

Open the Camera Calibrator

- MATLAB Toolstrip: On the **Apps** tab, in the **Image Processing and Computer Vision** section, click the **Camera Calibrator** icon.
- MATLAB command prompt: Enter `cameraCalibrator`

Prepare the Pattern, Camera, and Images

To better the results, use between 10 and 20 images of the calibration pattern. The calibrator requires at least three images. Use uncompressed images or lossless compression formats such as PNG. The calibration pattern and the camera setup must satisfy a set of requirements to work with the calibrator. For greater calibration accuracy, follow these instructions for preparing the pattern, setting up the camera, and capturing the images.

Note The Camera Calibrator app supports only checkerboard patterns. If you are using a different type of calibration pattern, you can still calibrate your camera using the `estimateCameraParameters` function. Using a different type of pattern requires that you supply your own code to detect the pattern points in the image.

Prepare the Checkerboard Pattern

The **Camera Calibrator** app uses a checkerboard pattern. A checkerboard pattern is a convenient calibration target. If you want to use a different pattern to extract key points, you can use the camera calibration MATLAB functions directly. See “Camera Calibration” for the list of functions.

You can print (from MATLAB) and use the checkerboard pattern provided.

Tip Use a checkerboard that contains an even number of squares along one edge and an odd number of squares along the other edge. Using a non-square pattern contains two black corners along one side and two white corners on the opposite side. This criteria enables the app to determine the orientation of the pattern and the origin. The calibrator assigns the longer side to be the x-direction. A square pattern can produce unexpected results for camera extrinsics.



To prepare the checkerboard pattern: