

Shape Processor

product sheet

AQSENSE Shape Processor software allows the alignment and comparison of dense 3D clouds of points with their respective models. Based on a "best-fit" approach, the patent-pending alignment procedure relies on a very fast and accurate technology, which combined with an optimized comparison engine operates on huge clouds of points in a fraction of a second.

Shape Processor is AQSENSE's C++, easy-to-use, easy-to-integrate Application Programming Interface. It includes comprehensive documentation as an interactive HTML full manual, source code examples, binary GUIs and sample 3D clouds of points. Shape Processor is easily customizable, including extension features so users can create their own 3D object importer in order to facilitate the work with familiar 3D data formats.

Technical Features:

- Compatible with Windows 2000 SP4 and Windows XP SP2
- Compatible with Microsoft Visual C++ 6.0 and 2005
- Alignment error < 1 micron*
- Alignment time < 100 ms*
- Comparison time < 300 ms*
- Compatible with most existing 3D acquisition systems
- Compatible with multi-core architectures

*Our Benchmark | 1 Million points surfaces / Initial misalignment: 10° and 10mm in each axis (X, Y & Z)
CPU Intel Pentium IV Core Duo 2 1.8GHz / 2 GiB DDR2 (667MHz) RAM



Minimal requirements

Pentium IV at 1 GHz | 256 MiB of RAM | Windows 2000 Service Pack 4 or Windows XP Service Pack 2.
Microsoft Visual C++ 6.0.

Full Alignment and Comparison Sample Code

```
aqsp::LoaderRaw loader [1.0F, 0.85F, 0.375F];
aqsp::Object3D model [loader ["ok.raw"]];
aqsp::Object3D scan [loader ["error.raw"]];

processor.setModel [model];
aqsp::RangeMap disparityMap;
processor.align [scan, disparityMap];
```