



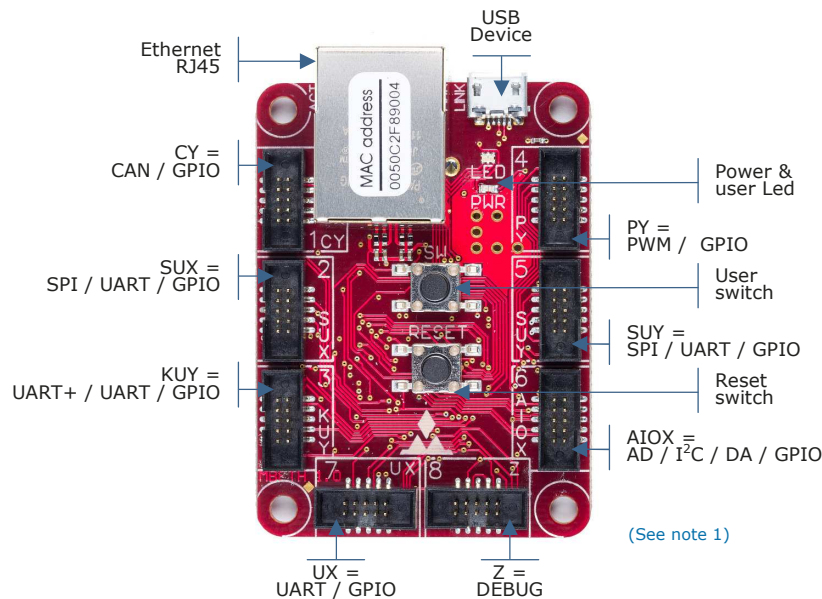
# Mountaineer Ethernet Mainboard

.NET Gadgeteer compatible platform

## Technical specifications

### Features

- o Ethernet connector & embedded lwIP Stack: HTTP, TCP, UDP, DHCP, ICMP (no separate Ethernet module needed)
- o 8 Gadgeteer sockets for: GPIO (34x), CAN, SPI (2x), I<sup>2</sup>C, UART (4x), AD (3x), DA, PWM (3x)
- o Integrated micro USB connector (no separate USB client module needed)
- o 2 pushbutton switches (Reset and User)
- o Embedded 8 MB Flash memory (SPI)
- o Power LED (green) and RGB User LED
- o 100% open source hardware and software
- o Serial Wire Debug (SWD) & boot mode selection on the manufacturer-specific connector (Z)
- o Low power modes



### Microcontroller & memory

- o Processor STM32F407
- o Operating frequency: 168 MHz/210 DMIPS
- o Flash: 1 MB (on chip) + 8 MB (on board)
- o RAM: 192 KB (on chip)

### Platform & environment

- o Microsoft .NET Micro Framework 4.2
- o Microsoft Visual Studio 2010 or Visual Studio Express 2010

### Electrical specifications

- o 5V supply from USB, internally regulated to 3.3 V
- o Current on any IO pin: ±25 mA (total 120 mA max.)
- o Standalone power consumption (168 MHz):
  - Active mode with Ethernet: 170 mA typ.
  - Active mode (Eth. not connected): 80 mA typ.
  - Sleep mode: 37 mA typ.
  - Deep sleep: 8 mA typ.
- o 5V-tolerant IO's except AD4 and AD5 (3.6 V max.)

### Board size

- o 57 x 42 mm (2.24" x 1.65")

### Board designation

- o Eth Mainboard

### Environmental directives & temperature range

- o RoHS compliant
- o Lead-free
- o Operating temperature: 0-70°C (32-158°F)

### Links

#### Mountaineer

- o <http://www.mountaineer.org>
- o <http://www.mountaineer-boards.com>

#### Gadgeteer

- o <http://www.netmf.com/gadgeteer>
- o <http://gadgeteer.codeplex.com>

Note 1: There is currently no NETMF support for the sockets "C" and "O".