

TECHNICAL NOTE

Maple Model(s)

Title

TN5033

Graphic HMIs
cMT Products

Multiple HMIs connecting to one PLC

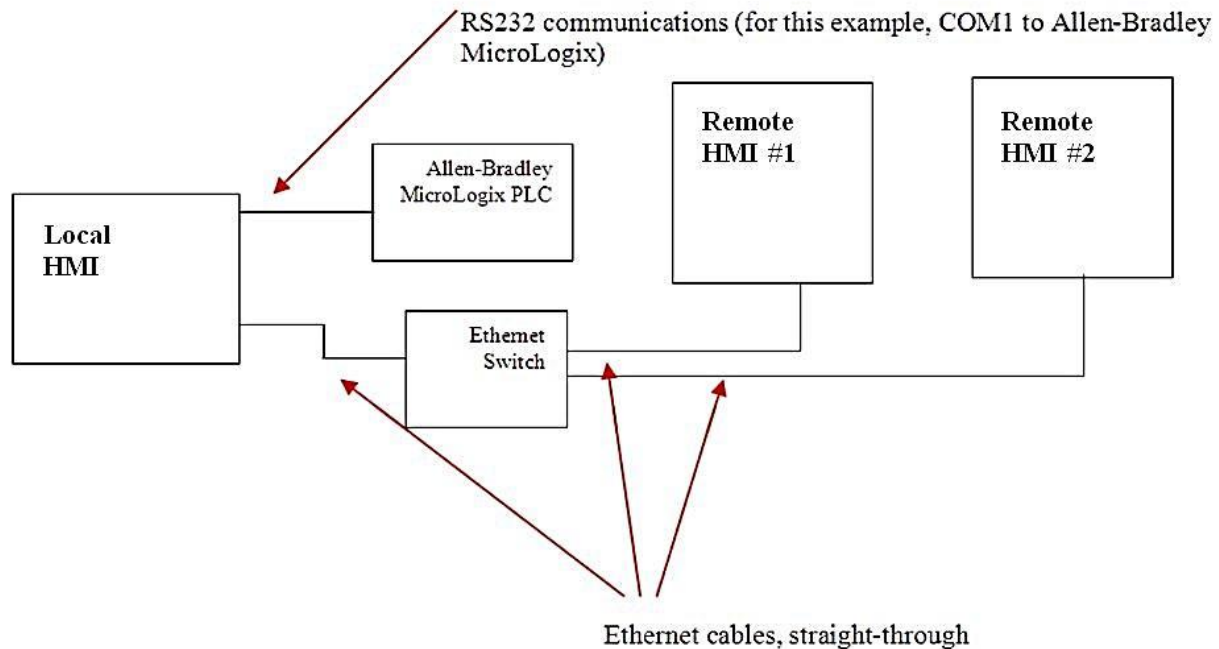
P/N: 0907-5033

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Summary

Several Graphic HMI units can be connected to one PLC as shown below. The HMI's can also directly share data.

