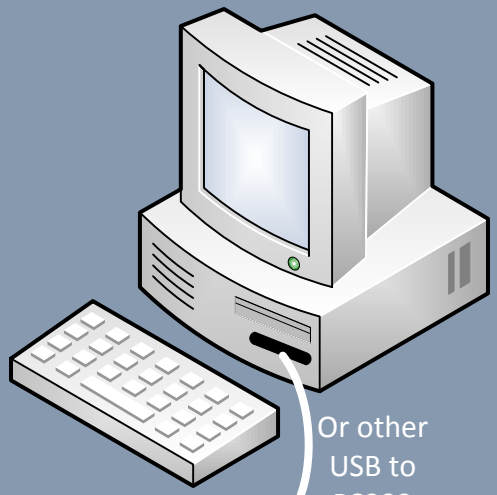
# K5 PLC Getting Started

Necessary Hardware:

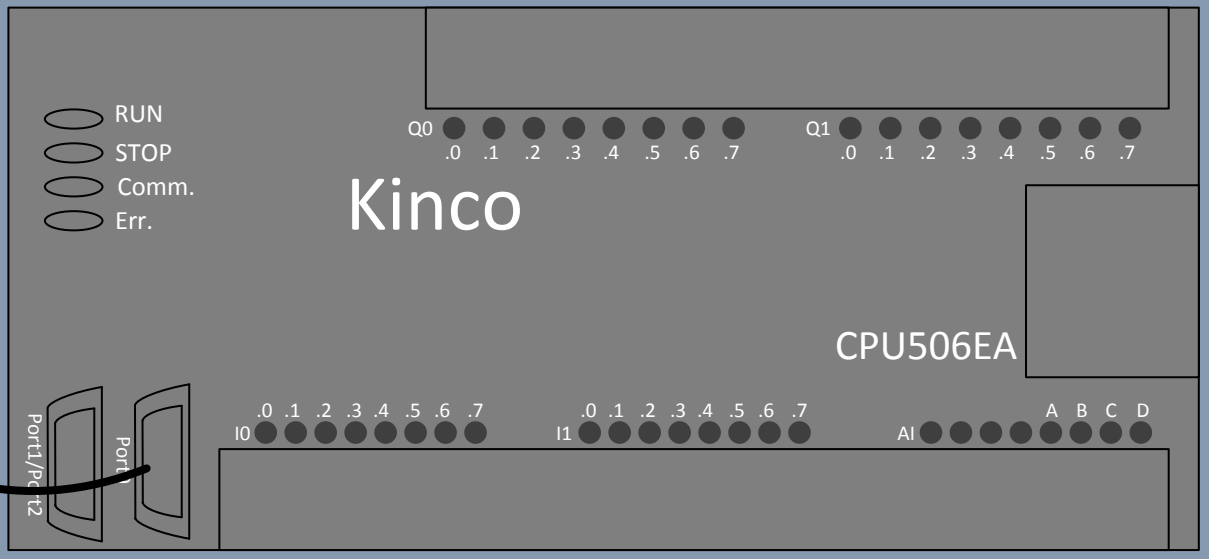
- PC
- USB to RS232 Converter
- HMI-KCO-MT54-KC programming cable
- K5 PLC




HMI-KCO-MT54-KC

For Program Download:

The communication ports on the Kinco PLCs have female DB9 Connectors, which means a USB to RS-232 Converter is needed if your computer does not have a RS232 port. Anaheim sells the UT232R-200 if you don't already have a USB to RS232 converter. A standard RS232 cable will not work, so you need to purchase the HMI-KCO-MT54-KC so that you don't have to make your own cable.

