

# SEA 3D Pro 2010 System Requirements

## Recommendations for a Linux Desktop Workstation



SEA 3D Pro 2010 makes intensive use of the graphics and system hardware it is run on. Choosing the right configuration to avoid bottlenecks is important.

### Software Requirements

SEA 3D Pro 2010 for Linux is a 64 bit application. It requires

- **RedHat Enterprise Workstation 4, with a minimum update level of 6.**
- **RedHat Enterprise Workstation 5, with a minimum update level of 3.**

An official NVIDIA driver has to be installed – Please see table below for further details.

The following package groups must also be installed:

- X Window System
- GNOME Desktop Environment
- Open Motif

SEA 3D Pro 2010 is compatible with GeoProbe v4.x and R5000.

### Recommended & Minimum Requirements for GPU Hardware

With the right GPU configuration choices SEA 3D Pro 2010 users can get the best from the software in terms of Performance, Interactivity and Visualisation Quality.

The following GPU configurations are **strongly recommended** to get the best out of SEA 3D Pro 2010.

#### Desktop Workstation:

Primary GPU: Quadro FX 4800<sup>a</sup> (1.5GB) or FX 5800 (4GB).  
Secondary GPU: Tesla C1060



In smaller workstation chassis that only accommodate a single card, we recommend upgrade of the primary GPU as above.

Devices marked **a** have been certified with driver version 177.80.

*(Many modern workstations support these dual card configurations, examples are: HP xw8400, HP xw8600, HP xw9400, HP Z800; Dell Precision 690 (\*1KW Chassis only), T7400, T7500; Bull R423, R425; Workstation Specialists WSX218. When considering workstation upgrades, existence of 2x PCI-E x16 slots, space for 2x double width cards, sufficient power rating and sufficient power connectors should be verified.)*

The following is a table of the current NVIDIA Quadro cards and their SEA 3D Pro compatibility. The rows highlighted indicate GPUs that meet minimum requirements.

| GPU               | General Visualisation | Advanced Rendering | GPU Accelerated Processing* | Certified (Driver Version) |
|-------------------|-----------------------|--------------------|-----------------------------|----------------------------|
| Tesla C1060       | -                     | -                  | Yes                         |                            |
| Quadro FX 5800    | Yes                   | Yes                | Yes                         | 190.53                     |
| Quadro FX 4800    | Yes                   | Yes                | Yes                         | 190.53                     |
| Quadro FX 5600    | Yes                   | Yes                | Yes                         | 190.53                     |
| Quadro FX 4700 x2 | Yes                   | Yes                | Yes                         |                            |
| Quadro FX 4600    | Yes                   | Yes                | Yes                         | 190.53                     |
| Quadro FX 5500    | Yes                   | Yes                | No                          |                            |
| Quadro FX 4500 x2 | Yes                   | Yes                | No                          |                            |
| Quadro FX 4500    | Yes                   | Yes                | No                          |                            |
| Quadro FX 4400    | not recommended       | No                 | No                          |                            |
| Quadro FX 3800    | Yes                   | Yes                | Yes                         |                            |
| Quadro FX 3700    | Yes                   | Yes                | Yes                         |                            |
| Quadro FX 3500    | not recommended       | No                 | No                          |                            |
| Quadro FX 3400    | not recommended       | No                 | No                          |                            |

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|                       |                 |            |            |  |
|-----------------------|-----------------|------------|------------|--|
| Quadro FX 2700        | not recommended | No         | No         |  |
| <b>Quadro FX 1800</b> | <b>Yes</b>      | <b>Yes</b> | <b>Yes</b> |  |
| Quadro FX 1700        | not recommended | No         | No         |  |
| Quadro FX 1500        | not recommended | No         | No         |  |
| Quadro FX 1400        | not recommended | No         | No         |  |
| Quadro FX 1300        | not recommended | No         | No         |  |
| Quadro FX 580         | not recommended | No         | No         |  |
| Quadro FX 570         | not recommended | No         | No         |  |
| Quadro FX 560         | not recommended | No         | No         |  |
| Quadro FX 550         | not recommended | No         | No         |  |
| Quadro FX 540         | not recommended | No         | No         |  |
| Quadro FX 380         | not recommended | No         | No         |  |
| Quadro FX 370 LP      | not recommended | No         | No         |  |
| Quadro FX 370         | not recommended | No         | No         |  |
| Quadro FX 350         | not recommended | No         | No         |  |
| Quadro FX 330         | not recommended | No         | No         |  |

