TSEK06
High-Level Design Report

Group 5

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Version P1B

Status

Reviewed	Johannes Klasson	2016-02-15
Approved	Martin Nielsen-Lönn	-

PROJECT IDENTITY

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Contents

Document history

Version	**Date**	**Changes**	**Performed by**
P1A	2016-02-15	First draft	Johan Isaksson

1 Introduction

2 Block Level Description

2.1 SPI/PSRBR

2.2 16-bit Kogge-Stone Adder

The Kogge-Stone adder consists of four simple blocks connected in a complex way.
Lägg till bild på hur blocken sitter ihop.

2.2.1 Red

Table 1 – Logic table of red block.

A_i	B_i	P	G
0	0	0	0
0	1	1	0
1	0	1	0
1	1	0	1

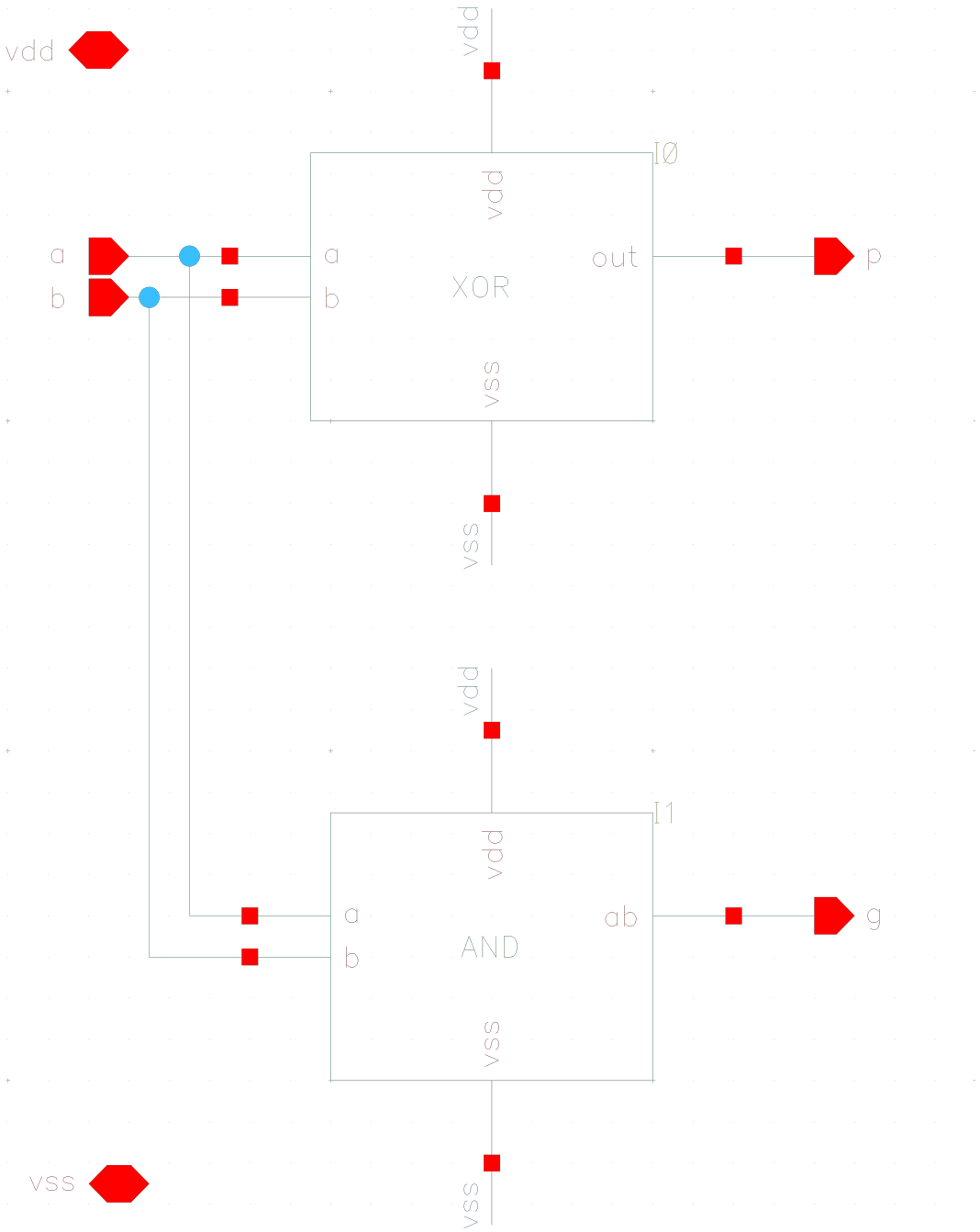

Figure 1 – Figure shows whats inside the red block in the adder

2.3 Comparator

2.3.1 Yellow

Table 2 – Logic table of yellow block.

Input	Function1	Function2	Output
00	1	0	1
01	0	0	1
10	0	0	1
11	1	0	1

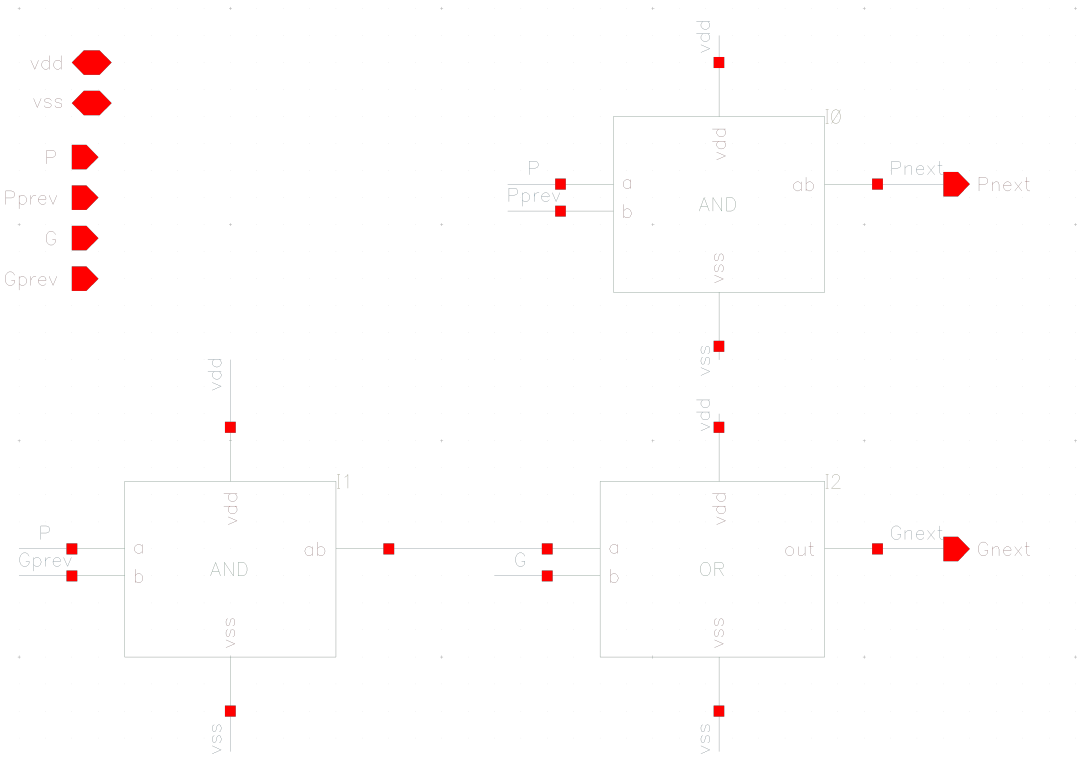

Figure 2 – Figure shows whats inside the yellow block in the adder

2.3.2 Yellow with carry

Table 3 – Logic table of yellow with carry block.

