

# MCF5253 Family

## M5253EVBE

- The M5253EVBE evaluation kit contains everything a designer needs to develop and evaluate application code.
- M5253EVBE Features:
  - USB 2.0 High Speed OTG Connector
  - CAN and Serial Ports
  - ATA/IDE Connector
- Kit includes CD ROM, Power Supply, BDM Cable, Serial Cable, USB Adapter Cable, and USB Cable.

## Software Support

- Complimentary ColdFire® uClinux BSP
- Complimentary Codewarrior® SPECIAL EDITION included in each development tool.
- Coldfire Init—Graphical Initialization Tool

## Freescall CodeWarrior uClinux BSP Features

- USB Host and Device stacks to support USB OTG/Dual Mode functionality
- Dual CAN Bus support
- Support for 16-ch. DMA controller
- Real Time Clock
- Support for standard serial interfaces (UART and QSPI)
- Support for on-chip memory and memory interfaces
- BSP also comes with GNU tools

## Complimentary USB Stack from CMX

- USB Host (object code only)
- CodeWarrior and GNU based
- USB Device
- Generic HID
- HID mouse
- Mass Storage (object code only)

## 3rd Party Tool Support Planned From:

- GreenHills
- MQX
- P&E Micro

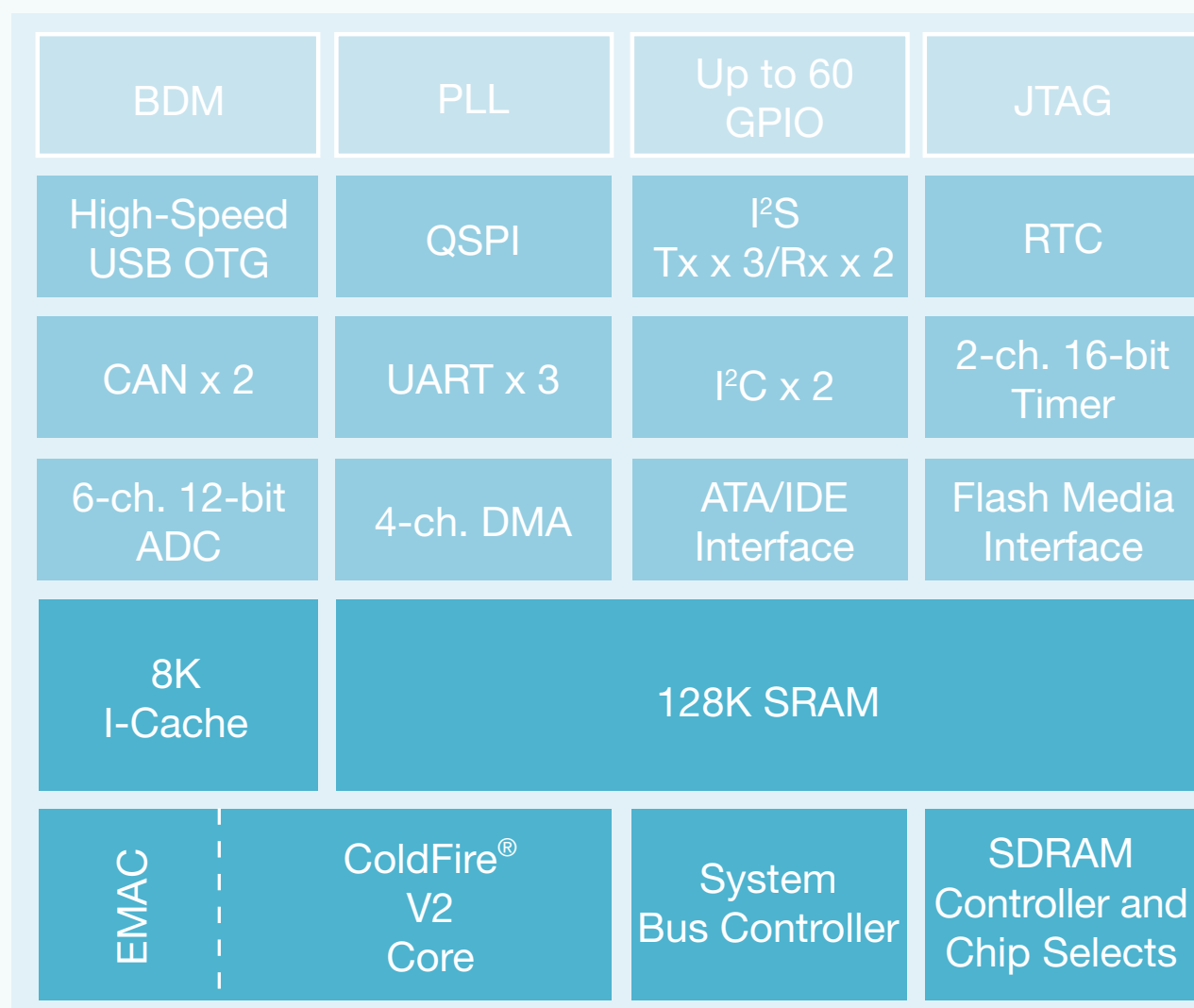
## Distinguishing features of the MCF5253:

- ColdFire® V2 Core offering 125 MIPS at 140 MHz
- USB 2.0 high-speed on-the-go (OTG) with integrated PHY
- 128K Integrated SRAM
- Dedicated ATA hard disk interface
- Dedicated USB and ATA 16K SRAM with DMA support
- Digital audio interface (I<sup>2</sup>S and SPDIF)
- SmartMedia interface (including IDE and compact flash)
- Three UARTs
- NOR flash interface
- Twin controller area network module (FlexCAN)
- Embedded BDM debug port
- On-chip real-time clock that works with a 32.768 kHz crystal. Real-time clock has tamper detection functionality.
- 225-pin MAPBGA package
- SD/MMC interface
- Keypad/battery level monitor ADC
- Two I<sup>2</sup>C interfaces (400 KHz)

For more information on the MCF5253, go to [www.freescale.com/coldfire](http://www.freescale.com/coldfire).



