Features

- Companion development kit includes all of the hardware and software you will need to develop embedded applications. This includes an RTOS, TCP/IP, Web Server, C/C++ Compiler, IDE, Graphical Debugger, configuration and deployment tools.
- Start writing your application code immediately, instead of integrating development tools or building custom hardware.
- Use as a high-performance single board computer, or as a network interface processor.
- Module supports 2 serial ports, 4 timers, address bus, data bus, GPIO, SPI, interrupts, PWM, USB and more.
- Integrated 62Mhz 32-bit Coldfire 5272 processor with integrated 10/100 Ethernet and MAC
- 8MB SDRAM, 2MB of Flash Memory.
- Temperature Range: 0°C to 70° C.

MOD5272

NetBurner's High Peformance Embedded Network Core Module

Introduction

The MOD5272 processor modules are low cost, high performance single board computers that are excellent solutions to network-enable both existing and new product designs with 10/100BaseT Ethernet. Based on the Freescale ColdFire 5272 32-bit processors with integrated 10/100 Ethernet MAC, they have plenty of horsepower for the most demanding applications (rated at 60+MIPS with 62Mhz clock).

Network-Enable New or Existing Applications

Add a module to an existing application network-enable your device though its serial ports, GPIO pins, or serial bit streams. If you have an application-specific motherboard, you can add a module and have a powerful processing platform that can function as the control processor for your product, or as a low cost network interface processor.

Customize to Suit Any Application

The NetBurner Network Development Kit enables you to quickly and easily create custom applications. NetBurner has a solid reputation for development platforms to facilitate rapid product development, and the module kits are no exception. The kit includes the MOD5272 module, development board, TCP/IP Stack, uC/OS Real-time operating system, Web Server, GNU C/C++ compiler and linker, GDB graphical debugger, end-user device configuration, flash update utilities, and much more.

Real 32-Bit Performance

Traditionally, companies using 8 and 16-bit platforms find it nearly impossible to run resource-intensive applications on fast Ethernet connections. The NetBurner Embeded Network Core Module features a Web-based control interface, a full 32-bit architecture providing 60+ MIPS, and the ability to send and receive E-mail. This processing platform provides the horsepower to handle both 10/100 Ethernet connections and resource-demanding applications with ease and flexibility.



