
InfiniteReality4 Addendum to Silicon Graphics® Onyx2®, SGI® Onyx® 3000 Series, and SGI® Onyx® 300 Guides

This addendum adds InfiniteReality4 graphics hardware information to the following documentation:

- *Silicon Graphics Onyx2 Rackmount Owner's Guide (007-3457- 00x)*
- *Silicon Graphics Onyx2 Deskside Workstation Owner's Guide (007-3454-00x)*
- *SGI Onyx 3000 Series Graphics System Hardware Owner's Guide (007-4264-00x)*
- *SGI Onyx 300 Graphics System User's Guide (007-4509-00x)*

This addendum provides a brief description of the InfiniteReality graphics system, and explains how the InfiniteReality board set that composes the graphics system has been improved over previous generations of InfiniteReality graphics to greatly enhance speed, reliability, texture memory, and the frame buffer.

These improvements provide increased graphics capabilities to the following systems:

- Silicon Graphics Onyx2 rack and deskside systems
- SGI Onyx 3000 series of graphics systems
- SGI Onyx 300 graphics system

InfiniteReality is a three-stage graphics pipeline architecture that includes the following components. (Figure 1 shows the InfiniteReality board set components.)

- Geometry engine (GE) (one board per pipe)
- Raster manager (RM) (one, two, or four boards per pipe)
- Display generator (DG5) (one board per pipe)

Note: The DG5 board can be combined with various optional daughterboards to meet your graphics needs. For example, the DG5-8 board has a VIO5H daughterboard, which adds six monitor connectors, for a total of eight. See your graphics systems user's or owner's guide for details about the DG5 board options.

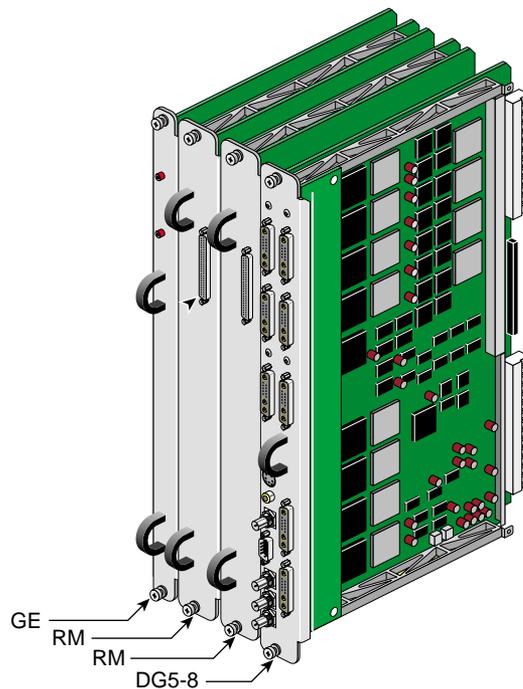


Figure 1 InfiniteReality Board Set Components

The Silicon Graphics Onyx2 rack system, SGI Onyx 3000 series, and SGI Onyx 300 graphics systems use a dedicated graphics enclosure that houses one or two InfiniteReality graphics pipes. The first pipeline has up to four RM boards, and the second pipeline has up to two RM boards. (Figure 2 shows a graphics module with two InfiniteReality pipes: pipe 0 with four RM boards, and pipe 1 with two RM boards.)

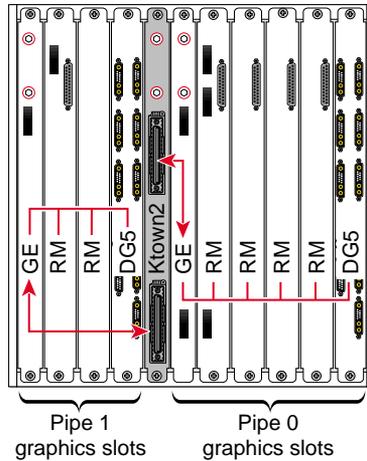


Figure 2 InfiniteReality Graphics Architecture

In contrast to the previously mentioned systems, the Silicon Graphics Onyx2 deskside graphics system can be configured with a maximum of one pipeline with two RM boards. The Silicon Graphics Onyx2 deskside graphics system includes the following components:

- Geometry engine (GE) (one board per pipe)
- Raster manager (RM) (one or two boards per pipe)
- Display generator (DG5) (one board per pipe)

Note: For detailed descriptions of the GE, RM, and DG5 boards (and a list of DG5 board options), see your graphics system user's or owner's guide.

Ordered new, the InfiniteReality4 graphics pipe consists of the GE16-4, at least a two-channel display generator (DG5-2), and the new raster manager (RM11).

If you order it as an upgrade, you can enhance your current InfiniteReality graphics system by upgrading, at the pipe-component level, to the GE16-4, DG5, and RM11 boards available with InfiniteReality4.

Note: The upgrade requires that your system is running IRIX 6.5.17 release software, or later, for the enhanced capabilities to work.

Compared to the InfiniteReality3 graphics system, the InfiniteReality4 graphics system provides the following increased capabilities:

- Texture memory is increased from 256 MB to 1024 MB per pipe.
- Raster memory (frame buffer) is increased from 80 MB to 2.5 GB per RM11 board.
- Raster Manager board speed is increased for higher pixel fill performance.