





## ELECTROMAGNETIC COMPTABILITY / INTERFERENCE (EMC/EMI)



### CONDUCTED EMISSIONS



### CONDUCTED SUSCEPTIBILITY



### ELECTROSTATIC DISCHARGE (ESD)



### RADIATED EMISSIONS



### RADIATED SUSCEPTIBILITY



### LIGHTNING INDUCED



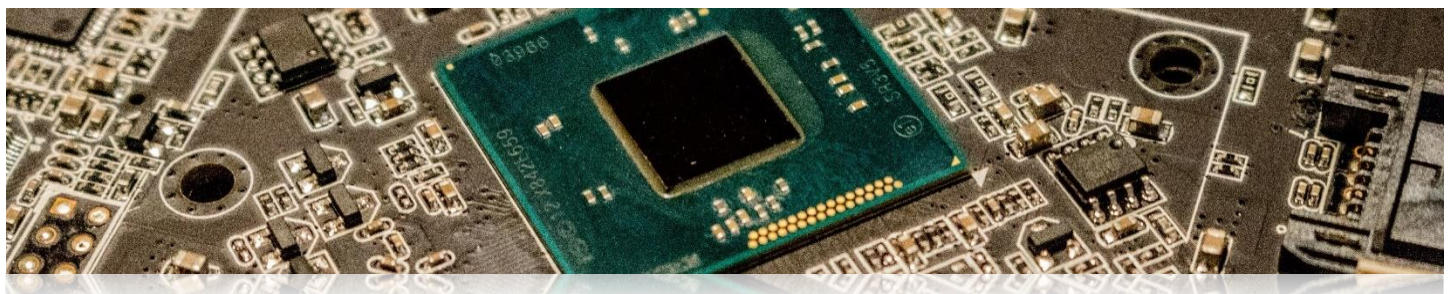
Electromagnetic Compatibility (EMC) is an often-overlooked aspect of product design. Proactively addressing EMI culprits at different levels early in the project will ensure a successful project.

Poor management of EMI can often lead to problems and malfunction of hardware when system components are integrated together.

### We Check For

- ✓ Unintended Radiators
- ✓ DC/DC Input Filters & Power Factor
- ✓ Performance To Interference
- ✓ Differential & Common-Mode Noise
- ✓ Proper Shielding and Grounding

## COMPONENT SELECTION



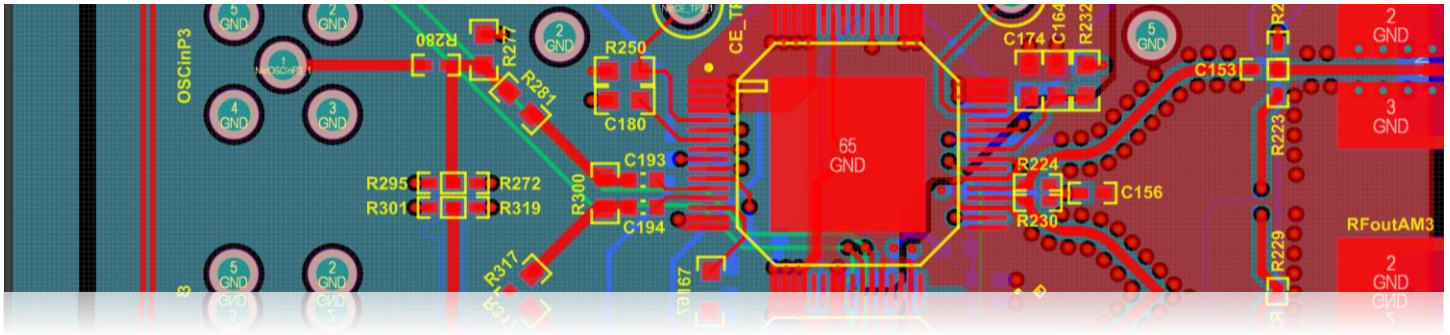
There are many components to choose from when incorporating them into your design. At BuildEmber, we consider a multitude of characteristics about a component to ensure it's the right fit for your design.

We take the approach of determining design constraints to properly choose components. Whether it's cost, reliability, accuracy, etc., these types of questions are ultimately the driving factors for component selection.

### We Consider

- ✓ Operating Temperature
- ✓ Bias Effects on Components
- ✓ Material Directives Requirements
- ✓ Component Deratings
- ✓ Parameter Drift
- ✓ Cost

## SCHEMATIC & PCB LAYOUT



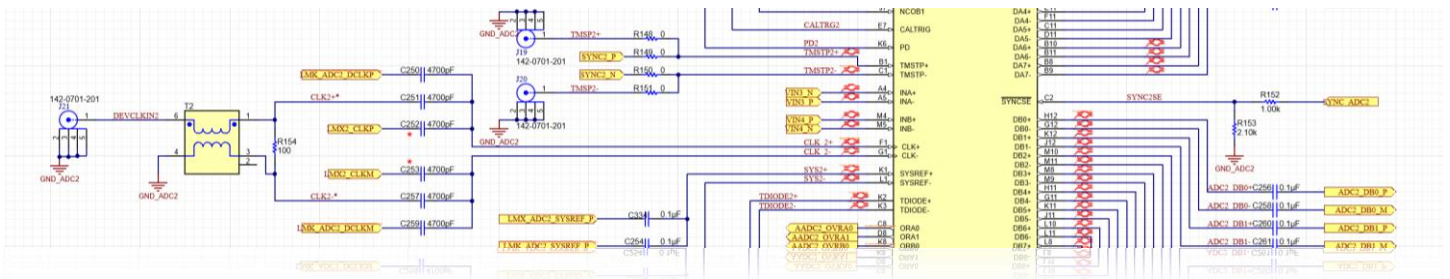
Armed with industry standards, BuildEmber is equipped to tackle your PCB layout needs. We've got a breadth of experience in many different fields including industrial, aerospace, instrumentation and data acquisition, downhole electronics, and many more. PCB layout is an ever-evolving field, so don't let the pitfalls of signal integrity, power integrity, manufacturability, and assembly catch you off guard.

A proper PCB layout can prevent a myriad of issues such as electrical overstress, EMC failures, improper assembly, and lost time for your business.

## Our Deliverables

- ✓ Schematic & PCBA Variants
- ✓ Bill of Materials (BOM)
- ✓ Fabrication & Assembly Drawings
- ✓ ODB++ & Gerber Files
- ✓ Fabrication & Assembly Quotes
- ✓ Support For Manufacturing & Assembly

## DESIGN REVIEW



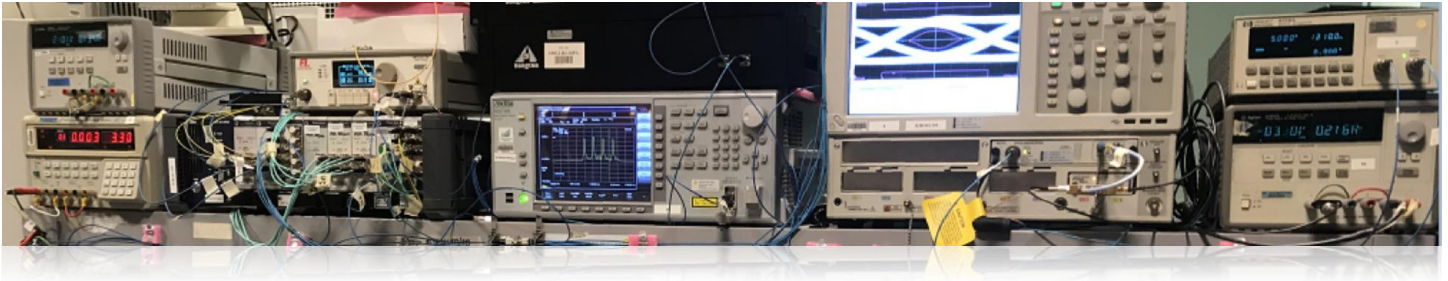
Design review is a critical aspect of project planning. Having a thorough review allows for products to get to production with fewer PCB fabrications and assemblies which translates directly to time to market.

The effort put in here has a multiplier effect on the likelihood of the success of a project. Our engineers have designed and built hardware where failure is not an option. If there are any reservations about whether a design will work, a second opinion is always a good choice.

## We Check For

- ✓ Requirements Definition
- ✓ Worst-Case Analysis
- ✓ Schematic Symbols and Footprints
- ✓ Logic Compatibility
- ✓ Electrical Overstress
- ✓ EMC/EMI Mitigation

## DESIGN VERIFICATION



### What's Included

- ✓ Specification Verification
- ✓ Requirements Verification Matrix (RVM)
- ✓ Oscilloscope Waveforms
- ✓ Design Verification Report
- ✓ Address Known Shortcomings

To verify your product is working as designed, we utilize on-the-bench testing to verify performance and functional design.

Let us take your product and run it through the ringer. Whether you have a product that you suspect has issues, or there are unknowns, we will find them and make you aware. We know how to properly test your hardware and find any potential issues.

## CONTACT US



Schedule a time to discuss your project needs. Our experienced team members are ready to discuss your project.

Phone



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