



Make Sure You Have It Right the First Time

Fiber-to-the Home Optical Design

A leading telecommunications equipment manufacturer turned to Egret Technologies to provide design reviewing and pre-manufacturing evaluation for their new FTTH GPON product. Egret Technologies' optical and electrical engineering feedback guaranteed a "first time right" product which cut significant time and cost from their development cycle. Also ensured was the competitive advantage of an early product launch for our customer.

Situation: A major broadband access solutions company develops and manufactures copper and fiber systems. Its products are deployed throughout North America by regional and rural service providers offering voice, data and video.

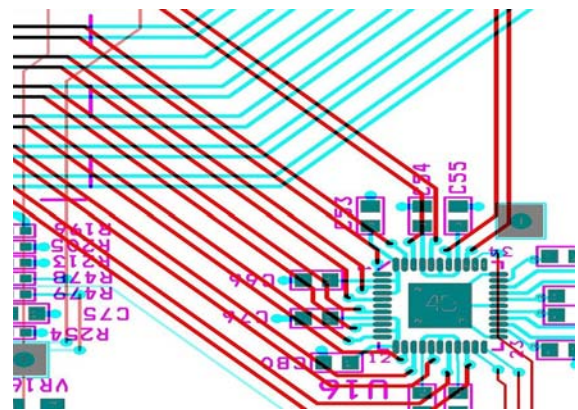
The company had decided to pursue a Fiber-to-the-Home (FTTH) GPON (gigabit passive optical network) platform and had developed initial electrical and optical designs. With limited experience with this technology, they needed to validate their approach. Egret Technologies stepped in to provide fiber optic and electrical engineering expertise gained from many years of work with Tier 1 telecommunications systems suppliers.

Solution: Egret Technologies' careful review of the broadband loop carrier design identified several design issues with their quad GPON board. Alternatives were proposed and incorporated into the product ensuring top performance. These included:

- Changes to the electrical design for the optical interface block to the MAC chip

- Modifications to the burst clock data recovery (CDR)
- Improvements to controlled impedance traces

These recommendations were included in prototypes that passed all design and testing requirements successfully the first time through. Full-scale production quickly followed.



“Turning Innovation into Profit” Results: Egret Technologies' role was pivotal in reducing design time by 25% while delivering complete product assurance. This avoided a potential \$200,000 in cost for additional engineering

efforts, the risk of uncertain results, and delays to the product launch schedule. Citing the Director of Hardware Engineering, “Egret Technologies’ experience with GPON optical

interfaces helped us ensure a ‘right first time’ design. Their input was invaluable to ensuring the quality of this product.”

Egret Technologies is a superior electronic design partner to global vendors of technology products. We are an innovative, solution-driven, US-based engineering design firm specializing in optical, electronic, and mechanical hardware, as well as embedded software systems. We provide concept development, product design and project engineering. Contact Egret Technologies at (954) 518-9645 or Innovate@EgretTechnologies.com