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Products

CM-F82 Computer-On-Module

Computer-On-Module's

CM-X270

CM-X255

CM-iGLX

CM-F82

CM-i686M

CM-i686B

CM-iVCF

CM-i886
(NFND)

CM-i586
(NFND)

PC/104+ &
ATX boards

SBC-X270

SBC-X255

SBC-i686

SBC-iVCF

SBC-i886
(NFND)

ATX

Related Topics:

- CoM

Comparison

- PC/104

Comparison

- Linux

Support

- Evaluation

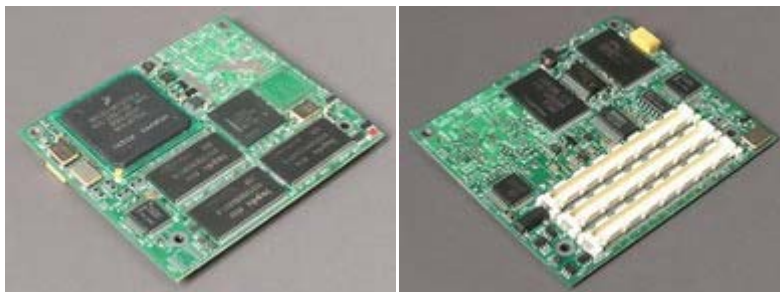
Kits

- Industrial

Temperature

- RoHS

Compliance



Top View

Bottom View

CM-F82 Highlights

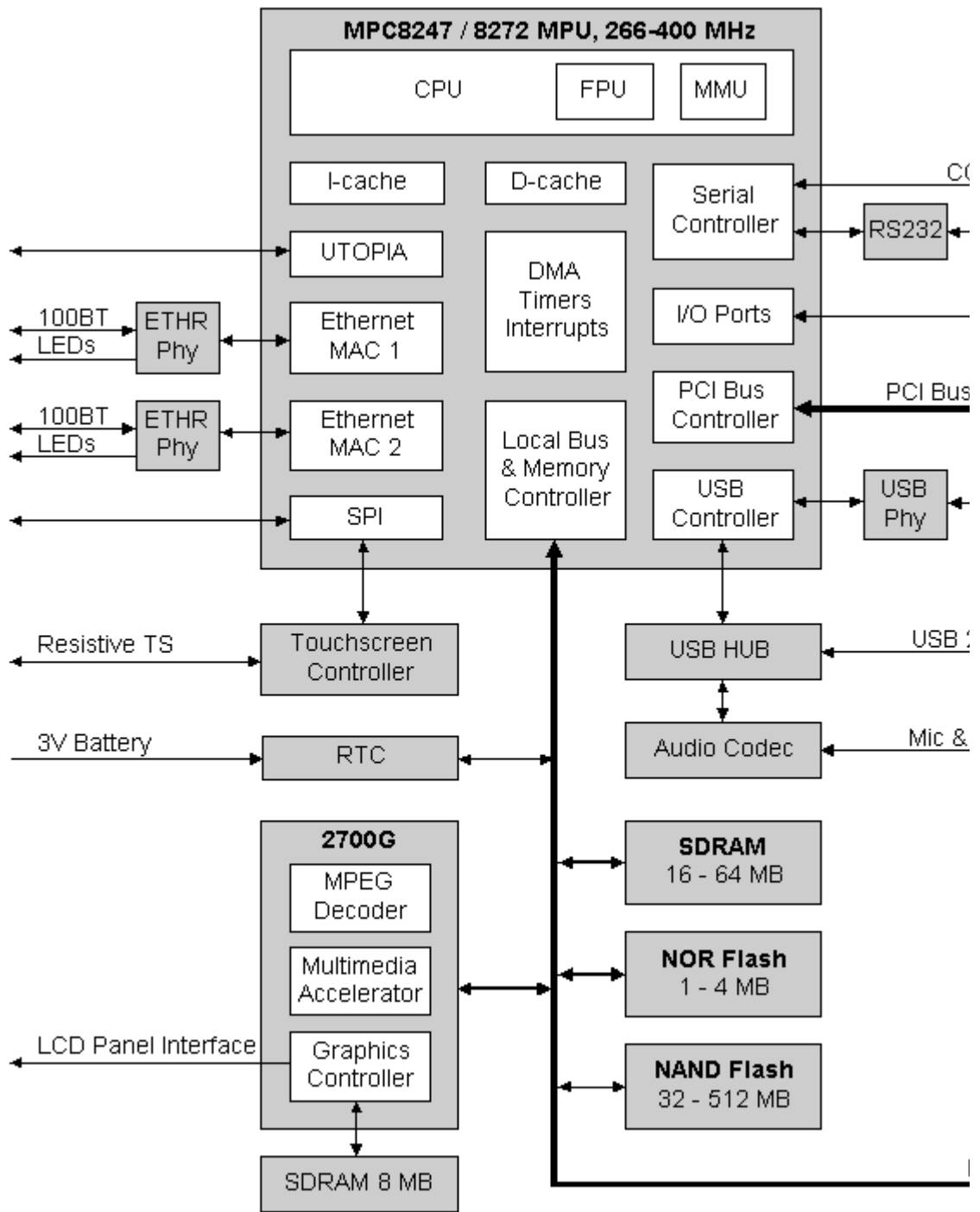
- **Freescale PowerPC MPC8271 CPU, up to 400 MHz, 16+16 KB cache**
- **General purpose bus , PCI bus**
- **16 - 128 Mbyte SDRAM**
- **32 - 512 Mbyte Flash Disk**
- **Two 10/100BaseT Ethernet ports (optional)**
- **2700G Multimedia Accelerator - 1280 x 1024 max resolution, 8 MB frame buffer, 3D accelerator, MPEG-2 & MPEG-4 decoders (optional)**
- **Serial ports, GPIO's**
- **Hard-disk interface**
- **Sound codec with speaker and microphone support (optional)**
- **Touchscreen Controller (optional)**
- **Slave and host USB ports**
- **UTOPIA interface for ATM (optional)**
- **68 x 58 mm size**
- **Interchangeable with other modules via CAMI connectors**

