

PLC Project Summary

- 2 PicknPlace feeders
- Each feeder has 2 Axes with motion functions including Jog, Move to Position, Stop and Reset
- Each feeder axis has HMI variables for:
 - o Setting operation mode
 - o Auto Mode, which has the following state machine for feeder
 - o Manual Mode – Jog forward and backward with set velocity;
 - o Stop Mode – Executes MC_Stop
 - o Historizing of Actual Position and Actual Velocity
 - o Axis mode (Enabled, Jog, Positioning)
 - o Recipe for setting target positions and travel speeds
- Structure data types for HMI data:
 - o Auto Mode data (Feeder state)
 - o Manual Mode data (Jog velocities and +/-)
 - o Feeder Info (Axis Info for X and Y position and axis state)
 - o Operation mode control and status
 - o Feeder Recipe
- Enums for:
 - o Axis mode:
 - 0. INIT
 - 1. ENABLE
 - 2. JOG
 - 3. POSITIONING
 - 4. STOP
 - 5. RESET
 - 6. ERROR
 - o Feeder state:
 - 0. Move to top
 - 1. Move to target 1 pos X
 - 2. Move to target 1 pos Y
 - 3. Grab
 - 4. Move back to top
 - 5. Move to target 2 pos X
 - 6. Move to target 2 pos Y
 - 7. Place
- Each feeder has Events:
 - o Messages for Mode switching
 - o Alarms for axis errors (for example Jog too fast/slow)