
sphinxcontrib-eagle Documentation

Release 0.0.0

ponty

April 29, 2011

CONTENTS

1	About	2
2	Basic usage	3
3	How it works	4
4	Installation	5
4.1	General	5
4.2	Ubuntu	5
4.3	Uninstall	5
5	Usage	6
5.1	Configuration	6
5.2	Directives	6
5.3	Image options	8
5.4	Partlist options	13

This [Sphinx](#) 1.0 extension includes image or partlist of [eagle](#) schematic or board.
pdf documentation: sphinxcontrib-eagle.pdf

ABOUT

This [Sphinx](#) 1.0 extension exports [eagle](#) partlist or image of schematic or board during the build step and includes them into the documentation.

Links:

- home: <https://github.com/ponty/sphinxcontrib-eagle>
- documentation: <http://ponty.github.com/sphinxcontrib-eagle>

BASIC USAGE

```
.. eagle-image:: singlesided.sch
    :resolution: 100
    :scale: 30 %

.. eagle-partlist:: singlesided.sch
    :header: part, value
```

HOW IT WORKS

1. export image or text by `eagle` using `eagexp`
2. include image or text into documentation

INSTALLATION

4.1 General

- install `eagle`
- install `setuptools`
- install `PyVirtualDisplay` , `xvfb` , `xephyr` (optional for background processing)
- install `eagexp`
- install the program:

```
# as root
easy_install https://github.com/ponty/eagexp/zipball/master
easy_install https://github.com/ponty/sphinxcontrib-eagle/zipball/master
```

4.2 Ubuntu

```
sudo apt-get install eagle
sudo apt-get install python-setuptools

# optional for background processing
sudo apt-get install xvfb xserver-xephyr

sudo easy_install https://github.com/ponty/eagexp/zipball/master
sudo easy_install https://github.com/ponty/sphinxcontrib-eagle/zipball/master
```

4.3 Uninstall

```
# as root
pip uninstall sphinxcontrib-eagle
```


USAGE

5.1 Configuration

Add `sphinxcontrib.eagle` to extensions list in `conf.py`:

```
extensions = [  
    'sphinxcontrib.eagle',  
]
```

5.2 Directives

There are 2 directives, they accept a single string as argument, which is the path to the eagle .sch or .brd file:

```
.. eagle-image:: ~/.eagle/projects/examples/singlesided/singlesided.sch  
   :scale: 30%
```

```
.. eagle-partlist:: ~/.eagle/projects/examples/singlesided/singlesided.sch
```

The above snippet would render like this:

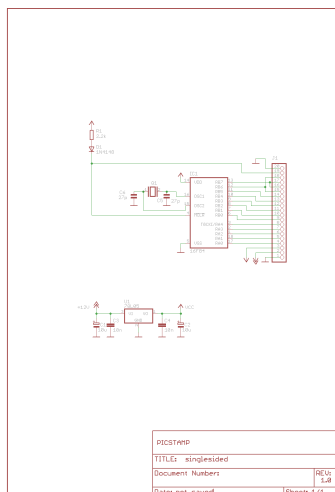


Table 5.1:

part	value	device	package	library	sheet
C1	10u	E2,5-6	E2,5-6	polcap	1
C2	10u	E2,5-6	E2,5-6	polcap	1
C3	10n	C-EU025-025X050	C025-025X050	rcl	1
C4	10n	C-EU025-025X050	C025-025X050	rcl	1
C5	27p	C2.5/2	C2,5-2	capacitor-wima	1
C6	27p	C2.5/2	C2,5-2	capacitor-wima	1
D1	1N4148	1N4148	DO35-10	diode	1
IC1	16F84	PIC16F84AP	DIL18	microchip	1
J1		PINHD-1X20	1X20	PINHEAD	1
Q1		XTAL/S	QS	special	1
R1	2.2k	R-EU_0207/10	0207/10	rcl	1
U1	78L05	78LXXZ	TO92	linear	1

The same for a board:

```
.. eagle-image:: ~/.eagle/projects/examples/singlesided/singlesided.brd
.. eagle-partlist:: ~/.eagle/projects/examples/singlesided/singlesided.brd
```

The above snippet would render like this:

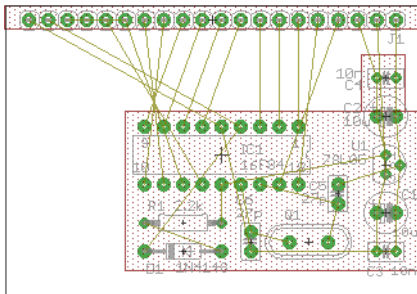


Table 5.2:

part	value	package	library	position	orientation
C1	10u	E2,5-6	polcap	(1950 400)	R0
C2	10u	E2,5-6	polcap	(1950 900)	R0
C3	10n	C025-025X050	rcl	(1950 200)	R180
C4	10n	C025-025X050	rcl	(1950 1100)	R180
C5	27p	C2,5-2	capacitor-wima	(1700 500)	R270
C6	27p	C2,5-2	capacitor-wima	(1250 250)	R90
D1	1N4148	DO35-10	diode	(900 200)	R0
IC1	16F84	DIL18	microchip	(1100 700)	R180
J1		1X20	PINHEAD	(1050 1400)	R180
Q1		QS	special	(1550 250)	R0
R1	2.2k	0207/10	rcl	(900 350)	R0
U1	78L05	TO92	linear	(1950 650)	R270

