

MiMagic 6+ Application Processor

MM6+ High System Performance

- ARM926EJ RISC processor (v5TEJ), 200MHz
- 16KB I-cache, 16KB D-cache for performance
- Dual bus architecture. Simultaneous access to code and data
- Up to 256MB 32-bit SDRAM, supports Low-Power Mobile
- On-chip 48KB SRAM

Memories

- SDRAM up to 256MB 8/16/32 bits
- Nand Flash: 8/16/32-bit NAND/Linear Flash w/ECC
- Nor Flash: Intel 16/32 bit interface

Display Subsystem

- Supports screen sizes up to 800x600x18 bpp
- LCD Partial Display Mode
- Two independent image overlay engines
 - Crop, scale at 2x, 1x, 1/2x, 1/3x
 - Color space conversion
 - Color-key or programmatic position
- Color depth support: 8, 18 bpp, STN or TFT
- Gray Scale support: 1, 2, 4 bpp, STN or TFT
- LCD Bypass Mode

Camera / Video Input Engine

- Supports CMOS and CCD sensors
- High speed CCIR 601-5
 - Bayer-8 camera input
 - Bayer to 4:2:2 or 4:2:0YUV color space conversion Crop, scale (2x, 1x, 1/2x, 1/3x) on input stream

Audio Subsystem

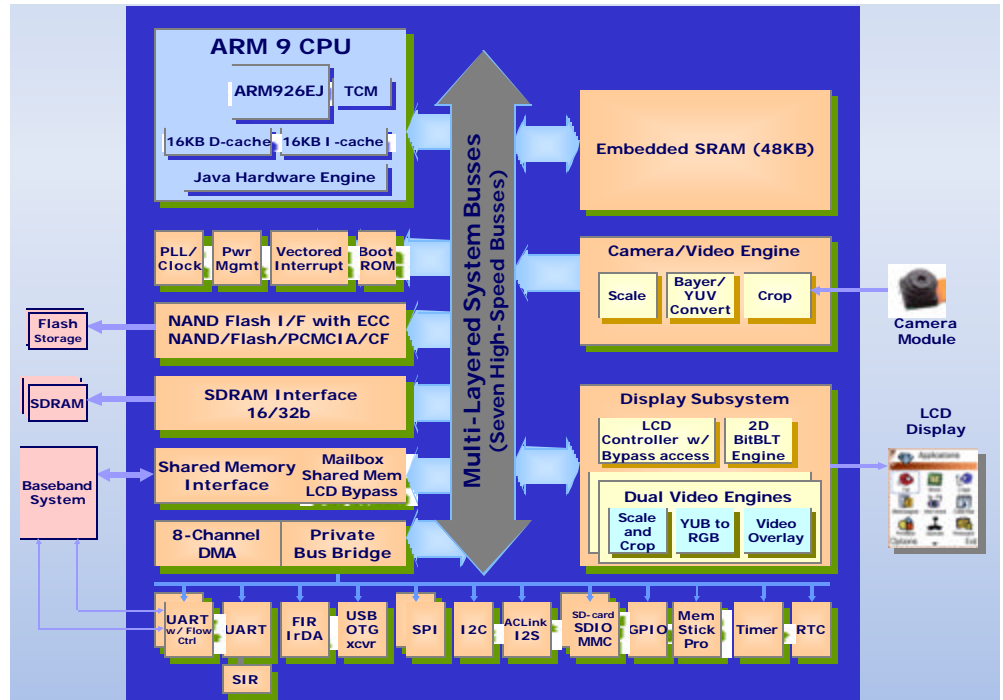
- I²S, ACLink/AIL interfaces

Rich Set of DMA-Backed Peripherals

- 2 SD Card/SDIO/MMC controllers
- Memory Stick, Memory Stick PRO, Memory Stick Duo
- MagicGate Memory Stick
- USB OTG (full speed)/USB 2.0 full rate with USB transceiver
- 4 UARTs, 2 with flow control
- IrDA support with FIR and SIR
- Two SPI ports, one I2C port
- RTC, 4 Timers, GPIO, Vectored Interrupts



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Hardware Features

- 200 MHz ARM926EJ
- Camera Features
 - CCIR 601-5, Bayer -8 or 10 input
- Display Subsystem
 - LCD Bypass mode
 - Supports up to 800x600x18 bpp panel size
 - 256K colors
 - Shared Memory I/F, UART
- Jazelle™ Java hardware accelerator
- Very Low System Power Consumption
- Up to 16 Megapixel Camera support
- Accelerated 2D Graphics w/ BitBlt
- Hardware Accelerated Java
- Audio: I2S and AC Link
- 1.2V core, dynamic clock gating –
- 1.8V to 3.3V memory interface

Multiple Boot Options

- Flash, NAND, UART, SD Card, MMC, Serial EPROM, MemoryStick, boot via Shared Memory

Rich Peripheral Set

- SD Card/SDIO/MMC
- USB OTG (full speed)/USB 2.0 full
- UARTS, IrDA, SPI, RTC
- MagicGate Memory Stick, Memory Stick
- Memory Stick Duo, Memory Stick-PRO

Applications

- Digital Picture Frame
- e Learning Electronics

Package

- 13x13 mm BGA
- Commercial (0 to 70C) or Industrial (-40 to 85C)

Software Support

- NeoMagic Boot
- Linux 2.6.24
- QT embedded

MiMagic 6+ Application Processor

NeoMagic Products:

SOC Application Processors:

MiMagic 3
MiMagic 6+
MiMagic 8

Arm Microcontroller:

ARM 720T
ARM 926EJ

MiMagic Family

NeoMagic's solutions include NeoMagic's family of SOC processors and software you need to produce your device quickly- from OS, drivers and APIs, to applications. Our low power consumption solutions were designed to reduce our OEM's development cycles, while offering them cost effective, high performance, and highly flexible SOC technology.

NeoMagic provides complete development and manufacturing kits to enable OEMs to develop their own unique devices. Our kits use NeoMagic's powerful MiMagic family system-on-chip (SOC) technology at its core and come with complete hardware and software to round out our total solution. OEMs have utilized our kits to develop a diverse line of products; MP3 players, countertop/mobile POS systems, vehicle toll collection, IP camera and mobile phones.



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MiMagic 6+ Product Highlights

The MiMagic 6+ Applications Processor is the heart of a complete mobile content and communications device. A rich set of peripherals, including USB On-The-Go, Memory Stick, Magic Gate, Nand Flash Controller, UART and SD card offer many options for device connectivity and it's all on a single chip.

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About NeoMagic

NeoMagic designs and delivers consumer electronic device solutions with semiconductors and software offering exciting new product functionality for Imaging, Graphics and Audio. We provide low cost, innovative chip technology for tomorrow's entertainment and communication needs. Our capabilities give our partners and their customer's high quality answers to excite and enhance the consumer's lifestyle.

Our focus on vision and sound is enhanced through our commitment to quality, paired with our unique architecture and experience developed over the life of the company. Working with multiple operating systems, customized drivers, and ready-to-go Manufacturing Kits allow our partners quick entrance to consumer markets with enhanced feature sets enabling a clear differentiation for their customers and the consumer.

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