UNIVERSITÄT
DES
SAARLANDES

Universität des Saarlandes
Lehrstuhl für Mikroelektronik
Prof. Dr.-Ing. Chihao Xu

DEF - ABC

A random title

Left section:

Some Text
Gebäude A5.1
Raum 0.29

Right section:

Some Text
More Text
another line

Inhaltsverzeichnis

1 Basics

Text can be **bold**, *italic*, underlined or ***everything together***. `Inline code is possible too`. Another sentence.

Text indents automatically if you leaves one row empty. Lorem ipsum dolor sit amet, consetetur sadipscing elitr, sed diam nonumy eirmod tempor invidunt ut labore et dolore magna aliquyam erat, sed diam voluptua. At vero eos et accusam et justo duo dolores et ea rebum. Stet clita kasd gubergren, no sea takimata sanctus est Lorem ipsum dolor sit amet. Lorem ipsum dolor sit amet, consetetur sadipscing elitr, sed diam nonumy eirmod tempor invidunt ut labore et dolore magna aliquyam erat, sed diam voluptua. At vero eos et accusam et justo duo dolores et ea rebum. Stet clita kasd gubergren, no sea takimata sanctus est Lorem ipsum dolor sit amet. [1]

Lorem ipsum dolor sit amet, consetetur sadipscing elitr, sed diam nonumy eirmod tempor invidunt ut labore et dolore magna aliquyam erat, sed diam voluptua. At vero eos et accusam et justo duo dolores et ea rebum. Stet clita kasd gubergren, no sea takimata sanctus est Lorem ipsum dolor sit amet. Lorem ipsum dolor sit amet, consetetur sadipscing elitr, sed diam nonumy eirmod tempor invidunt ut labore et dolore magna aliquyam erat, sed diam voluptua. At vero eos et accusam et justo duo dolores et ea rebum. Stet clita kasd gubergren, no sea takimata sanctus est Lorem ipsum dolor sit amet. [2] [3]

1.1 Item list

- item 1
    - subitem 1
    - subitem 2
- item 2

1.2 Numbered List

1. numbered item 1
2. numbered item 2

1.3 Table

	Item 1	Item 2
1	c	d
2	e	f

Tabelle 1.1: Your title here

1.4 Math

Inline Math looks like this $x = y + z$.

$$x = y + z \tag{1.1}$$

$$v + b = 4 \tag{1.2}$$

$$x = y + z$$

$$v + b = 4$$

2 Layer 0

asdf

2.1 Layer 1

asdf

2.1.1 Layer 2

asdf

Layer 3

asdf

Layer 4 asdf

Layer 5 asdf

3 Code Boxes

Reference to **Codeauszug 3.1**. The command `\refn` additionally adds a localized typename in front of the number. The localization has to be set inside `styling.tex`.

```
1  module Addiererzelle (
2      input [5:0] A,
3      input [5:0] B,
4      input C_IN,            // Carry In (Uebertragseingang)
5      output reg[5:0] S,     // Summe
6      output reg C_OUT       // Carry Out (Uebertragsausgang)
7  );
8  //something happens here
9  endmodule
```

Codeauszug 3.1: **Example of a portlist with register- / wirearrays**

```
17 module Addiererzelle #(parameter WIDTH=10) (
18     input [WIDTH-1:0] A,
19     input [WIDTH-1:0] B,
❶ 20     input C_IN,               // Carry In (Uebertragseingang)
21     output reg[WIDTH-1:0] S, // Summe
22     output reg C_OUT          // Carry Out (Uebertragsausgang)
23 );
24
25 //something happens here
26
27 endmodule
28
29 /*****************************/
30
31 parameter ADD1_WIDTH = 6;
❷ 32 Addierzelle #(.WIDTH(ADD1_WIDTH)) add1 (
33     .A      (A),
34     .B      (B),
35     .C_IN   (C_IN),
36     .S      (S),
37     .C_OUT  (C_OUT)
38 );
```

This is a codebox with an explicit defined description area. Text only referencing the code can be placed in here. Additionally referencing single lines works like ❶ this or like this ❷!

