

Using dSPACE Software under 64-Bit Windows Operating Systems

Much More RAM – Even for 32-Bit Software

32-bit Windows XP can use at most about 3.2 GB RAM to share between the operating system and all applications running in parallel, even if more physical RAM is installed in the PC. In contrast, 64-bit Windows Vista and 64-bit Windows 7 can use the PC's entire memory, up to 192 GB RAM.

The larger RAM available with 64-bit systems can partly also be used with today's 32-bit application software such as MATLAB[®] 32-bit and the current dSPACE 32-bit software. This is made possible by the "WOW64" mode (Windows-On-Windows 64-Bit), which Microsoft[®] provides to ensure that 32-bit application software is compatible with 64-bit Windows operating systems.

WOW64 Mode

In WOW64 mode, the operating system and every application running in parallel are each assigned a separate 4 GB address range. If sufficient RAM is installed, disk swapping of memory segments is significantly reduced. Another benefit is that even extensive Simulink[®] models can be processed as a whole, not split up into submodels, and model compilation gets considerably faster.

Native 64-Bit Applications versus WOW64

While 32-bit application software cannot address as much memory as native 64-bit software, running 32-bit software on WOW64 improves performance and usability significantly compared to running the same 32-bit software on 32-bit Windows versions, provided that much more than 4 GB RAM is installed in the PC.

For up-to-date information on the compatibility of dSPACE and third-party software with different operating systems, see the dSPACE Web site:

<http://www.dspace.com/goto?compatibility>