



# Multi-link



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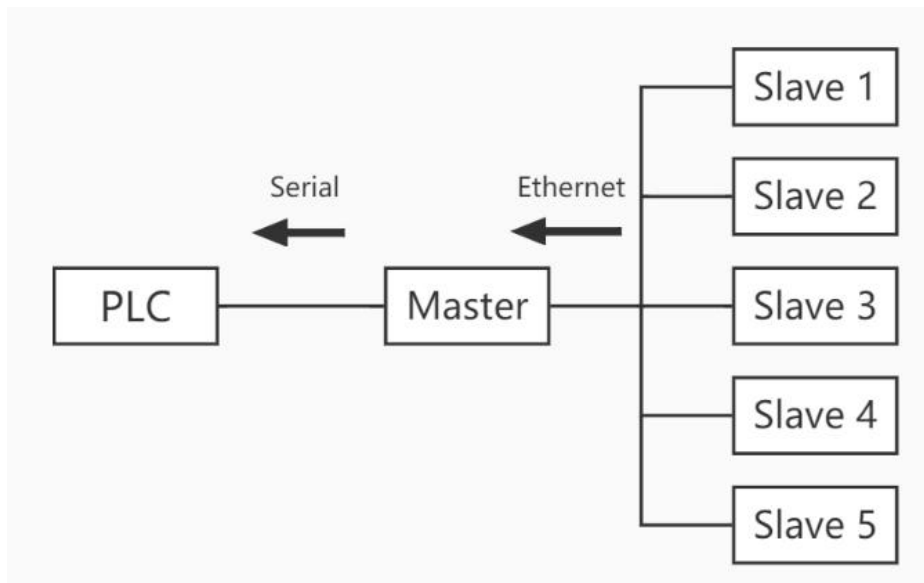
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# 1.Function Introduction

- 1) The main principle of Multi-link is to use the method of Master&Slave to implement the One machine-Multiple screens by ethernet port. For example, one Master HMI connect to one Slave HMI, the Slave one can write or read value from PLC which is communicated with Master.
- 2) In Multi-link, there is only one Master, and all the other HMIs are Slaves. The Master HMI is the only one device communicate with PLC, and the data received from the PLC is transmitted to each slave through the host HMI(Master).



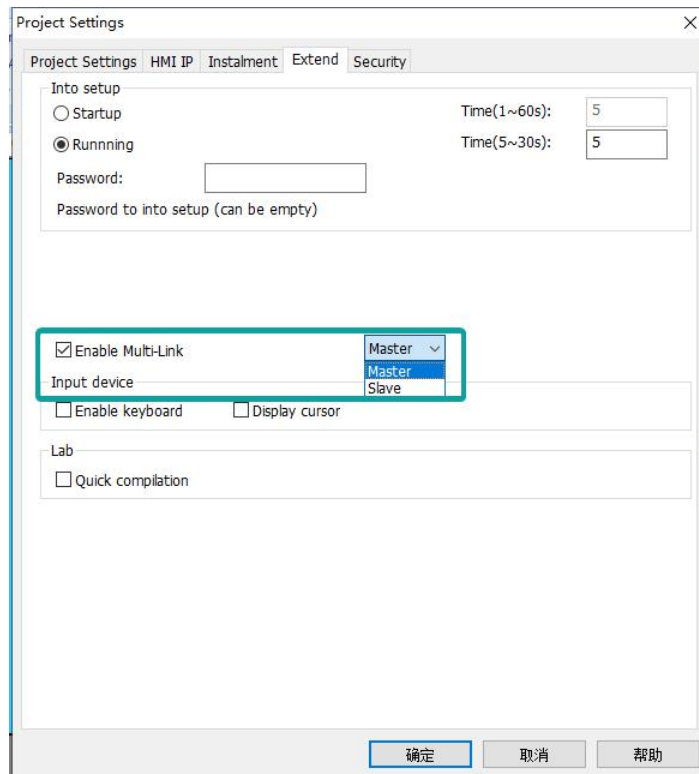
- 3) At present, the Multi-link is regarded as special function. So not any model HMI support it. Need the HMI come with the special machine code. The series support Multi-link function right now: General, HMI+, i Series. Multi link doesn't support the online simulation. PI3000/PI3000+/PI3000i series can only have one Slave when using this function, while PI8000/9000,PI8000+/PI9000+ series can use at most 5 Slaves.

## 1.Address Usage

Address	Address Description	Usage Method
HSW1100	The IP of Master HMI	IP address high endian 1
HSW1101		IP address high endian 2
HSW1102		IP address high endian 3
HSW1103		IP address high endian 4
HSW1104.0	Control the Slave to connect to the Master or not	1: Connect to Master 0: Disconnect

## 2.PIStudio Settings

Check to enable Multi-link, select the corresponding option. For example, if it is a slave HMI, select Slave.



## 3.Slave Project

In order to let the fonts in the Slave and the Master consistent with each others, so Slave project needs to add one screen that can set the IP address of Master HMI for connecting to the Master, on the original the Master project. If Master project has components that use other font styles, and Slave project If there is no component corresponding to Master project, then the default font style SimSun would be displayed when the Multi-link is enabled. To avoid the Slave device prompts communication timeout message, you can add HSW9 = 1 in the initial script of Slave device.

## 4. Other Notice

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1) During the connection, if the Master is downloading program, there is a highly chances that the slave screen is abnormal, and the Gallery and imported pictures cannot be displayed.

After the download process of Master HMI is finished, Slave needs to be restarted to monitor normally.

2) If the Master and Slave are operated on any screen, the screen also will follow the changes and synchronize for other side.

Using HSW12 = 1 on the Master, which can not affect each other.

3) There is no momentary delay function for buttons.


4) Multi-link version bit switch has no Min. holding time.

5) PI3000 series can only have one Slave when using this function, while PI8000/9000 series can use this function at most 5 Slaves.

6) Only supports Multi-link connection in the LAN network (local area network), or direct connection between Master and Slave.

7) The Master and Slave projects must be consistent (mainly for keeping the font style used by the Master and Slave HMI consistent), and the Slave HMI always adds the configuration of the "Master IP address".

8) After the special address is enabled, Slave will remotely monitor the interfaces from Master, and the source project will not be executed.

 **Note:** Slave project only needs to ensure that there is "the HSW address of the Master HMI IP" and the font style used by the Master.