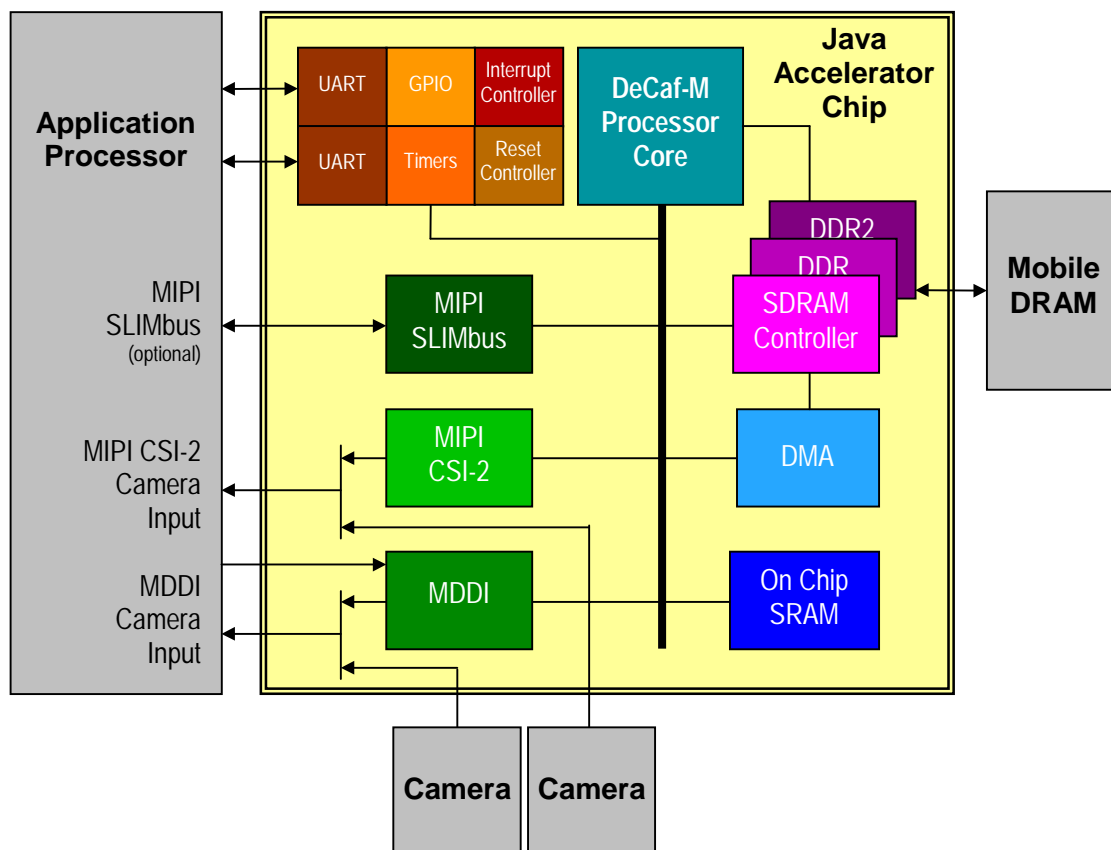


AV1000: Java Accelerator Chip For Smart Phones

The AV1000 Java Accelerator Chip provides extremely high performance Java to smart phones and other wireless devices. Java performance using the Java Accelerator Chip alongside the phone's application processor, is 3 to 30 times faster than Java performance on today's state of the art smart phones. The Java Accelerator Chip functions as a coprocessor to the phone's main application processor. It connects to the application processor over MIPI buses- MIPI CSI-2 and MIPI SLIMbus, OR over an MDDI bus and UART. The high speed connections- MIPI CSI-2 and MDDI, include simple bridge functionality so that no camera ports are sacrificed by including the Java Accelerator Chip. One Mobile DRAM chip is needed with the Java Accelerator Chip to provide a two chip complete super high performance Java solution.



Features

- Super high performance Java
 - 20 CaffeineMarks/MHz
 - 3 to 30 times faster than Java on today's state-of-the-art smart phones
- Applications processor interfaces
 - high speed- for graphics frame buffers, file transfers, etc
 - MIPI CSI-2 host
 - MDDI host
 - mid speed- for file transfers, text IO, other low or mid speed IO, etc
 - MIPI SLIMbus
 - low speed- text IO and other low speed IO
 - 2 x 16550 UARTs
- Processors
 - DeCaf Java processor
 - Embedded C/C++ processor
 - Shared instruction cache- 2K bytes
 - Shared data cache- 2K bytes
 - Shared Memory Management Unit (MMU) with 40 entry TLB
- Mobile SDRAM memory interface
 - 32 bit data bus
 - one 512Mbit or 1Gbit chip- 64Mbytes or 128Mbytes
- 4K bytes embedded SRAM
- Simple high speed graphics interface bridges to connect camera to apps processor
 - MIPI CSI-2 client to MIPI CSI-2 host interface to apps processor
 - MDDI client to MDDI host interface to apps processor
- DMA
 - 4 general purpose DMA channels
 - dedicated MIPI interfaces and MDDI interface DMA channels
- Full set of timers and counters
- Interrupt controller
 - pin interrupts
 - software interrupts- set by apps processor or Java Accelerator Chip processors
- Reset controller
 - separate full chip and processor resets
 - pin reset (full chip)
 - software resets- set by apps processor or Java Accelerator Chip processors
- GPIOs
- Software
 - boot from on-chip SRAM after boot code download from apps processor
 - Linux OS runs on the embedded C/C++ processor- includes a Java daemon to launch Java apps when notified by the main apps processor
 - J2ME (CLDC/CDC) JVM, MIDP 2.0
 - Java or C/C++ execution controlled by the JVM
 - Java Wireless Client profiles