



KEY FEATURES

- ▶ Tiny Size - 50*50mm
- ▶ 800MHz or 1GHz ARM Cortex A8
- ▶ 660MHz or 800MHz TI Digital Signal Processor
- ▶ Imagination Graphics 2D/3D engine
- ▶ 256MB Low Power DDR memory
- ▶ 512MB SLC NAND Flash
- ▶ Ultra Low power consumption
- ▶ 720p (1280*720 resolution) multimedia graphics performance
- ▶ Wide array of peripherals
- ▶ Rugged connections to carrier board, does not use on DIMM/So-DIM style low cost connections

RM2 SYSTEM ON MODULE

Blue Chip Technology have brought the power of the ARM processor to their successful range of SOM (System On Module) boards. Based on the OMAP™ 3 platform, the ARM® Cortex™ A8 core offers over four times the processing power of yesterday's 300MHz ARM9 devices. Combined with its extraordinary DSP and video engine, the RM2 brings laptop style GUI and graphics to your application whilst operating with an operating power consumption of approximately 2W.

A SOM board is an off-the-shelf building block with all of the functionality of a typical single board computer - CPU, main chipsets, RAM, Flash etc but without the usual IO connectors. Instead the SOM drops into a custom host board ie: the footprint, connector layout, GPIO and any application specific electronics are all tailored to the target application. Basing your hardware on a SOM means the most expensive, complex and highest risky elements of the design is already proven whilst the host board is a simple build which can be completed quickly and cost effectively. Blue Chip Technology can either support you design your own hostboard or design it for you. Blue Chip Technology also provide a full BSP to ensure that your product gets to market as quickly as possible.

The compact RM2 (50*50mm) is an ideal off-the-shelf solution for high performance, low-power embedded applications requiring graphics, video, or featuring high-resolution touch screen displays. Whether your market is medical, multimedia, vision, telematics or many others the RM2 is the perfect heart of your new product.

RM2 SYSTEM ON MODULE TECHNICAL SPECIFICATION

System

- ▶ ARM Cortex-A8 Core (800Mhz or 1GHz)
- ▶ NEON™ SIMD Co-processor
- ▶ TMS320C64x+ DSP Core (660MHz or 800Mhz)
- ▶ POWERVR SGX™ 2D/3D graphic Acceleration
- ▶ 32KB Level 1 cache, 256KB Level 2
- ▶ 256MByte/512MByte DDR RAM
- ▶ 512MByte Nand Flash

Enhanced IO

- ▶ 2 x SPI Bus
- ▶ 3 x 4 line UART (RX,TX,CTS,RTS)
- ▶ 2 x MCBSP Bus
- ▶ 2 x MMC Bus
- ▶ 1 x HS USB OTG
- ▶ 2 x HS USB ULPI Bus
- ▶ 2 x I2C Bus
- ▶ 1 x OneWire Bus
- ▶ 1 x JTAG (TI standard)
- ▶ 8 x GPIO (2 PWM)
- ▶ 2 x ADC Inputs
- ▶ Boot selection signal
- ▶ 5 x Power management signals
- ▶ 6 x 6 matrix scanning keyboard
- ▶
- ▶ Other IO configurations are available, please ask

Local Storage

- ▶ 256MB, 512MB, 1GB Nand Flash options
- ▶ 2 interfaces for SD/MMC

Expansion

- ▶ 1x OMAP3 GPMC 16 bit Bus (similar to X-Bus)

Display/Audio

- ▶ 1 x OMAP3 DSS Video Bus (24 bit RGB)
- ▶ 1 x AV/S-Video Output (TV)
- ▶ 1 x Digital Camera Bus
- ▶ 1 x Stereo headphone output
- ▶ 1 x Mono Channel microphone input
- ▶ 1 x Mono Channel Audio output

Operating System Support

- ▶ Linux Ubuntu 10.04 LTS
- ▶ Win CE6.0 R3 & Windows Embedded Compact 7
- ▶ Android - please check with Sales for release date
- ▶ QNX - please check with Sales for release date

Power

- ▶ Power Supply - 5 volt, 3.3 volt
- ▶ Power Consumption Operating- approximately 2 watts

System Management

- ▶ 1 x Power LED
- ▶ 2 x Programmable LED

Environmentals/Mechanicals

- ▶ Operating temperature range
- ▶ Standard 0°C to +70°C
- ▶ Extended -40°C to +85°C
- ▶ Dimensions - 35mm x 64mm

Board Ordering Options

- ▶ RM2-1000-256M-512F-DSP-3D
- ▶ 1GHz ARM Cortex A8
- ▶ 256MB LPDDR
- ▶ 512MB SLC NAND Flash
- ▶ 800MHz TMS320C64x+DSP
- ▶ Imagination Graphics PowerVR SGX
- ▶ RM2-800-256M-512F
- ▶ 800MHz ARM Cortex A8
- ▶ 256MB LPDDR
- ▶ 512MB SLC NAND Flash

Connector Pin Outs

