

**MATLAB-Based UART Error Characterization**

**RFP #:** ECECS5F23

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# Abstract

As a serial communication protocol, Universal Asynchronous Send and Receive (abbreviated “UART”) is ubiquitous. It’s simplicity offers immense opportunities for quickly getting up a debug platform in some new or existing design. However, the existence of parasitic coupling, a real-concern in industry-facing electronics applications, can lend to errors in transmission. The inspiration for this project is to characterize the error distributions for some known values of parasitic channel coupling, and to be able to more rapidly diagnose the source of issues in the field.

# Introduction

# Results

# Discussion

# Conclusion

# References

This section provides a list of references used throughout the paper, formatted according to the latest release of the IEEE Reference Guide (11.12.2018).

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