MOD5234-100IR Platform Reference

Revision 1.3
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Introduction

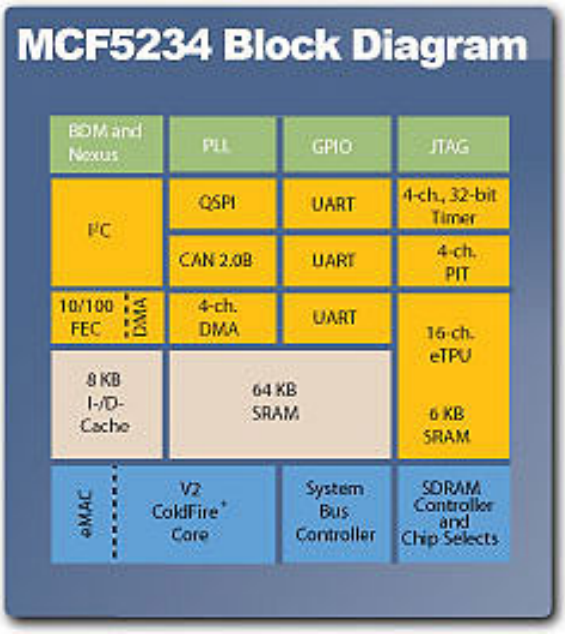
This document provides the memory map and locations of reference materials for those who wish to add additional hardware to their NetBurner device. Hardware dimensions, connectors and pinouts are described in the datasheet for your NetBurner device at www.netburner.com.

eTPU

The eTPU is essentially an independent microcontroller designed for timing control, I/O handling, serial communications, motor control, and engine control applications. The NetBurner Mod5234 module includes a programmable I/O controller with its own core and memory system, enabling it to perform complex timing and I/O management independently of the CPU.

MCF5234 Processor Block Diagram

The block diagram of the 5234 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 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, RS-485, CAN Bus or SD Flash card implementation.

Memory Map

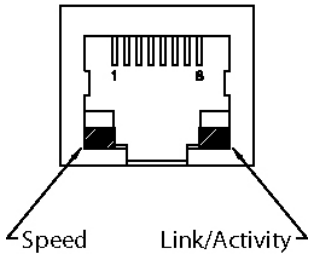
If you are adding peripherals to your NetBurner device address/data bus, you can choose unused memory locates from the table below. Once an area has been selected, you will need to configure the appropriate chip select address and option registers in the MCF5234 processor. Please refer to the chip select sections of the Freescale MCF5234 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 0x027FFFFF	The 8 MB of SDRAM
Unused	0x02800000 to 0x1FFFFFFF	Available to Programmer
VBR	0x20000000 to 0x200003FF	5234 Vector Base Register
RAMBAR	0x20000000 to 0x2000FFFF	5234 Internal SRAM
Unused	0x20010000 to 0x3FFFFFFF	Available to Programmer
IPSBAR	0x40000000 to 0x7FFFFFFF	The 5234 Internal Device Registers. These are accessible using the sim structure defined in sim5234.h
Unused	0x80000000 to 0xFFBFFFFF	Available to Programmer
Start of FLASH	0xFFC00000	Start of 2 MB of FLASH Memory
FLASH Monitor	0xFFC00000 to 0xFFC03FFF	16K The 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	0x FFDFFFFF	End of 2 MB 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	----