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Find the *Abaco Systems / SBS S4110-CC03-AR* at our website: ***Click HERE***

S4110

Sentiris™ PMC 4110 COTS Graphics Subsystem with NVIDIA Quadro4 GPU

I/O & COMMUNICATIONS

Features

Conduction Cooling Available

Performance

- 64 MB DDR SDRAM
- 7.0 GB/s dedicated graphics bandwidth
- 400 megapixels/second (trilinear) pixel fill rate
- 3.5M independent, texture mapped triangles/second (trilinear)
- 2.6M 3D anti-aliased lines/second

Image Quality

- 16- or 32-bit RGBA and Z with both Accuview full scene and Quadro4 drawing primitive anti-aliasing combined with both trilinear and anisotropic texture filtering
- Supports overlay planes
- 2-sided lighting support

Video Input Formats

- NTSC, PAL, RS-170, RS-170A, and S-Video

Video Outputs

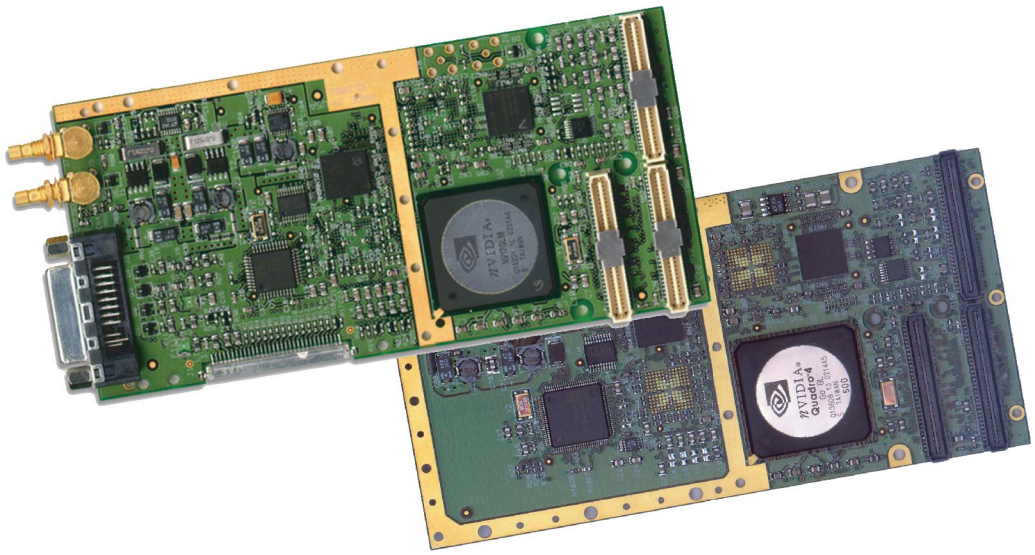
- DVI 1.0 digital and analog; LVDS (flat panel) digital single or dual link; composite or S-Video
- Two outputs available: DVI-A (RGB)/DVI-D (TMDS), LVDS, & composite/S-Video

Software Support

- Intel IA32 architecture systems
  Windows® 2000
  OpenGL® 1.3 or earlier
  DirectX® 8.0
- Intel x86 and PowerPC systems
  OpenGL® 1.3 under Linux®
  Wind River Systems VxWorks®

Power Consumption

- Maximum processing load
  +5 V = 1 amp
  +3.3 V ≤ 5 amps



Convection and Conduction Cooled PMC

S4110 is a PCI Mezzanine Card (PMC) that brings the power of the NVIDIA Quadro4 embedded graphics processing unit (GPU) to real-time commercial and military embedded visual computing applications that require the combination of high-performance, high-resolution multi-channel 2D and 3D graphics, advanced video input/output, low-power consumption and extended or MIL-SPEC capabilities. Convection cooled and conduction cooled versions are available.

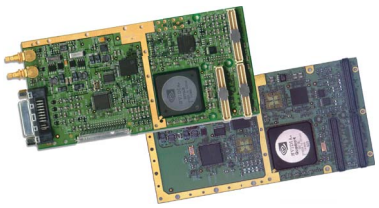
With a 128-bit interface to 64 MB of DDR memory, S4110 hosts a dedicated graphics bandwidth of 7.0 GB/s, enabling delivery of up to 400 megapixels per second (trilinear) pixel fill rate, 3.5M independent, texture mapped triangles per second (trilinear), and 2.6M 3D anti-aliased lines per second when deployed with single board computers (SBCs) that support 66 MHz PCI-bus interconnects.

