NVIDIA GOFORCE 3D TECHNOLOGY

- Programmable Shader Technology
  - Support for VGA (640 x 480) LCD
  - Double-buffering support on HWSA
  - Dual LCD support
  - Support for sub-LCD display
  - 18-bpp input support with 262k colors
  - S-Video output
  - Support for storage or Bluetooth cards

- Embedded Memory
  - 1280KB of 128-bit-wide SRAM memory enables on-chip processing of multimedia applications, resulting in low system power consumption. High-resolution display support is provided without the need to access external memory, reducing the power required to output to the display.

- FLAT PANEL (LCD) INTERFACE
  - Mono source/pattern transparency
  - Bilinear/trilinear texture filtering
  - Hardware rotation (90°, 180°, 270°)
  - Flip and mirror
  - Partial display support (any size/position)
  - Triple 8-bit lookup table (LUT)
  - Encode predefined region of display

- Late Z Technology
  - Early Z technology optimizes the processing and power consumption of mobile devices by identifying scenes to be rendered efficiently, with extended battery life, on mobile devices.

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NVIDIA GoForce: Wireless Media Processors for Advanced Mobile Devices

Digital cameras are quickly becoming a standard feature on mobile devices. Removable storage cards and 8x digital zoom let you use your mobile phone as your primary digital camera—for taking, storing, and printing your high-quality photos. NVIDIA GoForce WMPs also offer real-time capture, storage, and viewing of multiple digital images on your phone, for added convenience when you want to quickly view all the images you have taken.

FULL 30 FRAMES-PER-SECOND VIDEO CAPTURE AND PLAYBACK

When you record or play video content, frame rate is a key factor in determining the visual quality. The higher the frame rate the better. NVIDIA GoForce WMPs are capable of both encoding (recording) and decoding (playback) at a fast 30 frames per second—delivering smooth and jitter-free high-quality video. NVIDIA GoForce WMPs incorporate a number of filters that further improve the quality of video content. GoForce 3D 4400 can record and play back video at VGA resolutions. Users see this quality improvement when viewing streaming video on their phone or when using the phone as a camcorder to capture streaming video. NVIDIA GoForce WMPs also allow for simultaneous encode and decode that can be used for applications like video conferencing, which records and sends your image while playing back the image of the person you are video conferencing with.

NVIDIA NP0WR TECHNOLOGY

Multimedia functions, like video and imaging, require a significant amount of processing. If all these functions had to be performed by the phone’s main processor, battery life and performance would suffer dramatically. NVIDIA GoForce WMPs are architected specifically to address this issue—maximizing multimedia processing performance while minimizing power drain on the battery, by using NVIDIA nPower technology. By offloading the main processor and running multimedia applications on the media processor, nPower significantly reduces the power required to run these applications, while improving the image quality on the display.