Input	Function1	Function2	Output
00	1	0	1
01	0	0	1
10	0	0	1
11	1	0	1

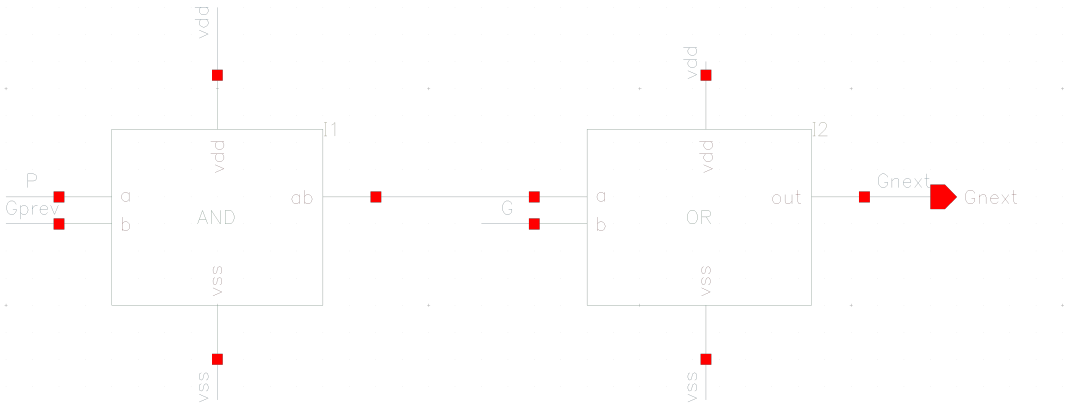

Figure 3 – Figure shows whats inside the yellow carry block in the adder

2.3.3 Sum

Table 4 – Logic table of sum block.

Input	Function1	Function2	Output
00	1	0	1
01	0	0	1
10	0	0	1
11	1	0	1

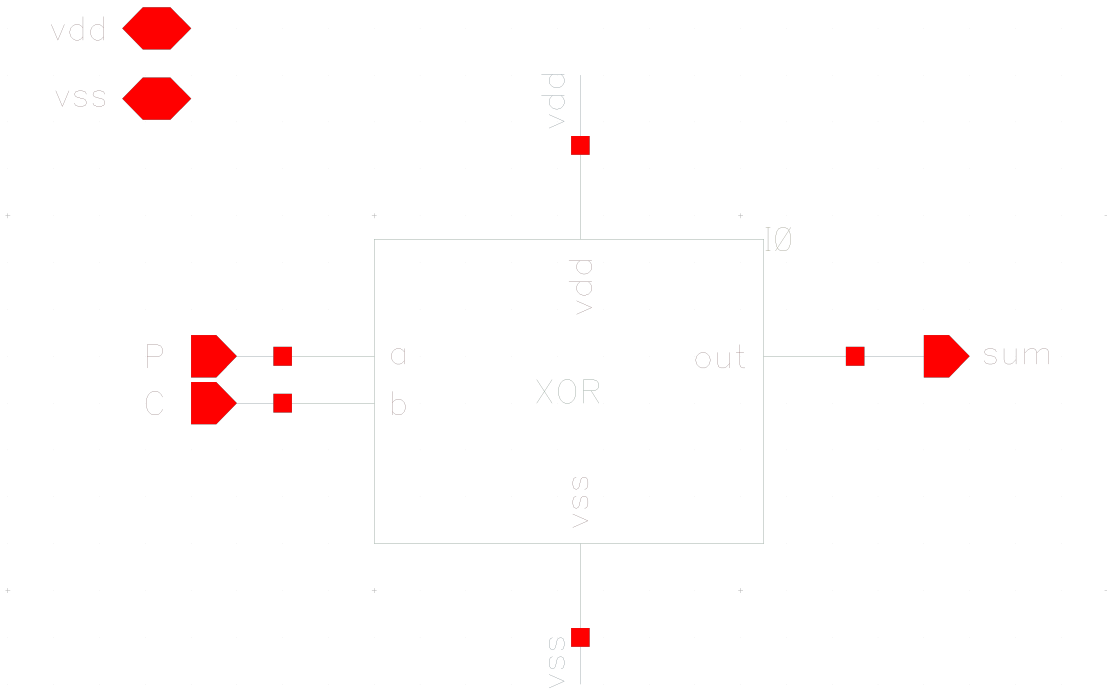

Figure 4 – Figure shows whats inside the sum block in the adder