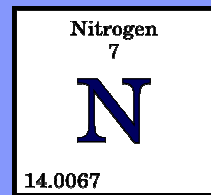# boundary devices

The elements of your next design.

Introduces...
The Nitrogen-53 Board

The Nitrogen-53 is based on the next generation ARM-Cortex A8 processor from Freescale, the IMX53. With expanded DDR2 memory capacity of up to 2GB and processor speeds up to 1GHz, the IMX53 is a powerful multimedia platform capable of 1080P video playback. The Nitrogen-53 was designed to take advantage of the video performance of the IMX53 by offering multiple display interfaces including HDMI, LVDS, and TTL. With OpenGL® ES 2.0 and OpenVG™ 1.1 hardware accelerators, the IMX53 is ideal for 3D applications.
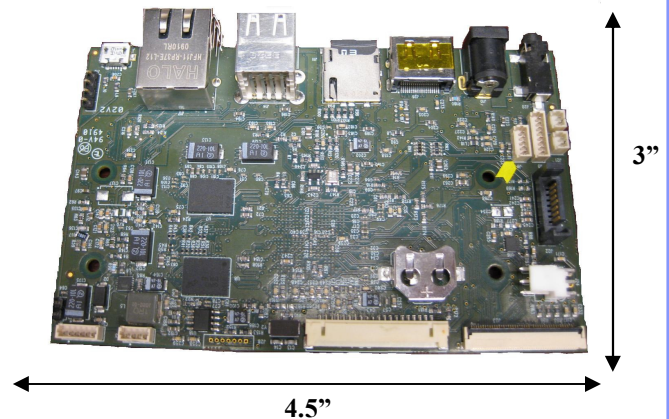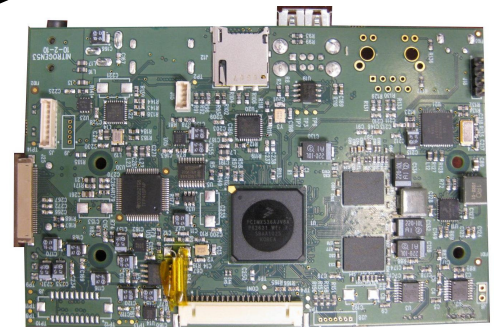
The Nitrogen-53 has been optimized for low power consumption making it ideal for high-end tablet or power-sensitive applications such as Power over Ethernet. In addition, the Nitrogen-53 can interface with a variety of peripherals by utilizing the numerous connectivity options such as 10/100 Ethernet, 3 USB Master, 1 USB OTG, 3 RS232 serial ports, and I2C.

External storage is provided by the microSD slot or the on-board SATA connector, or both depending on the requirements of the application. For applications requiring a camera, the Nitrogen-53 has on-board interface to an Omnivision 5MP OV5642 camera sensor. The Nitrogen-53 is available with a variety of operating systems including Linux, Android, and Windows Embedded Compact 7 coming soon.

Boundary Devices specializes in creating customized solutions. Contact us today with your custom requirements for a quote.

The following are additional highlights of the Nitrogen-53 board:

- Freescale iMX53 1GHz ARM Cortex A8
- Up to 2GB DDR2 Memory
- 2MB Serial Flash
- Dual Display Capable with multiple display options including TTL, HDMI or LVDS Interface
- Built-in 5MP OV5642 Camera Interface
- 3 RS-232 Serial Ports
- 3 High-Speed USB 2.0 Master Port
- 1 High-Speed USB 2.0 OTG
- SATA
- 2 microSD Slots for Expanded Storage

3"

4.5"

- General Purpose I/O for Device Control
- 44KHz Stereo 16-Bit Audio Output
- 44KHz Monaural Audio Input (microphone)
- SPI/I2C Interface
- 10/100 Ethernet
- Supports WindowsCE 6.0, Android or Linux Operating Systems
- Windows Embedded Compact 7 Coming Soon

For additional information on Nitrogen and all other Boundary Devices products, please visit our website: www.boundarydevices.com or call us at 602-212-6744.

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