



# **ProNoC**

## **Installation Manual for the Ubuntu Linux Environment**

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This file is part of ProNoC

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## Installation

1. You can download the ProNoC source code from [ProNoC homepage](#) or optionally open the *terminal* and run:

```
svn co http://opencores.org/ocsvn/an-fpga-implementation-of-low-  
latency-noc-based-mpsoc/an-fpga-implementation-of-low-latency-  
noc-based-mpsoc/trunk/
```

2. To give execution permission, open `trunk/mpsoc` in terminal and run

```
sudo chmod +x -Rf ./
```

3. Install required packages dependencies

```
sudo apt-get install build-essential  
sudo apt-get install libgtk2.0-dev libglib2.0-dev  
sudo apt-get install libpangol.0-dev  
sudo apt-get install clang  
sudo apt-get install lib32z1  
sudo apt-get install libgd-graph-perl  
sudo apt-get install cpanminus  
sudo apt-get install libusb-1.0  
sudo apt-get install graphviz
```

4. Install required Perl modules:

```
sudo cpanm ExtUtils::Depends  
sudo cpanm ExtUtils::PkgConfig  
sudo cpanm Glib  
sudo cpanm Pango  
sudo cpanm Gtk2  
sudo cpanm String::Similarity  
sudo cpanm Gtk2::Ex::Graph::GD  
sudo cpanm IO::CaptureOutput  
sudo cpanm Proc::Background  
sudo cpanm List::MoreUtils  
sudo cpanm File::Find::Rule
```

5. Install Verilator simulator ( optional )

```
sudo apt-get install verilator  
cpan install Verilog::Language
```

6. Add `mpsoc_work` path to the `PATH` variable in `.bashrc` file:

```
gedit ~/.bashrc
```

Add `PRONOC_WORK` variable to `.bashrc` file then save and close it:

```
export PRONOC_WORK={path_to_mpsoc_work_directory}  
# e.g export PRONOC_WORK=/home/alireza/Mywork/mpsoc_work
```

Now run following command in terminal

```
source ~/.bashrc
```

---

7. Download soft-core processors' GNU toolchain:

(a) [aeMB](#)

(b) [Lm32](#) or from [Lm32](#)

Unzip the files and copy them in `mpsoc_work/toolchain` directory:

```
mv lm32 mpsoc_work/toolchain/lm32
mv aemb mpsoc_work/toolchain/aemb
```

8. Give execution permission to GNU toolchains. Open terminal in `mpsoc_work/toolchain` and run

```
sudo chmod +x -Rf ./
```

9. Open `/mpsoc/src_c` in terminal and run

```
make
```

10. Now you can run the GUI application by

```
cd mpsoc/perl_gui
./ProNoC.pl
```