

Base System Builder

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WelcomeBoardSystemProcessorPeripheralCacheSummary

Welcome to the Base System Builder  
This tool leads you through the steps necessary for creating an embedded system.  
Select One of the Following:  

☒ I would like to create a new design

☐ I would like to load an existing .bsb settings file (saved from a previous sessi

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Base System Builder

Welcome

Board

System

Processor

Peripheral

Cache

Summary

Board Selection

Select a target development board.

Board

☒ I would like to create a system for the following development board

Board Vendor

Digilent

Board Name

Digilent Genesys System Board

Board Revision

C

☐ I would like to create a system for a custom board

Board Information

Architecture	Device	Package	Speed Grade
virtex5	xc5vlx50t	ff1136	-1
<input type="checkbox"/> Use Stepping			
Reset Polarity	Active Low		

Related Information

[Vendor's Website](#)

[Vendor's Contact Information](#)

[Third Party Board Definition Files Download Website](#)

The Genesys board utilizes a Xilinx Virtex 5 XC5VLX50T-FFG1136 device. The board includes Tri-Mode Ethernet MAC/PHY, 256MB DDR2 SDRAM SODIMM memory, 32MB of Intel P30 Flash, DVI ouptut, Digilent USB-EPP port, Xilinx USB host and device controller and 2 RS232 serial ports.

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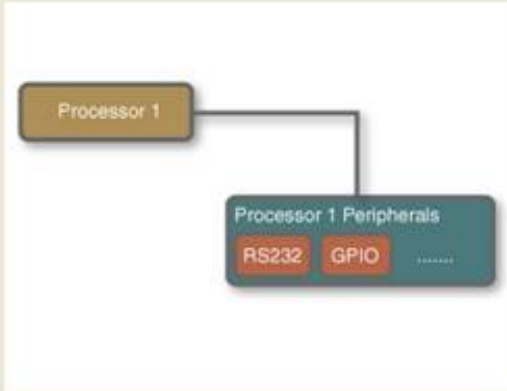
Summary

System Configuration

Configure your system.

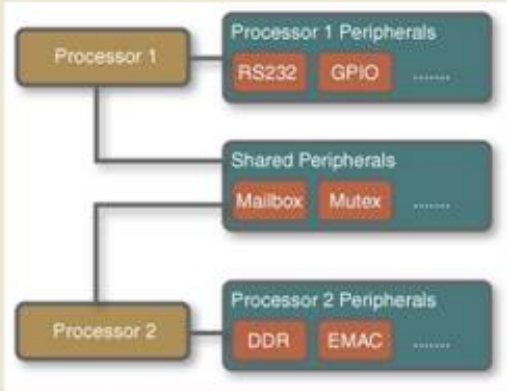
☒ Single-Processor System

Select this option to create a design with a single processor. This Wizard will let you configure the processor, the peripheral set and some major configuration parameters for the peripherals.



☐ Dual-Processor System

Select this option to create a design with two processors. This Wizard will let you select the types of processors, peripherals unique to each processor, and peripherals shared by the processors.



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Summary

Processor Configuration

Configure the processor(s).

Reference Clock Frequency

100.00

MHz

Processor 1 Configuration

Processor Type

MicroBlaze

System Clock Frequency

125.00

MHz

Local Memory

64 KB

Debug Interface

On-Chip HW Debug Module

☐ Enable Floating Point Unit

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Peripheral Configuration

To add a peripheral, drag it from the "Available Peripherals" to the processor peripheral list. To change a core parameter, click on the peripheral.

Available Peripherals

Peripheral Names

IO Devices

Internal Peripherals

lmb\_bram\_if\_cntlr

xps\_bram\_if\_cntlr

xps\_timebase\_wdt

xps\_timer

Add >

< Remove

Processor 1 (MicroBlaze) Peripherals

Select All

Core	Parameter
Core: xps_gpio	
FLASH	
Core: xps_mch_emc	
<del>Hard Ethernet MAC</del>	
<del>Core: xps_ll_temper, User D...</del>	
LEDs_8Bit	
Core: xps_gpio	
Push_Buttons_7Bit	
Core: xps_gpio	
RS232_Uart_0	
RS232_Uart_0	xps_uart16550
Configure Mode	Configure as UART
Use Interrupt	<input type="checkbox"/>
RS232_Uart_1	
Core: xps_uartlite, Baud Ra...	
dlmb_cntlr	
Core: lmb_bram_if_cntlr	
ilmb_cntlr	
Core: lmb_bram_if_cntlr	