5.3 Image options

5.3.1 timeout

Using the option `timeout` you can set the timeout (default 20) in seconds for processing. Eagle can block the export by displaying a messagebox. If this happens the export is aborted after timeout:

```
.. eagle-image:: ~/.eagle/projects/examples/singlesided/singlesided.brd
   :timeout: 60
```

5.3.2 resolution

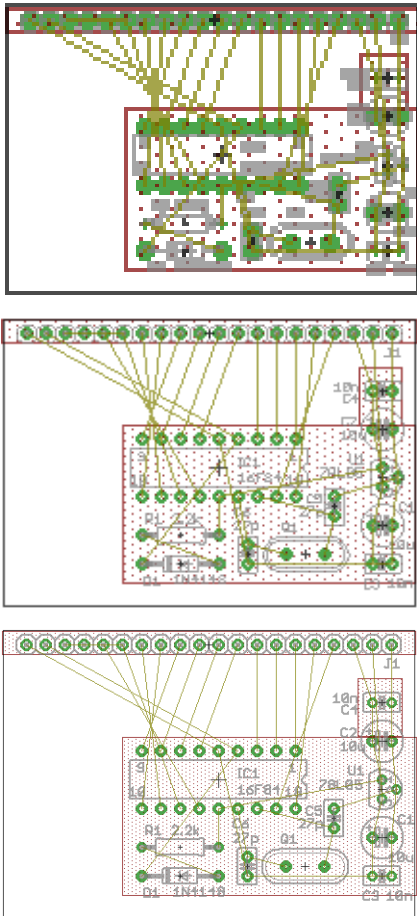
Using the option `resolution` you can set the resolution in dpi, valid range: 50..2400, default is 150:

```
.. eagle-image:: ~/.eagle/projects/examples/singlesided/singlesided.brd
   :resolution: 50
```

```
.. eagle-image:: ~/.eagle/projects/examples/singlesided/singlesided.brd
   :resolution: 100
```

```
.. eagle-image:: ~/.eagle/projects/examples/singlesided/singlesided.brd
   :resolution: 200
```

The above snippet would render like this:



5.3.3 palette

Using the option `palette` you can set the background color.

Valid settings:

- white
- black
- colored

Default:white

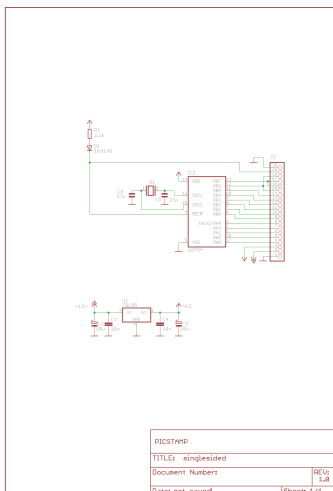
Example:

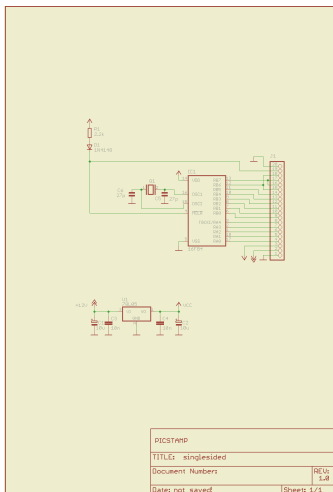
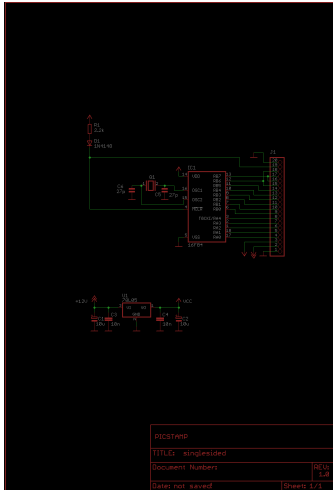
```
.. eagle-image:: ~/.eagle/projects/examples/singlesided/singlesided.sch
   :palette:  white
   :scale: 30 %

.. eagle-image:: ~/.eagle/projects/examples/singlesided/singlesided.sch
   :palette:  black
   :scale: 30 %

.. eagle-image:: ~/.eagle/projects/examples/singlesided/singlesided.sch
   :palette:  colored
   :scale: 30 %
```

The above snippet would render like this:





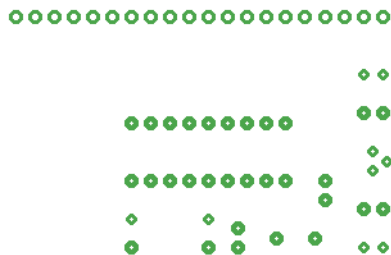
5.3.4 layers

Using the option `layers` you can display or hide layers. Check eagle documentation for valid settings.

