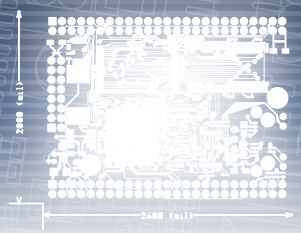
NetBurner
Networking in 1 Day!



Features

- Companion development kit includes all of the hardware and software you will need to develop embedded applications
- 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.
- Modules support serial ports, timers, address bus, data bus, 8 timers, GPIO, SPI, I2C, interrupts and more.
- Integrated 32-bit ColdFire 5234 processors with integrated 10/100 Ethernet and MAC
- 8MB SDRAM, 2MB of Flash Memory
- Temperature Range: -40°C to 85° C

MOD5234
NetBurner's 10/100 Ethernet Module with eTPU Co-processor

Introduction

The industrial temperature rated Mod5234 is based on the 32-bit Freescale MCF5234 running at 147MHz. In addition to the eTPU features the module provides 10/100 Ethernet, 2MB of Flash memory, 8MB of SDRAM, SPI, I2C, 3 UARTS and CAN.

eTPU for complex timing and I/O management

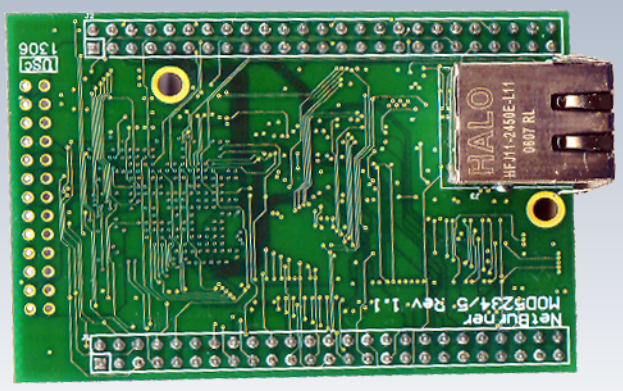
The NetBurner Mod5234 10/100 Ethernet module includes a programmable I/O controller with its own core and memory system, enabling it to perform complex timing and I/O management independently of the CPU. The eTPU is essentially an independent microcontroller designed for timing control, I/O handling, serial communications, motor control and engine control applications.

Network-Enable New or Existing Applications

Add a module to an existing application to 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 to 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 hardware platform, IDE, TCP/IP Stack, uC/OS Real-time operating system, Web Server, GNU C/C++ compiler and linker, Flash File System, GDB graphical debugger, end-user device configuration and flash update utilities, and much more.



Specifications

Processor
32-bit Freescale ColdFire 5234 running at 147Mhz

Software Development
NetBurner Network Development Kit includes:
MOD5234 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)

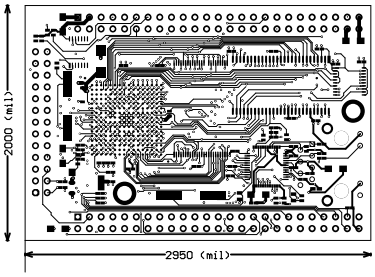
Connectors
Two dual inline 50-pin headers

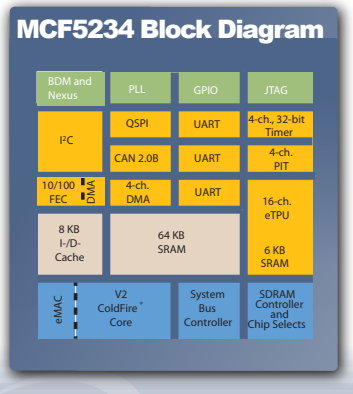
Physical Characteristics
Dimensions: 2.0″ x 2.9″
Mounting Holes: 2 x 0.125″ dia

