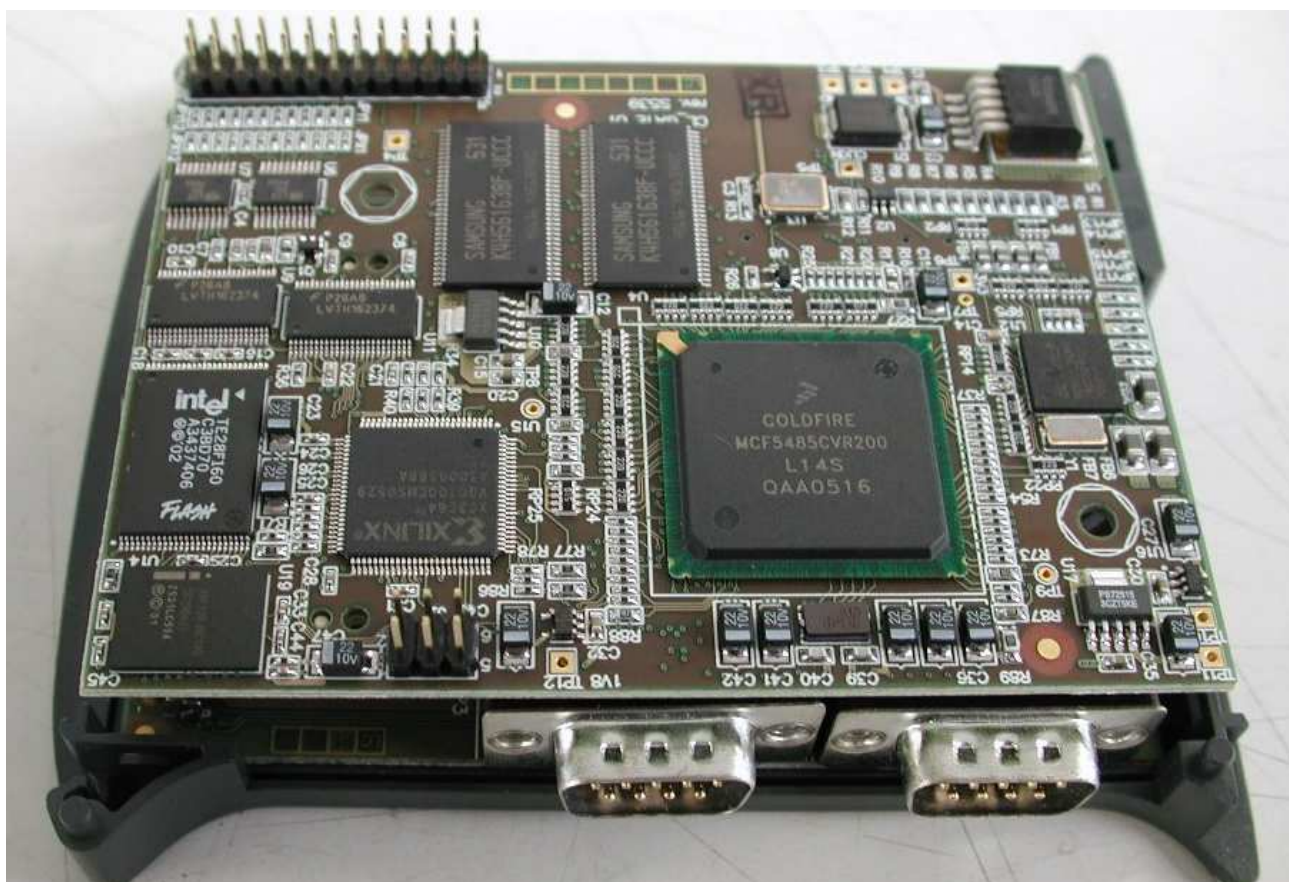


## CLGate-MCF548x

**Low-cost Integrated 32-bit SBC with Ethernet, Dual CAN, 2.0 USB, Compact Flash Slot suitable for industrial control, automotive, data logger and professional application.**

**The full support of LINUX guarantee an open and standard software platform. All the software developed by the Open Source Community and available in source code can be used on this board.**