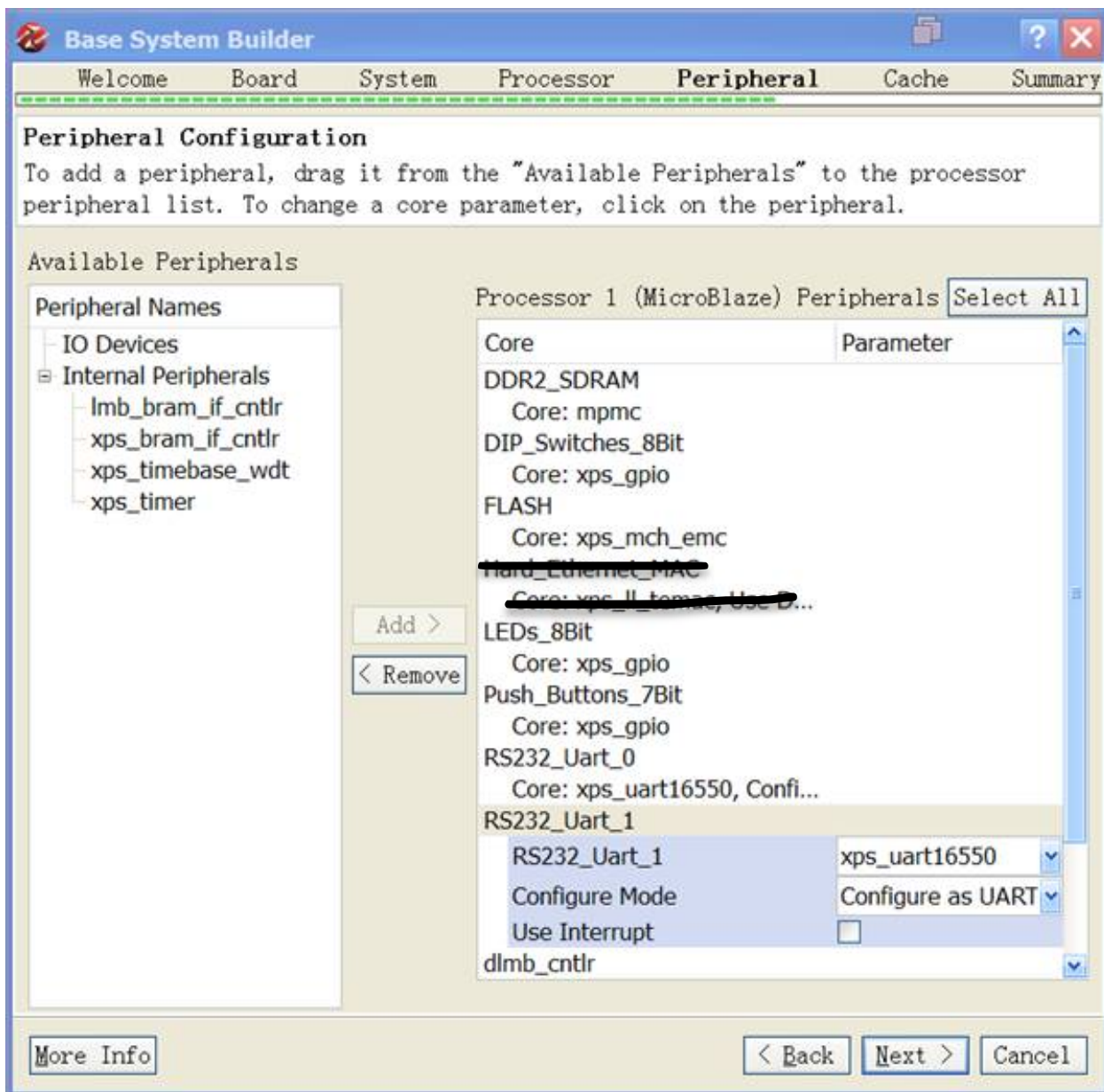
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Cache Configuration

Select cache size and cache memory for processor(s).

Processor 1 (MicroBlaze) Cache

In MicroBlaze, caches are optional and configurable. Caches are implemented using FPGA LUTs for small caches or Block RAMs for large sized caches.

☒ Instruction Cache

Instruction Cache Size2 KB

Instruction Cache Memory

☒ DDR2\_SDRAM

☐ FLASH

☒ Data Cache

Data Cache Size2 KB

Data Cache Memory

☒ DDR2\_SDRAM

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