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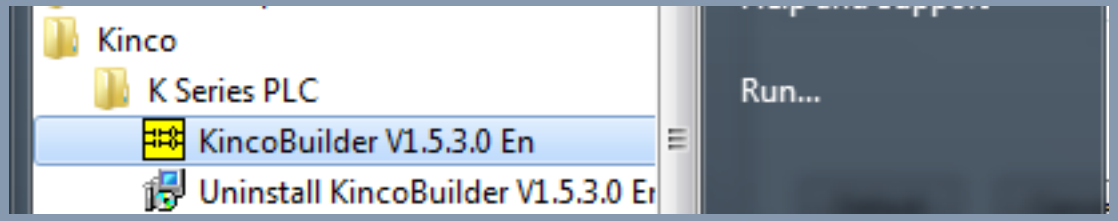
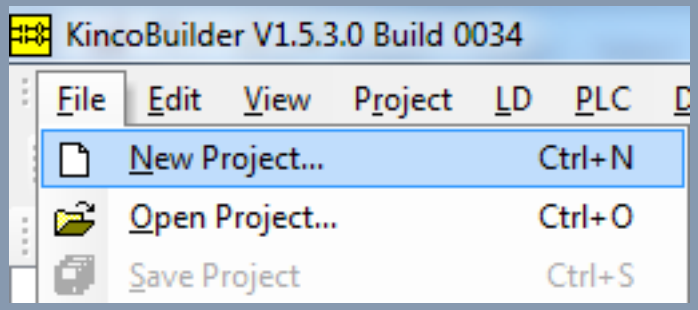
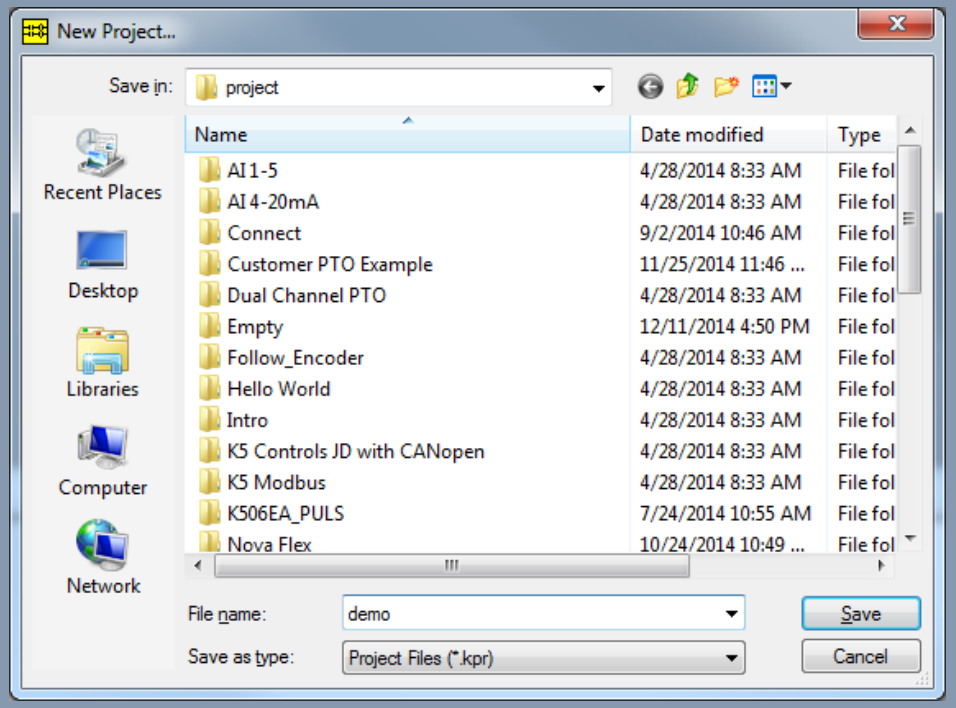
# Getting Started




