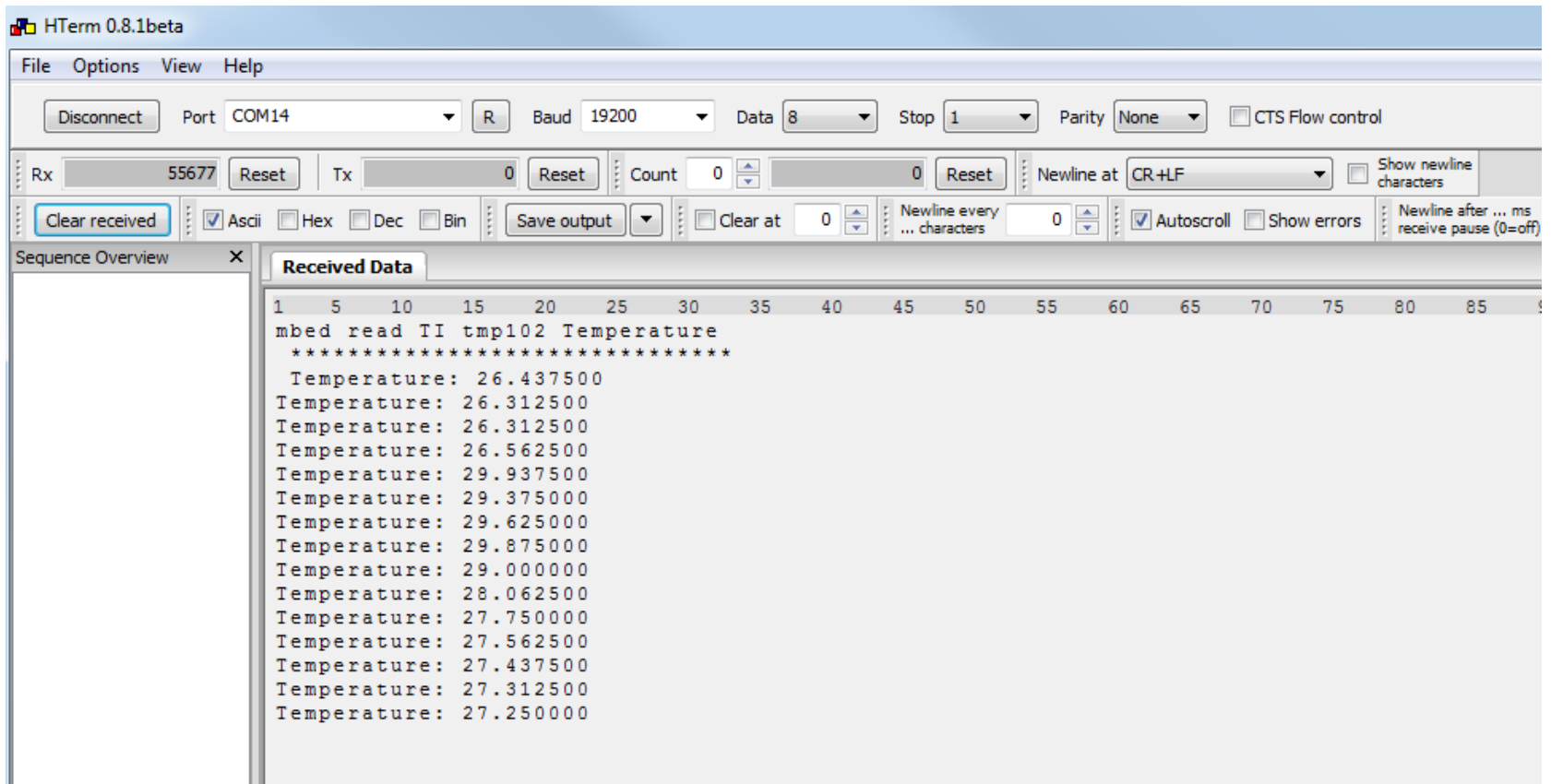


main.cpp x

```
1 #include "mbed.h"
2 #include "TMP102.h"
3
4 DigitalOut led1(LED1);
5
6 Serial pc (USBTX, USBRX);
7 TMP102 temperature(p9, p10, 0x90); //A0 pin is connected to ground
8
9 int main() {
10
11     pc.baud(19200); //tx, rx to PC
12     pc.printf("mbed read TI tmp102 Temperature\r\n ");
13     pc.printf("*****\r\n ");
14
15     while(1) {
16         pc.printf("Temperature: %f\r\n", temperature.read());
17
18         led1 = 1;
19         wait(1.0);
20         led1 = 0;
21     }
22 }
```



