

Application: Pick and Place



Robots have been used in factory automation for many years, including for product assembly and picking and placing, in which the benefits of their use are numerous, including increased productivity, improved consistent accuracy, and reduction of costs.

Recently 3D robot guidance has further improved accuracy and speed in assembly and pick and place operations, with 3D calibration the first and most important step in system development. Establishment of the relationship among the robot, camera, and object coordinates comes first, followed by pattern matching to acquire object position and orientation, with robot trajectory then determined based on the collected 3D data. The ADLINK EOS-1200's superior multicore processing performance delivers the computing power necessary for these critical 3D calculations.

Once the position and orientation of the object are determined, the data is transmitted to the robot through the RS-232 transmission protocol. As well, isolated TTL digital inputs, outputs, and programmable trigger output pulses are also required for connection to external devices such as sensors and strobe lighting. The EOS-1200 provides versatile I/O connectability, including RS-232/422/485, Ethernet, and isolation PNP/NPN input/output for communication between different devices, and PoE capability reduces installation and wiring maintenance costs for 3D robot guidance applications.



ADLINK Solution: EOS-1200: Powerful 4-CH Gigabit PoE Embedded Vision System with 2nd/3rd Generation Intel® Core™ i5/i7 Processor

ADLINK's EOS-1200 features 2nd/3rd generation Intel® Core™ i7 quad core processors, providing four independent gigabit PoE (power over Ethernet) ports with data transfer rates up to 4.0 Gb/s, and rich I/O capability, including four serial ports, 32 PNP/NPN isolated digital I/Os, an internal USB port, and 1 kbit programmable EEPROM, all making the EOS-1200 simple to integrate and deploy.