MOD5272 Pinout and **Signal Description**

2 GND VCCSV URR 3 VCCSV URR 4 R/*W UTT 5 *CS1²* 6 *CS1²* 6 *CS2²* PF 7 *CS3²* PF 8 *OE PF 9 *BS2 PF 10 *BS3 PF 11 *TIP²* PF 11 *TIP²* PF 11 *TIP²* PF 12 D16	MOD5272 ¹ Pin	Header J1	Header J
3	1	GND	GNI
4 R/*W UT) 5 *CS1² 6 *CS2² PP 7 *CS3² PP 8 *OE PP 9 *BS2 PP 10 *BS3 PP 11 *TIP² PP 12 D16 PP 13 *TA PP 14 D18 GB 15 D17 PP 16 D20 PP 17 D19 PP 18 D21 PP 18 D22 PP 19 D21 PP 10	2	GND	VCC3
5	3	VCC3V	URXD
66 "CS2" P. 7 "CS3" P. 8 "OE P. 9 "BS2 P. 10 "BS3 P. 11 "TIP" P. 11 "TIP" P. 12 D16 J. 13 "TA J. 14 D18 G. 15 D17 J. 16 D20 J. 17 D19 J. 18 D22 J. 19 D21 J. 19 D21 J. 20 D24 J. 21 D23 UR. 22 D26 UT. 23 D25 J. 24 D28 J. 25 D27 SPIC 26 D30 SPI_ 27 D29 SPI_ 28 "RSTI SPI_DC 27 D29 SPI_ 28 "RSTI SPI_DC 29 D31 PB2_ 21 SPI_DC 22 SPI_DC 23 D25 SPI_DC 24 D28 SPI_DC 25 SPI_DC 26 D30 SPI_DC 27 D29 SPI_DC 28 "RSTI SPI_DC 29 SPI_DC 30 SPI_DC 31 CLKOUT-62-5MHz TINO/PB4/UARTICC 32 A0 PWA 33 A1 TINO/PB4/UARTICC 34 A2 PWM2/TO1 35 A3 SPI_ 36 A4 TO1 37 A5 TT 38 A6 PB3 (39 A7 J. 40 A8 SPI_ 41 A9 USB 41 A9 USB	4	R/*W	UTXD
7	5	*CS1 ²	N
8	6	*CS2 ²	PC1
8	7	*CS3 ²	PC1
9	8		PC1
10	9	*BS2	PC1
11	10	*BS3	PC1
12 D16 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	11	*TIP ²	PC1
13			PC
14 D18 G 15 D17	13	*TA	PC
15 D17 16 D20 17 16 D20 17 18 D22 19 18 D22 19 19 D21 20 D24 21 20 D24 21 D23 UR 22 22 D26 UT 23 24 D28 25 26 D30 SPI 26 D30 SPI 27 29 D31 SPI 20 30 *RSTI SPI 29 D31 PB2 31 CLKOUT-62.5MHz TINO/PB4/UARTIOC 31 CLKOUT-62.5MHz TINO/PB4/UARTIOC 32 A0 PWM2/TOI 33 A1 SPI 34 A2 PWM2/TOI 35 A3 SPI 36 A4 TOI 37 A5 T 38 A6 PB3 (39 A7 SPI 41 A9 USB 41 A9 USB			GNI
116 D20 1 17 D19 1 18 D22			PC
17 D19 18 D22 19 19 D21 20 D24 21 20 D24 21 21 D23 UR 22 22 D26 UT 23 24 D28 25 24 D28 25 26 D30 SPI_ 27 D29 SPI_ 28 28 **RSTI SPI_DC 29 D31 PB2 (30 **RSTO SPI_ 30 **RSTO SPI_ 31 CLKOUT-62-5MHz TIN0/PB4/LARTIC 32 A0 TIN0/PB4/LARTIC 32 A0 TIN0/PB4/LARTIC 33 A1 34 A2 PWM2/TOI 35 A3 SPI_ 36 A4 TOI 37 A5 TA 38 A6 PB3 (39 A7 40 A8 SPI_ 41 A9 USB 41 A9 USB 41 A1 USB 41 A9 USB			PC
18 D22 19 D21 20 D24 21 D23 22 D26 23 D25 24 D28 25 D27 SPIC SPIC 26 D30 SPI_ 27 D29 SPI_DC 28 *RSTI SPI_DC 29 D31 PB2 30 *RSTO SPI_ 31 CLKOUT-62.5MHz TIN0/PB4/UARTOC 32 A0 PW 33 A1 PW 33 A1 TIN0/PB4/UARTOC 35 A3 SPI_ 36 A4 TO 37 A5 T 38 A6 PB3 (39 A7 T 40 A8 SPI_ 41 A9 USB 42 A10 T 41 A9 USB			PC
19 D21 20 D24 21 D23 UR3 22 D26 UT7 23 D25 24 D28 25 D27 SPIC 26 D30 SPI_ 27 D29 SPI_ 28 *RSTI SPI_DC 29 D31 PB2_ 29 D31 PB2_ 29 D31 PB2_ 30 *RSTO SPI_ 31 CLKOUT-62.5MHz TINO/PB4/UARTOC 32 A0 PW 33 A1 SPI_ 34 A2 PWM2/TOI 35 A3 SPI_ 36 A4 TOI 37 A5 T 38 A6 PB3_(39 A7 SPI_ 41 A9 USB 41 A1 USB 41 A9 USB			PC
20 D24 D24 D25 UR 21 D23 UR 22 D26 UT 23 D25 D25 D25 D25 D25 D27 SPIC 26 D30 SPI_ 27 D29 SPI_ 28 **RSTI SPI_DC 29 D31 PB2 (30 **RSTO SPI_ 29 D31 CLKOUT-62-5MHz TIN0/PB4/LAKTIOC 31 CLKOUT-62-5MHz TIN0/PB4/LAKTIOC 32 A0 PW 33 A1 D1 34 A2 PWMZ/TOI 35 A3 SPI_ 36 A4 TOI 37 A5 TT 38 A6 PB3 (39 A7 D1 40 A8 SPI_ 41 A9 USB 41 A9 USB 42 A10 D1 43 A11 III			PC
21 D23 UR 22 D26 UT 23 D25 UT 24 D28 I 25 D27 SPIC 26 D30 SPI_ 27 D29 SPI_ 28 *RSTI SPI_OC 29 D31 PB2 (30 *RSTO SPI_ 31 CLKOUT-62.5MHz TIN0/PB4/UARTOC 32 A0 PW 33 A1 M 34 A2 PWM2/TO 35 A3 SPI_ 36 A4 TO 37 A5 T 38 A6 PB3 (39 A7 I 40 A8 SPI_ 41 A9 USB 42 A10 I 43 A11 II 44 A10 I 43 A11 II			PC