\*Please contact ffa Support ([support@ffa.co.uk](mailto:support@ffa.co.uk)) for more information on GPU computing performance of these boards.

### Additional Notes

#### **Project Storage**

The amount of disk space a SEA 3D Pro 2008 project requires increases in direct relation to the size of the source data volume loaded.

*For example:*

*If the source data is 10GB then SEA 3D Pro 2008 will need 10GB + 10-15GB for its cache file. This means a total of 25GB in space (internal or external) is needed to load and visualise the source volume.*

*If any processing is to be carried out on the volume, the same amount of space is needed again for the resulting volume. After a number of processing operations the number of volumes in an SEA 3D Pro 2008 can grow rapidly.*

*Once the project contains 10 volumes, 250GB will be required; this means a single 1TB disk is capable of holding a SEA 3D Pro 2008 project containing around 40 10GB volumes.*

#### **Temporary Disk Space**

SEA 3D Pro 2008 also requires a certain amount of temporary disk space to use during volume processing. The 'temp' directory, specified on setup is the target for all temporary files and significant amount of space is required.

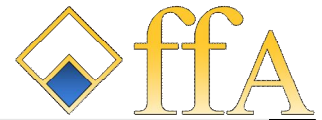
The amount of temporary space required is also dependent on the size of the source volume and the processes being used within SEA 3D Pro 2008. We recommend that a large amount of disk space is reserved for temporary files. In the example situation given above, for a 10GB source volume we recommend having 200GB available. However, a minimum of 50GB would enable the majority of processes to be applied.

### Base Specification Recommendations

|            |  |
|------------|--|
| <b>CPU</b> | <p>Fast Intel Xeon or AMD Opteron processors are recommended.</p> <p>The processing engine behind SEA 3D Pro is multithreaded and step performance increases will be seen if a multiprocessor/core system is chosen.</p> <p>The following configurations are all compatible:</p> <ul style="list-style-type: none"> <li>• A dual/quad core processor</li> <li>• A dual/quad processor system</li> <li>• A dual/quad processor system with dual/quad core processors (4/16 effective cpu's)</li> </ul> <p>However, a single quad core processor system is often a good choice in terms of a trade off between system performance and costs.</p> |
|------------|--|

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|                            |  |
|----------------------------|--|
| <b>Memory</b>              | <p><b>Minimum:</b> 8GB<br/><b>Recommended:</b> 32GB</p>  |
| <b>Internal hard disks</b> | <p><b>Interface type:</b> SATA, SCSI (<i>Ultra-3, Ultra-320, and Ultra-640</i>).</p> <p><b>Capacity:</b> We recommend systems with 1.5TB of internal hard disk space. An example configuration would be:</p> <ol style="list-style-type: none"><li>1. Primary drive of 500GB for OS, software and windows page file.</li><li>2. Additional high capacity (1TB+) drives for SEA 3D Pro projects and temporary files.</li></ol> <p>However, the more internal hard disk space the better. (Multiple drives are usually spanned to create a single visible drive)</p> |
| <b>External storage</b>    | <p><i>We highly recommend using either eSATA enabled drives or drives with fast SCSI connection.</i></p> <p><i>Drives with USB2.0 and FireWire interfaces can be used but with lesser performance.</i></p> <p><i>Note: use of USB 1.1 devices is not recommended.</i></p>  |