

Organizational Data				Value-Data					
ID	Type	Number	Requirements	Minimum Requirement	Should be Requirement	Wish Requirement	Unit	Justification/Source	Flow down from
			Locomotion Control (LC)						
LC	F	1	The LC shall move the rover as specified by navigation commands	-	-	-	-		S_F_1
LC	F	2	The LC shall steer the rover as specified by navigation commands	-	-	-	-		S_F_1
LC	S	2	Twist ROS message shall be converted to wheel velocities and orientation	-	-	-	-	Vector Protocol for four independent wheel drive	
LC	S	3	ROS CAN node that transfers the wheel messages to each of the wheel controllers	-	-	-	-		
LC	S	4	The wheel velocity and orientation shall be PID controlled	-	-	-	-		
			Sensors (SN)						
SN	S	3	ROS Camera node publisher	-	-	-	-		SN_F_1, SN_F_2
SN	S	4	The ZED Camera shall be used for stereo vision	-	-	-	-		SN_F_1, SN_F_2
			Odometry (O)						
O	S	2	Ros node for IMU/Odometry sensor publishing	-	-	-	-		O_F_1
O	S	3	Ros node for encoder feedback publishing	-	-	-	-		O_F_1
			On-Board Computer (OBC)						
OBC	F	1	The OBC shall function as a general unit for managing all subsystems	-	-	-	-		
OBC	F	2	The OBC shall provide a communication interface via WLAN to the operator	-	-	-	-		S_F_10
			Software (SW)						
SW	S	1	The main operating System shall be ROS	Kinetic	Melodic	-	-	Kinetic for bigger base, Melodic for continual support	
SW	S	2	All subsystem ROS nodes shall run on the OBC	-	-	-	-		OBC_F_2

SW	S	3	The ROS network shall provide transforms for all sensors and movable parts	-	-	-	-		S_F_9
SW	S	4	ROS node for Gamepad teleoperation	-	-	-	-		S_F_10