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1  // megafunction wizard: %RAM: 2-PORT%
2  // GENERATION: STANDARD
3  // VERSION: WM1.0
4  // MODULE: altsyncram
5
6  // =====
7  // File Name: ram16x8.v
8  // Megafunction Name(s):
9  //     altsyncram
10 //
11 // Simulation Library File(s):
12 //     altera_mf
13 // =====
14 // *****
15 // THIS IS A WIZARD-GENERATED FILE. DO NOT EDIT THIS FILE!
16 //
17 // 17.0.0 Build 595 04/25/2017 SJ Lite Edition
18 // *****
19
20
21 //Copyright (C) 2017 Intel Corporation. All rights reserved.
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31 //that your use is for the sole purpose of programming logic
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34 //agreement for further details.
35
36
37 // synopsys translate_off
38 `timescale 1 ps / 1 ps
39 // synopsys translate_on
40 module ram16x8 (
41     clock,
42     data,
43     rdaddress,
44     wraddress,
45     wren,
46     q);
47
48     input    clock;
49     input [7:0] data;
50     input [3:0] rdaddress;
51     input [3:0] wraddress;
52     input    wren;
53     output [7:0] q;
54 `ifndef ALTERA_RESERVED_QIS
55 // synopsys translate_off
56 `endif
57     tri1    clock;
58     tri0    wren;
59 `ifndef ALTERA_RESERVED_QIS
60 // synopsys translate_on
61 `endif
62
63     wire [7:0] sub_wire0;
64     wire [7:0] q = sub_wire0[7:0];
65
66     altsyncram altsyncram_component (
67         .address_a (wraddress),
68         .address_b (rdaddress),
69         .clock0 (clock),
70         .data_a (data),
71         .wren_a (wren),
72         .q_b (sub_wire0),
73         .aclr0 (1'b0),

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74     .aclr1 (1'b0),
75     .addressstall_a (1'b0),
76     .addressstall_b (1'b0),
77     .byteena_a (1'b1),
78     .byteena_b (1'b1),
79     .clock1 (1'b1),
80     .clocken0 (1'b1),
81     .clocken1 (1'b1),
82     .clocken2 (1'b1),
83     .clocken3 (1'b1),
84     .data_b ({8{1'b1}}),
85     .eccstatus (),
86     .q_a (),
87     .rden_a (1'b1),
88     .rden_b (1'b1),
89     .wren_b (1'b0));
90 defparam
91     altsyncram_component.address_aclr_b = "NONE",
92     altsyncram_component.address_reg_b = "CLOCK0",
93     altsyncram_component.clock_enable_input_a = "BYPASS",
94     altsyncram_component.clock_enable_input_b = "BYPASS",
95     altsyncram_component.clock_enable_output_b = "BYPASS",
96     altsyncram_component.init_file = "ram16x8.mif",
97     altsyncram_component.intended_device_family = "Cyclone v",
98     altsyncram_component.lpm_type = "altsyncram",
99     altsyncram_component.numwords_a = 16,
100    altsyncram_component.numwords_b = 16,
101    altsyncram_component.operation_mode = "DUAL_PORT",
102    altsyncram_component.outdata_aclr_b = "NONE",
103    altsyncram_component.outdata_reg_b = "CLOCK0",
104    altsyncram_component.power_up_uninitialized = "FALSE",
105    altsyncram_component.ram_block_type = "M10K",
106    altsyncram_component.read_during_write_mode_mixed_ports = "DONT_CARE",
107    altsyncram_component.widthad_a = 4,
108    altsyncram_component.widthad_b = 4,
109    altsyncram_component.width_a = 8,
110    altsyncram_component.width_b = 8,
