Two Input MUX

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Features

- Drop-in module for the XC4000E, EX, XL, XV and Spartan families
- Data widths from 2 to 32 bits
- High performance and density guaranteed through Relational Placed Macro (RPM) mapping and placement technology
- Available in Xilinx CORE Generator

Functional Description

This macro is a two-input multiplexer. One input is chosen by the state of the select line (S0) and directed to the output data bus.

Pinout

Signal names for the schematic symbol are shown in Figure 1 and described in Table 1.

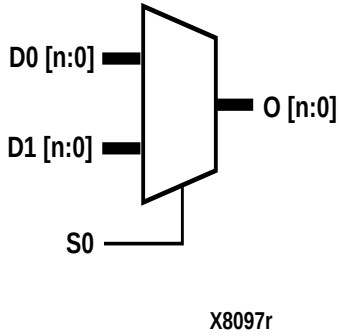

Figure 1: Functional Representation

Table 1: Core Signal Pinout

Signal	Signal Direction	Description
D0[n:0]	Input	FIRST INPUT- selected when S0 = 0
D1[n:0]	Input	SECOND INPUT - selected when S0 = 1
S0	Input	SELECT INPUT - chooses which input data bus is directed to the output bus
O[n:0]	Output	OUTPUT DATA BUS

CORE Generator Parameters

The CORE Generator parameterization window for this macro is shown in Figure 2. The parameters are as follows:

- **Component Name**: Enter a name for the output files generated for this module.
- **Port Width**: Select a bit width from the pull-down menu. The valid range is 2-32.
- **Create RPM**: When checked, a columnar Relational Placed Macro is created.

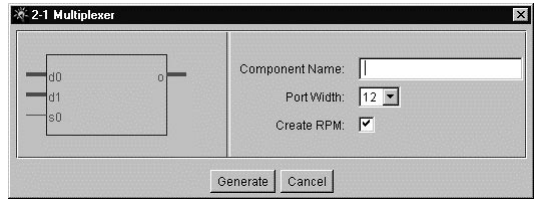

Figure 2: Parameterization Window

Core Resource Utilization

Table 2 shows the number of CLBs required for each available bit width.

Table 2: Bit Width versus CLB Count

Bit Width	CLB Count
2	1
3	2
4	2
5	3
6	3
7	4
8	4
9	5
10	5
11	6
12	6
13	7
14	7
15	8
16	8
17	9
18	9
19	10
20	10
21	11
22	11
23	12
24	12
25	13
26	13
27	14
28	14
29	15
30	15
31	16
32	16

Ordering Information

This macro comes free with the Xilinx CORE Generator. For additional information contact your local Xilinx sales representative, or e-mail requests to coregen@xilinx.com.

Parameter File Information

Parameter Name	Type	Notes
Componet_Name	String	
Port_Width	Integer	2 - 32
Create_RPM	Boolean	True/False