The CM-F82 is a small Computer-On-Module board designed to serve as a building block in embedded applications. The CM-F82 has all the components required to run Linux or any other operating system. Ready Linux package is available from CompuLab. [See O/S Support Coverage Map](#)

The feature set of the CM-F82 module combines a 32-bit CPU, SDRAM, Flash Disk and vital computing peripherals. For embedded applications, the CM-F82 provides a 32-bit PCI bus, two 100Mbit Ethernet ports, serial communication ports, general purpose I/O lines and many other essential functions. An on-board 2700G Multimedia Accelerator enhances the feature set with support of XGA display resolution and MPEG-2 & MPEG-4 decoders.

The standardized CAMI ("CompuLab's Aggregated Module Interface") connectors the CM-F82 module allow interchangeability with other Computer-On-Module's available from CompuLab, enabling the flexibility required in a dynamic market where application requirements can change rapidly.

Block Diagram



CM-F82 Features

"Option" column specifies the configuration code required to have the particular feature.
 "+" means that the feature is available always.

CPU, Memory and Buses

Feature	Specifications	Op
CPU	Freescale PowerPC MPC8247 or MPC8271 CPU @ 266/400 MHz. 16 KB I-cache and 16 KB D-cache, FPU, MMU, DMA and Interrupt	

	controllers, Timers	
DRAM	16 - 128 MB, SDRAM, 66/100 MHz, 32-bit	
NOR Flash	1 - 4 Mbytes	
NAND Flash Disk	32 - 512 Mbytes	
External local bus	16-bit, variable rate up to 100 MHz, 3.3V	
PCI bus	32-bit, PCI 2.2 specification compliant, up to 66MHz, arbiter for 3 masters	
JTAG Interface	Available	

Peripherals

Feature	Specifications	Op
Graphics & Multimedia Controller	2700G chipset, TFT panels support, resolution up to 1280 x 1024 x 24, dedicated 8 MB frame buffer, MPEG-2 & MPEG 4 decoders @30 fps	
USB	One Host/Slave port always available, 12 Mbps, 4 endpoints Additional three Host ports expansion, 12 Mbps	
Serial Ports	Up to 4 serial ports, data rate up to 4.125Mbps COM-A – RS232, partial modem COM-B – TTL, partial modem COM-C – TTL, Rx/Tx COM-D – TTL, Rx/Tx	
General Purpose I/O	About 30 lines shared with other functions. Can also be used as interrupt inputs.	
Hard Disk Interface	IDE, PIO mode	
Ethernet	Up to two 100Mb Ethernet ports, Intel LXT972M PHYs, LED's	
Audio codec	Texas Instruments PCM2900 USB codec	
Touchscreen ctrl.	Analog Devices AD7843 touchscreen ctrl. Supports resistive touch panels.	
RTC	Real Time Clock, powered by external lithium battery	

Electrical, Mechanical and Environmental Specifications

Supply Voltage	Single 3.3V or dual 3.3V / 5.0V (for "A" option)
Active power consumption	3W at 266 MHz
Dimensions	68 x 58 x 8 mm
Weight	50 gram
MTBF	> 100,000 hours
Operation temperature (measured on case)	Commercial : 0° to 70° C Extended : -20° to 70° C Industrial : -40° to 85° C
Storage temperature	-40° to 85° C
Relative humidity	10% to 90% (operation) 05% to 95% (storage)
Shock	50G / 20 ms

Vibration	20G / 0 - 600 Hz
Connectors	3 x 140 pin, 0.6 mm
Connector re-insertion	50 cycles

For more information see:

- [CM-F82 Reference Guide](#)
- [Developer Resources](#)

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