


```
Release 14.7 - xst P.20131013 (nt64)
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--> Parameter TMPDIR set to xst/projnav.tmp
```

```
Total REAL time to Xst completion: 0.00 secs
Total CPU time to Xst completion: 0.12 secs
```

```
--> Parameter xsthdpdir set to xst
```

```
Total REAL time to Xst completion: 0.00 secs
Total CPU time to Xst completion: 0.12 secs
```

```
--> Reading design: mux_proper.prj
```

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```
=====
*                               Synthesis Options Summary                         *
=====
---- Source Parameters
Input File Name      : "mux_proper.prj"
Ignore Synthesis Constraint File : NO

---- Target Parameters
Output File Name       : "mux_proper"
Output Format          : NGC
Target Device          : xc7a100t-3-csg324

---- Source Options
Top Module Name        : mux_proper
Automatic FSM Extraction : YES
FSM Encoding Algorithm : Auto
Safe Implementation    : No
FSM Style              : LUT
RAM Extraction         : Yes
RAM Style              : Auto
ROM Extraction          : Yes
Shift Register Extraction : YES
ROM Style              : Auto
```

Resource Sharing	:	YES
Asynchronous To Synchronous	:	NO
Shift Register Minimum Size	:	2
Use DSP Block	:	Auto
Automatic Register Balancing	:	No

----- Target Options

LUT Combining	:	Auto
Reduce Control Sets	:	Auto
Add IO Buffers	:	YES
Global Maximum Fanout	:	100000
Add Generic Clock Buffer(BUFG)	:	32
Register Duplication	:	YES
Optimize Instantiated Primitives	:	NO
Use Clock Enable	:	Auto
Use Synchronous Set	:	Auto
Use Synchronous Reset	:	Auto
Pack IO Registers into IOBs	:	Auto
Equivalent register Removal	:	YES

----- General Options

```
Optimization Goal : Speed
Optimization Effort : 1
Power Reduction : NO
Keep Hierarchy : No
Netlist Hierarchy : As_Optimized
RTL Output : Yes
Global Optimization : AllClockNets
Read Cores : YES
Write Timing Constraints : NO
Cross Clock Analysis : NO
Hierarchy Separator : /
Bus Delimiter : <>
Case Specifier : Maintain
Slice Utilization Ratio : 100
BRAM Utilization Ratio : 100
DSP48 Utilization Ratio : 100
Auto BRAM Packing : NO
Slice Utilization Ratio Delta : 5
```

=====
=====

* HDL Parsing
=====

* HDI Elaboration

Elaborating module <mux proper>.

WARNING: HDLCompiler:413 - "D:\BRB\dds-mini\W4_0.v" Line 12: Result of 32-bit expression is truncated to fit in 1-bit target.

WARNING: HDLCompiler:413 - "D:\BRB\dds-mini\W4_0.v" Line 13: Result of 32-bit expression is truncated to fit in 1-bit target.

=====
=====

* HDI: Synthesis

```
=====
Synthesizing Unit <mux_proper>.
  Related source file is "D:\BRB\dds-mini\W4_0.v".
  Summary:
    no macro.
Unit <mux_proper> synthesized.
```

```
=====
HDL Synthesis Report
```

```
Found no macro
```

```
=====
*           Advanced HDL Synthesis           *
=====
```

```
=====
Advanced HDL Synthesis Report
```

```
Found no macro
```

```
=====
*           Low Level Synthesis           *
=====
```

```
Optimizing unit <mux_proper> ...
```

```
Mapping all equations...
```

```
Building and optimizing final netlist ...
```

```
Found area constraint ratio of 100 (+ 5) on block mux_proper, actual ratio is 0.
```

```
Final Macro Processing ...
```

```
=====
Final Register Report
```

```
Found no macro
```

```
=====
*           Partition Report           *
=====
```

```
Partition Implementation Status
```

```
-----
No Partitions were found in this design.
```

```
=====
*           Design Summary           *
=====
```

```
Top Level Output File Name      : mux_proper.ngc
```

```
Primitive and Black Box Usage:
```

```
-----  
# BELS : 4  
# GND : 1  
# LUT2 : 1  
# LUT3 : 1  
# VCC : 1  
# IO Buffers : 12  
# IBUF : 3  
# OBUF : 9
```

Device utilization summary:

```
-----  
Selected Device : 7a100tcsg324-3
```

Slice Logic Utilization:

Number of Slice LUTs:	2	out of	63400	0%
Number used as Logic:	2	out of	63400	0%

Slice Logic Distribution:

Number of LUT Flip Flop pairs used:	2			
Number with an unused Flip Flop:	2	out of	2	100%
Number with an unused LUT:	0	out of	2	0%
Number of fully used LUT-FF pairs:	0	out of	2	0%
Number of unique control sets:	0			

IO Utilization:

Number of IOs:	12			
Number of bonded IOBs:	12	out of	210	5%

Specific Feature Utilization:

```
-----  
Partition Resource Summary:
```

No Partitions were found in this design.

```
=====
```

Timing Report

NOTE: THESE TIMING NUMBERS ARE ONLY A SYNTHESIS ESTIMATE.
FOR ACCURATE TIMING INFORMATION PLEASE REFER TO THE TRACE REPORT
GENERATED AFTER PLACE-and-ROUTE.

Clock Information:

```
-----  
No clock signals found in this design
```

Asynchronous Control Signals Information:

```
-----  
No asynchronous control signals found in this design
```

Timing Summary:

```
-----  
Speed Grade: -3
```

Minimum period: No path found
Minimum input arrival time before clock: No path found
Maximum output required time after clock: No path found
Maximum combinational path delay: 0.898ns

Timing Details:

All values displayed in nanoseconds (ns)

=====

Timing constraint: Default path analysis
Total number of paths / destination ports: 10 / 7

=====

Delay: 0.898ns (Levels of Logic = 3)
Source: I0 (PAD)
Destination: out<8> (PAD)

Data Path: I0 to out<8>

Cell:in->out	fanout	Gate Delay	Net Delay	Logical Name (Net Name)
IBUF:I->O	3	0.001	0.521	I0_IBUF (out_0_OBUF)
LUT3:I0->O	1	0.097	0.279	_n00191 (out_8_OBUF)
OBUF:I->O		0.000		out_8_OBUF (out<8>)
Total	0.898ns (0.098ns logic, 0.800ns route)			(10.9% logic, 89.1% route)

=====

Cross Clock Domains Report:

=====

Total REAL time to Xst completion: 15.00 secs
Total CPU time to Xst completion: 14.80 secs

-->

Total memory usage is 4616504 kilobytes

Number of errors : 0 (0 filtered)
Number of warnings : 2 (0 filtered)
Number of infos : 0 (0 filtered)