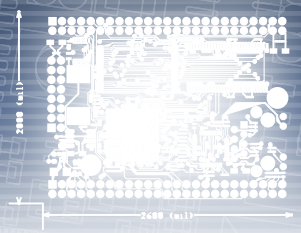
NetBurner
Networking in 1 Day!



## 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.

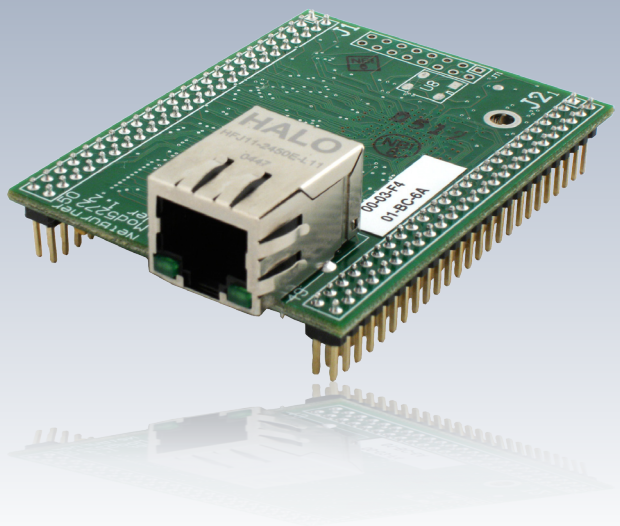
# MOD5272
# NetBurner's High Peformance Embedded Network Core Module

### 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

| MOD5272[1] Pin | Header J1 | Header J2 |
|---|---|---|
| 1 | GND | GND |
| 2 | GND | VCC3V |
| 3 | VCC3V | URXD0 |
| 4 | R/*W | UTXD0 |
| 5 | *CS1[2] | NC |
| 6 | *CS2[2] | PC14 |
| 7 | *CS3[2] | PC13 |
| 8 | *OE | PC15 |
| 9 | *BS2 | PC11 |
| 10 | *BS3 | PC12 |
| 11 | *TIP[2] | PC10 |
| 12 | D16 | PC9 |
| 13 | *TA | PC8 |
| 14 | D18 | GND |
| 15 | D17 | PC0 |
| 16 | D20 | PC1 |
| 17 | D19 | PC4 |
| 18 | D22 | PC2 |
| 19 | D21 | PC5 |
| 20 | D24 | PC6 |
| 21 | D23 | URXD1 |
| 22 | D26 | UTXD1 |
| 23 | D25 | PC3 |
| 24 | D28 | PC7 |
| 25 | D27 | SPICLK |
| 26 | D30 | SPI_CS3 |
| 27 | D29 | SPI_DIN |
| 28 | *RSTI | SPI_DOUT |
| 29 | D31 | PB2 (H2) |
| 30 | *RSTO | SPI_CS0 |
| 31 | CLKOUT-62.5MHz | TIN0/PB4/UART0CLK[3] |
| 32 | A0 | PWM1 |
| 33 | A1 | PA5 |
| 34 | A2 | PWM2/TOUT1 |
| 35 | A3 | SPI_CS2 |
| 36 | A4 | TOUT0 |
| 37 | A5 | TIN1 |
| 38 | A6 | PB3 (H3) |
| 39 | A7 | PA0 |
| 40 | A8 | SPI_CS1 |
| 41 | A9 | USB_D- |
| 42 | A10 | PA1 |
| 43 | A11 | IRQ1 |
| 44 | A12 | USB_D+ |
| 45 | A13 | IRQ3 |
| 46 | A14 | GND |
| 47 | A15 | IRQ5 |
| 48 | VCC3V | PA15/IRQ6 |
| 49 | GND | GND |
| 50 | GND | VCC3V |

[1]The ColdFire 5272 processor supports USB device mode only. A 48Mhz oscillator must be installed in locaton U8 of the Mod5272.

[2]The TIP signal is the logical AND of /CS1, /CS2 and /CS3. TIP can used to control an external data bus buffer for the data bus signals. An example circuit design can be found on the Module Development Board schematic. An external data bus buffer is recommended for any designs that use data bus signals D16 - D31.

[3]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 |
| **NNDK-MOD5272-KIT** | 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