Go to the Start menu → All Programs → Kinco → K Series PLC → KincoBuilder




Go to the File menu → New Project

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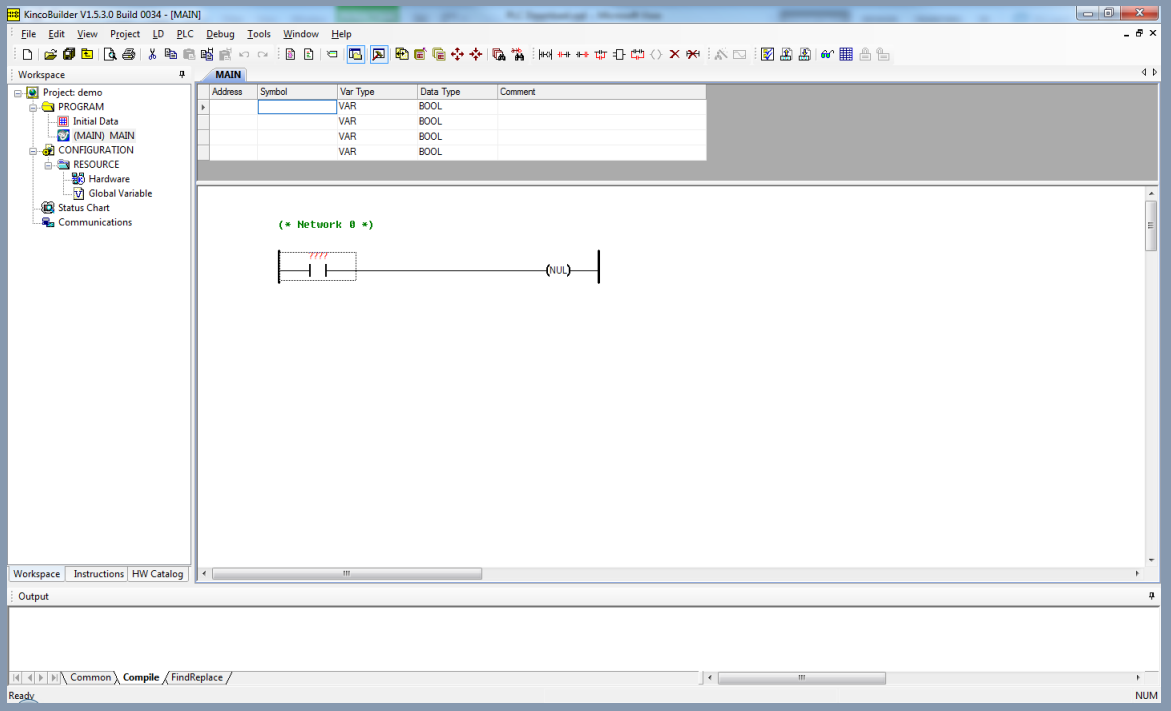
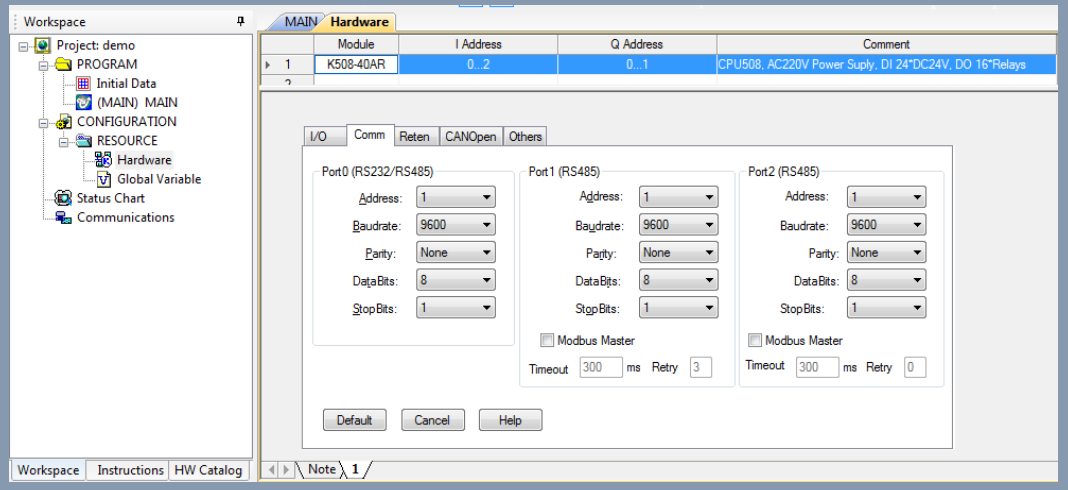
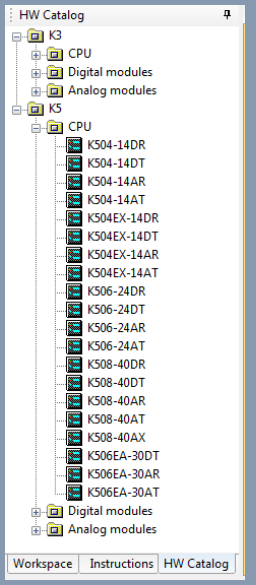
Select the directory for your new project and enter the name




Empty Project




In the Workspace navigate to the Hardware Resource to setup your hardware.
If the list view does not contain the PLC you are using, right click and delete.




Select the HW Catalog tab and double click the PLC you are using to add it to the list view, so that the hardware can be setup.

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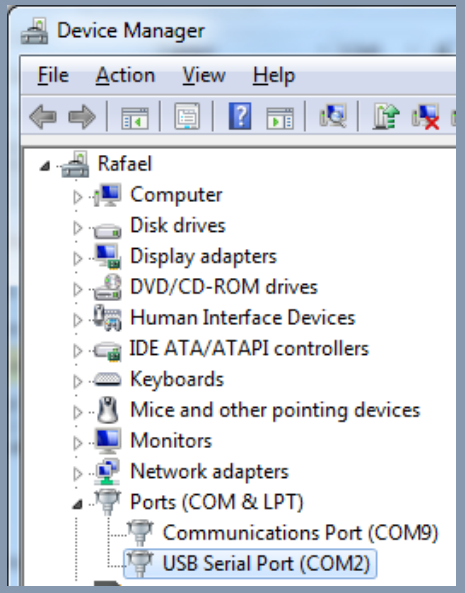
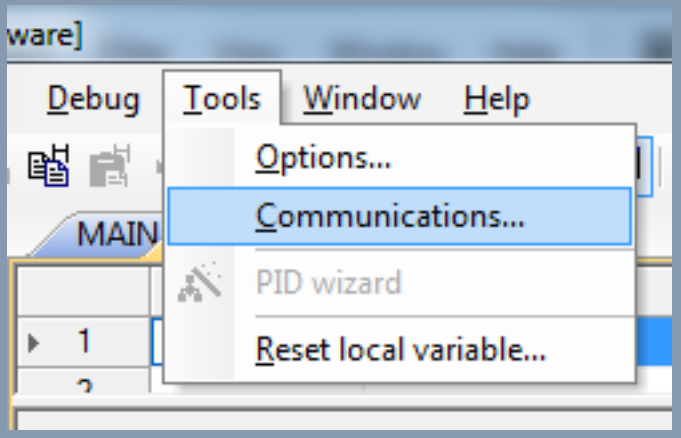
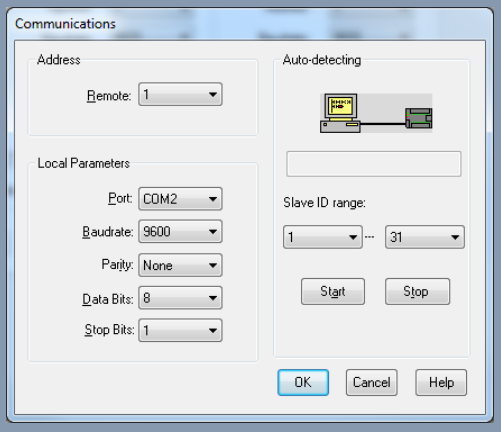


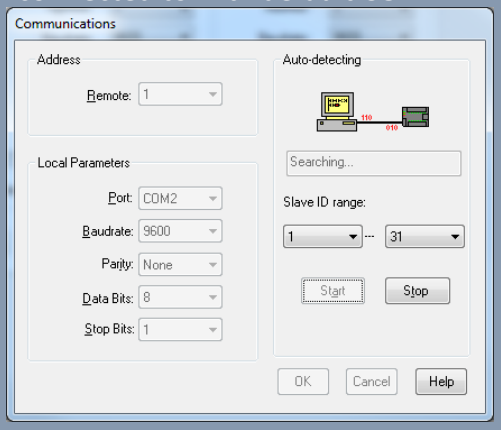

Since most PCs no longer have RS232 ports a USB to RS232 converter must be used. Open the Device Manager, plug in the USB to RS232 converter to see what COM Port number it is given.



