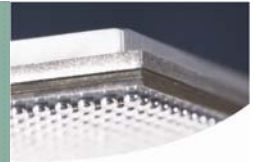


# Case Study



## THE CLIENT

### Semiconductor Packaging Application

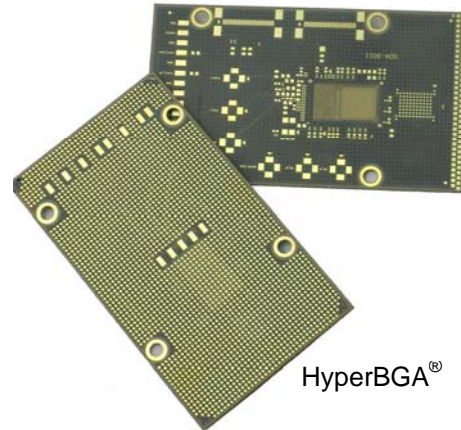
The client is a leading provider of semiconductor design services, intellectual property (IP) and products. Through strong and lasting relationships with tier 1 foundries, the client provides leading edge design capability for their customers.

The client specializes in designing RF, analog, mixed-signal and high-performance digital blocks to create mixed-mode systems on a single monolithic substrate in SiGe/BiCMOS, CMOS and SOI. This allows them to deliver compelling solutions that meet their customers' needs. They have a proven track record in the design of complex custom integrated circuits (ICs) for companies ranging from small semiconductor start ups to very large network systems providers.

## THE CHALLENGE

This client needed a supplier capable of manufacturing reliable, high performance semiconductor packaging substrates in prototype through production volumes. The preferred supplier would also offer design and first level assembly services.

The end product was an RF communications device for an Aerospace and Defense customer. It was a mixed signal application that provided a high degree of functionality at high processing speeds.



## THE SOLUTION

Endicott Interconnect Technologies' reviewed the design, offering suggestions that would enhance performance as well as manufacturability, performed the physical layout and manufactured the substrates. They were also able to provide the first level module assembly.

Both single and double sided, high I/O prototype Hyper BGA® multi-chip modules (MCMs) were supplied. Production quantity potential could be as high as 100,000 modules over the life of the program.

## THE BENEFITS

Endicott Interconnect Technologies' vertically integrated structure proved beneficial to this client by providing one-stop-shopping for high performance, complex substrates. From substrate design and layout to prototype and volume production requirements of substrate fabrication as well as complex assembly, Endicott Interconnect Technologies provides the total solution. With quality control standards that are among the most stringent in the industry and fluoropolymer-base (PTFE) dielectric, EI provides superior electrical performance and reliability in a cost effective, thin, light package.