

# CrossRobotics Universal Robot Maintenance Training



## ◆ Introduction to Robot/Mechanical Design Overview

## ◆ Power Up Procedure and Initial Setup

### ❖ Creating and Editing Installation Files

- TCP, Mounting, I/O Setup, Modbus TCP, Default Programs

## ◆ Basics of Programming

### ❖ Cover commands on 'Basic' Tab of Structure Screen

- Move Types with hands on practice examples of each
- Simple I/O interaction and Wait Commands
- Popup, Halt, Comments and Folders
- Write simple (simulated) pick and place program using Basics

## ◆ Break

## ◆ Advanced Programming on Pendant

### ❖ Cover commands on Advanced Tab of Structure Screen

- Loops, Subprogram Calls, If..Else Statements, Variable Assignments
  - ◆ Integrate these into Basic program above
- Threads, Events and overview of build in functions on the pendant
- Force Mode
  - ◆ Explanation of each type and simple hands on examples

## ◆ Features

### ❖ Creating User Defined Coordinate Systems

- Points, Lines, Planes and features thereof
- How to use these in programming and hands on example

## ◆ Hands On Practice

### ❖ Connect Gripper

- Palletizing with 'Inspection' Between (I/O Intervention)
- Advanced Pick and Place of different objects
  - ◆ Program Optimization (speed, robot movement)

## ◆ Troubleshooting Joint and Control Box Issues

## ◆ Support Site/Magic Files/Software and Firmware Update