

Selfie Aligner

Calibrating a mobile robot to a workplace 20 times more precisely than tradition systems

A robot arm mounted on a mobile platform are well established component in production automation. But the lack of precision in the existing calibration systems reduces the use to only moving boxes. The Selfie Aligner calibrating a mobile robot to a workplace and makes it able to perform tasks with the same precision as a stationary robot.

Selfie Aligner is a vision-based system that uses a mirror in the calibration tag to let the camera see it self and align to the tag with an angular precision more than 20 times better than traditional systems.

A camera, set up for part recognition or bin picking, can also be used for the Selfie Aligner. The system performs robust alignments with out of focus images. Even lens distortion is not a problem.

Mobile robots can now take full advantage of the robot arm and significantly expands the range of applications and value creation. The precision of the robot arm is not lost to the angular error in the alignment.

The Selfie Aligner have been tested in a demonstration setup with a UR5 robot at the Smart Lab at Aalborg University. A test series show that it can align to the Mirror Tag with a repeatability of less than 0.1 mm and 0.3 mRad.

With the Selfie Aligner the mobile robot can become a true mobile manipulator and not only a mobile "box handler". Trivial tasks at laboratories or workshops can now be performed by the mobile robot.

Patent for Selfie Aligner has been granted and is now being extended worldwide. The mirror in the tag is the key element.



Patented: DK 181486 B1

This new technology will be a game changer for the use of mobile robots. With the ability to perform high accuracy tasks it will take AGV's with robots to the next level and can spark a breakthrough for mobile manipulators.

We are offering to sell the whole Selfie Aligner concept with all know-how, designs, algorithms and intellectual properties. We are looking for a big player in the mobile robot marked that can take this concept to the next level and commercialize this solution on a global scale.

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Selfie Aligner demo video and more info:

<https://vimeo.com/908762499/798a04ae5b>
www.toolchanger.eu/selfie-info/SelfieAligner.htm

Company URL:
www.toolchanger.eu
www.4tech.dk