Hterm Ausgabe tmp102

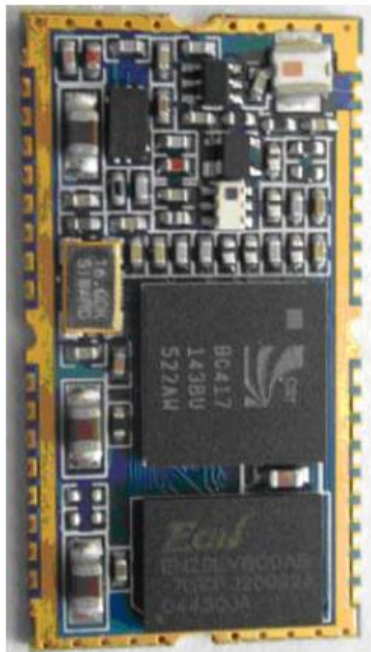


Bluetooth _ Module

Bluetooth[®] Module

BTM-222

Outline



MIKROCONTROLLER PRAXIS

Warenkorb Ihr Konto Kasse Anmelden Impressum

[Startseite](#) [Wireless](#) [Bluetooth Module](#) [BTM-222 Bluetooth Class-1 Modul](#)


Neue Artikel

GO

Kategorien

- Angebot / Sonderaktion
- Bauelemente aktiv
- Bauelemente passiv
- Development-Tools
- Display + Optoelektronik

BTM-222 Bluetooth Class-1 Modul



10,50 EUR - 9,60 EUR
inkl. 19 % MwSt zzgl. [Versandkosten](#)
Lieferzeit: Gewöhnlich versandfertig in 24 Stunden
Lagernd
0 [Bewertung\(en\)](#) | [Bewertung schreiben](#)

Art.Nr.: BTM-222



Bluetooth Code

main.cpp x

```

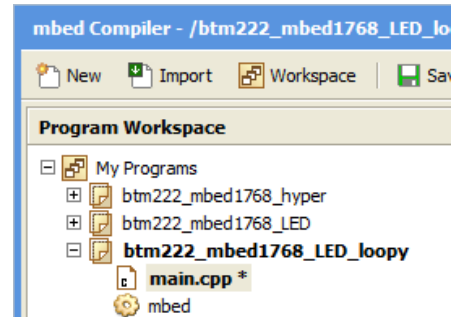
1 #include "mbed.h"
2
3 DigitalOut led_1(LED1);
4 DigitalOut led_2(LED2);
5 DigitalOut led_3(LED3);
6 DigitalOut led_4(LED4);
7 Serial pc (USBTX, USBRX);
8 Serial btm(p9, p10);
9
10 char c;
11 char serChar, count, temp;
12 int blink();
13
14 int main()
15 {
16     pc.baud(19200);
17     pc.printf("\r\n mbed is activ!\n");
18     pc.printf("\r\nTry to get connection to BTM222\r\n");
19     led_1 = 1;
20     wait(0.6);
21     led_1 = 0;
22     wait(0.6);
23     led_1= led_2= 1; count=0;
24
25     btm.baud(19200);
26     btm.printf("ATN=WOLF BTM-222\r"); //Name des BTM
27     while(1)
28     {
29         if (btm.readable())
30         {
31             temp= pc.putc(serChar=btm.getc());
32             switch (serChar)
33             {
34                 case 'a':
35                     led_1=led_2=led_3=led_4=1; break;
36                 case 'b':
37                     c='v';
38                     blink();
39                     break;
40                 case 't':
41                     led_1=!led_1; led_2=!led_2; led_3=!led_3; led_4=!led_4; break;
42                 case 'c':
43                     led_1=led_2=led_3=led_4=0; break;
44                 case 'x':
45                     led_1=led_3=1; led_2=led_4=0; break;
46                 default:
47                     led_1=led_3=0; led_2=led_4=1; break;
48             }
49         }
50     }
51 }

