

CASE STUDY: MEDICAL STARTUP

CIREXX DEVELOPS RIGID-FLEX CIRCUITS TO BRING HEALTH CARE TECHOLOGY TO MARKET

CLIENT / INDUSTRY

Medical Equipment
Manufacturer

PROJECT SIZE

\$250,000 Project 6 Units

THE CLIENT

A Midwest medical manufacturer, a few years out of "start-up" mode, with a unique product idea and a bench-top proven design. Their product is designed to address the growing and aging baby-boomer generation with "in-office" care previously unavailable in that mode.

INTRODUCTION

Medical manufacturer developed unique cognition system and needed to take the design into production with several unique requirements:

- product adaptability to patient's head
- signal integrity
- hand held/battery operated electronics system
- · Homogenous aesthetics



NEEDS ASSESSMENT

Customer "engineering" was a small and stretched-thin staff of scientists with little experience producing hardware. To bring this to market they needed help in:

- Product design for manufacturability
 - o 2 Printed Circuit Board Assemblies in hand held controller
 - 4 Rigid-Flex Circuit Boards in "Head" Assembly
- Head Assembly circuitry depended significantly on signal integrity impedance
- Appropriate documentation for fabrication and assembly
- Testing and acceptance guidelines



Model Impedance requirements for Rigid-Flexes and electrical performance of all items

Layout components to fit mechanical requirements of system

Select materials and develop Stack Ups for all PWBs – PCBs and Rigid-Flex

Develop appropriate Engineering Drawings for Fabrication and Assembly

Fabricate prototype runs to "tweak" final deign for optimal performance

Develop appropriate fabrication, assembly, acceptance and testing procedures for volume production

SOLUTIONS

Cirexx quickly manufactured – fabrication and assembly - several iterations of product sets as the customer tweaked the design for electronic performance and mechanical reliability. Cirexx engineers participated in design revisions to ensure that performance requirements where achieved with the most effective and efficient manufacturing methods. The customer npw has a production-ready design that can be ordered with minimal lead times as deman for their system is generated.

"Cirexx had the resources - technology, facilities and methods - to respond effectively and quickly to bring a unique medical product to market."

FINAL OUTCOME

The customer has a production-proven system which they are now successfully taking to market. Each new iteration of the system is much more reliable than the previous and their industry is responding enthusiastically to their product. Cirexx is supporting production requirements as needed by customer demand.

HIGHLIGHTS

- Cirexx took the customer's great idea and made it a producible reality
- Cirexx had the resources technology, facilities and methods – to respond effectively and quickly
- Cirexx was a "one-stop shop" for a customer with limited administrative bandwidth