



CASE STUDY

INCREASING YIELDS IN OPTICAL COMMUNICATIONS PRODUCTS LEADS TO IMPROVED MARKET SHARE

A network communications company was challenged with low yields in its optical products, but the company had superior technology and the potential to grow. Sanmina streamlined its manufacturing and helped develop more advanced versions of the product. The collaboration has enabled the company to accelerate its design cycle and significantly increase market share.

THE OPPORTUNITY

Driven by smartphones and streaming video, consumers have an ever-increasing need for bandwidth. A leading network communications company provided optical products that enable increased traffic capacity on communication networks around the world. The company had developed its 40 Gigabit product at a time when demand was low. However, when orders increased, the firm faced difficulties manufacturing in high volume.

Challenges included lower yields and troubleshooting issues, impacting the customer's ability to fulfill the higher demand.

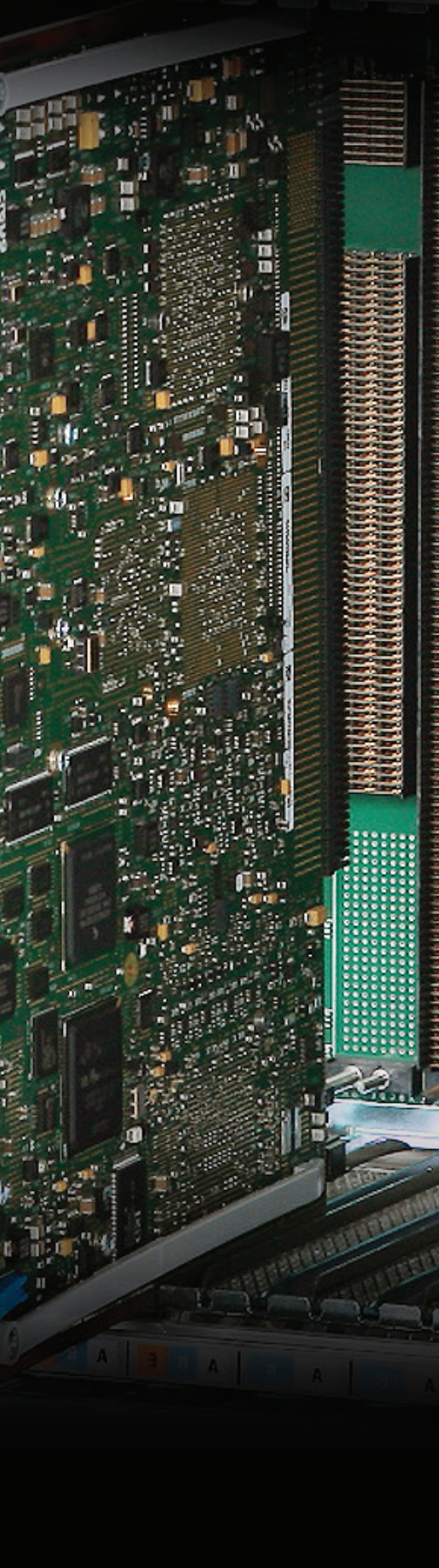
Solving these problems would enable the company to tap into a significant and growing global market. The customer's product offered clear advantages, allowing it to capture more market share and revenues if yields and throughput were improved.

THE CHALLENGE

The company had to:

- **Increase yields.** Yields significantly limited output and required additional rework/retest cycles.
- **Streamline production.** In particular, the company needed to make some design and process changes that would become unmanageable with high-volume production. It had to make the product truly manufacturable.
- **Overcome additional challenges from laser tuning.** Some competitors used off the shelf lasers in their products, but Sanmina's customer tuned its lasers for better performance. Tuning is more difficult and requires more sophisticated testing, technical competence, and process control.
- **Adapt testing for high-volume production.**
- **Tap into an agile, responsive supply chain.** Certain key elements of the supply chain were fragmented with unnecessary touch points, and the global footprint was not optimized.
- **Lower cost.** The 40 Gigabit products would soon become commoditized and price would be critical.





WHY SANMINA?

Sanmina was the perfect fit for this customer because of:

- **Greater optical expertise than any other EMS company.** This customer saw Sanmina's experience with advanced optical solutions, microelectronics, and technical experience.
- **State of the art manufacturing.** Sanmina makes some of the most complex and innovative optical, electronic and mechanical products in the world.
- **Complete solution.** With decades of experience in optical engineering, Sanmina offered expertise in design, manufacture, testing, quality control, service and repair.
- **One IT system.** Sanmina is the only EMS provider with a single IT system across all facilities that greatly improves agility and reduces time to market.
- **Worldwide scale.** With a global footprint in 25 countries on six continents, Sanmina can manufacture in best-cost regions and easily address the total available market.