```

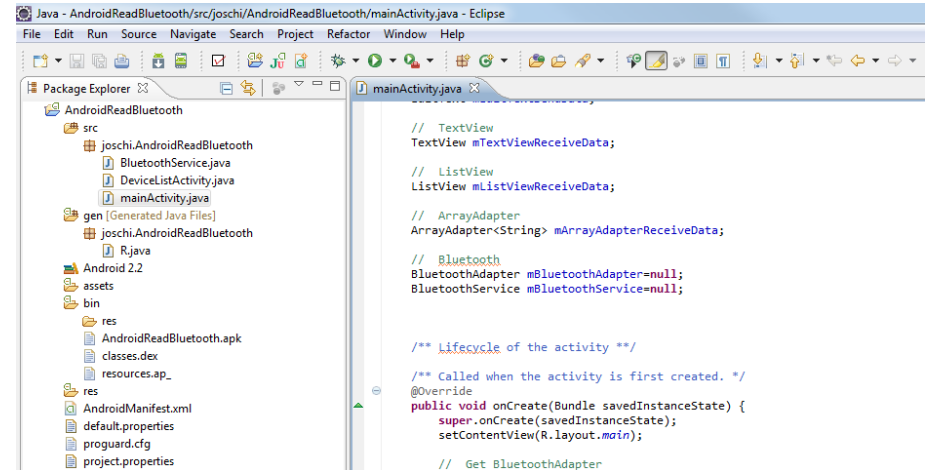
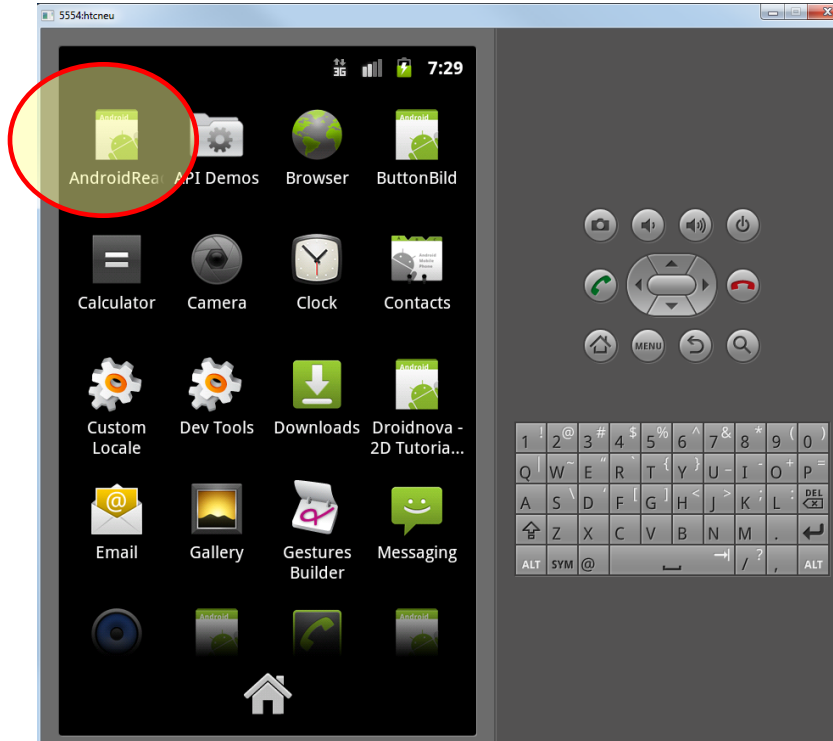
```

53 int blink(){
54
55     //for (int i=0; i<5; i++)
56
57     while (c!='x')
58     {
59         if (btm.readable())
60         {
61             c=btm.getc();
62         }
63
64         led_1 = 1;
65         wait(0.2);