Example:

```
.. eagle-image:: ~/.eagle/projects/examples/singlesided/singlesided.brd
   :layers: via,pads
```

The above snippet would render like this:



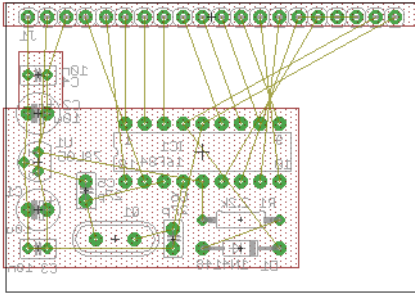
5.3.5 mirror

Using the option `mirror` you can mirror the image.

Example:

```
.. eagle-image:: ~/.eagle/projects/examples/singlesided/singlesided.brd
   :mirror:
```

The above snippet would render like this:



5.3.6 command

Using the option `command` you can apply eagle commands.

Example:

```
.. eagle-image:: ~/.eagle/projects/examples/singlesided/singlesided.brd
   :command: display none dimension
```

The above snippet would render like this:



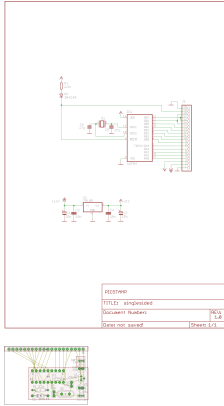
5.3.7 scale, alt

Example:

```
.. eagle-image:: ~/.eagle/projects/examples/singlesided/singlesided.sch
   :scale: 20 %
   :alt: alternate text

.. eagle-image:: ~/.eagle/projects/examples/singlesided/singlesided.brd
   :scale: 20 %
   :alt: alternate text
```

The above snippet would render like this:

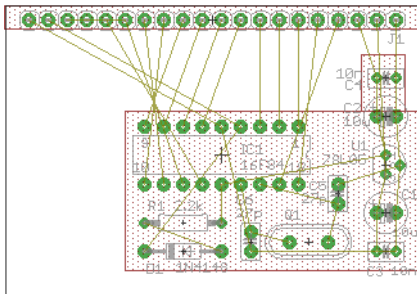


5.3.8 height, width

Example:

```
.. eagle-image:: ~/.eagle/projects/examples/singlesided/singlesided.brd
   :height: 100px
   :width: 100 px
```

The above snippet would render like this:

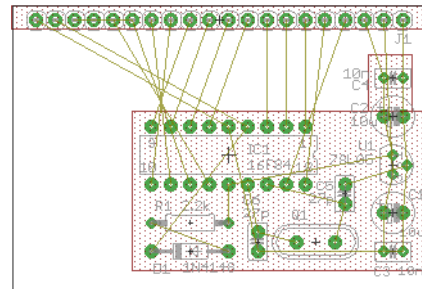


5.3.9 align

Example:

```
.. eagle-image:: ~/.eagle/projects/examples/singlesided/singlesided.brd
   :height: 100px
   :width: 100 px
   :align: right
```

The above snippet would render like this:



5.4 Partlist options

5.4.1 raw

Eagle partlist export is included as literal text:

```
.. eagle-partlist:: ~/.eagle/projects/examples/singlesided/singlesided.sch
   :raw:
```

The above snippet would render like this:

```
Partlist

Exported from singlesided.sch at 4/29/11 4:19 PM

EAGLE Version 5.10.0 Copyright (c) 1988-2010 CadSoft
```

Part	Value	Device	Package	Library	Sheet
C1	10u	E2,5-6	E2,5-6	polcap	1
C2	10u	E2,5-6	E2,5-6	polcap	1
C3	10n	C-EU025-025X050	C025-025X050	rcl	1
C4	10n	C-EU025-025X050	C025-025X050	rcl	1
C5	27p	C2.5/2	C2,5-2	capacitor-wima	1
C6	27p	C2.5/2	C2,5-2	capacitor-wima	1
D1	1N4148	1N4148	DO35-10	diode	1
IC1	16F84	PIC16F84AP	DIL18	microchip	1
J1		PINHD-1X20	1X20	PINHEAD	1
Q1		XTAL/S	QS	special	1
R1	2.2k	R-EU_0207/10	0207/10	rcl	1
U1	78L05	78LXXZ	TO92	linear	1

5.4.2 header

A comma-separated list of selected column names:

```
.. eagle-partlist:: ~/.eagle/projects/examples/singlesided/singlesided.sch
   :header: part, value
```

The above snippet would render like this:

Table 5.3:

part	value
C1	10u
C2	10u
C3	10n
C4	10n
C5	27p
C6	27p
D1	1N4148
IC1	16F84
J1	
Q1	
R1	2.2k
U1	78L05

5.4.3 widths

A comma- or space-separated list of relative column widths. The default is equal-width columns:

```
.. eagle-partlist:: ~/.eagle/projects/examples/singlesided/singlesided.sch
   :header: part, value
   :widths: 2,8
```

The above snippet would render like this:

Table 5.4:

part	value
C1	10u
C2	10u
C3	10n
C4	10n
C5	27p
C6	27p
D1	1N4148
IC1	16F84
J1	
Q1	
R1	2.2k
U1	78L05