?

Peer-to-Peer

nodes
ROS
Messages
int
float
topic
string

services
web services
request
response

ROS Master
publishers
subscribers
Parameter Server

tf
tf
??
$_d iagram.png Monstertruck.$

??
Software/Hardware
Interface
$_c omponent_d iagram.png Software/Hardware Interface Monstertruck.$

hokuyo_node
?
sensor_msgs/LaserScan

laser_roll_controller
laser_pitch_controller
dynamixel_controller
?
libuvc_node
libuvc_camera
?
sensor_msgs/Image

imu_hardware_interface
pandora_imu_hardware_interface
x, y, z
a_x, a_y, a_z
monstertruck_hardware_interface
pandora_monstertruck_hardware_interface,

??
Control
??
$_c omponent_d iagram.png Control Monstertruck.$

stabilizer_control_node
pandora_stabilizer
four_wheel_steer_teleop
??
yocs_cmd_vel_mux
?

??
reference frames

world:
map:
odom:
base_footprint:
base_link:
$(x, y, z, yaw, pitch, roll)$
laser_link:

exploration_controller

pandora_explorer

$_component_diagram.png Monster truck.$

move_base

??

global_planner

local_planner

2D

costmap_2d

global_costmap

global_plan

local_costmap

local_plan

recovery behaviors

$_base.png move base [?].$

?

static layer

obstacle layer

inflation layer

??

??

cost_unknown(255)

cost_lethal(254)

cost_inscribed(253)

cost_possibly_circumscribed(128)

$[128, 252]$

cost_safe

$\in$

$[128, 0)$

cost_freespace

(0)

$_inflation_costs.png 2D [?].$

$_costmap.png [localcostmap][width = 0.32] Chapters/Chapter4/Figures/local_costmap.png SLAM.$

car_maneuver_recovery

??