SB72EX-100CR Platform Reference

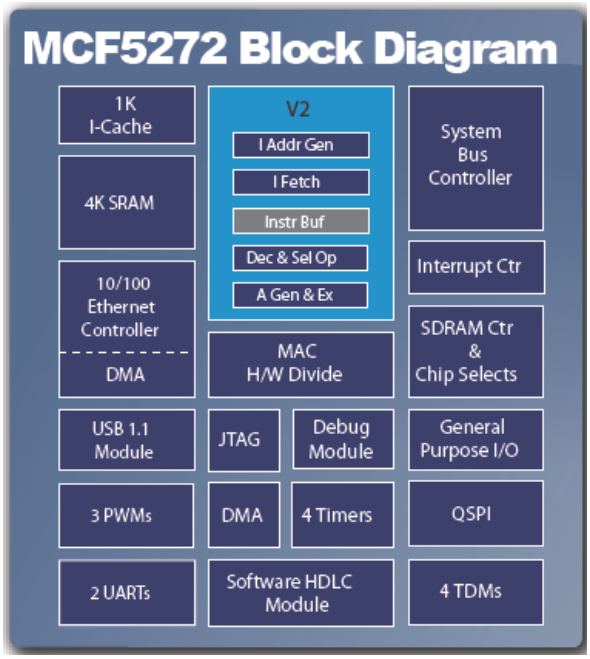
Revision 1.4
April 16, 2010

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 data sheet for the NetBurner device at www.netburner.com.

MCF5272 Processor Block Diagram

The block diagram of the MCF5272 processor is shown below. The Freescale user's manual provides in-depth information on the processor and is located in the \Nburn\docs\FreescaleManuals directory of the NetBurner Network Development Kit (NNDK) tools installation.



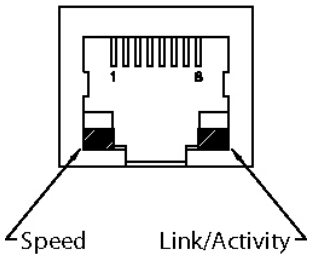
Memory Map

If peripherals are added to the NetBurner device address/data bus, then unused memory locations can be chosen from the table below. Once an area has been selected, the appropriate chip select address and option registers will need to be configured in the MCF5272 processor. Please refer to the chip select sections of the Freescale MCF5272 User's Manual for details on the register configuration.

Memory Region	Address Range	Region Description
Undefined	0x00000000 to 0x01FFFFFF	Undefined area to catch null pointers
SDRAM	0x02000000 to 0x027FFFFF	8 MB of SDRAM
Unused	0x02800000 to 0x0FFFFFFF	Available to programmer
MBAR	0x10000000 to 0x1000FFFF	MCF5272 internal register mapping
Unused	0x10010000 to 0x1FFFFFFF	Available to programmer
RAMBAR	0x20000000 to 0x20000FFF	MCF5272 4 kB of internal static RAM
VBR	0x20000000 to 0x200003FF	MCF5272 vector base register
Undefined	0x20002000 to 0xFFBFFFFF	Available to programmer
Start of FLASH	0xFFC00000	Start of 2 MB FLASH Memory
Monitor	0xFFC00000 to 0xFFC03FFF	16 kB for the boot monitor
Monitor Params	0xFFC04000 to 0xFFC05FFF	8 kB for monitor parameter storage
User Params	0xFFC06000 to 0xFFC07FFF	8 kB for user parameter storage
Application Code	0xFFC08000 to ...	Compressed application code
End of FLASH	0xFFDFFFFF	End of FLASH memory

RJ-45 Connector

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



Pin-out Information

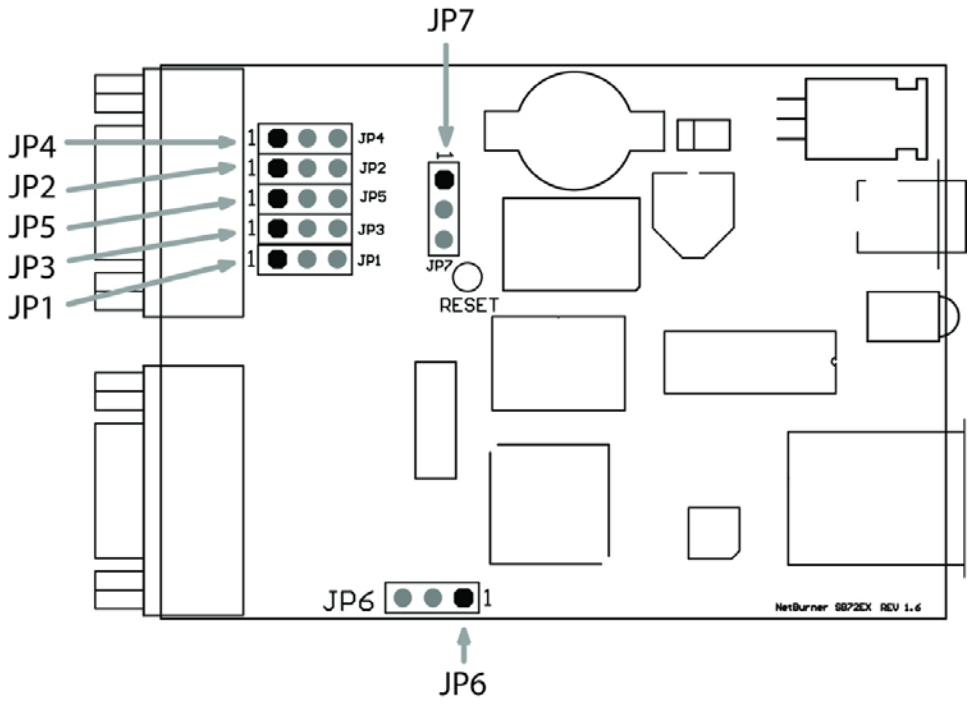
RJ-45 Connector			
Pin	**Signal**	**Pin**	**Signal**
1	TX+	4	---
2	TX-	6	RX-
3	RX+	7	---
4	---	8	---

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 (B)
3	Transmit (TX – out)	Tx+ for Half/Full-Duplex (A)
4	Data Terminal Ready (DTR – out)	---
5	Ground (GND)	Ground (GND)
6	Data Set Ready (DSR – in)	Rx- for Full-Duplex (Z)
7	Request to Send (RTS – out)	Rx+ for Full-Duplex (Y)
8	Clear to Send (CTS – in)	---
9	Ring Indicator (RI – in)	---

Serial Port 0 Jumper Configuration

Mode	JP1	JP2	JP3	JP4	JP5	JP7
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	---	---	---	---	---	[1 – 2]
Disable RS-485 HD Echo	---	---	---	---	---	[2 – 3]

- JP7[1-2] should always be used when using RS-485 full-duplex mode.
- JP7[1-2] or JP7[2-3] can be used in RS-422 mode.



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