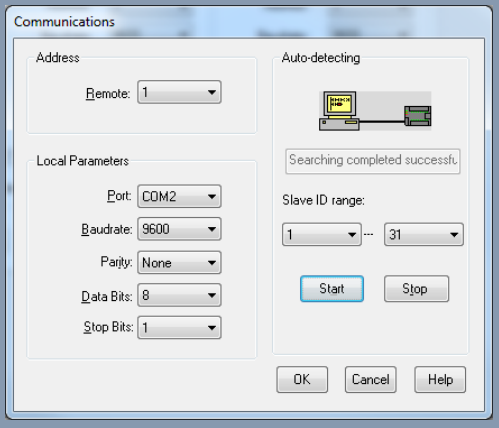

Go to the Tools menu → Communications



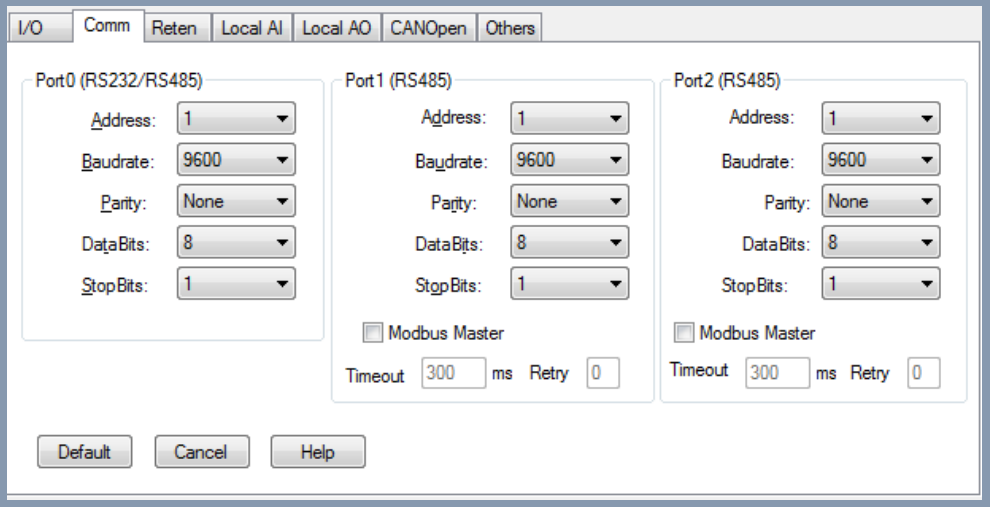

Select the COM port that the PLC is connected to with default COM




Click Start to begin auto detecting




PLC was successfully detected




Default Parameters of the PLC

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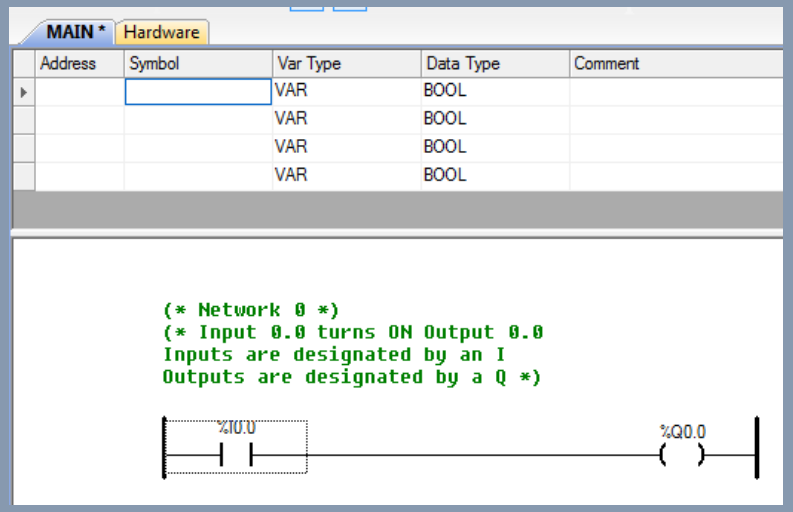
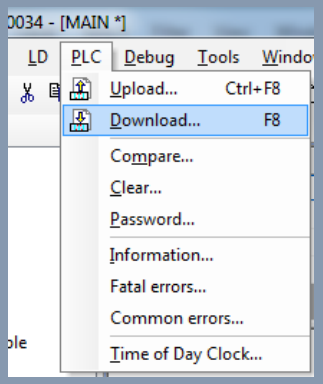
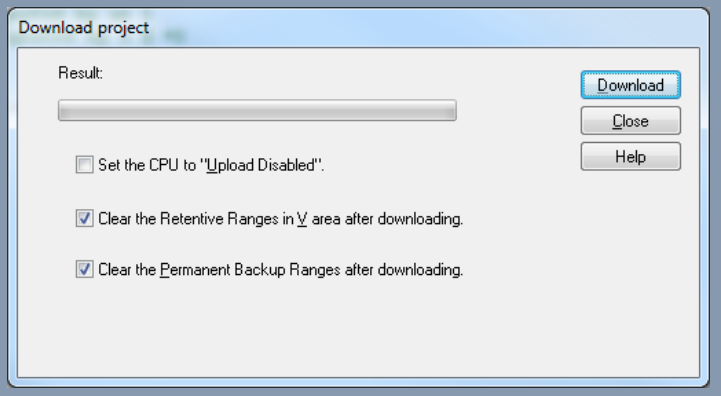


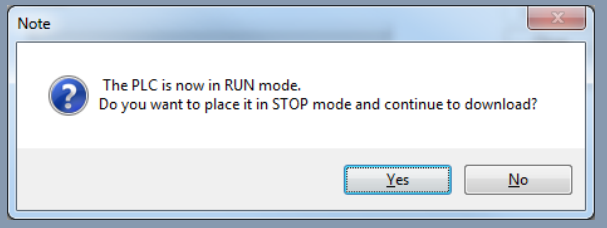

Go to the Main tab to write our first program. On the first Network designate the contact I0.0 and the coil Q0.0



