

# FOSS EDA / Coriolis Repositories

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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 available. 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 development release. Those repositories must be understood as *rolling release*.

## Supported Distributions

- AlmaLinux 8 (missing: klayout).
- AlmaLinux 9.
- Fedora 40.
- Fedora 41.
- openSUSE Leap 15.6.
- openSUSE Tumbleweed.
- Debian 12.
- Ubuntu 22.04 LTS.
- Ubuntu 24.04 LTS.
- Ubuntu 24.10.

## Provided Softwares

| Software  | Web Site                                                              | Package name |
|-----------|-----------------------------------------------------------------------|--------------|
| Coriolis  | <a href="https://coriolis.lip6.fr/">https://coriolis.lip6.fr/</a>     | coriolis-eda |
| Yosys     | <a href="https://yosyshq.net">https://yosyshq.net</a>                 | yosys        |
| klayout   | <a href="https://klayout.de/">https://klayout.de/</a>                 | klayout      |
| Tas/Yagle | <a href="https://coriolis.lip6.fr/">https://coriolis.lip6.fr/</a>     | tas-yagle    |
| OpenVAF   | <a href="https://openvaf.semimod.de/">https://openvaf.semimod.de/</a> | openvaf      |

## Provided PDKs

| PDK                          | Web Site                       | Package name               |
|------------------------------|--------------------------------|----------------------------|
| GF 180 MCU PDK               | <a href="#">GF 180 MCU PDK</a> | coriolis-pdk-gf180mcu      |
| C4M PDKMaster for GF 180 MCU | <a href="#">PDKMaster</a>      | coriolis-pdk-gf180mcu-pdk  |
| IHP 130nm (SG13G2)           | <a href="#">IHP Open PDK</a>   | coriolis-pdk-ihpsg13g2     |
| C4M PDKMaster for IHP SG13G2 | <a href="#">PDKMaster</a>      | 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 in Python, will always be able to import them regardless of the distribution specific layout.



### 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    | <a href="https://ftp.lip6.fr/lip6/softs/coriolis/etc/fossEDA_al8.repo">https://ftp.lip6.fr/lip6/softs/coriolis/etc/fossEDA_al8.repo</a>     |
| AlmaLinux 9    | <a href="https://ftp.lip6.fr/lip6/softs/coriolis/etc/fossEDA_al9.repo">https://ftp.lip6.fr/lip6/softs/coriolis/etc/fossEDA_al9.repo</a>     |
| AlmaLinux 9.6+ | <a href="https://ftp.lip6.fr/lip6/softs/coriolis/etc/fossEDA_al9_6.repo">https://ftp.lip6.fr/lip6/softs/coriolis/etc/fossEDA_al9_6.repo</a> |
| Fedora 40      | <a href="https://ftp.lip6.fr/lip6/softs/coriolis/etc/fossEDA_f40.repo">https://ftp.lip6.fr/lip6/softs/coriolis/etc/fossEDA_f40.repo</a>     |
| Fedora 41      | <a href="https://ftp.lip6.fr/lip6/softs/coriolis/etc/fossEDA_f41.repo">https://ftp.lip6.fr/lip6/softs/coriolis/etc/fossEDA_f41.repo</a>     |

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| Distributions       | .repo (rpm) or .sources (deb)                                                                                                                                 |
|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| openSUSE Leap 15.6  | <a href="https://ftp.lip6.fr/lip6/softs/coriolis/etc/fossEDA_SUSELeap.repo">https://ftp.lip6.fr/lip6/softs/coriolis/etc/fossEDA_SUSELeap.repo</a>             |
| openSUSE Tumbleweed | <a href="https://ftp.lip6.fr/lip6/softs/coriolis/etc/fossEDA_SUSETumbleweed.repo">https://ftp.lip6.fr/lip6/softs/coriolis/etc/fossEDA_SUSETumbleweed.repo</a> |
| Debian 12           | <a href="https://ftp.lip6.fr/lip6/softs/coriolis/etc/fossEDA_deb12.sources">https://ftp.lip6.fr/lip6/softs/coriolis/etc/fossEDA_deb12.sources</a>             |
| Ubuntu 22.04 LTS    | <a href="https://ftp.lip6.fr/lip6/softs/coriolis/etc/fossEDA_ubu22_04.sources">https://ftp.lip6.fr/lip6/softs/coriolis/etc/fossEDA_ubu22_04.sources</a>       |
| Ubuntu 24.04 LTS    | <a href="https://ftp.lip6.fr/lip6/softs/coriolis/etc/fossEDA_ubu24_04.sources">https://ftp.lip6.fr/lip6/softs/coriolis/etc/fossEDA_ubu24_04.sources</a>       |
| Ubuntu 24.10        | <a href="https://ftp.lip6.fr/lip6/softs/coriolis/etc/fossEDA_ubu24_10.sources">https://ftp.lip6.fr/lip6/softs/coriolis/etc/fossEDA_ubu24_10.sources</a>       |

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
```