



**OpenCores**

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# IP Core Specification

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# Contents

<b>INTRODUCTION.....</b>	<b>1</b>
<b>ARCHITECTURE.....</b>	<b>2</b>
<b>OPERATION.....</b>	<b>3</b>
<b>REGISTERS.....</b>	<b>4</b>
LIST OF REGISTERS.....	4
REGISTER 1 – DESCRIPTION.....	4
<b>CLOCKS.....</b>	<b>5</b>
<b>IO PORTS.....</b>	<b>6</b>

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# 1.

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# Introduction

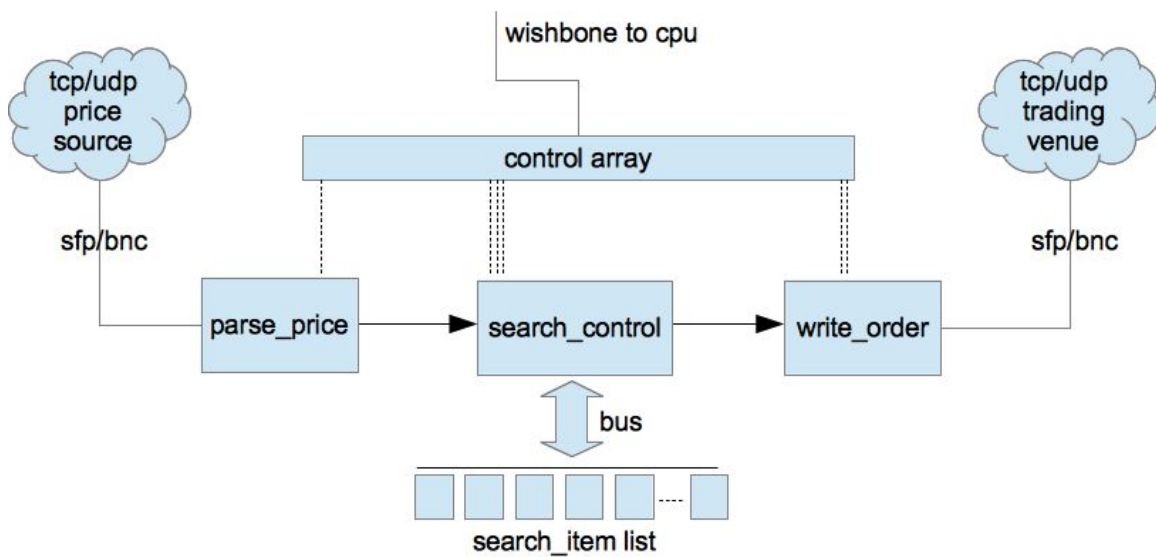
*[This section contains the introduction to the core, describing its use and features.]*

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# 2.

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## Architecture



*[This section describes the architecture of the block. A block diagram should be included describing the top level of the design.]*



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# 3.

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# Operation

*[This section describes the operation of the core. Specific sequences, such as startup sequences, as well as the modes and states of the block should be described.]*

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# 4.

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## Registers

*[This section specifies all internal registers. It should completely cover the interface between the core and the host as seen from the software view.]*

### List of Registers

Name	Address	Width	Access	Description

Table 1: List of registers

### Register 1 – Description

*[You shall choose the style of register you prefer. Do not use both options in one and the same document.]*

Bit #	Access	Description

*Reset Value:*

Reg\_Name: 0000h

31	30	29	28	...	8	7	6	5	4	3	2	1	0

Table 2: Description of registers

*Reset Value:*



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Reg\_Name: 0000h

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# 5.

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# Clocks

*[This section specifies all the clocks. All clocks, clock domain passes and the clock relations should be described.]*

Name	Source	Rates (MHz)			Remarks	Description
		Max	Min	Resolution		
clk_pad_i	Input Pad	10	4	0.1	Duty cycle 70/30.	For external interface.
wb_clk_I	PLL	200	-	-	Must be synchronized to sm_clk_i	System clock.
sm_clk_i	Input port	55	40	1	There are multi-clocks paths.	Clock 55MHz for State machine.

**Table 3: List of clocks**

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# 6.

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## IO Ports

*[This section specifies the core IO ports.]*

Port	Width	Direction	Description
wb_clk_i	1	Input	Block's WISHBONE Clock Input
wb_rst_i	1	Input	Block's WISHBONE Reset Input
wb_sel_i	4	Input	Block's WISHBONE Select Inputs
foo_pad_o	1	Output	Block's foo output to output pad
...			

**Table 4: List of IO ports**

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**1.**

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**Name**

*[This section may be added to outline different specifications.]*

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**1.**

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**Name**

*[This section may be added to outline different specifications.]*

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# Index

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*[This section contains an alphabetical list of helpful document entries with their corresponding page numbers.]*