# Modular Rocket Engine Control Software (MRECS)

## Objective

The Modular Rocket Engine Control Software (MRECS) is a real-time multitasked rocket engine control application whose modular design provides the capability to be readily modified in support of a variety of advanced engine control systems, the result being a highly reliable product with lower software development and maintenance costs. It is designed for maximal hardware and software interface independence. This effort will develop a set of detailed technical reports. These technical reports will provide a potential commercialization customer with the implementation specific details of the technology.

## Why Needed

The MRECS technology application has been typecast due to its original design and scope as rocket engine control software. It was realized after its development that the underlying adaptable software architecture could be applied to many control system applications. The MRECS has potential to contribute in numerous areas that will increase the value of the product over time. MRECS is applicable to a wide range of advanced engine concepts for the reusable and expendable launch programs. In addition, the MRECS architecture is applicable to any commercial real-time, closed-loop process control system. A demonstration of a distributed avionics real-time health monitoring capability is the next modular extension to implement.

## Point of Contact

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## Sponsor

Technology Investment Projects (TIPs)