Goat 350 kg

Communication document

Serial port	JSON FROM ROS TO EMB	JSON FROM EMB TO ROS	Details
ULTRA SONIC		**{"u"[1,2,1,2,1,2,1,2],"emg":true,"bumper":false,"manual_switch_status":true,"pause_switch_status":true}**	Ultrasonic data continuous streaming.
ULTRA SONIC	**{"ota":1}**	**{"ota":true}**	1 - Sensor Main Board 2 - Ultrasonic Board 3 - Cliff Board
LIGHT	**{"status":"Alive?"}**	**{"status":true}**	Board Alive status
LIGHT	**{"data_fetch":"battery"}**	**{"battery":2048,"charging_status":1098,"power_switch_status":true,"safety_relay_status":true,"execute_switch_status":true}**	If the sensor is available, sensor data is available here.
LIGHT	**{"execute_reset_switch":false}**	**{"execute_reset_switch":true}**	Execute switch reset for screen change
LIGHT	**{"power_fullshutdown": true}**	**{"power_fullshutdown":true}**	After 5 second full shutdown
LIGHT	**{"soft_emg": true/false}**	**{"soft_emg": true}**	Emergency relay
LIGHT	**{"buzzer":true/false}**	**{"buzzer":true}**	Buzzer turn on and off

LIGHT	**{"motor_shutdown":true/ false}**	**{"motor_shutdown":true}**	Motor contractor turn on and turn off
LIGHT	**{"board_no":1,"port_no":1, "mode_no": 1,"colour1": [255, 0, 100],"colour2": [255,0,100],"no_of_led": 50,"speed": 500,"f_back": 10}**	**{"board_no":1,"port_no": 1,"mode_no": 1,"colour1": [255, 0, 100],"colour2": [255,0,100], "no_of_led":50,"r_speed":10,"f_back": 10,"response": true}** **If the RGB Board 1 is not alive** **{"Data_send":false,"Board":"rgb_down"}** **If the RGB Board 2 is not alive** **{"Data_send":false,"Board": "rgb_up"}**	Board No : 1 - RGB Board 1 2 - RGB Board 2 5 - Indicator light Port no : 1-4 (4 Individual port LED) Mode No: 1 - Blink ON - with colour 1 and colour 2 with interval in speed param (In millisecond). 2 - Blink OFF - with colour 1. 3 - Fade IN - with colour 1 with interval in speed param(In millisecond). 4 - Fade OUT - with colour1 with interval in speed param(In millisecond). 5 - Fade Loop - Fade IN with colour 1 and Fade Out with colour 2 with the interval in speed param(In millisecond). 6 - Round Loop - Round Loop with speed(In millisecond). 7 - Split Light - Splits half and round with colour 1 and balance half with colour 2 with the interval in speed param(In millisecond).

LIGHT	**{"docking":"Alive?"}**	**{"docking": true}** **If the docking is not alive** **{"docking": false, "reason": "docker_dead"}**	Docking Alive req
LIGHT	**{"docking": "dock"}**	**{"docking": true}**	Docking start command.
LIGHT		**After checking voltage from docking station,** **{"docking":"predocking"}** **If Voltage is not available means,** **{"docking":"fail","reason": "docker"}** **If Voltage not received in a Robot,** **{"docking":"fail",** **"reason": "robot"}** **If all the cases passes,** **{"docking":"succes”}**	After pre docking is successful,the actuator rises up. After voltage fail in robot ,the actuator goes down
LIGHT	**{"docking":"undock"}**	**{"undocking":true}**	Docking start command.
LIGHT		**{"undocking":"success"}**	If the actuator is available it will send a reply after the actuator goes down.
LIGHT	**{"docking": "actuator_on"}**	**{"actuator_on":true}**	Actuator rises
LIGHT	**{"docking": "actuator_off"}**	**{"actuator_off":true}**	Actuator goes down
LIGHT	**{"docking":"docker_relayon"}**	**{"docker_relayon":true}**	Turn on relay in docking Station and robot
LIGHT	**{"docking":"docker_relayoff"}**	**{"docker_realyoff":true}**	Turn off relay in docking Station and robot
LIGHT	**{"handshake":false/true}**	**{"handshake":true}**	False - Handshake False True - Handshake True

LIGHT	**{"ota":4}**	**{"ota":true}**	4 - Application main board 5 - Docking Board 6 - Application Board 7 - RGB1 8 - RGB2