SB700EX-100CR Platform Reference

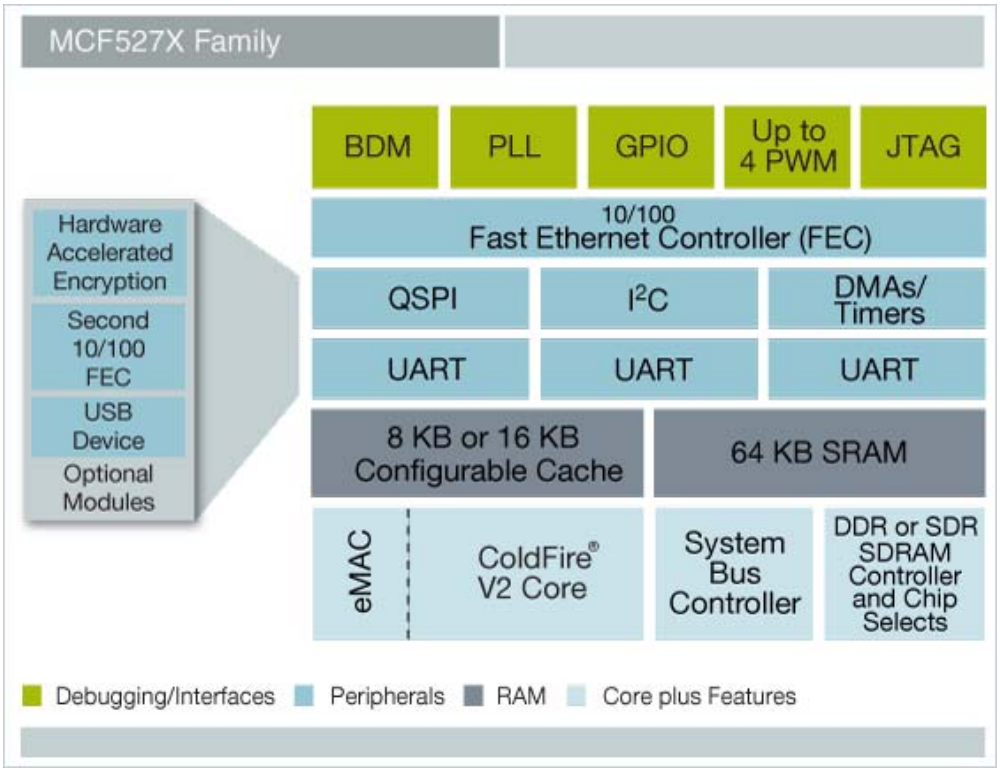
Revision 1.2
April 16, 2010

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 pin-outs are described in the datasheet for the NetBurner device at www.netburner.com.

MCF5270 Processor Block Diagram

The block diagram of the 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.

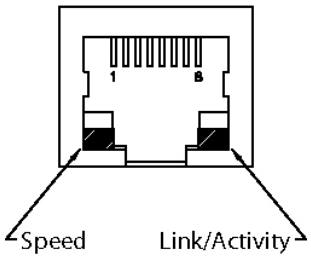


Memory Map

Memory Region	Address Range	Region Description
Undefined	0x00000000 to 0x01FFFFFF	Undefined area to catch null pointers
SDRAM	0x02000000 to 0x027FFFFF	8MB of SDRAM
Unused	0x02800000 to 0x1FFFFFFF	Available to programmer
VBR	0x20000000 to 0x200003FF	MCF5270 vector base register
RAMBAR	0x20000000 to 0x2000FFFF	MCF5270 64kB internal SRAM
Unused	0x20010000 to 0x3FFFFFFF	Available to programmer
IPSBAR	0x40000000 to 0x7FFFFFFF	MCF5270 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 2MB flash memory
Flash Monitor	0xFFC00000 to 0xFFC03FFF	16kB boot monitor
Monitor Params	0xFFC04000 to 0xFFC05FFF	8kB monitor parameter storage
User Params	0xFFC06000 to 0xFFC07FFF	8kB user parameter storage
Application Code	0xFFC08000 to End of Flash	Compressed application code
End of Flash	0XFFDFFFFF	End of 2MB flash memory