## CLGate Module Features:

- Single Board Computer in small form factor (70 x 57 mm)
- CPU [Freescale ColdFire MCF548x](#) (200 MHz) in a 388-pin BGA package
- Two board design
- on-board memory:
  - DDR SDRAM: 64 to 128 MB
  - Flash: 32 to 64 MB Intel Strata Flash, 32-bit memory width supporting synchronous (K3) or asynchronous (J3) devices
  - Separate Boot Flash: 8 MB
  - Slot Compact Flash
- 4x UART ports (RXD, TXD/RTS/CTS RS-232 and 2x TTL-level interfaces)
- 2x CAN ports, configurable as TTL-level
- 2.0 USB
- Slot Compact Flash
- PCI 2.2 bus, SPI bus, I<sup>2</sup>C bus, SSI (Synchronous Serial Interface) with 2x/CS
- Real-Time Clock with Calendar/Alarm
- JTAG/BDM test/debug port
- industrial temperature range (-40..+85°C)

The GLGate-ColdFire/MCF548x supports the [Freescale MCF548x](#) ColdFire family, which operates at a 200 MHz clock speed in industrial temperature range. On-chip functional units include MMU, FPU, Cache, PCI and DDR SDRAM. The module can be populated with up to 128 MB DDR SDRAM and 64 MB Flash. Ethernet, CAN, SPI, UART, USB 2.0, I<sup>2</sup>C, processor bus, PCI bus and all applicable processor signals extend to the external connectors. A slot for compact flash memory can guarantee GB of flash memory available at very low price.

The board supports Linux operating system and will be provide with all the driver and the tools for software development.

- Linux
- Integrated Web Server
- SNMPv3 Agent
- Remote management

## Technical Features

### Internal Features of the MCF548X:

- 32-bit ColdFire V4e core, 200 MHz CPU speed
- 32 kByte instruction cache
- 32 kByte data cache
- MMU with 32 entries
- 64-bit FPU double precision IEEE-754
- EMAC unit
- DMA unit
- Encryption unit
- 32 kByte SRAM
- Watchdog
- Two system timers
- Four 32-bit general purpose timers
- Four UARTs
- SPI interfaces
- Two CAN 2.0B interfaces
- I<sup>2</sup>C Master/Slave controller
- Two Fast Ethernet controllers
- USB2.0 Slave
- PCI bus
- BDM test/debug port

### Memory Configuration1:

- DDR SDRAM: 64 MByte to 128 MByte
- Flash: 32 MByte to 64 MByte Intel Strata Flash memory, 32-Bit memory width, K3 and J3, synchronous or asynchronous devices are supported
- Flash: 2 MByte for Bootloader
- Compact Flash Slot

### Other Board-Level Features:

- Four UART (two if CAN ports are used), one port RS-232 for Linux terminal, one ports RS-232/RS-485 (RxD/TxD/RTS/CTS) and two TTL-level interfaces
- Two CAN ports, on-board CAN transceivers; also configurable as TTL
- One 10/100Mbit Ethernet port (option a second 10/100Mbit port)
- One USB 2.0
- Logic Device Xilinx 5000 family 256/512/768 Macrocells and 128/256/384 kBit SRAM, in-system programmable available for custom specific logic
- special bus interfaces
- multi-purpose I/O signals etc.
- PCI 2.2 bus
- SPI bus, Synchronous Serial Interface with two Chip Selects
- I2C bus
- I2C Real-Time Clock with calendar and alarm function
- JTAG/BDM test/debug port
- Industrial temperature range (-40...+85 C)
- Power supply 12 VDC @ 1 A

Connectors:

Ethernet 10/100 Mbit	n.1 RJ45
CAN-1 Optoisolata	DIP 9 poli
CAN-2 Optoisolata	Connector
Seriale Terminale	DIP 9 poli
Seriale RS232/485	Pin-strip
USB 2.0	USB Slave connector type A
Compact Flash	Connector
Power supply	Connector

## Software Development Kit

The Software Development Kits provide all necessary ingredients with which to jump start embedded designs and propel concept to prototype and finished product.

The Linux Software Development kit includes:

- Linux Kernel 2.6 customized and preconfigured for the board
- All the linux driver
- Utilities for boot from flash, testing, remote upgrading
- Network stack and related utilities (TCP/IP, DHCP, TFTP, TELNET,..)
- Remote monitoring SNMPv3
- Integrated WEB Server

## OEM/ODM Services

A professional team can support you on specific customization both for hardware and software. We can provide you engineering capabilities to create your product.

