



ISC CASE STUDY

Coherent

OVERVIEW

- Initial business with Coherent started in January of 2009.
- Since 2009, ISC has collaborated with Coherent on 80 different renditions of products totaling over 40,000 units of high-end interconnect solutions
- Most of Coherent's assemblies are what are referred to as "smart cables". A smart cable integrates in a feature like a PCB which allows the cable to convert transmissions from one format to another.
- What makes these assemblies unique is that the PCBA is direct over-molded. Over-molding a PCBA such as an RS232 can be challenging with material shrinkage, proper pin placement, addressing sensitive components when exposed to heat and pressure and other standard criteria like cosmetics.
- ISC continues to be a key strategic supplier to provide expertise on the interconnect front of this growing business.
- Although there are challenges to direct over-molding PCBA's there are several benefits to this value-added process.
- The over-mold protects the board and other sensitive components such as crystal clock oscillators from damage and failure.
- The over-mold provides strain relief to the assembly where the highest failure mode occurs when an assembly is used over time.
- The over-mold is customizable with logos that helps with brand recognition
- The over-mold can also aid in ingress protection and other environmental failures.
- Translucent material allows LED's and other key components on boards to be seen

OPPORTUNITY/CHALLENGE:

Challenge was to direct over-mold onto PCB and maintain the performance integrity of sensitive components which can malfunction under heat and pressure during molding.

SOLUTION:

Build a smart cable with logo, strain relief, and integrating visual elements like LED to be seen through over-mold solution

OUTCOME:

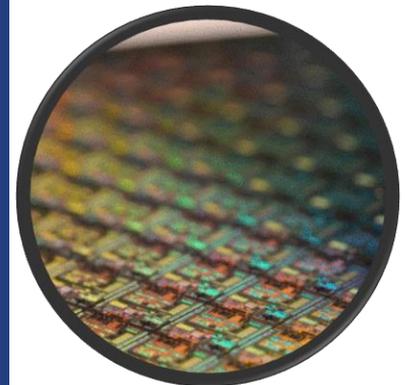
Thousands of products put into the field helping to make Coherent an industry leader in the photonics industry

FUN FACTS

Coherent is a \$5.7 billion dollar company

Photonics as a field began with the invention of the laser in 1960.

Coherent is an industry leader in photonics



Coherent Photonics



Additional Example
of Overmolded PCB



Overmolded PCBA



Coherent assortment
of products

OPPORTUNITY/CHALLENGE:

The challenge was to directly over-mold onto the PCB's for Coherent and to maintain the performance integrity, in the PCB's, of sensitive components, which can malfunction under heat and pressure during molding.

SOLUTION:

To solve Coherent's challenge, we built out a smart cable with their logo, to increase branding, that is integrated with strain relief and visual elements, like LED lights, that can be seen through the semi-transparent overmold material.



OUTCOME

Since the start of our partnership with Coherent, we have manufactured thousands of products that are immediately sent to the field. Our custom solution and product has enabled Coherent to become an industry leader in the photonics industry. Currently ISC and Coherent continue their partnership.