

## TriAccess Technologies Delivers Complete Suite of CATV RFIC Amplifiers for Emerging Networks

*AWR's Microwave Office® Software Coupled to TriQuint's Foundry Process Fuels TriAccess Launch and Speeds Development of Full Product Portfolio*

### CUSTOMER BACKGROUND

TriAccess Technologies, based in Santa Rosa, CA, designs and markets Radio Frequency Integrated Circuit (RFIC) amplifiers that enable cable television and telecommunications carriers to deliver the triple-play voice, data, and high-quality video solutions demanded by business and residential subscribers. The company's products are based on high-performance GaAs pHEMT technologies that achieve new benchmarks in low-noise amplification while maintaining extremely low levels of distortion. Last year TriAccess Technologies introduced its flagship product; the industry's first single chip RFIC amplifier for Fiber To The Home (FTTH) applications. Recently, the company introduced a full suite of CATV amplifiers to address specific needs of today's triple-play voice, video and data networks.

### THE DESIGN CHALLENGE

TriAccess Technologies is intensely focused on CATV and its mission to become an industry leading RFIC company. With fast-changing requirements of CATV system operators, equipment vendors rely on responsive industry-focused RFIC suppliers like TriAccess to rapidly meet their precise needs. Recently, the company faced the challenge of getting a wide range of products (based on its proprietary designs) to market quickly, in large volumes, and while maintaining industry leading performance. While TriAccess products had set new standards in the FTTH market, it was time to widen its focus on the CATV market, expanding from a single FTTH model to an entire portfolio of single-ended and push-pull amplifiers. The company uses Microwave Office software in all programs and recently turned to TriQuint for foundry support of these critical CATV additions.

### THE SOLUTION

**What design problem did AWR software help solve?** The efficient design flow of Microwave Office allows TriAccess Technologies to build on the design of an initial product to rapidly create other products with varying capabilities and specifications. Microwave Office is logical, fast, and devoid of the redundancies and other impediments to the design flow characteristic of other EDA tools. For a company like TriAccess Technologies that must react at high speed to market requirements, these features are highly valuable, and proved to be essential to the launch of its products.



Application:  
RFIC Amplifiers

AWR Software:  
Microwave Office®



*“TriAccess Technologies is intimately focused on CATV and must react at high speed to market requirements. Using solutions provided by AWR and TriQuint helped us deliver a complete portfolio of products in time for major Video-competitive builds.”*

*Chris Day  
President and CTO  
TriAccess Technologies  
www.triacesstech.com*

## What design problem did TriQuint's Foundry Services help you solve?

TriAccess was faced with a very narrow launch window. We knew that TriQuint's foundry process would optimize the performance of our products, but we were unsure whether as a start-up company we could garner the same level of TriQuint's attention that it provides to its larger customers. Our fears were unfounded: TriQuint not only delivered on schedule but helped TriAccess along the way to ensure that every detail was covered. Performance was excellent.

## How did the combination of TriQuint and AWR contribute to your success?

The design kits developed by TriQuint and AWR accurately represent TriQuint's foundry process, which dramatically reduced the risk to TriAccess, and the software's innovative features were easy to use. In short, TriQuint and AWR allowed TriAccess not only to meet initial objectives for entering the Telecom FTTH market, with industry-leading performance but to expand immediately into the CATV market as well.



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## ABOUT TRIQUINT PROCESSES

TriQuint's pHEMT processes have been proven through fabrication of millions of devices since formal introduction in 2003. Processes include both enhancement-mode and depletion-mode pHEMT transistors, as well as on-chip passives, three-level interconnects, and substrate vias. By combining control functions with an advanced, high-performance pHEMT process, designers can achieve higher levels of IC integration and performance.

## ABOUT MICROWAVE OFFICE

Microwave Office design suite is the industry's fastest growing microwave design platform and has revolutionized the communications design world by providing users with a superior choice. Built on the unique AWR high-frequency design environment platform with its unique Unified Data Model™, Microwave Office software is exceptionally intuitive and offers powerful, innovative technologies, and unprecedented interoperability, enabling integration with best-in-class tools for each part of the design process. Microwave Office design suite includes all of the essential technology: linear and nonlinear circuit simulators, EM analysis tools, integrated schematic and layout, statistical design capabilities, and parametric cell libraries with built-in DRC.

To learn more about how AWR's Microwave Office design suite and TriQuint's processes can help you with your next design, contact [info@awrcorp.com](mailto:info@awrcorp.com) or [foundryinfo@tqs.com](mailto:foundryinfo@tqs.com)



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