sphinxcontrib-eagle Documentation

Release 0.0.0

ponty

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CONTENTS

This Sphinx 1.0 extension includes image or partlist of eagle schematic or board.

CHAPTER

ONE

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
- pdf documentation: https://github.com/ponty/sphinxcontrib-eagle/raw/master/docs/_build/latex/sphinxcontrib-eagle.pdf

CHAPTER

TWO

BASIC USAGE

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

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

CHAPTER

THREE

HOW IT WORKS

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

CHAPTER

FOUR

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
```

CHAPTER

FIVE

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:

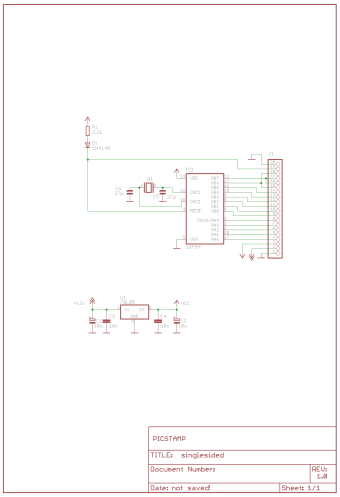


Table 5.1:

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:

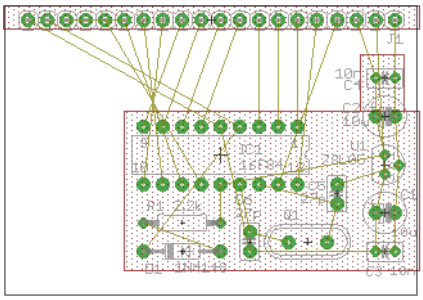


Table 5.2:

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:

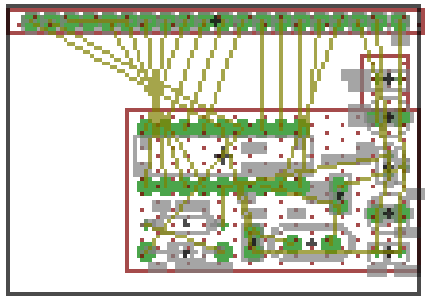
```
.. eagle-image:: ~/.eagle/projects/examples/singlesided/singlesided.brd
   :timeout: 60
```

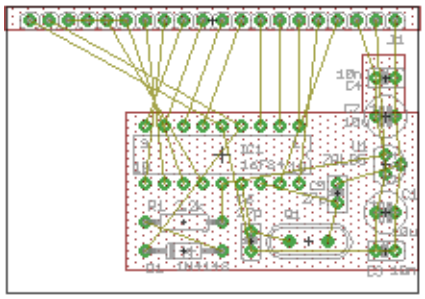
5.3.2 resolution

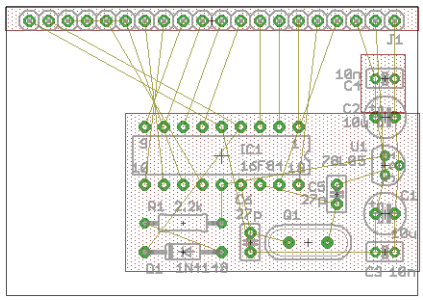
Using the option `resolution` you can set the resolution in dpi, valid range: 50..2400, default is 150:

```
.. 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:

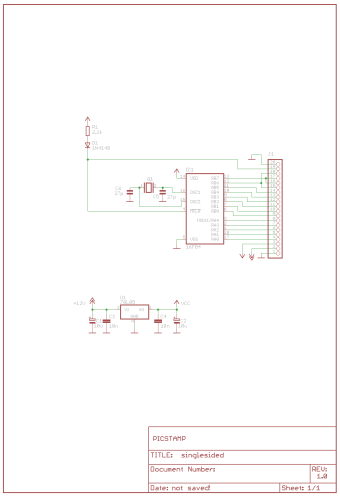
- white
- black
- colored

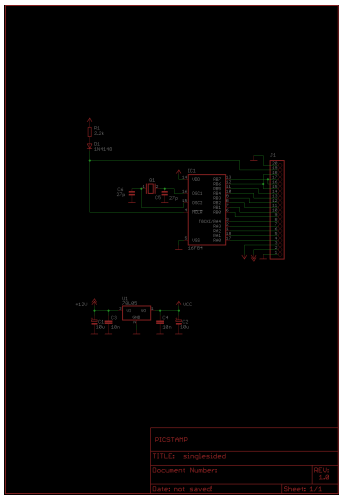
Default:white

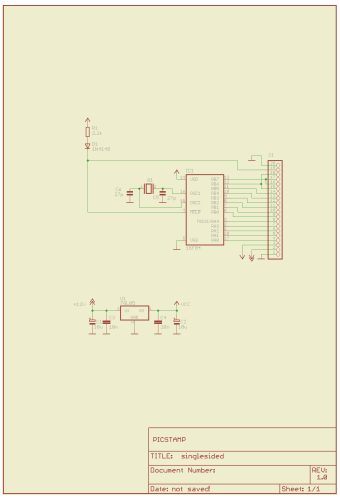
Example:

```
.. 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:







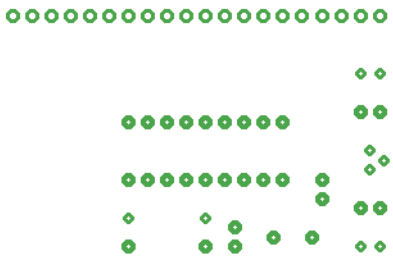
5.3.4 layers

Using the option `layers` you can diaplay 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:



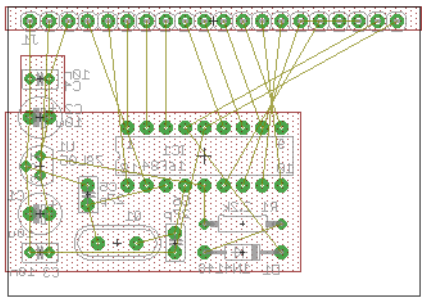
5.3.5 mirror

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
```

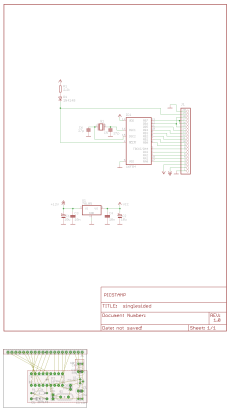
The above snippet would render like this:

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:

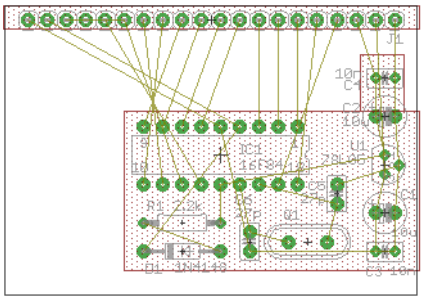


5.3.8 height, width

Example:

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

The above snippet would render like this:

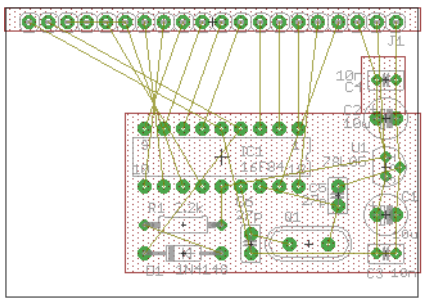


5.3.9 align

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 4/28/11 6:53 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