

## Description of ROS Nodes

Package	Node	Description	Subscribe to	Publish to
<b>joystick</b>	joystick_ros2	- Connect to the xbox360 controller - Read data (axis, buttons..) from the controller		/joy
	joystick_to_cmd_node	-Interpret/Convert joystick and buttons values into car orders (throttle, steering, manual/auto ...)	/joy	/manual_car_control /car_mode
<b>car_control</b>	car_control_node	-Control the car : Calculate and send motors order (in percent of PWM) to move the car	/manual_car_control /motors_feedback /steering_calibration /car_mode	/motors_order /steering_calibration
<b>can</b>	can_rx_node	-Read and transform data from CAN bus		/us_data /imu/data_raw /imu/mag /gnss_data /motors_feedback /general_data /steering_calibration
	can_tx_node	-Transform and send data to CAN bus	/motors_order /steering_calibration	
<b>simulation</b>	simulation_node	-Send data (pwm ...) to carla_simulator	/motors_order /motors_feedback (only for demo)	/carla/ego_vehicle/ vehicle_control_cmd
<b>imu_filter_madgwick</b>	imu_filter_madgwick_node or imu_complementary_filter	-Convert IMU data into quaternions	/imu/data_raw /imu/mag	/imu/data
<b>rplidar_ros</b>	rplidar_ros	-Read data from the LIDAR		/scan
<b>usb_cam</b>	usb_cam_node_exe	-Read data from the camera		/image_raw