

IMAGEON 100



Advanced graphics and video co-processor for wireless handheld devices

Visit ATI.com

ATI IMAGEON™ 100 offers advanced 2D display graphics and video acceleration, exceptional power management and MPEG/JPEG decoding for the wireless handheld device and mobile communications markets. Architecturally designed to meet the specific needs of the embedded marketplace, IMAGEON™ 100 supports both color and monochrome LCDs and interfaces to most industry leading embedded processors. It offers great performance enhancement and an amazing visual experience at no cost to design real-estate; as well as very low power consumption for longer battery life.



AT A GLANCE:

- High-performance advanced 2D graphics technology
- Leading-edge power management technology
- MPEG-4/JPEG decoding
- SDRAM memory interface with 384K embedded SRAM
- Color and monochrome display support up to 800x600x16



FEATURES

• **POWER DOWN MODES**

- Hardware: dynamic power down for inactive blocks
- Low power/low voltage process
- Software control
- Power consumption
 - Standby < 0.03mW
 - Display refresh < 5mW
 - Typical < 20mW

• **MPEG/JPEG DECODER**

- iDCT engine
- Motion compensation
- Scaling
- Color space conversion
- QCif and Cif decode at 30fps

• **ADVANCED 2D GRAPHICS**

- BitBLT (fill, srcCopy)-ROP3
- DrawLine
- Sprites
- Font caching
- Font anti-aliasing
- Scaling
- Object rotation
- Alpha blending

IMAGEON™ 100

HOST INTERFACE

- Standard SRAM interface to connect to many market leading CPUs, including:
 - Intel® StrongARM®/ Xscale
 - Motorola's DragonBall™
 - NEC MIPS®
 - Hitachi SH3
 - Unique low pin count interface

INTEGRATED MEMORY CONTROLLER

- 384KB embedded SRAM
- Memory controller to support up to 8M of external SDRAM

DISPLAY SUPPORT

- 1/2/4 bit monochrome,
- 12/16/18 bit color STN
- 12/16/18 bit TFT
- Maximum resolution 800x600 at a color depth of 16bpp
- Partial display refresh
- 2 HW cursors, 1 HW icon/overlay
- Frame modulation
- Panel rotation (90°, 180°, 270°)
- Integrated TCON

CLOCK SOURCE

- Single clock input (low frequency crystal)

OPERATING VOLTAGE

- 1.5V/1.8V/2.5V/3.3V CPU and external memory interface
- 1.2V ~1.8V core
- 1.8V/2.5V/3.3V for LCD interface

PACKAGE

- 165 pin TFBGA, COB, COF, Flip Chip

DEVELOPMENT SUPPORT

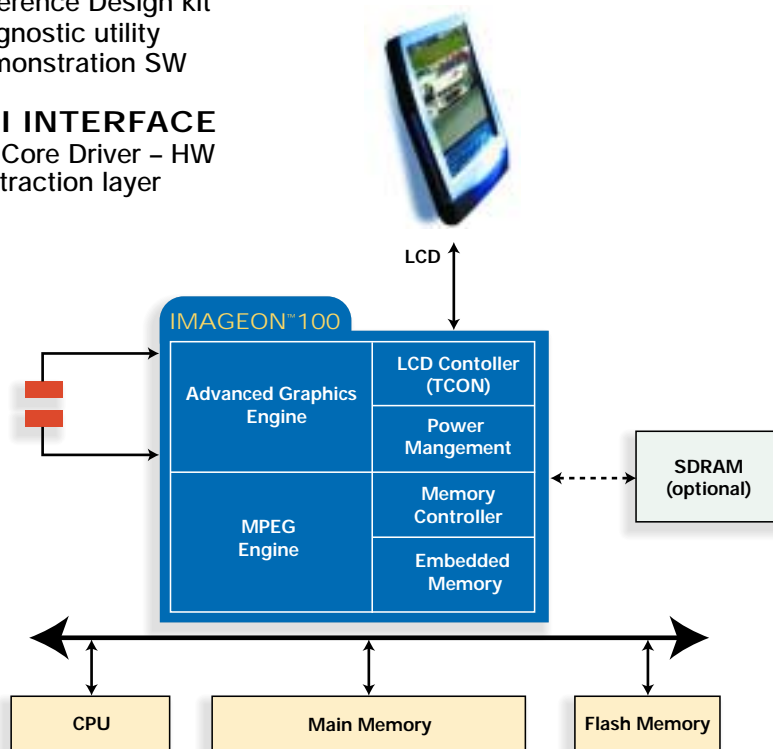
- Reference Design kit
- Diagnostic utility
- Demonstration SW

API INTERFACE

- ATI Core Driver – HW abstraction layer

DRIVER SUPPORT

- Windows® CE and Pocket PC
- Palm OS®
- Symbian EPOC
- Mobile Linux



IMAGEON™ 100 System Block Diagram



ATI TECHNOLOGIES INC.
33 Commerce Valley Drive East
Markham, Ontario, Canada L3T 7N6
Telephone: (905) 882-2600
Facsimile: (905) 882-2620
www.ati.com

ATI TECHNOLOGIES
SYSTEMS CORP.
2805 Bowers Avenue
Santa Clara, CA 95051-0917
Telephone: (408) 572-6500
Facsimile: (408) 572-6305

ATI TECHNOLOGIES
(EUROPE) GMBH
Kettenring 13
D-82041 Oberhaching, Germany
Telephone: +49 89 665 15 -0
Facsimile: +49 89 665 15 -300

ATI TECHNOLOGIES
(JAPAN) INC.
Kojimachi Nakata Bldg 4F
5-3 Kojimachi, Chiyoda-Ku
Tokyo 102-0083, Japan
Telephone: +81 35275-2241
Facsimile: +81 35275-2242

OFFICIAL ATI REP.
AMI TECHNOLOGIES CORP.
8F, 148, Sec. 1, Hsin Sheng S. Rd.
Taipei, Taiwan, R.O.C.
Telephone: 886-2-2396-7711
Facsimile: 886-2-2351-3030