

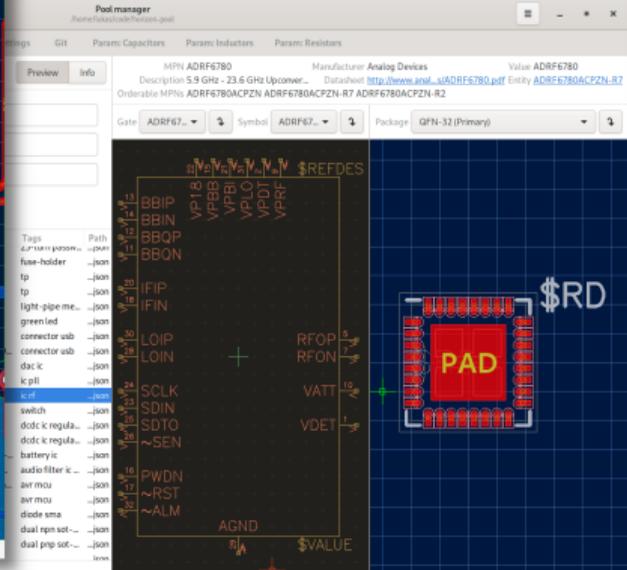
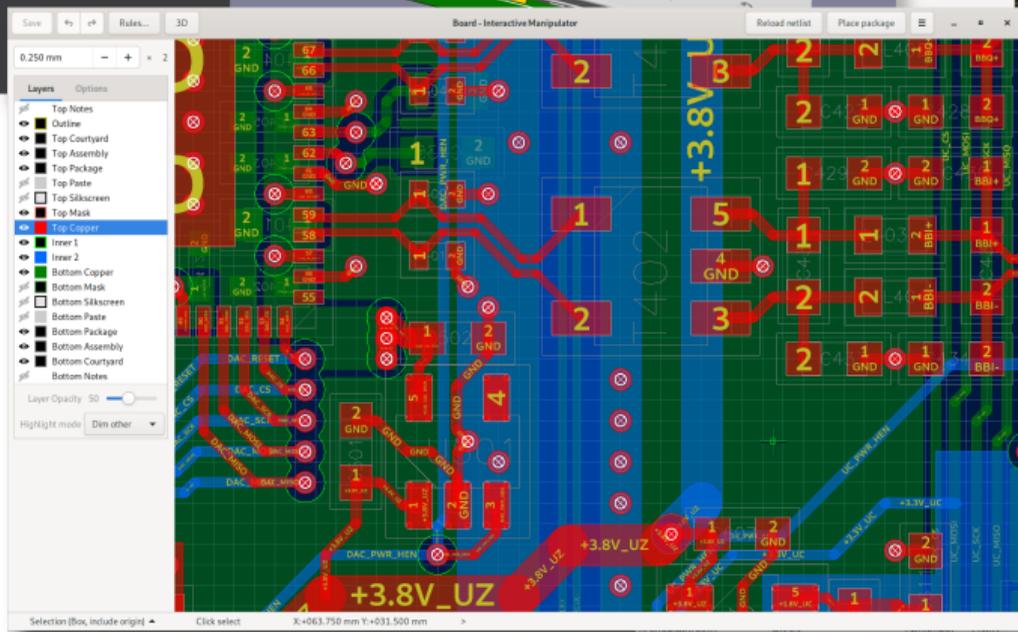
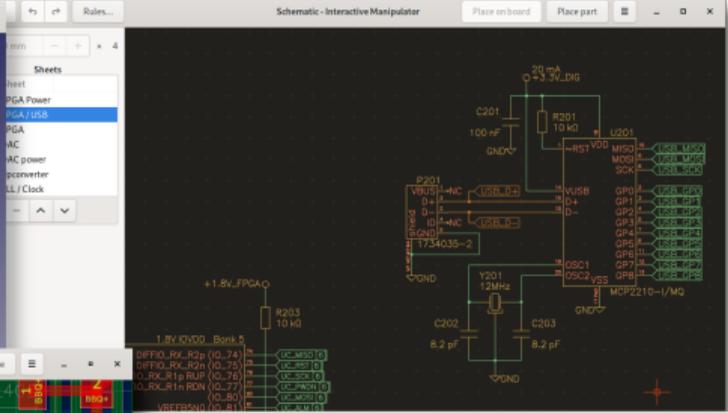
# Horizon EDA

