

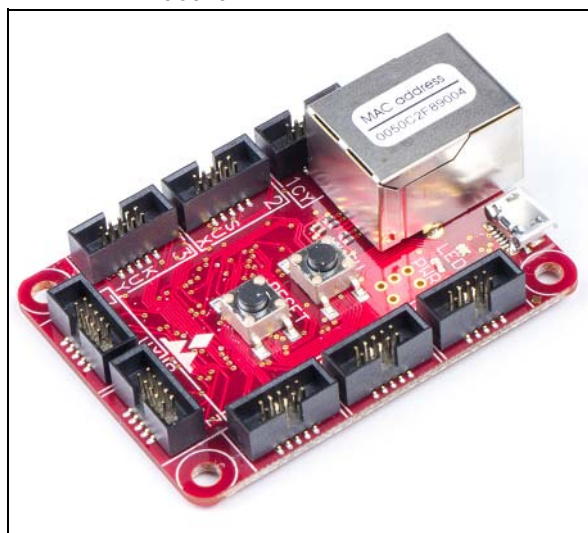
## Microsoft .NET Micro Framework environment for STM32F4 microcontrollers

Data brief

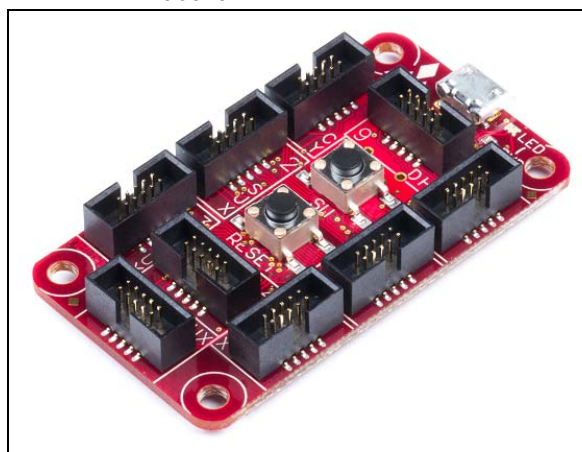
### Features

- STM3240G-ETH/NMF evaluation board
  - STM32F407VG MCU
  - Ethernet connector and embedded lwIP Stack: HTTP, TCP, UDP, DHCP, ICMP (no separate Ethernet module needed)
  - 8 Gadgeteer sockets for: GPIO (34x), CAN, SPI (2x), I2C, UART (4x), AD (3x), DA, PWM (3x)
  - Integrated micro USB connector (no separate USB client module needed)
  - 2 pushbutton switches (Reset and User)
  - Embedded 8-MByte Flash memory (SPI)
  - Power LED (green) and RGB User LED
  - Serial Wire Debug (SWD) and boot mode selection on the manufacturer-specific connector (Z)
  - Low power modes
  - 100 % open source hardware and software
- STM3240G-USB/NMF evaluation board
  - STM32F407VG MCU
  - 9 Gadgeteer sockets for: GPIO (34x), CAN, SPI (2x), I2C, UART (4x), AD (3x), DA, PWM (3x), USB Device/Host (independent from the second USB port, described below)
  - Integrated micro USB connector (no separate USB client module needed)
  - 2 pushbutton switches (Reset and User)
  - Embedded 8-MByte Flash memory (SPI)
  - Power LED (green) and RGB User LED
  - Serial Wire Debug (SWD) and boot mode selection on the manufacturer-specific connector (Z)
  - Low power modes
  - 100 % open source hardware and software

**Figure 1. STM3240G-ETH/NMF evaluation board**



**Figure 2. STM3240G-USB/NMF evaluation board**



## 1 Description

The STM32F4-NETMF is a complete, cost-effective solution to start an application development with the Microsoft .NET Micro Framework environment for an STM32F4 ARM Cortex-M4 core-based microcontroller.

It allows developing, testing and deploying embedded software in C#, using Microsoft Visual Studio tools, all necessary hardware being included.

You need to install Microsoft Visual Studio 2010 or its free version, Microsoft Visual C# 2010 Express, and the .NET Micro Framework Software Development Kit and associated packages.

The "Getting Started with Mountaineer" tutorial guides you to write your first application. Mountaineer websites are: [www.mountaineer.org](http://www.mountaineer.org) and [www.mountaineer-boards.com](http://www.mountaineer-boards.com).

.NET Micro Framework website is: [www.netmf.org](http://www.netmf.org).

Gadgeteer websites are: [www.netmf.com/gadgeteer](http://www.netmf.com/gadgeteer) and [www.gadgeteer.codeplex.com](http://www.gadgeteer.codeplex.com).

## 2 Ordering information

The STM32F4-NETMF can be ordered from *The Mountaineer Group* or from your nearest ST distributor or sales office.

ST order codes are:

- STM3240G-USB/NMF for the USB variant
- STM3240G-ETH/NMF for the Ethernet variant

For more information and a complete documentation, please refer to *The Mountaineer Group* web site at [www.mountaineer.org](http://www.mountaineer.org), or to the STMicroelectronics microcontroller support site at [www.st.com](http://www.st.com).

## 3 Revision history

Table 1. Document revision history

Date	Revision	Changes
7-Sep-2012	1	Initial release.
24-Sep-2012	2	Updated <a href="#">Description</a> .
02-Nov-2012	3	Moved "Useful links" contents to <a href="#">Description</a> , so that it shows up on the product page.
24-Jan-2013	4	Modified URL links in <a href="#">Description</a> .

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