THE APPROACH

Sanmina already had a long relationship with this customer but further expanded the engineering collaboration. Overall, Sanmina:

- **Contributed to every phase of the design and manufacturing process.** Sanmina built the product itself, including fiber splicing, complex laser tuning and product testing, along with the shelf chassis, circuit boards and backplanes.
- **Leveraged the benefits of co-location.** After Sanmina built the first prototype of a next-generation 100 Gigabit product, our engineers went to the customer's lab and collaborated to refine the design and plan the product launch. This approach took months off the development cycle.
- **Performed thorough test development.** Sanmina worked closely with the customer to troubleshoot issues and optimize the test profiles.
- **Moved some production to Sanmina's Guadalajara, Mexico campus to save costs and optimize global supply chain.** The customer viewed this as a challenge, but it proved to be a milestone that strengthened the relationship. Certain elements, including the chassis, were vertically integrated by Sanmina to further reduce overall working capital and increase agility.

RESULTS

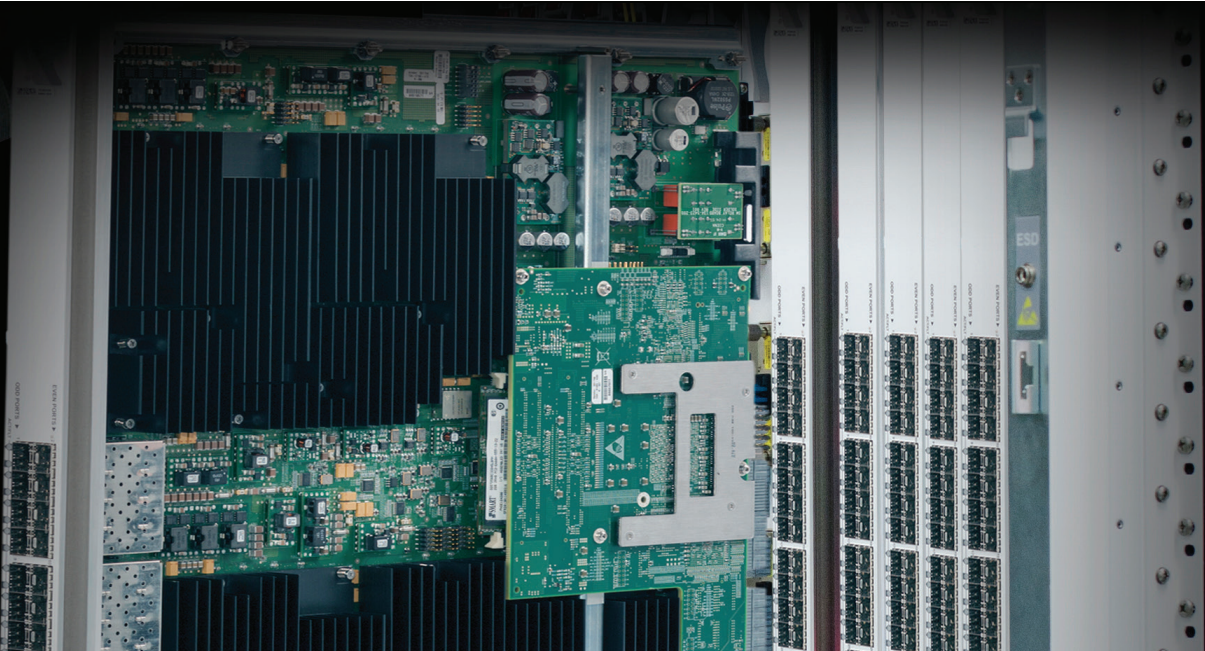
The customer strengthened its leading position in this field and asked Sanmina to broaden their partnership. Sanmina now manufactures its 100 Gigabit product and is collaborating on future projects. Among many benefits, this customer:

- **Removed obstacles for high-volume manufacturing.** It gained a more robust manufacturing process.
- **Improved the quality control system.** Yields greatly increased.
- **Reduced its costs as 40 Gigabit products became commoditized.** Improvements such as better component sourcing and process efficiencies reduced overhead.
- **Gained a simplified and more cost-effective supply chain.** This was accomplished by focusing on supplier-managed inventories as well as moving the supply of some components and assembly to Sanmina's Guadalajara campus. The overall fulfillment cycle was also reduced from the time parts arrived at the factory to product shipment.

THE BIG PICTURE

With the help of Sanmina, this customer:

- **Brought products to market faster.** By collaborating with Sanmina and leveraging our optical design capabilities, the company was able to focus on its core competencies and accelerate time to market.
- **Gained market share.** These cost effective products significantly increased its global optical product market share.



ABOUT SANMINA

Sanmina Corporation is a leading integrated manufacturing solutions provider serving the fastest-growing segments of the global Electronics Manufacturing Services (EMS) market. Recognized as a technology leader, Sanmina provides end-to-end manufacturing solutions, delivering superior quality and support to Original Equipment Manufacturers (OEMs) primarily in the medical, communications networks, defense and aerospace, industrial and semiconductor systems, multimedia, computing and storage, automotive and clean technology sectors. Sanmina has facilities strategically located in key regions throughout the world.

More information regarding the company is available at www.sanmina.com.