SCUBA-2 Block Specification

Microsecond Timer

February 11, 2004

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1. Block Overview
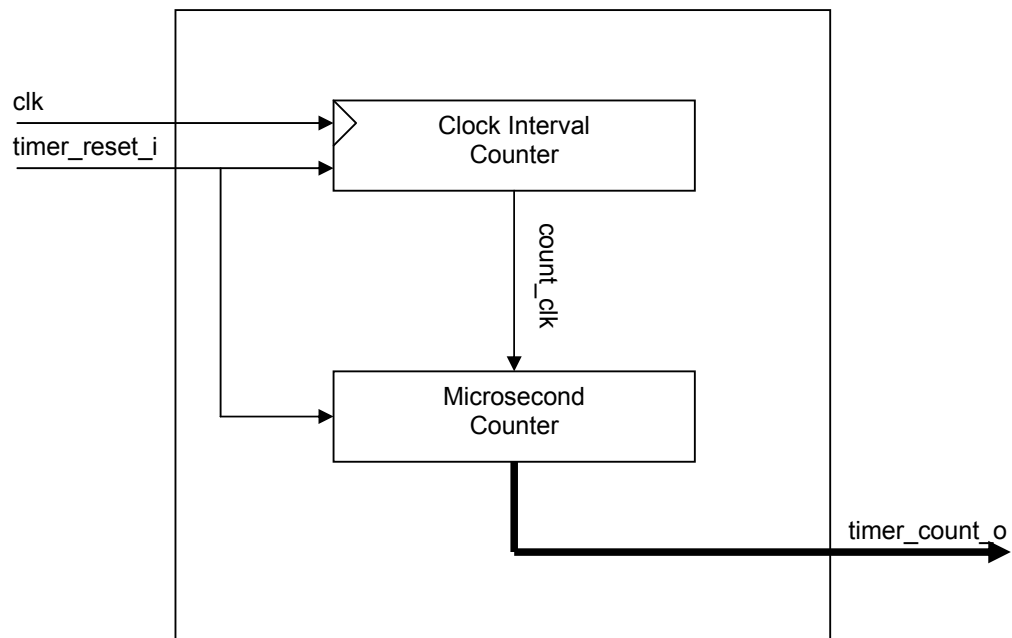
1.1 Block Location and Block Interface Within System

The microsecond timer is used as a building block in modules that use the 1-wire signalling protocol:

- Card_id
- Temperature

1.2 Block Functionality / Features

- Asynchronous reset
- Timer output available
- Parameterized clock period (changes to system clock frequency do not affect timer)
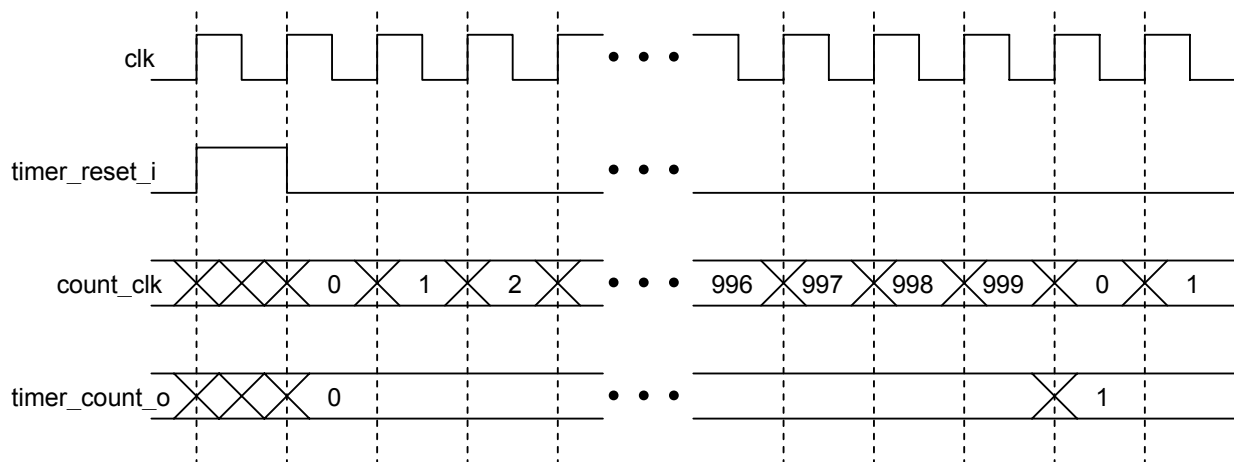
1.3 Block Dataflow

2. Block Interfaces

2.1 Interface Signal Description

Table 1: Interface Signals

Signal	Description	Direction
Global Signals		
clk	Global clock signal.	in
Timer Controls		
timer_reset_i	Active-high asynchronous timer reset	in
Timer Outputs		
timer_count_o	Current timer value.	out

2.2 Interface Protocol and Timing

3. Files of the Block

3.1 Source Code

3.1.1 us_timer.vhd

This file contains the implementation of the microsecond timer. It is compiled into the "components" library.

3.2 Header Code

3.2.1 general_pack.vhd

This file contains the parameters used by the microsecond timer. It is compiled into the "sys_param" library.