22 D26 UT) 23 D25 UT) 24 D28 I 25 D27 SPIC 26 D30 SPI_2 27 D29 SPI_D 28 "RSTI SPI_DC 29 D31 PB2_D 30 "RSTO SPI_D 31 CLKOUT-62.5MHz TIN0/PB4/UARTOC 32 A0 PW 33 A1 T 34 A2 PWM2/TOI 35 A3 SPI_ 36 A4 TOI 37 A5 T 38 A6 PB3 (39 A7 I 40 A8 SPI_ 41 A9 USB 42 A10 I 43 A11 II 44 A12 USB			URXD
23 D25			
24 D28 25 D27 SPIC 26 D30 SPI_ 27 D29 SPI_I 28 *RSTI SPI_D29 29 D31 PB2 (30 *RSTO SPI_ 31 CLKOUT-62.5MHz TIN0/PB4/UARTOC 32 A0 PW 33 A1 M 34 A2 PWM2/TOI 35 A3 SPI_ 36 A4 TOI 37 A5 T 38 A6 PB3 (39 A7 I 40 A8 SPI_ 41 A9 USB 42 A10 I 43 A11 II 44 A12 USB			PC
25 D27 SPIC 26 D30 SPI_1 27 D29 SPI_D 28 "RSTI SPI_DC 29 D31 PB2_D 30 "RSTO SPI_D 31 CLKOUT-62.5MHz TIN0/PB4/UARTOC 32 A0 PW 33 A1 T 34 A2 PWM2/TOI 35 A3 SPI_ 36 A4 TOI 37 A5 T 38 A6 PB3 (39 A7 I 40 A8 SPI_ 41 A9 USB 42 A10 I 43 A11 II 44 A12 USB			
26 D30 SPI_ 27 D29 SPI_ 28 *RSTI SPI_D2 29 D31 PB2 (30 *RSTO SPI_ 31 CLKOUT-62.5MHz TIN0/PB4/LARTIC 32 A0 PW 33 A1 I 34 A2 PWM2/TOI 35 A3 SPI_ 36 A4 TOI 37 A5 T 38 A6 PB3 (39 A7 I 40 A8 SPI_ 41 A9 USB 42 A10 I 43 A11 II 44 A12 USB			PC
27 D29 SPI_I 28 *RSTI SPI_D29 29 D31 PB2 (30 *RSTO SPI_G 31 CLKOUT-62.5MHz TIN0/PB4/UARTOC 32 A0 PW 33 A1 I 34 A2 PWM2/TOI 35 A3 SPI_G 36 A4 TOI 37 A5 T 38 A6 PB3 (39 A7 I 40 A8 SPI_G 41 A9 USB 42 A10 I 43 A11 III 44 A12 USB			
28 *RSTI SPI_DC 29 D31 PB2c 30 *RSTO SPI_D 31 CLKOUT-62.5MHz TIN0/PB4/UARTOC 32 A0 PW 33 A1 M 34 A2 PWM2/TOI 35 A3 SPI_ 36 A4 TOI 37 A5 T 38 A6 PB3 (39 A7 J 40 A8 SPI_ 41 A9 USB 42 A10 J 43 A11 II 44 A12 USB			
29 D31 PB2 (30 *RSTO SPI_ 31 CLKOUT-62.5MHz TIN0/PB4/LARTOC 32 A0 PW 33 A1 I 34 A2 PWM2/TOI 35 A3 SPI_ 36 A4 TOI 37 A5 T 38 A6 PB3 (39 A7 I 40 A8 SFI_ 41 A9 USB 42 A10 I 43 A11 II 44 A12 USB			
30 *RSTO SPI_ 31 CLKOUT-62.5MHz TIN0/PB4/UARTOC 32 A0 PW 33 A1 J 34 A2 PWM2/TOL 35 A3 SPI_ 36 A4 TOL 37 A5 T 38 A6 PB3 (39 A7 PB3 (40 A8 SPI_ 41 A9 USB 42 A10 J 43 A11 II 44 A12 USB			
31 CLKOUT-62.5MHz TIN0/PB4/UARTOC 32 A0 PW 33 A1 PW 34 A2 PWM2/TOI 35 A3 SPI_ 36 A4 TOI 37 A5 T 38 A6 PB3 (39 A7 I 40 A8 SPI_ 41 A9 USB 42 A10 I 43 A11 II 44 A12 USB			
32 A0 PW 33 A1 3 34 A2 PWM2/TOI 35 A3 SPI_ 36 A4 TOI 37 A5 T 38 A6 PB3 (39 A7 1 40 A8 SPI_ 41 A9 USB 42 A10 1 43 A11 III 44 A12 USB			
33 A1 34 A2 PWM2/TO 35 A3 SPI_ 36 A4 TO 37 A5 T 38 A6 PB3 39 A7 PB3 40 A8 SPI_ 41 A9 USB 42 A10 I 43 A11 II 44 A12 USB			
34 A2 PWM2/TOI 35 A3 SPI_ 36 A4 TOI 37 A5 T 38 A6 PB3 (39 A7 I 40 A8 SPI_ 41 A9 USB 42 A10 I 43 A11 III 44 A12 USB			PWM
35 A3 SPI_ 36 A4 TO 37 A5 T 38 A6 PB3 (39 A7			PA
36 A4 TOI 37 A5 T TOI 38 A6 PB3 (39 A7 SI 40 A8 SPI_ 41 A9 USB 42 A10 SI 43 A11 SI 44 A12 USB			
37 A5 T 38 A6 PB3(39 A7 1 40 A8 SPI_ 41 A9 USB 42 A10 1 43 A11 III 44 A12 USB			SPI_CS
38 A6 PB3 (39 A7 1			TOUT
39 A7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			TIN
40 A8 SPI_ 41 A9 USB 42 A10 1 43 A11 III 44 A12 USB			PB3 (H3
41 A9 USB 42 A10 I 43 A11 II 44 A12 USB.			PA
42 A10 I 43 A11 II 44 A12 USB,			SPI_CS
43 A11 II 44 A12 USB,			USB_D
44 A12 USB.			PA
			IRQ
45 A13 II			USB_D
			IRQ
			GNI
			IRQ
			PA15/IRQ
			GNI
			VCC3
The ColdFire 5272 processor supports USB device mode only. A 48Mhz oscillate nust be installed in locaton U8 of the Mod5272.	The ColdFire s nust be install	5272 processor supports USB ed in locaton U8 of the Mod5	device mode only. A 48Mhz oscillator 272.