66         led_1 = 0;
67
68         led_2 = 1;
69         wait(0.2);
70         led_2 = 0;
71
72         led_3 = 1;
73         wait(0.2);
74         led_3 = 0;
75
76         led_4 = 1;
77         wait(0.2);
78         led_4 = 0;
79
80     }
81
82     return 0;

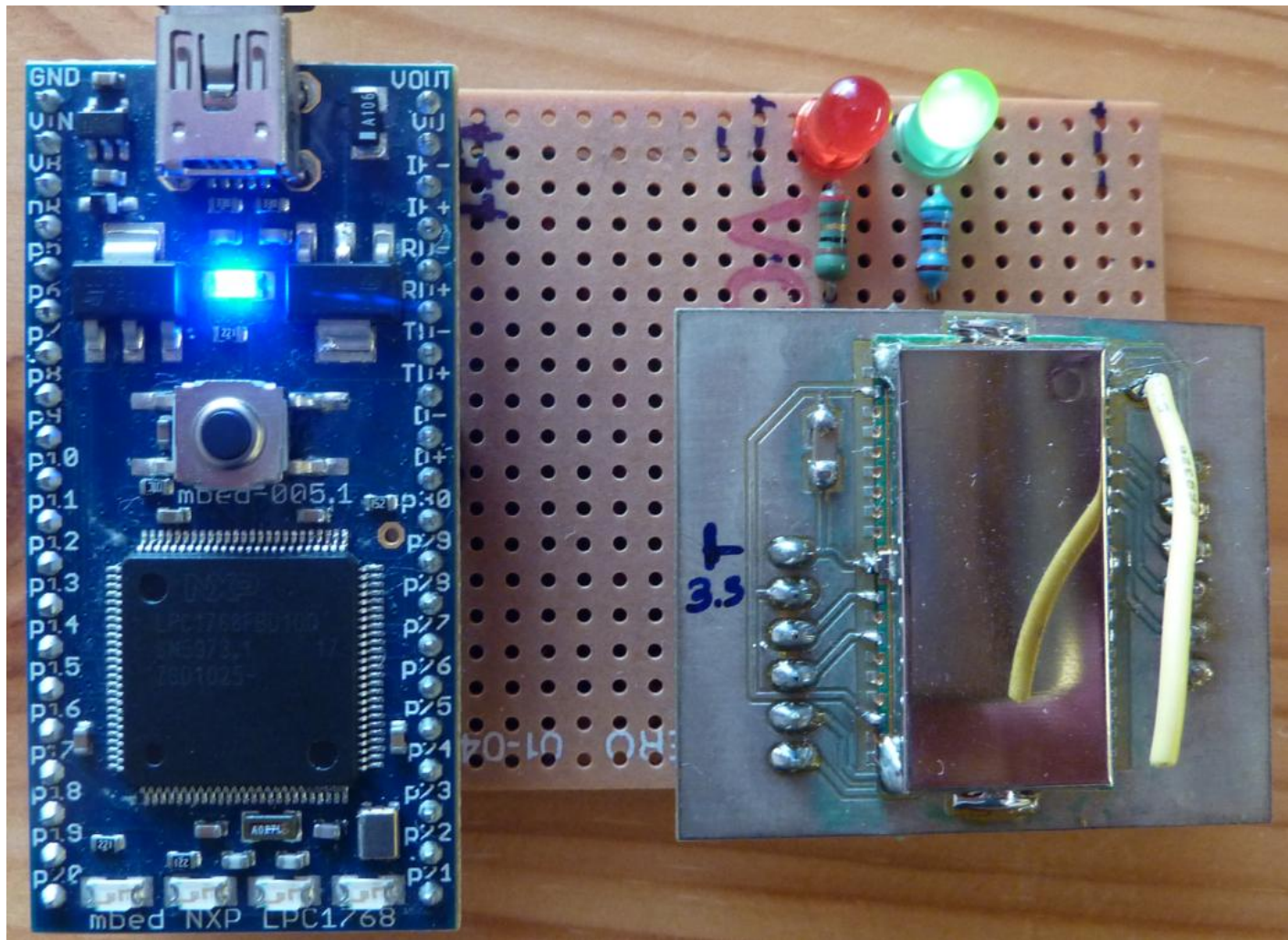
```



