

GNU Toolchain

1. riscv compiler for Linux: <https://github.com/riscv-collab/riscv-gnu-toolchain>

```
git clone https://github.com/riscv/riscv-gnu-toolchain
```

On Ubuntu the following packages are needed

```
1 sudo apt-get install autoconf automake autotools-dev curl python3 python3-pip python3-tomli  
libmpc-dev libmpfr-dev libgmp-dev gawk build-essential bison flex texinfo gperf libtool  
patchutils bc zlib1g-dev libexpat-dev ninja-build git cmake libglib2.0-dev libslirp-dev
```

```
1 ./configure --prefix=/opt/riscv --with-arch=rv32ima --with-abi=ilp32  
2 make
```

Note that `/opt/riscv` needs to be writeable (`sudo chmod +777 /opt/riscv`).

Add `/opt/riscv/bin` to your PATH.

This will generate the compiler for bare metal and real time OSes. For linux you need to build using command *make linux*.

Important: The standard gcc libraries are compiled together with the compiler. For this reason it is important to compile the compiler for the same arc that you will use.

2. riscv compiler for Windows (I have not tested it):  [Prebuilt GNU toolchain for RISC-V](#)