 $^3\mbox{J2-31}$ represents TIN0 and PB4/UART0 external baud rate clock. These two signals are tied together on the module PCB.

Ordering Information

Part Number and Description

MOD5272-100CR Core Module RoHS MOD5272-100IL Core Module Industrial

Temperature MOD5272-100IR Core Module Industrial

> Temperature RoHS Development Kit

Specifications

Processor

32-bit Freescale ColdFire 5272 running at 62MHz

Software Development

NetBurner Network Development Kit includes: MOD5272 module, development board, TCP/IP stack, Web Server, real-time operating system (RTOS), ANSI C/C++ compiler and linker, assembler, graphical debugger, integrated development environment (IDE), code update, configuration, and deployment tools.

Network Interface

10/100 BaseT with RJ-45 connector

Network Protocols Supported

Complete protocol support included. Please reference NetBurner Software Datasheet (www.NetBurner.com)

Connectors

Two dual inline 50-pin headers

Physical Characteristics

Dimensions: 2.0" x 2.6" Mounting Holes: 2 x 0.125" dia

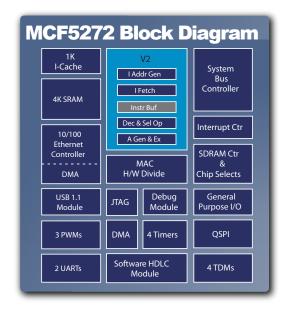
Power Requirements

DC Input Voltage: 3.3V @500mA

Environmental

Operating Temperature: 0°C to 70°C

MOD5272 Block Diagram





NNDK-MOD5272-KIT

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