

Hardware Requirements






express

© 2004 by DSI International

Large-Scale System Integration Configuration

This system is recommended for companies with large design teams and/or sub-contractors. This system is intended to accommodate extremely large hierarchical designs approaching millions of functions and tens of thousands of tests. Integrations of this size include system-level down to component-level designs for large. Machines of this specification may only be needed for certain individuals performing integration.

The following hardware requirements have been selected based on customer experience in working with various models and integration efforts. These recommendations are in no way a guarantee of software performance, but rather serve as a guideline to understand what typical configurations are appropriate for a given effort.

	<u>CPU Requirement</u> Pentium IV – 3.0 GHz 2.0 GB RAM
	<u>Hard Drive Requirement</u> 20 GB Ultra-Wide SCSI Hard Drive (free space) CD-RW Drive (Suggested)
	<u>Video Card/Monitor Requirements</u> 21"+ Monitor, 1280x1024x16K Non-Interlaced 32 MB AGP Video, Not-Integrated Video
	<u>Software Requirements</u> Windows XP 4 GB Swap File
	<u>Printer Requirements</u> Access to 600+ dpi Laser Printer for Reports Access to 600+ dpi Large Format Color Printer

eXpress Hardware Requirements



CPU Configuration

The CPU requirement for eXpress is dependent on the following factors:

- Number of Functions & Faults
- Depth of Hierarchy
- Complexity of Hardware
- Scope of Modeling

Although DSI continually analyzes software performance and memory requirements in order to minimize hardware requirements, eXpress must propagate failures across many levels of a design. As such, both CPU and memory are critical resources.

Large-Scale System Integration with many hierarchical links often results in diagnostic calculations requiring virtual memory in excess of 1 GB.



Hard Drive Configuration

The Hard Drive requirements for eXpress are dependent on the following factors:

- Complexity of Designs
- Depth of Hierarchy
- Size of Design Team

All information in eXpress must eventually be stored to disk. Although eXpress uses purely RAM while processing, the requirements for extremely large systems often exceeds the amount of available RAM. Under these conditions, the speed of disk swapping in order to use virtual memory is critical. With large-scale integration, we recommend the use of Ultra-Wide SCSI disks to obtain the fastest performance possible.

It is possible to utilize network-accessible storage to store virtually all eXpress data. eXpress requires only about a 10-MB area on each local machine in which to run. However, keep in mind that the local machine still does the processing and may require substantial disk space for virtual memory.

In addition to hard drive space, we recommend the addition of either a ZIP drive or CD-RW drive in order to make backups of the designs. ZIP drives are useful for small- to medium-sized integration where designs require up to 100-200 MB of storage. CD-RW drivers are recommended for large-scale integration where the total of all designs often exceeds 200 MB



Video/Monitor Configuration

The Video Card and Monitor requirements for eXpress are dependent on the following factors:

- Size of System-Level Boxes
- Complexity of Designs
- Depth of Hierarchy

Since visualization is a key element to good design practice, we recommend paying special attention to choosing the right video card and monitor configuration.

Complex hierarchy, as can be expected in medium- to large-scale integration, often results in system-level boxes with hundreds, even thousands of functions. In order to properly manipulate objects of this size, it is

eXpress Hardware Requirements

preferable to use a screen resolution of 1280x1024 or greater--implying a monitor size of at least 19". We suggest the largest systems use resolutions of 1600x1280 on monitors of 23" or larger.



Software Configuration

The Software recommended for eXpress is Windows XP due to their networking and memory handling capabilities. Based on the size of designs expected to be encountered, we recommend setting virtual memory to between 512MB to 4 GB.

Our largest systems we have seen to date have required approximately 1.50 GB of total virtual memory (this includes the overhead of Windows NT, eXpress itself and all the designs linked hierarchically to the top-level design under analysis).

Due to recent modeling enhancements, however, we expect systems several orders of magnitudes larger in the near future



Printer Configuration

We recommend access to two types of printers. First, in order to print reports, we recommend a Laser Printer capable of 600-dpi (or greater) output. Reports can range from a single page to hundreds of pages for large scale system analysis, so please choose a printer with speed indicative of the turn-around time you wish to attain.

Second, for printing designs, we recommend anywhere from a simple ink-jet color printer up to a large-format color printer (36x48 paper-roll type) for large-scale system integration. Since it is often necessary to present designs to enhance visualization of projects, we recommend color printers to make full use of eXpress's color and image handling capabilities.