



Gazing into the Crystal Ball

Octal Test Board – Small Form Factor Test Fixture

Egret Technologies' innovative engineering and test fixture development enabled a components supplier to gain 3X performance and 8X times manufacturing throughput. The flexible, low-cost solution was also designed to accommodate future increases in throughput and to support upcoming components under development.

Situation: The flexibility and scalability of optic test fixtures can significantly impact the total cost of production equipment needed for quality assurance. Unless upward compatibility is factored into the initial test equipment design, a manufacturer may need to scrap production fixtures each time they make engineering changes to the product. Often an increase in production may require another complete set of test equipment, which can easily cost more than \$100,000.

Egret Technologies was retained by an innovative optical components supplier to work on an innovative new transceiver and the corresponding test fixtures. The company had specified basic requirements for an octal test board for a 1.25Gb/s product with an 18-month lifecycle. Egret Technologies reviewed the company's development roadmap and recognized that changes to the testing strategy would provide major efficiency gains for the component supplier as the product evolved.

Solution: Egret Technologies presented its new test fixture design for approval. While meeting all the original schedule and quality objectives,



four major innovative, cost-effective improvements were introduced:

- The test board was upgraded to run almost three times faster (>3.0 GHz) so that it would be able to function with future transceiver designs
- Highly expensive RF switches were substituted with low-voltage (LV PECL) devices that could perform the repetitive built-in self-test functions
- Each octal test board was designed to function in a mechanical stack of 8, thus making it possible to manufacture 64 units

concurrently without additional test equipment

- All parts used to fabricate the test board and fixture were off-the-shelf and commonly available making the design easy to replicate

way, “Egret Technologies gave us exactly what we need but with 8X more power for the same cost. And, instead of retooling in another 18 months, they’ve delivered a test solution that will support our development for the next four years.”

“Turning Innovation into Profit” Results: A senior engineering executive summed it up this

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