S4110 provides 16- or 32-bit RGBA and Z with both Accuview full scene and Quadro4 drawing primitive anti-aliasing, combined with both trilinear and anisotropic texture filtering. The PMC also supports key workstation-level features such as overlay planes and 2-sided lighting that facilitates bringing new capabilities from the lab to the field.

With support for dual, independent analog and digital RGB (DVI/TMDS and LVDS) output, and with analog resolutions to 2048 x 1536 and digital resolutions to 1600 x 1200, the S4110 is ready for next-generation display applications today.

S4110 supports Microsoft Windows 2000, OpenGL 1.3 and DirectX 8.0 on Intel IA32 systems, and OpenGL 1.3 under Linux and popular real time operating systems, including WindRiver VxWorks on both IA and PowerPC systems. This level of hardware and software compatibility allows both new and existing applications to take advantage of Sentiris' performance and image quality without requiring a major software development effort. S4110 also supports Windows XP and XPE.

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S4110

Specifications

NVIDIA Quadro4 Embedded GPU

- 256-bit internal architecture, dual graphics pipeline, and 220 MHz operation
- 128-bit wide interface to 64 MB DDR SDRAM frame buffer/texture memory with 220 MHz operation
- 7.0 GB/s dedicated graphics bandwidth
- Pixel fill rate performance up to 400 MP/s with trilinear filtering enabled
- Up to 3.5 M independent trilinear triangles/second
- Up to 2.6M independent, Z-buffered, lit anti-aliased lines/second
- Any 2 I/Os may be active simultaneously

Weights

- CC03 - 0.0676 kg (0.149 lbs)

Compliance

- IEEE-P1386.1
- FCC Part 15 Level A and CE
- Conduction cooled Sentiris is compliant with ANSI/VITA 20-2001
- Conduction cooled Sentiris is compatible with MIL-STD-461D

PCI Bus Support

- 32-bit PCI, 33/66 MHz
- 3.3V and 5V PCI signalling

Safety Certification

- UL, ETL or equivalent and CE

Configurations

Model Number	Configuration
S4110-CV00	Sentiris S4110 PMC, Convection Cooled
S4110-CV01	Sentiris S4110 PMC, Convection Cooled, S Video IN
S4110-CV02	Sentiris S4110 PMC, Convection Cooled, S Video OUT
S4110-CV03	Sentiris S4110 PMC, Convection Cooled, All I/O via P4
S4110-CV04	Sentiris S4110 PMC, Convection Cooled, LVDS via P4
S4110-CC03	Sentiris S4110 PMC, Conduction Cooled, Uncoated (Lab use only, not tested at extended temperatures.)
S4110-CC03-AR1	Sentiris S4110 PMC, Conduction Cooled, w/Dual LVDS Outputs and acrylic conformal coating

1 Available with acrylic or urethane conformal coating. Add -AR to the Model Number for acrylic conformal coating. Add -UR to the Model Number for urethane conformal coating.
2 VxWorks SDK available (for -CC03 versions only)
3 Linux drivers available

Environmental

Convection Cooled

- Operating Temp: 0° to 50° C
- Storage Temp: -40° to 100° C
- Relative Humidity: 0 to 95% non-condensing
- Sine Vibration (Sweep duration 10 minutes each, independent axis test): 8 g peak (Displacement limited to 0.40 inches below 20Hz), 15 - 2 kHz
- Random Vibration (Duration 30 minutes each axis, independent axis test): 0.05 g2/Hz, 15 - 2 kHz
- Shock (Three impacts of two directions on each axis): 30 g peak, Half-sine 9 ms
- Atmospheric Pressure: sea level to 15k feet
- Optional onformal coating

Conduction Cooled

- Operating Temp: -40° to 85° C (At thermal interface)
- Storage Temp: -55° to 105° C
- Relative Humidity: 0 to 95% non-condensing
- Sine Vibration (Sweep duration 10 minutes each, independent axis test): 10 g peak (Displacement limited to 0.40 inches below 20Hz), 15 - 2 kHz
- Random Vibration (Duration 30 minutes each axis, independent axis test): 0.1 g^2/Hz, 15 - 2 kHz
- Shock (Three impacts of two directions on each axis): 40 g peak, Half-sine 11 ms
- Atmospheric Pressure: sea level to 200k feet
- Conformal coating: Acrylic & Urethane

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