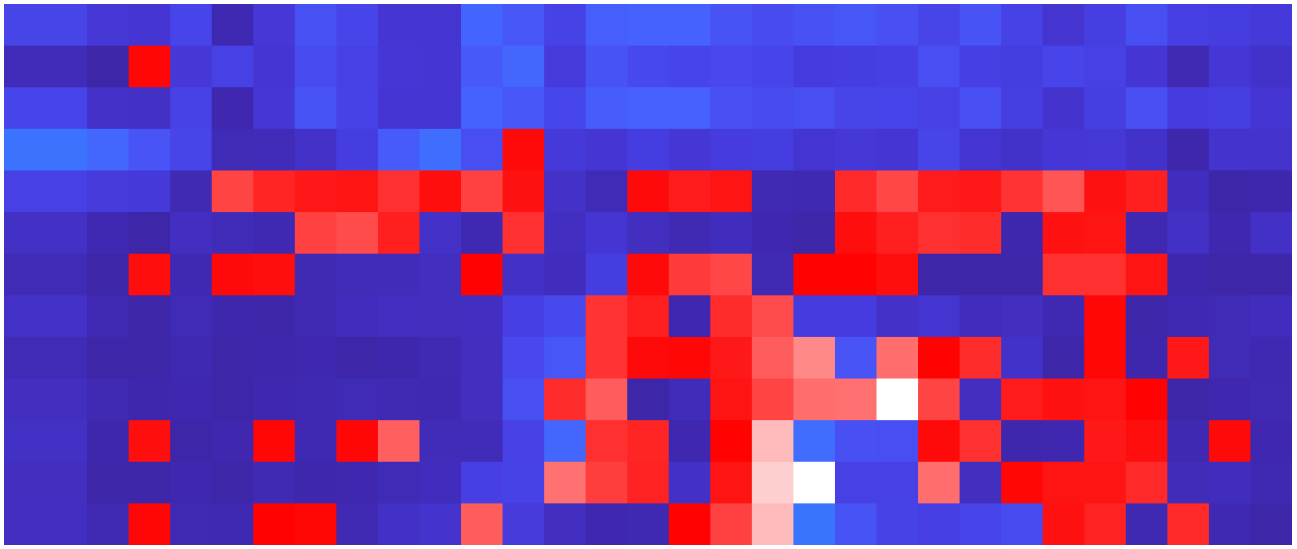
Codeauszug 3.2: **Example of a generic portlist with register- / wirearrays**

Additionally next to `inline highlighting` there are textboxes too:

```
mex -lde265 decoder/interface.cpp decoder/decoder.cpp -outdir decoder/bin;
```

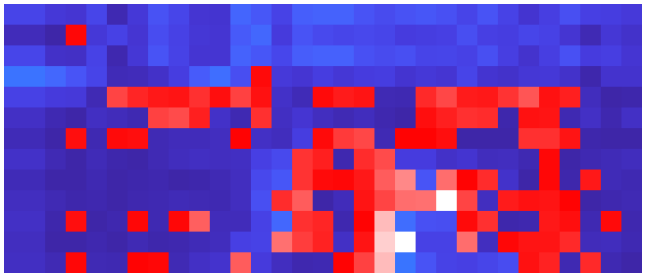
4 Images Boxes

Image boxes can be created in the same style as codeboxes. There are predefined image box styles for single and double images and a generic box for the use with multiple elements.

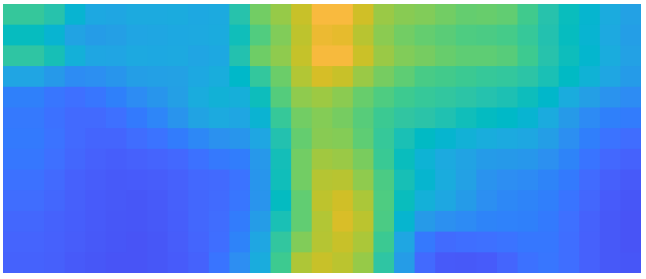


This is a single image that uses the full width of the page. It can have a command in the same style as the codebox uses.

Abbildung 4.1: **A single image**



(a) Image 1



(b) Image 2

Two images can be displayed next to each other if they have the same dimensions.

Abbildung 4.2: **Two images next to eachother**

5 Titles may be hidden!

In this chapter some titles may be hidden and therefore are not shown in the TOC.

5.1 Not Hidden Section

I'm not hidden in the ToC! [1]

Hidden subsection without a number

I'm hidden![4]

Literatur- und Quellenverzeichnis

[1] Marc Albrecht. *Sorted Sector Covering mit Bildkondensierung - Eine universelle Methode zur effizienten Berechnung von Local Dimming LED Backlight.* PhD thesis, Saarland University, 2010.

[2] Niklas Claesson Alexander Aulin. Tools in CMOS design. `https://www.eit.lth.se/fileadmin/eit/courses/eti135/slides/AlexanderNiklas.pdf`. [letzter Zugriff am 6.07.2018; Online].

[3] Tom Ashe. *Color Management and Quality Output: Working with Color from Camera to Display to Print.* Focal Press, 2012. ISBN: 0240821114 9780240821115.

[4] Marc Albrecht, Andreas Karrenbauer, Tobias Jung, and Chihao Xu. Sorted sector covering combined with image condensation : an efficient method for local dimming of direct-lit and edge-lit LCDs. *IEICE Transactions on Electronics*, E93-C(11):1556–1563, 2010.