

Design Value Proposition

The fundamental problem for Cyber Crew is to integrate two robot arms in a manufacturing process. The process involves a scanner to sort through various parts as well as two custom designed end effectors, and an adjustable conveyor belt to complete our desired assembly. What this will do for the future is create possibilities for more advanced automated processes for students at the University of Idaho taking the industrial automation class. Potentially having this more advanced course will help young engineers learn more about real world manufacturing processes, programming, and the concept of integrating the two robots, as well as other devices, using TCP/IP protocols. Having the ultimate goal of the robots be assembling a structure, it becomes a model for real world companies. Using two robots to create a part is being done by manufacturers today, overall saving the company money. In order to target the problem of using the two arms in one process, we look to achieve this integration using IP protocols – sending a signal from one controller to the other when each process is done. If you toured Schweitzer and asked if their robots used this method to connect two robots, they will tell you they use PLC, which is much more complicated and time consuming.