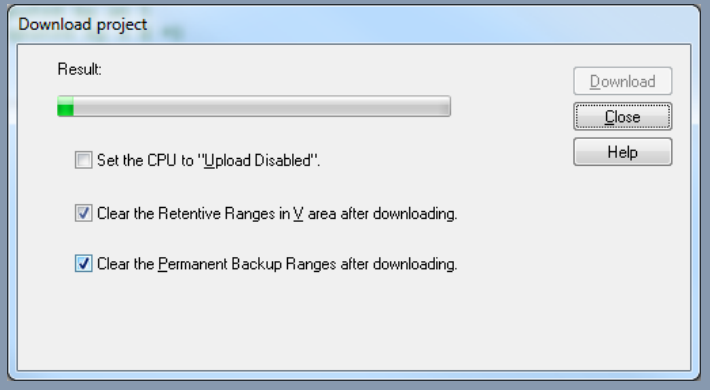

Go to the PLC menu → Download



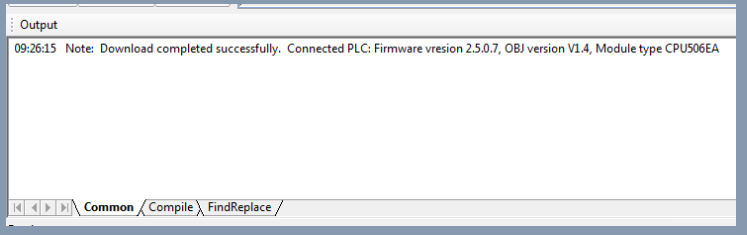

CLICK DOWNLOAD




Click Yes to play the PLC is STOP mode for program download.




Program is downloading.




Program Downloaded Successfully.

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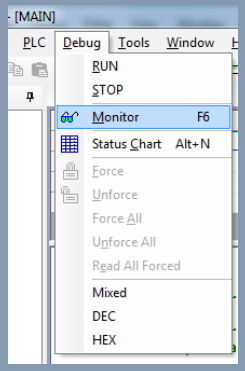
# Simulation

KincoBuilder has a simulation tool that allows you to view the status of all contacts, coils, and registers real-time. The simulator will not work unless the PLC is connected to the PC and has the same exact program in its memory.