Power Requirements
DC Input Voltage: 3.3V @450mA

Environmental
Operating Temperature: -40°C to 85°C

MOD5234 Mechanical & Block Diagram





MOD5234 Pinouts

J1 Pin	Pri. Func.	GPIO	CPU Pin #	J2 Pin	Pri. Func.	Sec. Func.	Ter. Func.	GPIO	CPU Pin #
1	GND			1	GND				
2	GND			2	VCC3V				
3	VCC3V			3	U0RXD			PUARTL0	G2
4	R/*W			4	U0TXD			PUARTL1	H2
5	*CS1[1]	PCS1	B13	5	TPUCH1			ETPU1	A6
6	*CS2[1]	PCS2	D12	6	TPUCH0			ETPU0	A7
7	*CS3[1]	PCS3	B12	7	TPUCH3			ETPU3	B4
8	*OE			8	TPUCH2			ETPU2	A4
9	*BS2		B9	9	TPUCH5			ETPU5	B3
10	*BS3		C9	10	TPUCH4			ETPU4	A3
11	*TIP			11	TPUCH7			ETPU7	B2
12	D16		R1	12	TPUCH6			ETPU6	A2
13	*TA	PBUS CTL6	K14	13	TPUCH9			ETPU9	C2
14	D18		P2	14	TPUCH8			ETPU8	B1
15	D17		P1	15	TPUCH11			ETPU11	D2
16	D20		N2	16	TPUCH10			ETPU10	C1
17	D19		N1	17	TPUCH13			ETPU13	E2
18	D22		M2	18	TPUCH12			ETPU12	D1
19	D21		M1	19	TPUCH15			ETPU15	F2
20	D24		L1	20	TPUCH14			ETPU14	E1
21	D23		M3	21	U1RXD	CAN0RX		PUARTL4	A11
22	D26		L3	22	U1TXD	CAN0TX		PUARTL5	A12
23	D25		L2	23	*U1RTS	*U2RTS		PUARTL6	B11
24	D28		K1	24	*U1CTS	*U2CTS		PUARTL7	C11
25	D27		L4	25	SPI_CLK	SCL		PQSPI2	B8
26	D30		K3	26	TCRCLK			PETPU2	F1
27	D29		K2	27	SPI_DIN	SDA		PQSPI1	C8
28	*RSTI		T15	28	SPI_DOUT			PQSPI0	D8
29	D31		K4	29	U0CTS			PUARTL3	G1
30	*RSTO		T14	30	*SPI_CS0[2]			PQSPI3	D9
31	CLK_OUT[3]		M16	31	DT0IN	*DREQ0		PTIMER1	G4
32	A0		H13	32	UTPUODIS			PETPU1	J13
33	A1		H14	33	DT2OUT	DACK2		PTIMER4	R10
34	A2		H15	34	DT1OUT	DACK1		PTIMER2	R7
35	A3		H16	35	LTPUODIS			PETPU0	J14
36	A4		G13	36	DT0OUT	DACK0		PTIMER0	G3
37	A5		G14	37	DT1IN	*DREQ1	DT1OUT	PTIMER3	P7
38	A6		G15	38	U0RTS			PUARTL2	H3
39	A7		F13	39	SDA	CAN0RX		PFECI2C0	L15
40	A8		F14	40	*SPI_CS1[2]	SCKE		PQSPI4	B10
41	A9		F15	41	U2RXD			PUARTH0	D10
42	A10		E13	42	SCL	CAN0TX		PFECI2C1	L14
43	A11		E14	43	*IRQ1			PIRQ1	N10
44	A12		E15	44	U2TXD			PUARTH1	D11
45	A13		E16	45	*IRQ3			PIRQ3	R9
46	A14		D14	46	NO CONNECT				
47	A15		D15	47	*IRQ5			PIRQ5	N9
48	VCC3V			48	*IRQ7			PIRQ7	R8
49	GND			49	GND				
50	GND			50	VCC3V				

[1] *CS1, *CS2, and *CS3 cannot be cannot be tested or used for GPIO functionality on the MOD-DEV-100 carrier board.

[2] QSPI_CSx can be configured as active high or low.

[3] PLL Frequency 147.456 Mhz (Crystal 18.432 Mhz).

Ordering Information

NetBurner Part Number and Description

MOD5234-100IR	Module RoHS
NNDK-MOD5234-KIT	Development Kit

To place an order, please visit www.NetBurnerStore.com.

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