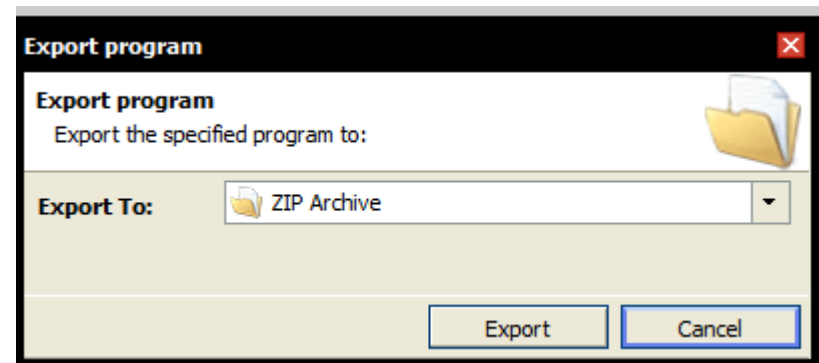
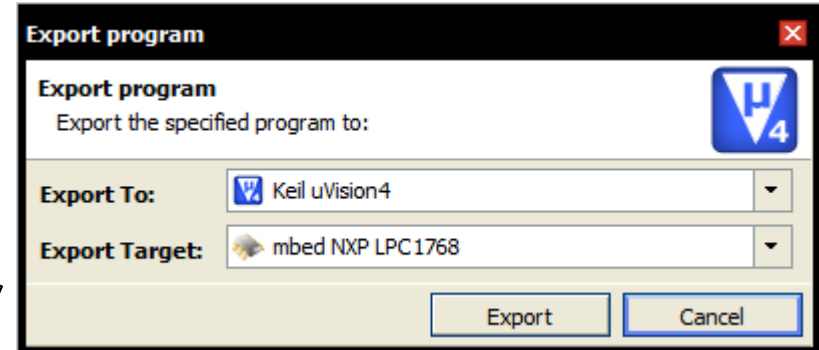
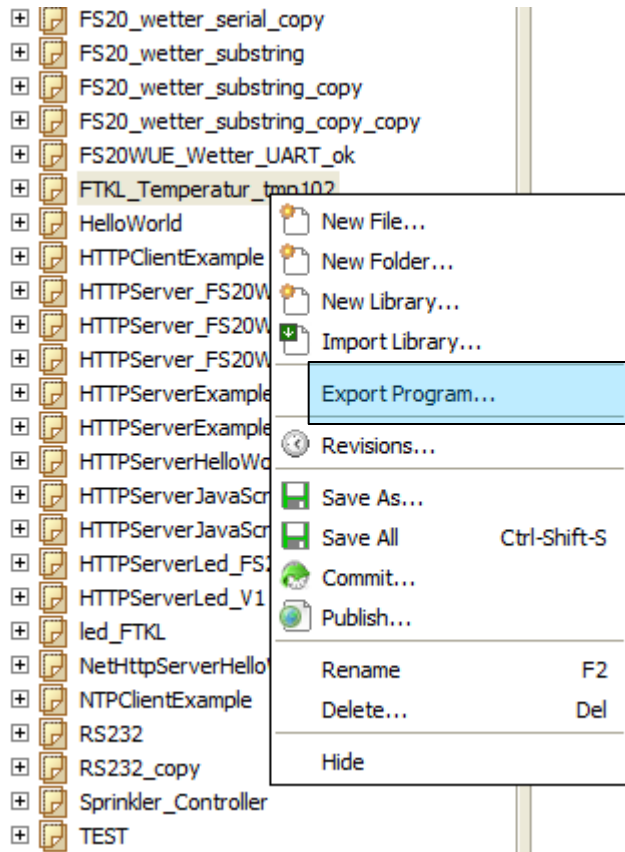
Android