## MCF5253 Block Diagram



## MCF5253 Ball Map

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
A	GND	D24	D26	D30	SDUDQM/ GPO53	SDRAS/ GPIO59	ATA_DMARQ	ATA_AO	ATA_D1	ATA_D6	ATA_D11	ATA_D12	ATA_D10W	LIN IN	GND	A
B	D19	D23	D25	D28	BCLK/ GPIO40	SDCSO/ GPIO60	ATA_A1	ATA_A2	ATA_D0	ATA_D4	ATA_D9	ATA_D14	HI_Z	LINOUT	ATA_DIOR	B
C	D16	D20	D22	D27	D31	SDLDQM/ GPO52	SDWE/ GPIO38	ATA_RST	ATA_CS0	ATA_D5	ATA_D10	ATA_DMACK	LINGND	CAN1_TX	CAN0_TX	C
D	A22	A23/GPO54	A21	D21	D29	SDCAS/ GPIO39	ATA_IORDY	ATA_INTRQ	ATA_CS1	ATA_D7	ATA_D8	ATA_D15	CAN0_RX	MCLK1/ GPIO11	SDATA02/ GPIO34	D
E	A14	A16	A18	D17	D18	BCLKE/ GPIO63	PADVDD	GND	PADVDD	GND	ATA_D13	CAN1_RX	SCLK2/ GPIO22	LRCK2/ GPIO23	RST1	E
F	A13	A10	A12	A17	A19	A20/A24	GND	ATA_D2	ATA_D3	PADVDD	TEST0	TMS/BKPT	TCK	TRST/ DSCLK	TDI/DSI	F
G	A5	A7	A6	A15	A11	GND	GND	COREVDD	GND	TEST1	GND	PST1/ GPIO49	TDO/DSO	PSTCLK/ GPIO51	PST0/ GPIO50	G
H	A3	A2	A1	A8	A4	A9	COREVDD	PADVDD	COREVDD	TEST2	PADVDD	TXDO/ GPIO45	PST3/ INTMON1/ GPIO47	PST2/ INTMON2/ GPIO48	RXDO/ GPIO46	H
J	RTC_CRIN	RTC_VDDA	CS0/CS4	RW	ADOUT/ SCLK4/ GPIO58	ADIN5/GPI57	GND	COREVDD	GND	GND	GND	DDATA3/ RTS0/ GPIO4	SCL1/TXD1/ GPIO10	DDATA2/ CTS0/ GPIO3	SDA1/RXD1/ GPIO44	J
K	RTCVSSA	RTCCROUT	ADIN0/GPI52	ADVDD	PADVDD	BUFENB2/ GPIO30	EBUIN3/ CMD_SDI02/ GPIO14	SCLK1/ GPIO20	SDA0/ SDATA3/ GPIO42	DDATA0/ CTS1/SDAT A0_SDI01/ GPIO1	USBGND	N/C	N/C	N/C	N/C	K
L	ADIN1/GPI53	ADIN2/GPI54	ADIN3/GPI55	AD GND	GND	PADVDD	GND	PADVDD	GND	PADVDD	USBGND	USBVDDP	USBVDD	USB_CRIN	USB_CROUT	L
M	ADIN4/GPI56	ADREF	CRIN	PLL CORE VDD	IDE_DIOR/ GPIO31	EBUIN2/ SCLKOUT/ GPIO13	CST1/ QSPIC53/ GPIO28	QSPIDOUT/ SFSY/ GPIO27	CFLG/GPIO5	LRCK3/ AUDCLK/ GPIO43	USBIN	USBGND	USBVDD	USBRES	USBDP	M
N	OSCPAD VDD	CROUT	PLL CORE VDD	PLL CORE GND	TA/GPIO12	EBUIN1/ GPIO36	RCK/QSPIDIN/ QSPIDOUT/ GPIO26	QSPIC51/ EBUOUT2/ GPIO16	SDATA1/ GPIO17	SDATA3/ GPIO8	N/C	N/C	N/C	USVBUS	USBDN	N
P	OSCPAD GND	PLL CORE VDD	PLL CORE GND	IDE_D10W/ GPIO32	BUFENB1/ GPIO29	EBUOUT1/ GPIO37	QSPICLK/ SUBR/ GPIO25	LRCK1/ GPIO19	QSPIC52/ MCLK2/ GPIO24	SCL0/SDAT A1_BS1/ GPIO41	N/C	N/C	TESTOUT	N/C	N/C	P
R	GND	PLL CORE GND	OE	IDE_IORDY/ GPIO33	WAKEUP/ GPIO21	XTRIM/TXD2/ GPIO0	QSPIC50/ EBUIN4/ GPIO15	SDATA01/ TOUT0/ GPIO18	EF/RXD2/ GPIO6	SCLK3/ GPIO35	DDATA1/RT S1/SDATA2_ BS2/GPIO2	N/C	PADVDD	N/C	GND	R

## Part Number/Package/Features

Orderable Part Number	Maximum Clock Frequency	Package Type	Operating Temperature Range	Part Status
MCF5253VM140	140 MHz	225 MAPBGA	0 –70°C	Lead free