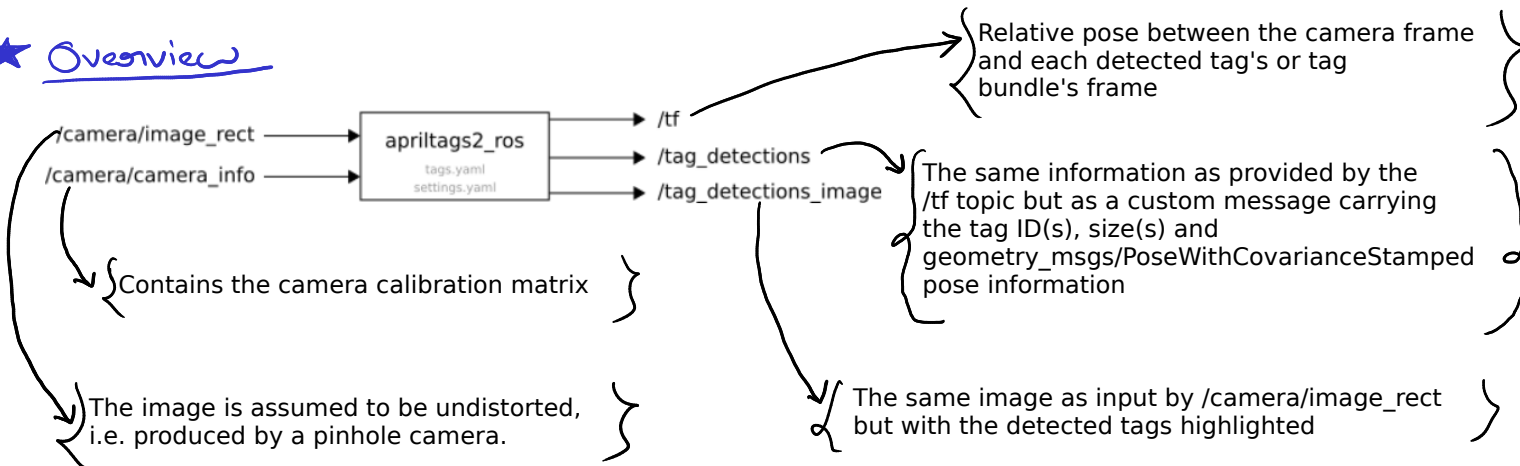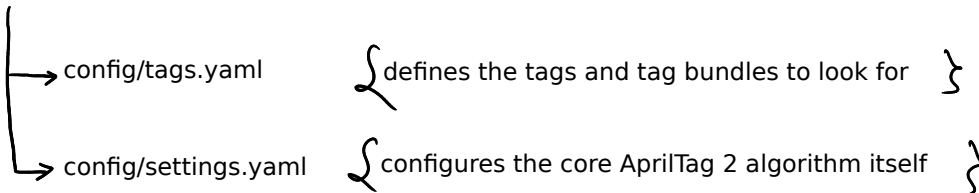# apriltag ros

⇒ ROS wrapper of the AprilTag 3 visual fiducial detection algorithm.

⇒ Continuous (camera image stream) and single image detector nodes are available.

★ Overview

/camera/image_rect ⟶ [**apriltags2_ros**] ⟶ /tf
/camera/camera_info ⟶ tags.yaml settings.yaml ⟶ /tag_detections
⟶ /tag_detections_image

Relative pose between the camera frame and each detected tag's or tag bundle's frame

Contains the camera calibration matrix

The same information as provided by the /tf topic but as a custom message carrying the tag ID(s), size(s) and geometry_msgs/PoseWithCovarianceStamped pose information

The image is assumed to be undistorted, i.e. produced by a pinhole camera.

The same image as input by /camera/image_rect but with the detected tags highlighted

⇒ The behavior of the ROS wrapper is fully defined by the two configuration files:

⟶ config/tags.yaml   defines the tags and tag bundles to look for

⟶ config/settings.yaml   configures the core AprilTag 2 algorithm itself

★ Nodes

1. apriltags2_ros

   ↳ Detector for a continuous image (i.e. video) stream.

2. apriltags2_ros_single_image_server

   ↳ Detector of tags in a single provided image

3. apriltags2_ros_single_image_client

   ↳ A client for the single image tag detection service provided by the apriltags2_ros_single_image_server node.