Kinematics Model:

**Figure XXX** shows the mathematical model used for the forwards and inverse kinematics. The gripper used in the project can be assumed to be a non-rotating, , square. This model can be mathematically simplified by instead assuming a point gripper, and reducing both frame dimensions by .

The forward kinematics model is defined by application of the cosine rule:

This can be simplified without application of trigonometric functions for code optimisation:

Finally, the inverse kinematics is defined as: