| **Test Name** | **Success Criteria** | **Methodology** | **Status** | **Key** |
| --- | --- | --- | --- | --- |
| Porting Solution onto F28p65x board  (requirement #1) | Ported motor control software onto f28p65x board successfully according to the Universal Motor Control Guide | Porting Solution onto F28p65x within Code Composer Studio (CCS) | Passed | Not Started |
| 16-bit ADC resolution  (requirement #2) | The system correctly operates using 16-bit ADC resolution according to the Universal Motor Control Guide | Implement 16-bit ADC on the ported solution using CCS | Passed | Passed |
| 64-bit floating-point operation  (requirement #4) | The system Correctly Operates using 64-bit Floating Point according to the Universal Motor Control Guide | Implement 64-bit operations on the ported solution using CCS | Passed | Tested |
| Enable oversampling  (requirement #3) | The system Correctly Operates while oversampling is enabled according to the Universal Motor control guide | Implement oversampling on the ported solution using CCS | Passed |  |
| 12-bit & 16-bit ADC resolution Support  (requirement #2) | The system correctly operates using either 12-bit or 16-bit ADC resolutions according to the Universal Motor control guide | Implement a way to easily switch between configurations using CCS | Passed |  |
| 32-bit & 64-bit floating-point support  (requirement #4) | The system Correctly Operates using either 32-bit or 64-bit Floating Point according to the Universal Motor Control Guide | Implement a way to easily switch between configurations using CCS | Passed |  |
| Oversampling & non-oversampling support  (requirement #3) | The system Correctly Operates using either oversampling or non-oversampling according to the Universal Motor Control Guide | Implement a way to easily switch between configurations using CCS | Passed |  |
| Test data acquisition  (requirement #5) | The system correctly gathers test data for the following parameters: speed ripple, speed step, and load step. The data can be graphed, and differences or lack thereof should be visible. | Develop UART communication using CCS & Putty | Passed |  |
| Test 12 vs. 16-bit performance  (requirement #5) | Test the performance of 12-bit and 16-bit ADC resolutions: speed ripple, speed step, load step. | Measure static speed, effects of load, speed changes & load changes on different configurations, and compare. Does x have more accurate average speed values, etc. | Passed |  |
| Test 32-bit & 64-bit Floating-point performance  (requirement #5) | Test the performance of 32-bit and 64-bit ADC Floating point operations: speed ripple, speed step, load step. | Measure static speed, effects of load, speed changes & load changes on different configurations, and compare. Does x have more accurate average speed values, etc. | Passed |  |
| Test the performance of oversampling  (requirement #5) | Test the effectiveness of oversampling: speed ripple, speed step, load step. | Measure static speed, effects of load, speed changes & load changes on different configurations, and compare. Does x have more accurate average speed values, etc. | Passed |  |