

About Viking Modular Solutions

Viking Modular Solutions™, Sanmina-SCI Corporation (“Viking”), is committed to designing, manufacturing and delivering the latest, most cost-effective and innovative solutions to Original Equipment Manufacturer (OEM) customers worldwide. Viking’s comprehensive range of DRAM, Flash and Microprocessor modules allow OEM customers maximum flexibility to enhance the speed, quality and design of their products.

Key Strategic Advantage for OEMs

Viking has emerged as a preferred supplier of application-optimized modules. Tier-1 OEMs from around the world trust Viking to develop, manufacture, test and logistically deploy modular solutions. Viking’s proven capability to achieve fast cycle time during design, validation and qualifications of JEDEC standard or application-optimized modules provide a key strategic advantage to OEMs. Accordingly, Viking chooses supply partners who align with its customers’ technical needs and make certain that critical components are available whenever and wherever they are required.

Superior and Flexible Support

Viking customers rely on its superior quality, flexibility and quick response to bring them the right solutions. We provide:

- Extensive modular solutions design and manufacturing experience
- Rapid time-to-market with cost-effective solutions
- Comprehensive product support portfolio featuring DRAM, Flash and microprocessors

Innovative Solutions

Viking’s extensive experience in modular design and manufacturing utilizes innovative, state-of-the-art and industry-standard memory technologies. The Company’s advanced design and manufacturing capabilities offer superior assembly, test, programming and deployment solutions for all modular product needs. To maintain its leadership position as a modular product solutions provider, Viking is constantly researching, developing and implementing next-generation solutions, such as RAM-Stack™ and SATA Cube³ to meet the needs of high-density, space-constrained and thermally challenging environments.

World-class Service

Customer satisfaction is a primary business objective at Viking. The Company is committed to delivering the latest and most cost-effective modular solutions to its OEM customers around the world, along with its relentless drive for continuous improvement and innovation in all aspects of the Viking business.

State-of-the-Art Manufacturing

World-class manufacturing facilities using state-of-the-art processes and equipment provide unmatched quality, flexibility and quick response to the customer’s delivery requirements. All of Viking’s innovative solutions are developed with strict adherence to a process that includes a detailed requirement definition, creation of a product specification, design implementation with verification, manufacturing tool development, substrate fabrication and module assembly, and full electrical testing.

Extensive Product Line

DRAM

Viking offers a full range of JEDEC standard and application-optimized modules for a variety of OEM applications. These modules are supported using multiple technologies ranging from the most up-to-date to legacy modules such as: DDR3, DDR2, DDR, SDRAM, RDRAM, EDO and FPM. Viking also offers an extensive range of form factors to enable memory support of all OEM customer needs, including:

- DIMM
- VLP DIMM
- SO-DIMM
- MiniDIMM
- VLP-Mini DIMM
- SO-RIMM
- SIMM

RAM-Stack™

Viking has developed RAM-Stack™ to support high-density and small form-factor modules. In addition to thermally challenging environments, RAM-Stack is specifically targeted towards the server, telecommunications and embedded markets. This innovative stacking technology has many benefits over current existing solutions that include:

- Excellent signal integrity
- Superior thermal characteristics
- Highest densities
- High reliability
- Industry-leading (4 high) quad stack

NexMod™

Rambus RDRAM® offers solutions for Intel® IXP2800 or IXP2850 Network processor-based design. The NexMod solution has been tailored to high-performance networking customers requiring high bandwidth and low latency in volumetric restrictive system environments. Due to its unique, stacked architecture, NexMod offers a cost-effective solution that enables a greater total system memory potential.

NexMod benefits:

- Simplified system layout by placing end-to-end termination, voltage regulation and the Direct RAMBUS® Clock Generator (DRCG) directly on the module
- Stacked design improves signal integrity and margin
- RDRAM® architecture enables the highest sustained bandwidth for multiple, simultaneous, randomly addressed, memory transactions
- Rambus Signaling Technology (RSL) allows the Viking NexMod to support 800MHz and 1066MHz transfer rates

Industrial Flash

Viking has developed a broad range of Industrial Grade Solid State Flash products to support OEMs. The Company's Industrial Flash products are engineered to meet the stringent quality, reliability and compatibility needs of today's industrial sector. Viking offers a full range of NAND and NOR flash products in a multitude of form factors such as:

- Compact Flash (CF)
- PC Card
- Discreet Flash Card
 - BGA solderable
- Embedded USB Drive (eUSB)
- SATA Cube³

SATA CUBE³

Viking introduces SATA Cube³, the first embedded industrial-grade Serial ATA SSD specifically designed for space constrained systems. This highly cost-effective solution enables OEM customers to design solutions with the high capacity and high reliability of a 2.5" or 1.8" HDD/SSD but with the smallest mechanical footprint available today, 30x32mm.

Processor Products

Viking supports a broad range of Digital Signal Processor (DSP) and Microprocessor-based modules for the telecommunications and embedded markets. Processor modules provide lower-cost, high-performance solutions. Plus, processor modules simplify baseboard design and drastically reduce time-to-market of customer designs. These modules enable current baseboard designs to take advantage of advances in processor devices without having to redesign the baseboard. Viking's processor modules are currently available in several SIMM, DIMM and SODIMM form factors (allowing use of standard sockets) and feature multiple processor options. Viking provides a comprehensive test and diagnostic system for all microprocessor products. In addition to this test and diagnostic capability, the software provides an environment for in-system embedded and real-time code development. This implementation allows standard development methods and tools to be used directly with the processor products.

Processor advantages include:

- System on Module (SOM) solutions for fast time-to-market
- Industry-standard form factors
- Multiple BOM options (DRAM and Flash)
- Reduces costly customer board redesigns
- Development systems available for debug

INNOVATIVE SOLUTIONS • WORLD-CLASS SERVICE