Client Layer	roscpp	rospy	roslisp	rosjava	roslibjs		
Robotics Application	Movelt!	navigatioin	executive smach	descartes	rospeex		
	teleop pkgs	rocon	mapviz	people	ar track		
Robotics	dynamic reconfigure	robot localization	robot pose ekf	Industrial core	robot web tools	ros realtime	mavros
Application Framework	tf	robot state publisher	robot model	ros control	calibration	octomap mapping	
	vision opencv	image pipeline	laser pipeline	perception pcl	laser filters	ecto	
Communication Layer	common msgs	rosbag	actionlib	pluginlib	rostopic	rosservice	
	rosnode	roslaunch	rosparam	rosmaster	rosout	ros console	
Hardware Interface	camera drivers	GPS/IMU drivers	joystick drivers	range finder drivers	3d sensor drivers	diagnostics	
Layer	audio common	force/torque sensor drivers	power supply drivers	rosserial	ethercat drivers	ros canopen	
Software Development Tools	RViz	rqt	wstool	rospack	catkin	rosdep	
Simulation	gazebo ros pkgs	stage ros					