# FOSS EDA / Coriolis Repositories

## Contents



The goal of the FOSS EDA and Coriolis repositories is to provide an *out of the box* way to install the Coriolis toolchain along with all the third party tools needed to fully use it.

- **Rollback and determinism**. Not only the latest versions of the tools are provided, but also all prior versions are kept availables. This way you can always rebuild previous designs in a fully deterministic way.
- **Fast pace update**. We intend to keep the packages in close synchronisation with the developement release. Those repositories must be understood as *rolling release*.

## Supported Distributions

- AlmaLinux 8 (missing: klayout).
- AlmaLinux 9.
- AlmaLinux 10.
- Fedora 41.
- Fedora 42.
- Fedora 43.
- openSUSE Leap 15.6.
- openSUSE Leap 16.0.
- openSUSE Tumbleweed.
- Mageia 9.
- Debian 12.
- Debian 13.
- Ubuntu 22.04 LTS.
- Ubuntu 24.04 LTS.
- Ubuntu 24.10.

## Provided Softwares

| Software | Web Site | Package name |
|---|---|---|
| Alliance | https://coriolis.lip6.fr/ | alliance |
| Coriolis | https://coriolis.lip6.fr/ | coriolis-eda |
| Yosys | https://yosyshq.net | yosys |
| Yosys Slang | https://github.com/povik/yosys-slang.git | yosys-slang |
| klayout | https://klayout.de/ | klayout |
| Magic | http://opencircuitdesign.com/magic/ | magic |
| Tas/Yagle | https://coriolis.lip6.fr/ | tas-yagle |
| OpenVAF | https://openvaf.semimod.de/ | openvaf |

## Provided PDKs

| PDK | Web Site | Package name |
|---|---|---|
| GF 180 MCU PDK | GF 180 MCU PDK | coriolis-pdk-gf180mcu |
| C4M PDKMaster for GF 180 MCU | PDKMaster | coriolis-pdk-gf180mcu-pdk |
| IHP 130nm (SG13G2) | IHP Open PDK | coriolis-pdk-ihpsg13g2 |
| C4M PDKMaster for IHP SG13G2 | PDKMaster | coriolis-pdk-ihpsg13g2-c4m |

**Note**

The PDKs are installed as *Python wheels*, so their data are stored under:

```
/usr/lib64/pythonV.RR/site-packages/pdks   (RPM based distributions)
/usr/lib/python3/dist-packages/pdks        (DEB based distributions)
```

Is convenient to install them as Python wheel so the toolchain, whose management part is written is Python, will always be able to import them regardless of the distribution specific layout.

**Note**

The GF 180 MCU base PDK package is *very large*, it takes about 5Gb, be sure to check that you have enough space on your disk before installing it.

**Note**

The GF 180 MCU is not complete yet. The support for I/O pads still contains errors, so only blocks, not full chip could be generated for now. Will be fixed in later releases.

## Using the Repositories

The various configuration files for the repositories are available here:

| Distributions | `.repo` (rpm) or `.sources` (deb) |
|---|---|
| AlmaLinux 8 | https://ftp.lip6.fr/lip6/softs/coriolis/etc/fossEDA_al8.repo |

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| Distributions | `.repo` (rpm) or `.sources` (deb) |
|---|---|
| AlmaLinux 9 | https://ftp.lip6.fr/lip6/softs/coriolis/etc/fossEDA_al9.repo |
| AlmaLinux 9.6+ | https://ftp.lip6.fr/lip6/softs/coriolis/etc/fossEDA_al9_6.repo |
| AlmaLinux 10 | https://ftp.lip6.fr/lip6/softs/coriolis/etc/fossEDA_al10.repo |
| Fedora 41 | https://ftp.lip6.fr/lip6/softs/coriolis/etc/fossEDA_f41.repo |
| Fedora 42 | https://ftp.lip6.fr/lip6/softs/coriolis/etc/fossEDA_f42.repo |
| Fedora 43 | https://ftp.lip6.fr/lip6/softs/coriolis/etc/fossEDA_f43.repo |
| openSUSE Leap 15.6 | https://ftp.lip6.fr/lip6/softs/coriolis/etc/fossEDA_SUSELeap.repo |
| openSUSE Leap 16.0 | https://ftp.lip6.fr/lip6/softs/coriolis/etc/fossEDA_SUSE_16.repo |
| openSUSE Tumbleweed | https://ftp.lip6.fr/lip6/softs/coriolis/etc/fossEDA_SUSETumbleweed.repo |
| Mageia 9 | https://ftp.lip6.fr/lip6/softs/coriolis/etc/fossEDA_Mageia9.repo |
| Debian 12 | https://ftp.lip6.fr/lip6/softs/coriolis/etc/fossEDA_deb12.sources |
| Debian 13 | https://ftp.lip6.fr/lip6/softs/coriolis/etc/fossEDA_deb13.sources |
| Ubuntu 22.04 LTS | https://ftp.lip6.fr/lip6/softs/coriolis/etc/fossEDA_ubu22_04.sources |
| Ubuntu 24.04 LTS | https://ftp.lip6.fr/lip6/softs/coriolis/etc/fossEDA_ubu24_04.sources |
| Ubuntu 24.10 | https://ftp.lip6.fr/lip6/softs/coriolis/etc/fossEDA_ubu24_10.sources |

Direct access to the directory holding the files:

https://ftp.lip6.fr/lip6/softs/coriolis/etc/

**Note**

There are two repositories for AlmaLinux. One for release up to and including 9.5. And a second one starting from 9.6. This is due to a change in ruby version minor that makes KLayout packages to build on all releases with the same version. It links with ruby 3.0 until 9.5 and 3.1 from 9.6 on.

### For RPM based systems (Fedora, AlmaLinux, SUSE)

As you are installing the tools natively in your distributions, those operations are to be done as `root`.

1. From the `etc/` directory of the ftp site, download the relevant `*.repo` file, then copy it under `/etc/yum.repos.d/`.

```
root@pc:~> wget https://ftp.lip6.fr/lip6/softs/coriolis/etc/fossEDA_al9.repo
root@pc:~> mv fossEDA_al9.repo /etc/yum.repos.d/
```

2. Install the PDK you want to work with, all the tools needed to use it will be installed with it as dependencies.

```
root@pc:~> dnf group install fossEDA
```

### For DEB based systems (Debian, Ubuntu)

As you are installing the tools natively in your distributions, those operations are to be done as `root`.

1. From the `etc/` directory of the ftp site, download the relevant `*.sources` file, then copy it under `/etc/apt/sources`

```
you@pc:~> wget https://ftp.lip6.fr/lip6/softs/coriolis/etc/fossEDA_ubu24_10.sources
you@pc:~> sudo mv fossEDA_ubu24_10.sources /etc/apt/sources.list.d/
```

2. Install the PDK you want to work with, all the tools needed to use it will be installed with it as dependencies.

```
you@pc:~> sudo apt update
you@pc:~> sudo apt install coriolis-pdk-ihpsg13g2-c4m
```