Go to the Debug menu → Monitor


Contact is OFF therefore the coil is OFF


The contact is ON therefore the coil is ON

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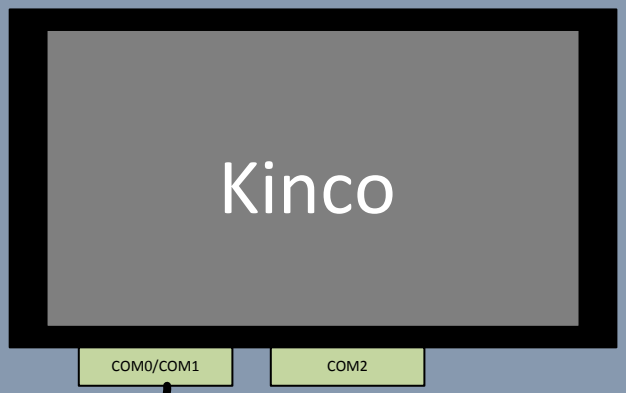
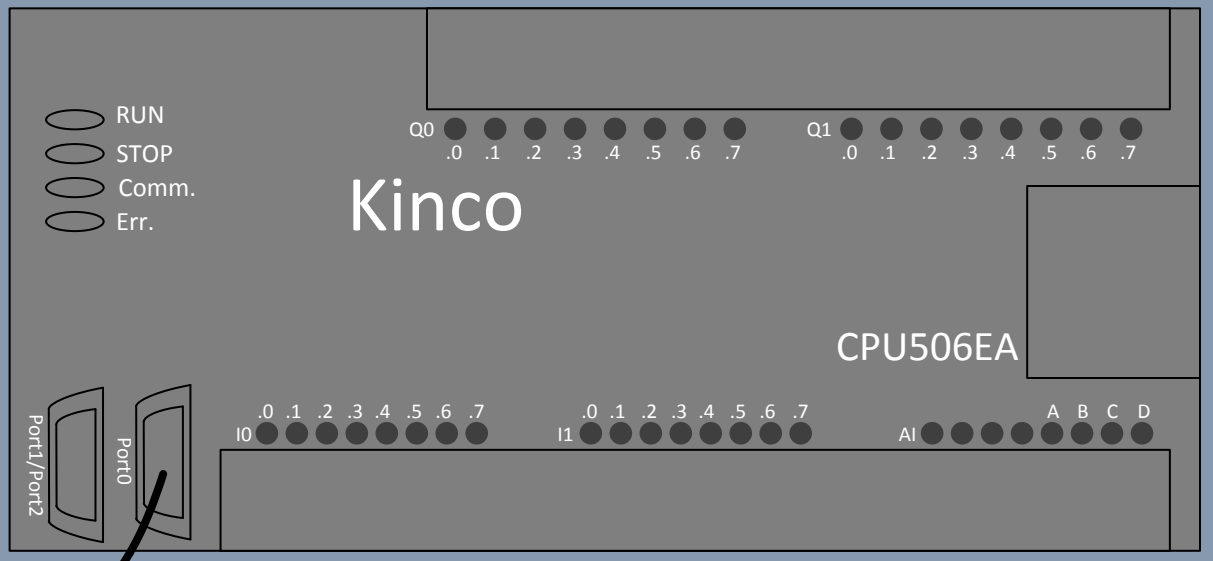
# HMI and PLC Connection




| COM0/ COM1 | COM2 |
|---|---|
| 2 RX | 7 RX |
| 3 TX | 8 TX |
| 5 GND | 5 GND |

For the Kinco HMIs and PLCs to communicate the developer should buy a HMI-KCO-MT54-KC cable. It is very appealing to just assume a standard RS232 cable would work but Kinco has their own wiring scheme that does not conform to the RS232 cable standard. The HMI communication port settings should match those of the PLC so that communication is synchronized.

HMI-KCO-MT54-KC




| COM2 |
|---|
| 3 TX |
| 2 RX |
| 5 GND |

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