111    altsyncram_component.width_byteena_a = 1;
112
113
114 endmodule
115
116 // =====
117 // CNX file retrieval info
118 // =====
119 // Retrieval info: PRIVATE: ADDRESSSTALL_A NUMERIC "0"
120 // Retrieval info: PRIVATE: ADDRESSSTALL_B NUMERIC "0"
121 // Retrieval info: PRIVATE: BYTEENA_ACLR_A NUMERIC "0"
122 // Retrieval info: PRIVATE: BYTEENA_ACLR_B NUMERIC "0"
123 // Retrieval info: PRIVATE: BYTE_ENABLE_A NUMERIC "0"
124 // Retrieval info: PRIVATE: BYTE_ENABLE_B NUMERIC "0"
125 // Retrieval info: PRIVATE: BYTE_SIZE NUMERIC "8"
126 // Retrieval info: PRIVATE: BlankMemory NUMERIC "0"
127 // Retrieval info: PRIVATE: CLOCK_ENABLE_INPUT_A NUMERIC "0"
128 // Retrieval info: PRIVATE: CLOCK_ENABLE_INPUT_B NUMERIC "0"
129 // Retrieval info: PRIVATE: CLOCK_ENABLE_OUTPUT_A NUMERIC "0"
130 // Retrieval info: PRIVATE: CLOCK_ENABLE_OUTPUT_B NUMERIC "0"
131 // Retrieval info: PRIVATE: CLRdata NUMERIC "0"
132 // Retrieval info: PRIVATE: CLRq NUMERIC "0"
133 // Retrieval info: PRIVATE: CLRrdaddress NUMERIC "0"
134 // Retrieval info: PRIVATE: CLRrren NUMERIC "0"
135 // Retrieval info: PRIVATE: CLRwraddress NUMERIC "0"
136 // Retrieval info: PRIVATE: CLRwren NUMERIC "0"
137 // Retrieval info: PRIVATE: Clock NUMERIC "0"
138 // Retrieval info: PRIVATE: Clock_A NUMERIC "0"
139 // Retrieval info: PRIVATE: Clock_B NUMERIC "0"
140 // Retrieval info: PRIVATE: IMPLEMENT_IN_LES NUMERIC "0"
141 // Retrieval info: PRIVATE: INDATA_ACLR_B NUMERIC "0"
142 // Retrieval info: PRIVATE: INDATA_REG_B NUMERIC "0"
143 // Retrieval info: PRIVATE: INIT_FILE_LAYOUT STRING "PORT_B"
144 // Retrieval info: PRIVATE: INIT_TO_SIM_X NUMERIC "0"
145 // Retrieval info: PRIVATE: INTENDED_DEVICE_FAMILY STRING "Cyclone v"
146 // Retrieval info: PRIVATE: JTAG_ENABLED NUMERIC "0"

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147 // Retrieval info: PRIVATE: JTAG_ID STRING "NONE"
148 // Retrieval info: PRIVATE: MAXIMUM_DEPTH NUMERIC "0"
149 // Retrieval info: PRIVATE: MEMSIZE NUMERIC "128"
150 // Retrieval info: PRIVATE: MEM_IN_BITS NUMERIC "0"
151 // Retrieval info: PRIVATE: MIFfilename STRING "ram16x8.mif"
152 // Retrieval info: PRIVATE: OPERATION_MODE NUMERIC "2"
153 // Retrieval info: PRIVATE: OUTDATA_ACLR_B NUMERIC "0"
154 // Retrieval info: PRIVATE: OUTDATA_REG_B NUMERIC "1"
155 // Retrieval info: PRIVATE: RAM_BLOCK_TYPE NUMERIC "2"
156 // Retrieval info: PRIVATE: READ_DURING_WRITE_MODE_MIXED_PORTS NUMERIC "2"
157 // Retrieval info: PRIVATE: READ_DURING_WRITE_MODE_PORT_A NUMERIC "3"
158 // Retrieval info: PRIVATE: READ_DURING_WRITE_MODE_PORT_B NUMERIC "3"
159 // Retrieval info: PRIVATE: REGdata NUMERIC "1"
160 // Retrieval info: PRIVATE: REGq NUMERIC "1"
161 // Retrieval info: PRIVATE: REGrdaddress NUMERIC "1"
162 // Retrieval info: PRIVATE: REGrren NUMERIC "1"
163 // Retrieval info: PRIVATE: REGwraddress NUMERIC "1"
164 // Retrieval info: PRIVATE: REGwren NUMERIC "1"
165 // Retrieval info: PRIVATE: SYNTH_WRAPPER_GEN_POSTFIX STRING "0"
166 // Retrieval info: PRIVATE: USE_DIFF_CLKEN NUMERIC "0"
167 // Retrieval info: PRIVATE: UsedPRAM NUMERIC "1"
168 // Retrieval info: PRIVATE: Varwidth NUMERIC "0"
169 // Retrieval info: PRIVATE: WIDTH_READ_A NUMERIC "8"