RJ-45 Connector

Left LED: Ethernet speed [10 MB (off), 100 MB (on)]
Right LED: Link/Activity



Pin-out Information

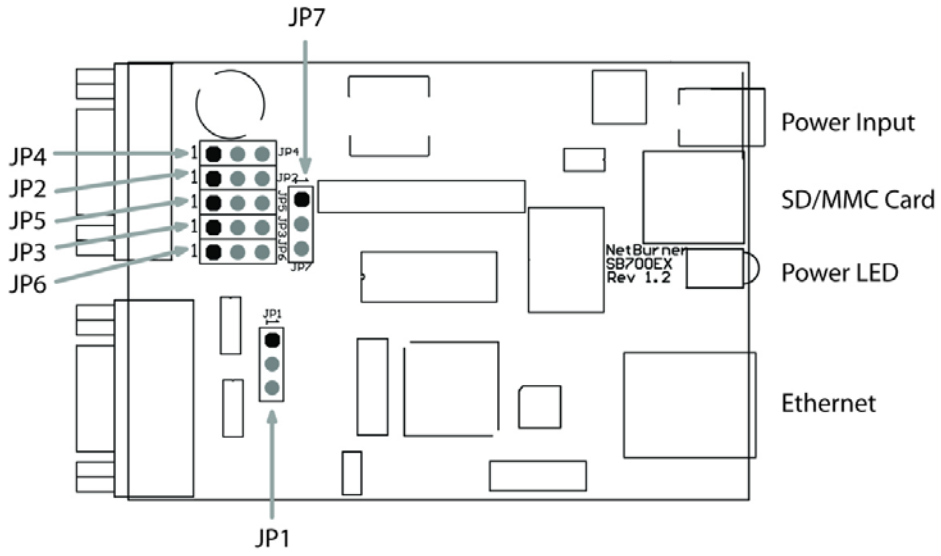
RJ-45 Connector			
Pin	**Signal**	**Pin**	**Signal**
1	TX+	4	---
2	TX-	6	RX-
3	RX+	7	---
4	---	8	---

Serial Port DB9 Configuration		
Pin	**RS-232**	**RS-422/485 (Port 0 Only)**
1	Carrier Detect (CD – in)	---
2	Receive (RX – in)	Tx- for Half/Full-Duplex (Z)
3	Transmit (TX – out)	Tx+ for Half/Full-Duplex (Y)
4	Data Terminal Ready (DTR – out)	---
5	Ground (GND)	Ground (GND)
6	Data Set Ready (DSR – in)	Rx- for Full-Duplex (B)
7	Request to Send (RTS – out)	Rx+ for Full-Duplex (A)
8	Clear to Send (CTS – in)	---
9	Ring Indicator (RI – in)	---

Serial Port 0 Jumper Configuration

Mode	JP1	JP2	JP3	JP4	JP5	JP6
RS-232	[1 – 2]	[1 – 2]	[1 – 2]	[1 – 2]	[1 – 2]	---
RS-422/485	[2 – 3]	[2 – 3]	[2 – 3]	[2 – 3]	[2 – 3]	---
Enable RS-485 HD Echo	---	---	---	---	---	[2 – 3]
Disable RS-485 HD Echo	---	---	---	---	---	[1 – 2]

- JP6[2-3] should be used when using RS-485 full-duplex mode.
- JP7 selects the slew-rate limit and has three configurations:
  [1-2] = 500 kbps communication rate
  [2-3] = 16 Mbps communication rate
  [No Jumper] = 250 kbps communication rate (default)



Power Connector

The power LED is illuminated when power is supplied. The power input is a standard 2.1 mm P5-type input jack. The center is positive and the outer shell is negative.

Pin	Signal
Center	7-30 V DC
Shell	GND