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Author jason chang
Author's Email Address No Public.
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Abstract
The purpose of the present study is to design the audio-visual system for a 4-Axes multiple-joint Robot (VR-4100A) to conduct the industrial works(To grip and lay the objects). This design will make the industrial automation more flexible. The visual system uses a camera of CCD to capture the image of objects ,separate objects from the background and figure out the position and motion speed. All collected data will be transmitted through the sequential port (RS232) to the servo motor system of the robot. The robot will calculate the next working position and the required moving steps of each axis, (pulses number) and use 4th order polynomials to compute the trajectory for each motion position. The transmission of pulses is equally distributed by DDA to the servo circuit system for the robotic arm to conduct the material processing in advance.
Key words: Visual System, Robotic Arm, Trajectory
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