Version 1.0

Lukas Kramer

2020-02-01

FOSDEM 2020



Latest release

v1.0.0

3f777bd

Compare ▾

Edit

# Horizon EDA Version 1.0.0 "Aurora"

 carrotIndustries released this 2 days ago · [5 commits](#) to master since this release

## This is the first versioned release of Horizon EDA

See [the docs](#) for installation instructions.

## Changelog

since this is the first versioned release, there is no changelog yet

### ▼ Assets 3

 <a href="#">horizon-eda-1.0.0-x64.msi</a>	46.5 MB
 <a href="#">Source code (zip)</a>	
 <a href="#">Source code (tar.gz)</a>	

- Keep it simple

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- No funky class hierarchies

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- Direct mapping from UI to data
- Breadth first implementation
- Don't be afraid to rewrite
- *Have fun!*

# Prehistory





September 2016

First commit, symbol editor in Python combined with C for renderer

# Prehistory



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First commit, symbol editor in Python combined with C for renderer

October 2016

Rewrite everything in C

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Rewrite everything in C++, symbol and schematic editor

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Padstack, package and board editor. Windows support.

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Part editor, YAML editors for units etc. Publication.

# Prehistory

The screenshot displays a circuit board design software interface. At the top, there is a toolbar with buttons for "Save", "Selection filter", "Export PDF", "Annotate", "Buses...", and "Place part". A "Sheets" panel on the left shows a list of sheets: "Sheet", "1 First sheet", and "2 sheet 2". The main workspace is a blue grid containing a schematic diagram of a 2N2222 transistor circuit. The circuit includes a +5V power source, a 100 μF capacitor (C101), a 10 kΩ resistor (R104), a 10 kΩ resistor (R103), a 49.9 Ω resistor (R102), and a 100 pF capacitor (C202). The transistor (Q101, 2N2222) has its base connected to the junction of R104 and R103, its emitter to ground, and its collector to the junction of R102 and C202. A +5V source is also connected to the collector. A label "B:I2C:MAIN" is connected to the base of the transistor. The bottom status bar shows "Active tool: None", coordinates "X:+056.250 mm Y:+130.000 mm", and a message ">Unknown key sequence".

Part editor, YAML editors for units etc. Publication.

# Prehistory

0.500 mm   -   +   Save   Selection filter   CAM Job   Reload netlist

Layers

W	V	D	I	Name
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	50 Outline
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	40 Top Courtyard
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	30 Top Placement
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	20 Top Silkscreen
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	10 Top Mask
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0 Top Copper
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	-1 Inner 1
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	-2 Inner 2
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	-100 Bottom Copper
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	-110 Bottom Mask
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-120 Bottom Silkscreen
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	-130 Bottom Placement

Select only on work layer

Layer Opacity 40

Active tool: None

X:+026.500 mm Y:+011.500 mm   >Unknown key sequence

# Early History



February 2017

Project manager, no more CLI for opening schematics!

# Early History



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May 2017

Rule framework and copper clearance rules (DRC)

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June 2017

Parametric padstacks and packages

# Early History

February 2017 Parameter program

Project ma

1.55mm 1.0mm

```
get-parameter [ solder_mask_expansion ]
```

May 2017

```
2 *
```

Rule frame

```
+xy
```

```
set-shape [ mask-ob obround ]
```

June 2017

Parametric

```
1.15mm
```

```
get-parameter [ solder_mask_expansion ]
```

```
+
```

```
1.55mm
```

```
get-parameter [ solder_mask_expansion ]
```

```
2 * +
```

```
set-shape [ mask-rect rectangle ]
```

```
...
```

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Pool manager, no more CLI at all! KiCad's router!

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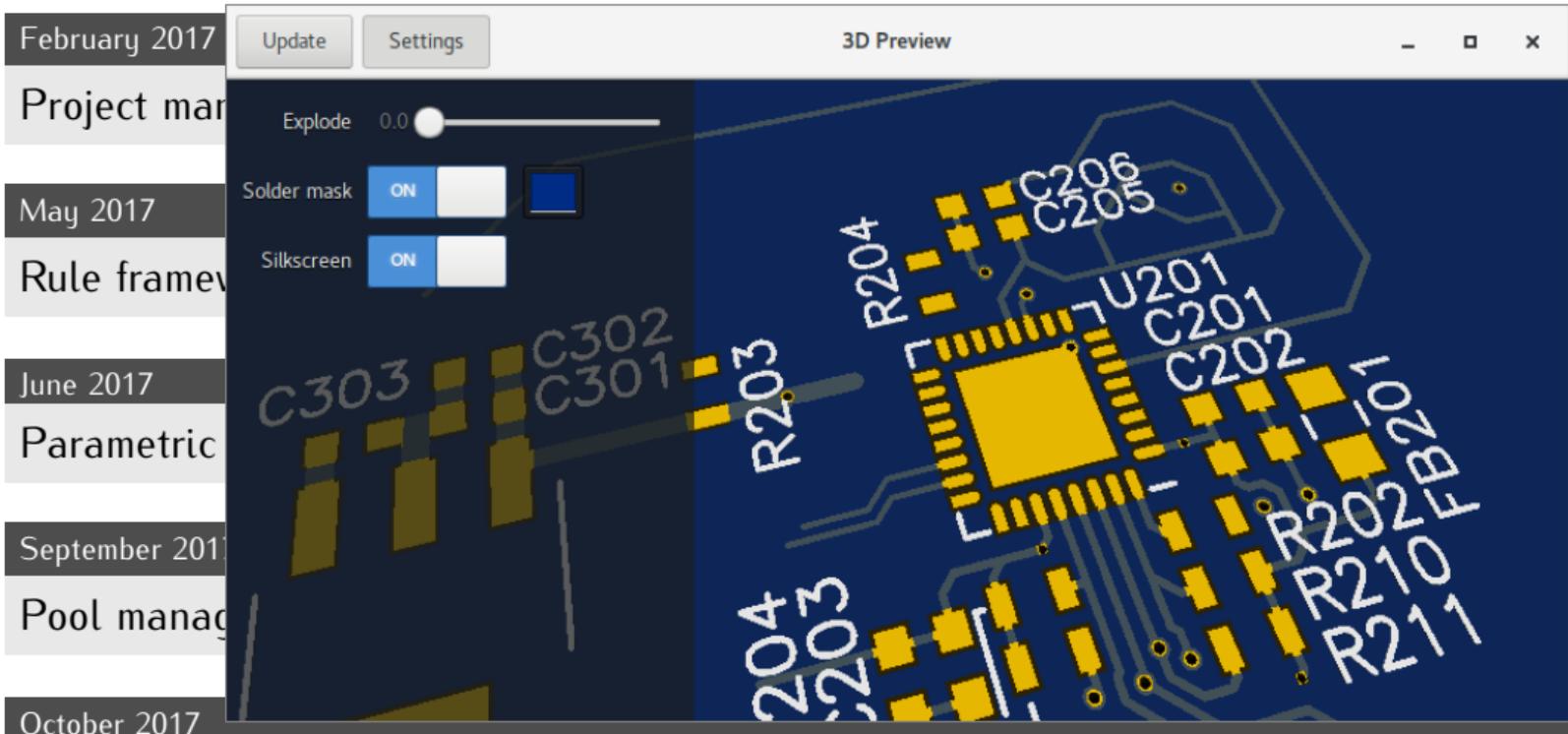
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Copper planes, 3D view (only board, no packages)

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January 2018

STEP import/export

# History



January 2018

STEP import/export

April 2018

Start of master thesis

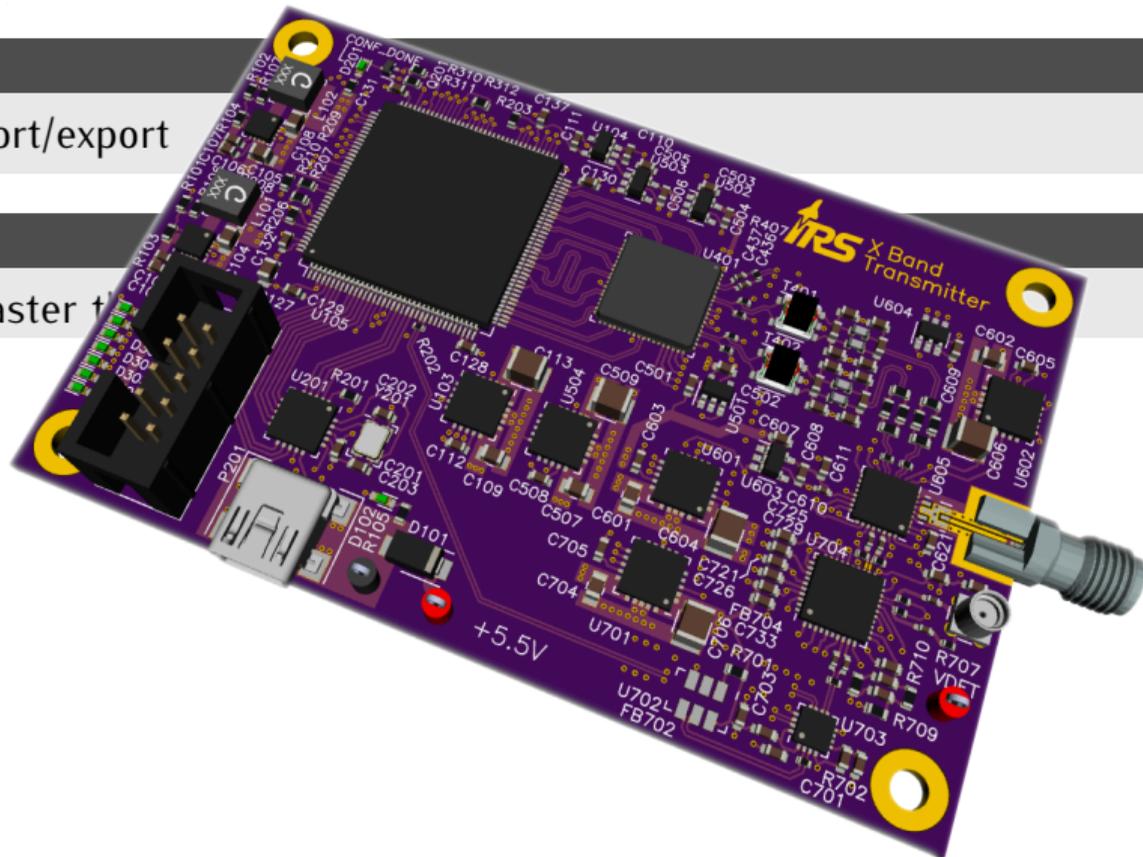
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Multithreaded DRC, BOM export

June 2018

Unified pool and project manager

October 2018

Configurable colors



January 2019

Parametric search

# History



January 2019

Parametric search

April 2019

Proper PDF export

# History



January 2019

Parametric search

April 2019

Proper PDF export

July 2019

Incremental pool update

# History



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April 2019

Proper PDF export

July 2019

Incremental pool update

November 2019

Partinfo API integration

# History



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## zeromq

fixed locale affecting port number formatting

## ccache

fixed broken header dependency generation (regression)

*What's next?*

*That's it!*