



Tensoft Fabless Semiconductor Management Customer Solution Case Study

Overview

Country/Region: USA
Industry: Fabless Semiconductor
Customer: Luxtera

Customer Profile

Luxtera commenced development of Silicon Photonics technology in 2001. Its first commercial product was launched in 2008, primarily as a proof vehicle for its Silicon Photonics processes and capabilities.

In 2015, the company debuted its first 100G transceiver module based on a silicon photonic chipset, completely transforming its business model.

Luxtera is a fabless semiconductor company. Its technology allows for transmission of high speed data across fiber optic interconnects. This is a critical capability for data centers and similar applications globally. Luxtera is regarded as the first mover and world's leader in Silicon Photonics.

Solution

Tensoft's Fabless Semiconductor Management Solution - Tensoft FSM*

The “Fiber to the Chip” Semiconductor Company Puts the “Pedal to the Metal” on Their ERP/Supply Chain System Implementation

“Having such a system holds the mirror onto Luxtera’s business processes and the need for their refinement – this was and remains one of the biggest wins from our decision to deploy this solution.”

Séamus Daly, VP of Operations, Luxtera

Business Needs

In its early stages, Luxtera’s Operations team was able to use bits and pieces of its legacy tools and systems to handle the growing complexity of its supply chain. But once production hit substantial volumes, “things started to break,” according to Renata Villa-Teschler, Supply Chain Manager. “Our legacy systems could no longer appropriately handle functions such as lot tracking, the complexity of unit of measure, and keeping track of and converting to a quantity of die per wafer.”

It became clear that scaling the business required investment in appropriate tools, business processes, and automation. Luxtera’s supply chain is unique in many respects, but the key

differentiator is a high-level of silicon integration used to build the silicon photonics chipset.

While large semiconductor companies often have highly customized ERP systems – and large IT support teams – Luxtera’s accelerating ramp meant that they could not afford to wait for the resources required to take that approach. They had to move fast on two fronts, finance/accounting and supply chain/materials management. Ideally, one system to cover both would have been desired, but the assessment was that this option didn’t exist.

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Solution

Luxtera's Director of Manufacturing, Tim Shook, was familiar with Tensoft Fables Semiconductor Management (FSM), and suggested the team evaluate it for Luxtera. They soon found that Tensoft FSM had the right framework and functionality to manage all of their complexities.

One key feature for Luxtera was Tensoft FSM's unit of measure flexibility, which allows users to go from wafer to die, thus handling a common semiconductor conversion step. In addition, Tensoft FSM's ability to integrate to Luxtera's suppliers provided WIP and receipt information, automating the data flow while providing visibility and traceability. The final piece fell into place when Luxtera's team learned that Tensoft would be able to integrate FSM to Luxtera's NetSuite accounting system.

Once the decision was made, Luxtera wanted to move quickly. It planned an ambitious ninety-day implementation with Tensoft, which was successfully completed in October 2017. Villa-Teschler, who was brought in specifically to help with the implementation, attributes this success to Tensoft's planning process. "I believe the secret to making this rollout successful was that Tensoft created a thorough requirements document for Luxtera prior to implementation. Before we started configuring, coding and aligning, Tensoft asked us to articulate our business processes and what we needed to operate effectively. This prevented feature creep and avoided the omission of basic processes because they weren't

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Renata Villa-Teschler, Supply Chain Manager, Luxtera

discussed beforehand - both issues that I've encountered in other implementations.”

Benefits

The new system quickly started to yield benefits. For example, Villa-Teschler found: “The biggest value add that we experience today is the ability to take what would otherwise be 80-120 individual discrete BOMs and consolidate down to just 3-4 iBOMs, managed in Tensoft FSM. That wouldn't be possible in a traditional ERP system. The way Tensoft FSM manages this consolidation saves Luxtera a significant amount of redundant work.”

As Luxtera scales, the importance of inventory control and visibility increases tremendously. The deployment of this integrated solution has given Luxtera a platform to gain such control in the face of growing volumes and product mix.

According to Séamus Daly, Luxtera's VP of Operations, “Having such a system holds the mirror onto Luxtera's business processes and the need for their refinement – this was and remains one of the biggest wins from our decision to deploy this solution.”

He concludes, “We needed to scale but saw gaps in our existing systems and processes. We took decisive actions and are now seeing the benefits with a greater understanding of the supporting business processes, which we will refine further to maximize the return on this investment. We have a great engine, now we need to use it well.”

The logo for Tensoft, featuring the word "TENSOFT" in a large, serif, blue font. A horizontal line is positioned above the letters "S" and "O".

*Tensoft FSM is now known as Tensoft SemiOps

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