

SMAPH[®]-H Vector/3D Hybrid IP

Digital appliances, car electronics, mobile devices, etc.



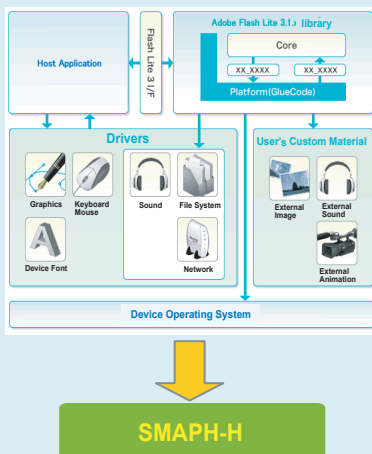
3D user interface creation tools and partnership

DMP is strengthening its collaboration with 3D-UI creation tool vendors to support planning and development of products using PICA200 Lite at the system level from both the hardware and software perspectives.



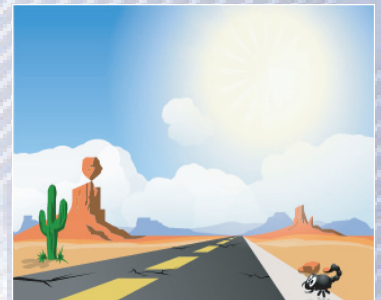
Adobe Flash Lite total support service

DMP offers the Adobe Solution by eSoL, Co., Ltd. as software development environment for Adobe Flash Lite, which allows for implementation of contents optimized for SMAPH-F at low cost and with short lead-time.



Integrating high-speed, high-quality vector graphics with 3D graphics

SMAPH-H is a hybrid IP core optimized for high-performance, high-quality user interface applications, supporting OpenVG 1.1 and OpenGL ES 1.1. Vector and 3-D graphics can share hardware components without loss of graphics performance. This has enabled us to successfully reduce circuit size and power consumption.



From Rightware VGMark1.0

With the advantages of both vector graphics, which remain sharp even at the highest resolutions, and 3-D graphics, which provide advanced visual effects utilizing free control of viewpoint and depth, SMAPH-H is a first among mobile consumer device solutions.



Main features / Specifications

- API support: OpenGL ES 1.1, OpenVG 1.1
- <3D/VG Common Features>
- Frame buffer: Maximum 4096x4096 pixels
- Render to texture
- ETC compressed texture
- Bilinear texture filtering
- Alpha blending
- <3D Features>
- Pixel format: RGBA4444, RGB565, RGBA5551, RGBA8888
- Vertex program (ARB_vertex_program)
- Polygon offset
- mipmap
- Line antialiasing
- 8-bit stencil buffer
- 24-bit depth buffer
- Vertex performance: Maximum 25.4M polygons/sec (at 333MHz)
- Pixel performance: Maximum 333M pixels/sec (at 333MHz)
- <VG Features>
- Pixel format: RGBA4444, RGB565, RGBA5551, RGBA8888, ARGB4444, ARGB5551, ARGB8888
- Path, stroke rendering
- Maximum 4x4 multi-sampling and antialiasing
- Single/Double/Triple buffer
- Pixel performance: Maximum 333M pixels/sec (at 333MHz)