

High Density Interconnect

The Challenge

A manufacturer of intelligent automotive communication systems needed a lot of functionality in a small package. The printed circuit board assembly (PCBA) included high density interconnect (HDI) with a microBGA. The layer count was low, but the density of inputs/outputs (I/O) was high. The PCBA also had high power consumption.

The Process

San Diego PCB's team utilized their extensive experience with good electromagnetic interference (EMI) principles and was able to analyze power integrity using simulation software. They modeled current and power delivery ensuring signal integrity and power integrity was maintained. They worked iteratively with the customer's engineers to balance the addition of traces without compromising power delivery.

The Result

The result was a dense packaging solution that met the customer's accelerated timeline parameters. San Diego PCB's ability to work concurrently as a team helped ensure that the solution performed and schedules were met. The end products were an eight-layer full build-up PCBA and a 14-layer full build-up PCBA.