

## Features

- Companion development kit includes all of the hardware and software you will need to develop embedded applications
- Integrated 32-bit ColdFire 5213 processor
- 66MHz Clock providing 63 MIPS of performance
- Compact 40-Pin DIP form factor
- 256Kb Flash, 32Kb SRAM
- CAN 2.0B controller
- 3 UARTs with DMA
- SPI
- I<sup>2</sup>C
- Four 32-bit timers with DMA
- Four 16-bit timers with capture/compare/PWM options
- PWM generator configurable as 4 channel 16-bit, or 8 channel 8-bit
- Two Periodic Interrupt Timers
- Four channel DMA controller
- Eight 12-bit analog to digital inputs
- Up to 33 general purpose I/O (GPIO) pins
- PLL, system watchdog
- MAC module and hardware divide
- DC input voltage: 4V – 7V
- Low power optimization
- Temperature Range: -40°C to 85°C)
- Development kit available with RTOS, C/C++ compiler & linker, IDE, & debugger

## MOD5213

### NetBurner's Low Cost / High Performance Embedded Processor Module

#### Introduction

The MOD5213 has a rich set of peripherals making it ideal for both communications and control applications. This small form factor module is targeted at the high performance, extended temperature, low power market. Available in a 40-pin DIP, the MOD5213 boasts 66MHz of performance on a 32-bit ColdFire platform. The MOD5213 development kit also includes all the tools necessary to complete your embedded design; including a world class IDE, Graphical Debugger, and Real Time Operating System.

#### Real-time High Performance Embedded System

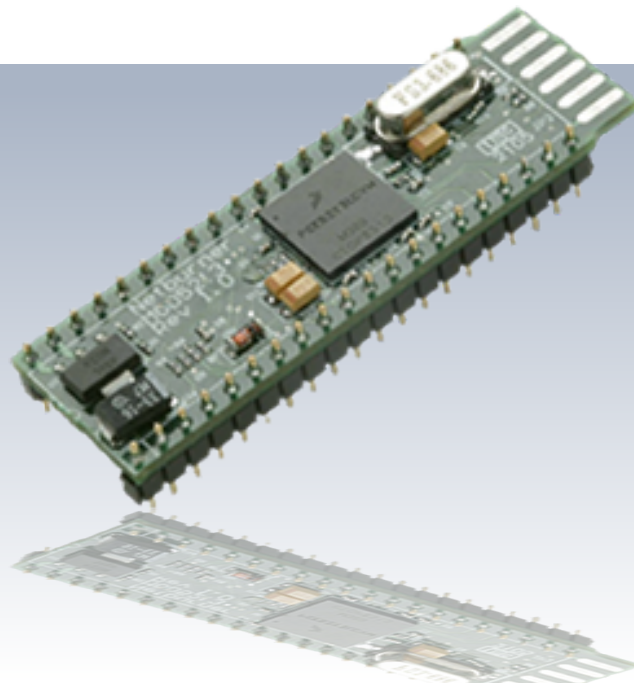
The MOD5213 is based on the Version 2 ColdFire core. Equipped with a full featured real-time operating system, the MOD5213 is ideal for any deterministic application. Real time capability, extended temperature operation, and low power features allow the MOD5213 to operate in the harshest environment.

#### Small Form Factor

The MOD5213 is ideal for rapid prototyping due to its industry standard 40-pin DIP form factor. Installed in a socket or soldered straight to the board, the MOD5213 can fit into almost any space constrained enclosure.

#### Development Tools Enable Product Development to Begin Today

The NetBurner MOD5213 Development Kit will get you up in running immediately. The kit includes MOD5213 hardware, development prototype board, integrated development environment (IDE), real-time operating system (RTOS), ANSI C/C++ compiler and linker, assembler, debugger, code update, and deployment tools.



## Specifications

### Processor

32-bit Freescale ColdFire 5213 running at 66MHz

### Software Development

**NetBurner Development Kit includes:** MOD5213, development board, real-time operating system (RTOS), ANSI C/C++ compiler and linker, assembler, graphical debugger, integrated development environment (IDE), code update, configuration, and deployment tools.

### Connectors

Two standard single row 20-pin 0.1" headers

### Physical Characteristics

**Form Factor:** Industry Standard 40-pin DIP

**Dimensions:** 2.0" x 2.6"

### Power Requirements

**DC Input Voltage:** 5V – 7V, or 3.3V Regulated

**Max Operating Current:** 120mA

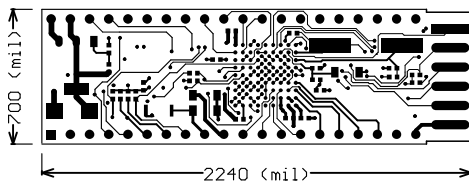
### Environmental

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

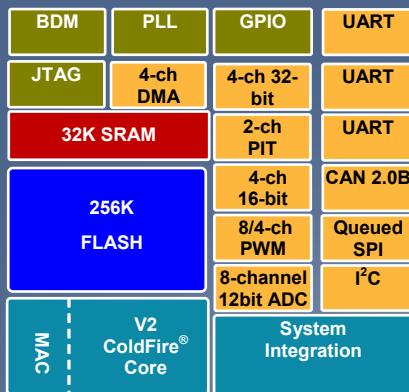
### Part Number and Description

MOD5213-100CR Core Module RoHS  
 NNDK-MOD5213-KIT Development Kit

## Mechanical Diagram



## MCF5213 Block Diagram



## MOD5213 Signal Description and Pinouts

Pin	Primary Function	Secondary Function	Tertiary Function	GPIO Port	Processor Pin Number
1	*RSTI			0	A3
2	URXD0			1	D1
3	UTXDO			1	D2
4	SDA	CANRX	URDX2	1	E2
5	SCL	CANTX	UTXD2	1	E1
6	*IRQ1	SYNCA	PWM1	1	C6
7	*IRQ4			1	C5
8	*IRQ7			1	C4
9	VDDA			0	H8
10	VRH			0	J8
11	AN2			1	G6
12	AN1			1	H6
13	AN0			1	J6
14	AN3			1	G7
15	AN7			1	H9
16	AN6			1	G9
17	AN5			1	G8
18	AN4			1	F9
19	VSSA/VRL			0	H7
20	VSS			0	J1
21	DTIN3	DTOUT3	PWM6	1	H3
22	DTIN2	DTOUT2	PWM4	1	J3
23	DTIN1	DTOUT1	PWM2	1	G4
24	DTIN0	DTOUT0	PWM0	1	H4
25	GPT3		PWM7	1	D8
26	GPT2		PWM5	1	D9
27	GPT1		PWM3	1	E9
28	GPT0		PWM1	1	F7
29	URXD1			1	B2
30	UTXD1			1	A2
31	*UCTS1	SYNCA	URXD2	1	C3
32	*URTS1	SYNCB	UTXD2	1	B1
33	*QSPI_CS2 <sup>1</sup>			1	F2
34	*QSPI_CS1 <sup>1</sup>			1	H2
35	*QSPI_CS0 <sup>1</sup>	SDA	*CTS1	1	H1
36	QSPI_DOUT	CANTX	TXD1	1	G1
37	QSPI_DIN	CANRX	RXD1	1	F3
38	QSPI_CLK	SCL	*RTS1	1	G2
39	VDD (3.3VDC)			0	E3
40	Unregulated Input Power, 5VDC-7VDC			0	

<sup>1</sup> QSPI\_CSx can be configured as active high or low.

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