Bluetooth HW

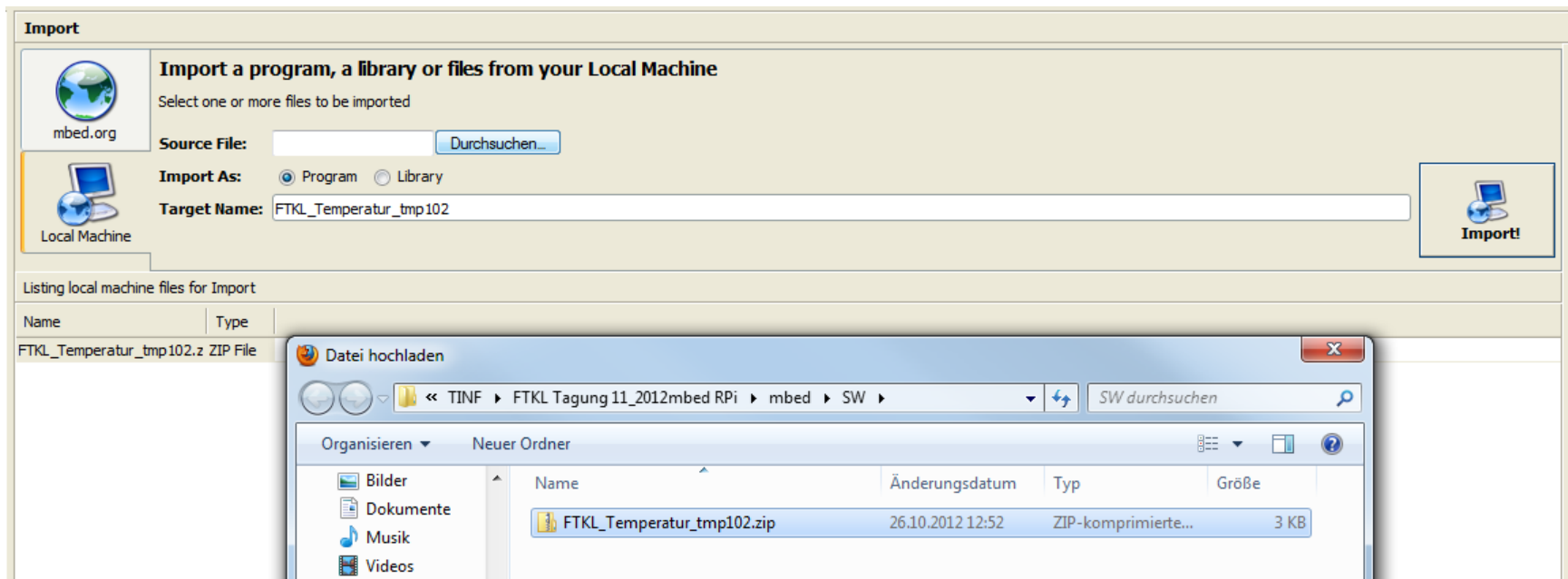
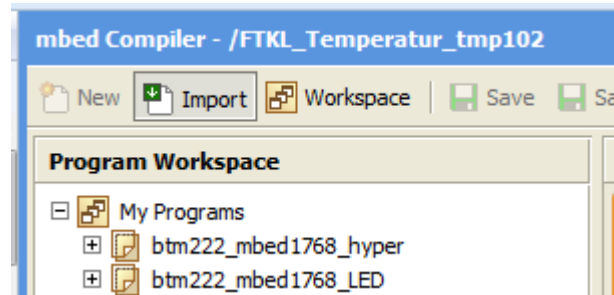


Programm exportieren

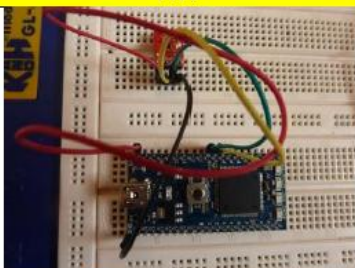

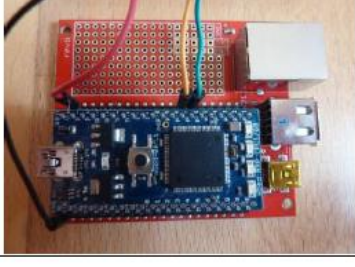



zum Archivieren ZIP-File

Programm importieren



Mbed Programme

Lehrgang : TINF		Dipl.-Ing. Franz Wolf (WF) 26.10.2012 Arbeitsblatt Mbed Programme FTKL Tagung.Docx	
Arbeitsblatt Nr. : Beispiele Mbed Programme			Seite 1
Programm	HW	SW	ZIP-File
FTKL_Temperatur_tmp102		<ul style="list-style-type: none"> FTKL_Temperatur_tmp102 <ul style="list-style-type: none"> TMP102 <ul style="list-style-type: none"> TMP102.cpp TMP102.h main.cpp mbed 	FTKL_Temperatur_tmp102.zip
FTKL_btm222		<ul style="list-style-type: none"> FTKL_btm222 <ul style="list-style-type: none"> main.cpp mbed 	FTKL_btm222.zip
FTKL_HTTPServerHelloWorld		<ul style="list-style-type: none"> FTKL_HTTPServerHelloWorld <ul style="list-style-type: none"> EthernetIF <ul style="list-style-type: none"> LPC1768 LPC2368 HTTPServer <ul style="list-style-type: none"> LPC1768 LPC2368 HTTPServerHelloWorld.cpp mbed 	FTKL_HTTPServerHelloWorld.zip Server minimal (ohne CSS):  index.htm



mbed

