Global Services

sgi™

Custom Engineering Practice

Engineering Development

- Multiformat media serving—encoding, decoding, and transcoding
- Device drivers—PCI, XIO, IEEE-1394, and SCSI
- Software engineering—digital media, visualization, and system and application tuning

Manufacturing Integration

- Customized, high-volume product manufacturing
- Nonstandard configurations of SGI Origin 3000 series systems
- Custom packaging
- System integration with third-party hardware and software

Hardware and Software Solutions Customized for Unique Customer Needs

The Custom Engineering Practice provides hardware and software development and manufacturing to SGI customers requiring nonstandard solutions. It delivers customized solutions on a global scale, promoting SGI system and solution sales and further extending the core capabilities of industry-leading SGI products. Custom Engineering captures and leverages valuable intellectual property created during custom-engineering engagements.

Expertise That Delivers a Competitive Advantage

The SGI Custom Engineering Practice has the resources and skills to deliver powerful, sustainable solutions, providing a competitive advantage that drives customer success. Our software and hardware engineers, solution architects, program managers, and technical consultants are highly skilled in software and hardware development, systems integration, and manufacturing.

Custom Engineering Solution Examples

Multiformat Media Device

Based on SGI Origin 200 GIGAchannel, the Multiformat Media Device provides a single interface for encoding and decoding multiple types of video formats, including MPEG-2, 601, and HDTV. SGI Custom Engineering provides everything required: device drivers for the hardware codecs, an API for ease of application development, a sample GUI application, integration of SGI hardware with third-party devices, custom packaging and connectors, and the design of a printed circuit board to reduce wiring complexity. The base functionality of this solution can be extended to other SGI platforms, additional video formats, and transcoding between formats.

Professional Services

IA-32 Custom Manufacturing

SGI Custom Engineering works directly with commodity-system vendors to provide customized volume products. In one instance, the objective was to create a system similar to the SGI 1100 server that had hot-swappable SCSI and other configuration enhancements. In another instance the objective was to add a card to an SGI 1200 server, calling for modification to the overall chassis. In both cases Custom Engineering worked with the vendor to design the solutions, oversaw manufacturing, negotiated with suppliers for parts, and provided overall management to ensure the project was on schedule.

SGI Origin 3000 Series Custom Configurations

Working with SGI Origin 3000 series marketing, manufacturing, and support, Custom Engineering has established a process for quoting, building, and supporting nonstandard SGI Origin 3000 series configurations. Requests typically include adding processor or router bricks and upgrading systems from one base model to the next. Custom Engineering helps sales with the quotes, provides manufacturing with details on how to build the system, and notifies support of the special configuration.

Device Driver for Data-Acquisition Card

In another case, a customer required an analog data-acquisition card with 8-bit data resolution for providing real-time, deterministic sampling at a rate of 60 million samples per second. The card utilized was a single-channel PCI card capable of sampling two billion 8-bit samples per second. Custom Engineering worked with the customer to define specifications, provided a device driver for the SGI 2000 series server, and delivered integration support. The card used in this solution can be retargeted for other customer requirements.

Visit *http://ps.csd.sgi.com/* for information on more Custom Engineering Practice capabilities.

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SGI Global Services offers a comprehensive range of service solutions in the following categories:

- **Professional Services**
  Custom Engineering

- **Productivity Services**
  Managed Services and Remanufactured Products

- **Support Services**
  Mission Critical

- **Education Services**

For more information please visit *www.sgi.com*