MOD5270 Platform Reference

Revision 1.3
July 15, 2009

Introduction

This document provides the memory map and locations of reference materials for those who wish to add additional hardware to their NetBurner device. Hardware dimensions, connectors and pinouts are described in the datasheet for your NetBurner device at www.netburner.com.

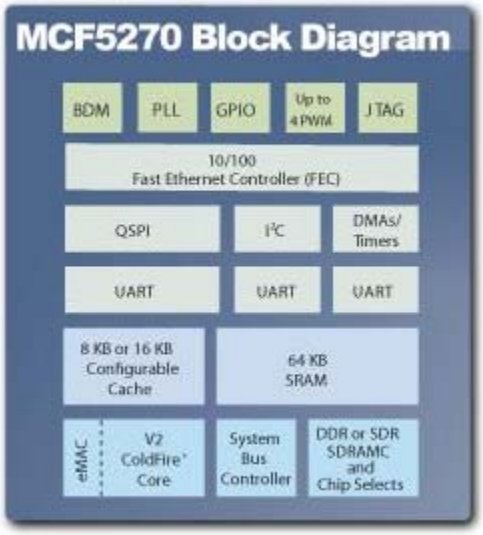
MOD5270 vs. MOD5270B

The original MOD5270-100CR uses a 2Mbyte SDRAM IC. When this IC was discontinued, it was replaced with a 8MB IC. Existing MOD5270 applications will run as before with no changes, using only 2MB of SDRAM. Applications may take advantage of the additional 6MB of SDRAM by building the application with the MOD5270B platform selected.

Note: When downloading a MOD5270B platform-compiled application to a MOD5270B module via AutoUpdate for the first time, it will not work due to platform conflicts. In order to resolve this, the application must first download through serial via MTTTY terminal. Once this is complete and the application is successfully running, future MOD5270B-compiled applications can download via AutoUpdate.

MCF5270 Processor Block Diagram

The block diagram of the 5270 processor is shown below. The Freescale reference manual provides in-depth information on the processor and is located in the \nburn\docs\Freescale directory of your NetBurner installation.



Development Board Schematic

The MOD-DEV-100CR or MOD-DEV-70CR development board schematic is located in the \nburn\docs\platform directory. This schematic can be used for design ideas in your own hardware implementation for power, RS-232 conversion or SD Flash card implementation.

Memory Map

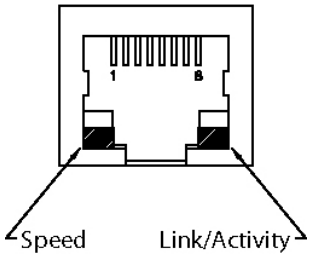
If you are adding peripherals to your NetBurner device address/data bus, you can choose unused memory locates from the table below. Once an area has been selected, you will need to configure the appropriate chip select address and option registers in the MCF5270 processor. Please refer to the chip select sections of the Freescale MCF5270 processor manual for details on the register configuration.

Memory Region	Address Range	Description
Undefined	0x00000000 to 0x01FFFFFF	Undefined area to catch null pointers
SDRAM	0x02000000 to 0x021FFFFF 0x02000000 to 0x027FFFFF	MOD5270: 2 MB of SDRAM MOD5270B: 8 MB of SDRAM
Unused	0x02200000 to 0x1FFFFFFF	Available to Programmer
VBR	0x20000000 to 0x200003FF	5270 Vector Base Register
RAMBAR	0x20000000 to 0x2000FFFF	5270 Internal SRAM
Unused	0x20010000 to 0x3FFFFFFF	Available to Programmer
IPSBAR	0x40000000 to 0x7FFFFFFF	The 5270 Internal Device Registers. These are accessible using the sim structure defined in sim5270.h
Unused	0x80000000 to 0xFFBFFFFF	Available to Programmer
Start of FLASH	0xFFC00000	Start of 512 K of FLASH Memory
Flash Monitor	0xFFC00000 to 0xFFC03FFF	16K Boot Monitor
Monitor Params	0xFFC04000 to 0xFFC05FFF	8K Monitor Parameter Storage
User Params	0xFFC06000 to 0xFFC07FFF	8K User Parameter Storage
Application Code	0xFFC08000 to ...	Compressed application code
End of FLASH	0xFFC7FFFF	End of 512 K of FLASH Memory

RJ-45 Connector

LEDs

LED 1: Ethernet speed: 10 MB (off) or 100 MB (on)
LED 2: Link/Activity



Pinout Information

Pin	Signal	Pin	Signal
1	TX+	5	----
2	TX-	6	RX-
3	RX+	7	----
4	----	8	----