

## Key Challenge

- Establishing a PLM system foundation for a startup development and manufacturing operation

## Solution

- Implement Autodesk Fusion Lifecycle for Bills of Materials, Product Data & Change Management, and Supplier & Quality Management

## Benefits

- Reduced BOM creation and review process from 3-4 weeks to less than a week
- Reduced Change Order process from 3-4 weeks to less than a week
- Improved supplier management process
- Set stage for ISO 9001 2015 registration

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# Duet Microelectronics Establishes PLM Foundation with Autodesk Fusion Lifecycle and Razorleaf

Duet Microelectronics is an early stage semiconductor company developing and fabricating RFIC solutions for the rapidly expanding bandwidth needs of 5G and IoT millimeter wave markets.

As a startup company headquartered in Raritan, NJ, they needed to build a complete PLM infrastructure to support their growing business. Duet Microelectronics engaged Razorleaf to help implement Autodesk Fusion Lifecycle to meet that challenge.

## SETTING THE PLM FOUNDATION

“Since we were just starting up, we needed to build our PLM system from scratch to support our product development and quality management processes,” said Hoan Duong, Senior Director of Quality Operations at Duet Microelectronics. “We also needed an integrated system that would allow us to reach our goal of attaining ISO 9001 2015 in the next year or so.”

At first, Duet Microelectronics was managing all its information manually using Excel spreadsheets in different areas located in separate network folders. Information retrieval was difficult, and data was not linked. The approval review process was a manual, slow, and cumbersome process.

Duet Microelectronics began addressing those challenges by developing the processes for new product development and new technology introduction along with the basic procedures for the quality management system (QMS).

“We soon realized we needed a group software tool to manage and link all the information that we needed to document the system and automate the process,” said Duong.



## **DUET MICROELECTRONICS SELECTS AUTODESK FUSION LIFECYCLE AND RAZORLEAF AS THE SOLUTION**

Duet Microelectronics reviewed several different PLM and PDM software packages. They were seeking a solution that offered a flexible configuration capable of performing the required product development and quality management needs, could be easily maintained with in-house resources, and that provided good value at reasonable cost.



Based on the ability to meet our requirements and the cost of the solution, Autodesk and Razorleaf came out on top,” said Duong. “Another attractive feature was their pilot project implementation option. That allowed us to do a first implementation trial period with minimal costs, user interruption, and licenses before we expanded fully.



### **COMPREHENSIVE AUTODESK FUSION LIFECYCLE IMPLEMENTATION**

Razorleaf worked with the Duet Microelectronics team to implement five elements of the Autodesk Fusion Lifecycle solution in the pilot. These include:

- **Items and Bills of Materials**, which allows configuration and management of structured BOMs and items; their releases, and revisions in a centralized, easy-to-use system. It also provides controlled yet broad access to items and BOMs and related supplier manufacturing part numbers for the entire organization.
- **Product Data Management** enables product managers to organize, manage, and track product data for new product and technology introduction. It is also used to maintain all of Duet Microelectronics’ QMS and non-quality management documentation.
- **Change Management** allows all changes to controlled data to be fully defined, reviewed, approved, and implemented in a collaborative environment.
- **Supplier Management** enables Duet Microelectronics to quickly and easily approve suppliers and vendors, manage supplier audits, and track supplier corrective actions as well as maintain the company-wide approved supplier list. A score card also lists at-a-glance color-coded ratings of each supplier, with links to all the other supplier information stored in the system.

- Quality Management coordinates, controls, and tracks the company's cross-functional quality processes together in a single system. Current processes in the system are RMA with failure analysis and CAPA, connected to engineering change; driving up product quality while reducing time-to-closure.

## EASE OF USE HUGE ADVANTAGE

"I've worked in the industry for over 30 years in various companies using various different software packages," said Duong, "and I find that Autodesk is much easier and more intuitive than the other solutions I've used.

"The ease of use also helps with user adoption which is critical when implementing a new software," he continued. "If you have a software that is cumbersome, users will avoid it. Autodesk is so intuitive and easy to use that people are more willing to use it."

## SIGNIFICANT BUSINESS BENEFITS

Duet Microelectronics is seeing significant benefits by having all product design and development records in one system. Turnaround times in both the BOM creation, documentation, and approval and the change order processes have been cut from 3-4 weeks to a week or less. Supplier management is also now much simpler.

"We are adding many new suppliers and we need to keep track of their information, our quality assessment and audits of them, and managing their CARs," he said. "And Autodesk makes it easy for our engineers to link BOMs to the suppliers and the supplier manufacturing part numbers."



## DUET MICROELECTRONICS IMPRESSED WITH RAZORLEAF AND AUTODESK FUSION LIFECYCLE

“There is a seamless integration with Razorleaf and Autodesk,” said Duong. “I don’t see a dividing line between them. Razorleaf has been a good project manager, consultant and trainer for us. They provided all the right recommendations and tips when we were making process flow and implementation decisions.

“Razorleaf is a great team to work with,” he concluded. “My experience with them has been excellent. I’ve implemented other software before and on a scale of one to 10, those other implementations were between a two and seven. I would rate the Razorleaf implementation a 10 by comparison.”

### FUTURE PLANS

Razorleaf is currently handling ongoing maintenance of the Autodesk Fusion Lifecycle solution, and Duet Microelectronics is considering other modules going forward such as Training, Customer, and Sales/IP.



## About Razorleaf

Founded in 2000, Razorleaf is dedicated to helping clients bridge the gap between PLM technologies and business problems to deliver greater value from their technology investments. Razorleaf’s technology expertise spans PLM, Product Data Management (PDM), Design Automation (DA), Process Management, Business Intelligence, and Systems Integration and Migration. Razorleaf works with many PLM/CAD platforms including Aras, Dassault Systèmes, Infor, Autodesk, SOLIDWORKS, DriveWorks, SharePoint and more. Razorleaf was named in the Top 20 Most Promising PLM Providers 2016 by CIO Review and was named a Weatherhead 100 company in 2017. For more information, visit [www.razorleaf.com](http://www.razorleaf.com).

