

## **SANMINA-SCI FIRST TO LICENSE DESIGN AND FABRICATION RIGHTS TO NORTEL NETWORKS CHANNEL ROUTING TECHNOLOGY**

**SAN JOSE, CA (February 4, 2004)** – Sanmina-SCI Corporation (Nasdaq NM: SANM), a leading global electronics contract manufacturer and high performance printed circuit board (PCB) fabricator, announced today it has become the first company to enter a world-wide licensing agreement under Nortel Networks\* "Channel Routing" Technology Licensing Program authorizing it to both design and manufacture printed circuit boards utilizing Nortel Networks patented Channel Routing technology. Channel Routing allows designers the opportunity to improve the routability of signals out of dense array packages and potentially reduce the number of layers required to interconnect components. The technology will be used by Nortel Networks designers in next generation systems and is expected to gain wide acceptance at other major OEMs around the world who recognize the challenges they will face in routing designs utilizing high pin count BGAs and other dense array packages.

With this license, Sanmina-SCI is immediately able to offer Channel Routing to all of its board layout and PCB customers. Channel Routing is an algorithm that utilizes blind vias and/or microvias to open up routing channels in dense array packages allowing for improved wiring density. A software layout tool, licensed from Nortel Networks, works with Sanmina-SCI's current ECAD tool to allow for auto-routing of designs with high I/O array packages, such as BGAs, speeding up the design process.

"We are very excited about licensing this technology from Nortel Networks," said George Dudnikov, Senior VP and CTO of Sanmina-SCI's PCB Division. "Usually we license our own patented technologies to others. This is an opportunity for us to license someone else's innovation and provide products and services which utilize this licensed technology to all of our customers in addition to Nortel Networks. It also demonstrates a close collaboration between an OEM and EMS partner in developing and commercializing new technology. Like our patented Buried Capacitance' technology, Channel Routing has the potential to become a design enabler and something board layout professionals will want to have in their toolbox."

Dense area array packages for high-end servers and switches are starting to push two thousand

I/O on 1 mm pitch, increasing PCB layer count. Channel Routing allows designers the potential to reduce the layer count by two to six layers, keeping the overall thickness within tolerance and improving yields. This process involves the cost of laser-drilled microvias, but still yields a net cost savings.

"By using our patented Channel Routing technology, complex PCBs can be designed with fewer layers, thereby enabling even higher density products, improved manufacturing yields, and overall, a more cost effective PCB," said Ryan Stark, Vice President, Advanced Technology Investments, Nortel Networks. "Channel Routing will benefit those who are pushing the envelope in complex PCB design."

"We worked closely with Nortel Networks as a beta site for their Channel Routing software tool," added Mike Bogosian, Director Design Services for Sanmina-SCI's Global Technology Solutions Group (GTS). "Our PCB designers have a great deal of experience routing complex designs utilizing high I/O BGAs. They were able to evaluate the software tool's performance through the auto routing sequence on our Cadence ECAD platform and validate the performance aspects of Channel Routing. We then developed a design benchmark by laying out a complex board with and without Channel Routing. Channel Routing enabled us to drop 4 layers."

### **About Sanmina-SCI**

Sanmina-SCI Corporation (NASDAQ: SANM) is a leading electronics contract manufacturer serving the fastest-growing segments of the global electronics manufacturing services (EMS) market. Recognized as a technology leader, Sanmina-SCI provides end-to-end manufacturing solutions, delivering unsurpassed quality and support to large OEMs primarily in the communications, defense and aerospace, industrial and medical instrumentation, computer technology and multimedia sectors. Sanmina-SCI has facilities strategically located in key regions throughout the world. Information about Sanmina-SCI is available at [www.sanmina-sci.com](http://www.sanmina-sci.com).