170 // Retrieval info: PRIVATE: WIDTH_READ_B NUMERIC "8"
171 // Retrieval info: PRIVATE: WIDTH_WRITE_A NUMERIC "8"
172 // Retrieval info: PRIVATE: WIDTH_WRITE_B NUMERIC "8"
173 // Retrieval info: PRIVATE: WRADDR_ACLR_B NUMERIC "0"
174 // Retrieval info: PRIVATE: WRADDR_REG_B NUMERIC "0"
175 // Retrieval info: PRIVATE: WRCTRL_ACLR_B NUMERIC "0"
176 // Retrieval info: PRIVATE: enable NUMERIC "0"
177 // Retrieval info: PRIVATE: rden NUMERIC "0"
178 // Retrieval info: LIBRARY: altera_mf altera_mf.altera_mf_components.all
179 // Retrieval info: CONSTANT: ADDRESS_ACLR_B STRING "NONE"
180 // Retrieval info: CONSTANT: ADDRESS_REG_B STRING "CLOCK0"
181 // Retrieval info: CONSTANT: CLOCK_ENABLE_INPUT_A STRING "BYPASS"
182 // Retrieval info: CONSTANT: CLOCK_ENABLE_INPUT_B STRING "BYPASS"
183 // Retrieval info: CONSTANT: CLOCK_ENABLE_OUTPUT_B STRING "BYPASS"
184 // Retrieval info: CONSTANT: INIT_FILE STRING "ram16x8.mif"
185 // Retrieval info: CONSTANT: INTENDED_DEVICE_FAMILY STRING "Cyclone V"
186 // Retrieval info: CONSTANT: LPM_TYPE STRING "altsyncram"
187 // Retrieval info: CONSTANT: NUMWORDS_A NUMERIC "16"
188 // Retrieval info: CONSTANT: NUMWORDS_B NUMERIC "16"
189 // Retrieval info: CONSTANT: OPERATION_MODE STRING "DUAL_PORT"
190 // Retrieval info: CONSTANT: OUTDATA_ACLR_B STRING "NONE"
191 // Retrieval info: CONSTANT: OUTDATA_REG_B STRING "CLOCK0"
192 // Retrieval info: CONSTANT: POWER_UP_UNINITIALIZED STRING "FALSE"
193 // Retrieval info: CONSTANT: RAM_BLOCK_TYPE STRING "M10K"
194 // Retrieval info: CONSTANT: READ_DURING_WRITE_MODE_MIXED_PORTS STRING "DONT_CARE"
195 // Retrieval info: CONSTANT: WIDTHAD_A NUMERIC "4"
196 // Retrieval info: CONSTANT: WIDTHAD_B NUMERIC "4"
197 // Retrieval info: CONSTANT: WIDTH_A NUMERIC "8"
198 // Retrieval info: CONSTANT: WIDTH_B NUMERIC "8"
199 // Retrieval info: CONSTANT: WIDTH_BYTEENA_A NUMERIC "1"
200 // Retrieval info: USED_PORT: clock 0 0 0 0 INPUT VCC "clock"
201 // Retrieval info: USED_PORT: data 0 0 8 0 INPUT NODEFVAL "data[7..0]"
202 // Retrieval info: USED_PORT: q 0 0 8 0 OUTPUT NODEFVAL "q[7..0]"
203 // Retrieval info: USED_PORT: rdaddress 0 0 4 0 INPUT NODEFVAL "rdaddress[3..0]"
204 // Retrieval info: USED_PORT: wraddress 0 0 4 0 INPUT NODEFVAL "wraddress[3..0]"
205 // Retrieval info: USED_PORT: wren 0 0 0 0 INPUT GND "wren"
206 // Retrieval info: CONNECT: @address_a 0 0 4 0 wraddress 0 0 4 0
207 // Retrieval info: CONNECT: @address_b 0 0 4 0 rdaddress 0 0 4 0
208 // Retrieval info: CONNECT: @clock0 0 0 0 0 clock 0 0 0 0
209 // Retrieval info: CONNECT: @data_a 0 0 8 0 data 0 0 8 0
210 // Retrieval info: CONNECT: @wren_a 0 0 0 0 wren 0 0 0 0
211 // Retrieval info: CONNECT: q 0 0 8 0 @q_b 0 0 8 0
212 // Retrieval info: GEN_FILE: TYPE_NORMAL ram16x8.v TRUE
213 // Retrieval info: GEN_FILE: TYPE_NORMAL ram16x8.inc FALSE
214 // Retrieval info: GEN_FILE: TYPE_NORMAL ram16x8.cmp FALSE
215 // Retrieval info: GEN_FILE: TYPE_NORMAL ram16x8.bsf FALSE
216 // Retrieval info: GEN_FILE: TYPE_NORMAL ram16x8_inst.v FALSE
217 // Retrieval info: GEN_FILE: TYPE_NORMAL ram16x8_bb.v TRUE
218 // Retrieval info: LIB_FILE: altera_mf
219
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