Test Writer	Sabin Maharjan		
Test Case Name	Throttle Test	Test ID	1
Description	Communicate with MWC Flip 1.5 Flight Controller using MultiWii Serial Protocol (MSP) commands to set the throttle for the drone.	Type:	
Name of the Tester	Sabin Maharjan	Date	May 15, 2016
Hardware Version	N/A	Time	8:33 PM
Required	- Drone - Intel Edison with breakout board - GPIO Board attached to Intel Edison - MWC Flip 1.5 Flight Controller - WIFI with SSH connection with Edison - 2x Mini USB –type B connector - 4 female-female pin connector - Stake - Rope		
Pre-Requirement	RC read and arm/disarm tests should be completed		
Setup	Connect Mini USB to Console port of the Intel Edison. Connect 4 female-female pin connector from serial port (Tx, Rx, Gnd, 5v) of the Flip 1.5 Flight Controller to GPIO Board's Serial Pin heads (Rx, Tx, Gnd, 5v). The blue light on Edison should be on. Red light on Flip 1.5 Controller should be on. Login to Edison using root. Change directory to "Drone/src". Type "make all". The following actions are done under this directory. The minimum throttle value set in multiwii's config.h file is 1220. In the code, the default throttle value is set to 1095. Motor turns at throttle value 1100. For Step 1-4, No Drone battery connection required. For Step 5-8, Done battery connection is required. **Remove Propellers from the motors**. For Step 9-10, Done battery connection is required. **Add Propellers on the motors**. **The drone should be ties to the stake with the rope and make sure no one is closer to drone than 5ft.** **Console Command: ./drone control**		

Step	Action	Header 3x(uint8_t)	Length (uint8_t)	Code (uint8_t)	Data 4x(uint16_t)	CRC (uint8_t)	Expected Result	P/F	Comment
1	Press up key	$M<	16	200	1500 1500 1500 1101	221	Value of throttle goes up by 10	P	
2	Press up key after 1 second	$M<	16	200	1500 1500 1500 1102	194	Value of throttle goes up by 10	P	
3	Press down	$M<	16	200	1500 1500 1500 1101	221	Value of throttle goes down by 1	P	

	key after 1 second								
4	Press down key after 1 second	$M<	16	200	1500 1500 1500 1100	216	Value of throttle goes down by 10	P	
5	Keep pressing the up key every second	$M<	16	200	1500 1500 1500 [varies]	221	The motor starts to spin at throttle 1100	P	
6	Keep pressing the down key every second	$M<	16	200	1500 1500 1500 [varies]	194	The motor spin stops to spin at throttle 1099	P	
9	Keep pressing up key every second	$M<	16	200	1500 1500 1500 [1000 varies with the key press]	varies	The drone takes off from the ground with increase in throttle.	P	
10	Keep pressing up key every second.	$M<	16	200	1500 1500 1500 [1000 varies with the key press]	varies	The drone decreases the throttle and lands on the ground.	P	