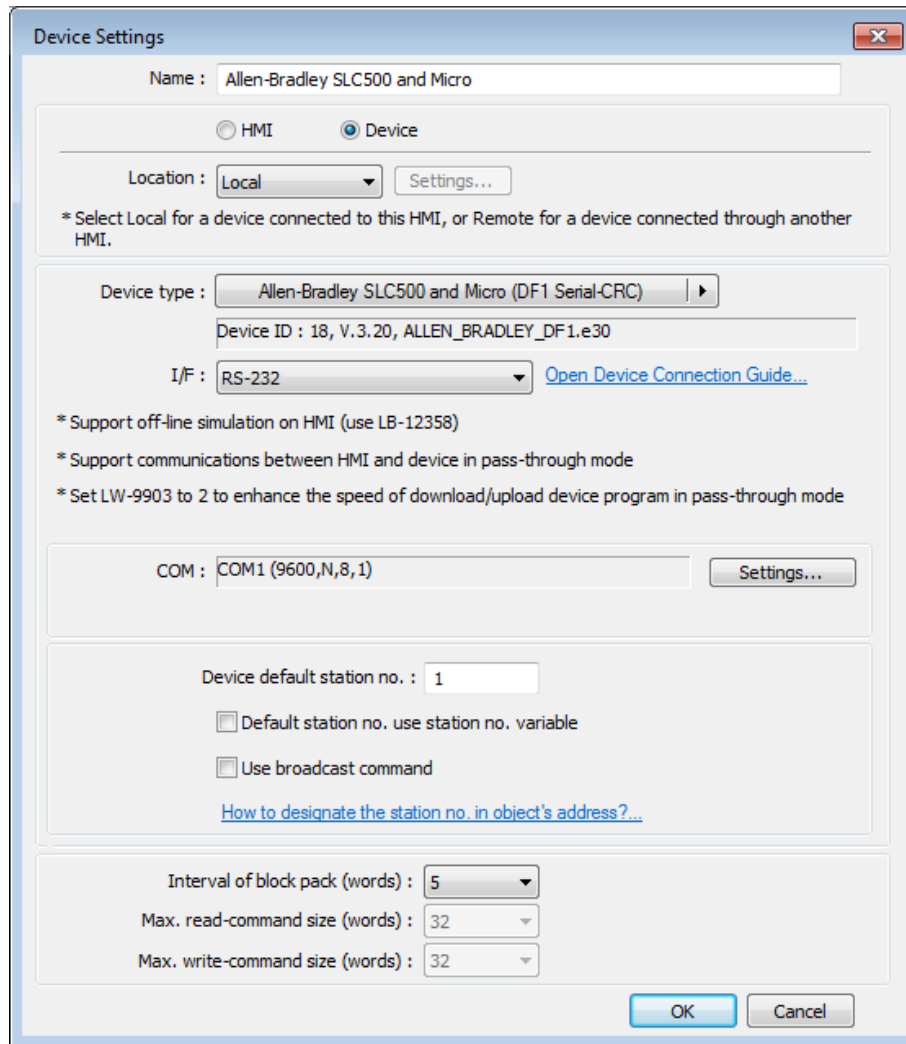


Solution

Communicating Between Advanced HMIs

Setting up the Local HMI

To set up the Local HMI, first enter the System Parameters. In EZwarePlus, this is found in Edit -> System Parameters, and in EBPro this is found in Home -> System Parameters. Once in System Parameters, select the Device tab and click New Device...



Select the Device type you are using and set up the COM port settings to match your connection type. In this example, we are using Allen-Bradley DF1 on COM1. Be sure to have Local selected for Location.

Setting up the Remote HMIs

After starting a new project for the first remote HMI, go to the System parameters and click New Device... as was done previously. This time, when setting up the device, change the Location to Remote.

The screenshot shows the 'Device Settings' dialog box. The 'Name' field is 'Allen-Bradley SLC500 and Micro'. The 'Location' dropdown menu is highlighted with a red box and is set to 'Remote'. The 'Device' radio button is selected. The 'IP' field is '0.0.0.0 (Port = 8000)'. The 'Device type' dropdown is 'Allen-Bradley SLC500 and Micro (DF1 Serial-CRC)'. The 'Device ID' is '18, V.3.20, ALLEN_BRADLEY_DF1.e30'. The 'I/F' dropdown is 'RS-232'. The 'COM' dropdown is 'COM1'. The 'Device default station no.' is '1'. The 'Interval of block pack (words)' is '5'. The 'Max. read-command size (words)' is '32'. The 'Max. write-command size (words)' is '32'. The 'OK' and 'Cancel' buttons are at the bottom right.

Enter the IP address of the Local HMI. This should be the IP address of the Local HMI, not the Remote HMI.

Select the Device type that the Local HMI is connected to. In the above example, Allen-Bradley DF1 has been selected. Verify that the COM port selected under COM is the same as is being used on the Local HMI.

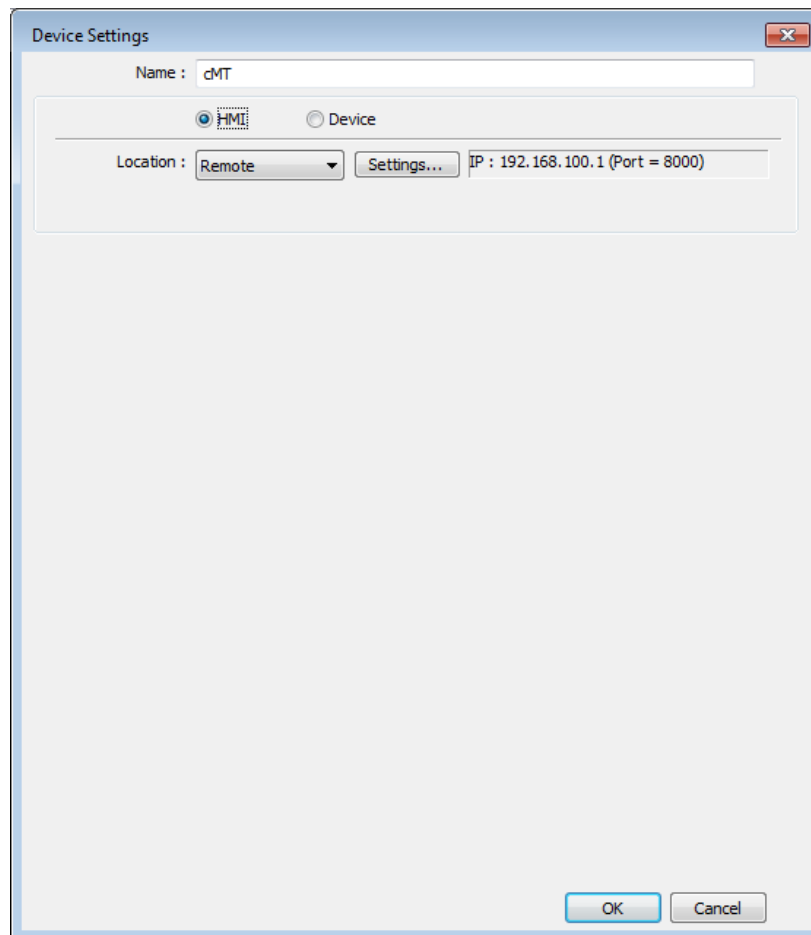
Summary of Connecting cMT Products to Advanced HMI Units

To communicate between a cMT Product and an Advanced HMI, there are a couple extra steps to take. In this instance, we will assume the Advanced HMI is the Local HMI, and the cMT Product is the Remote HMI.

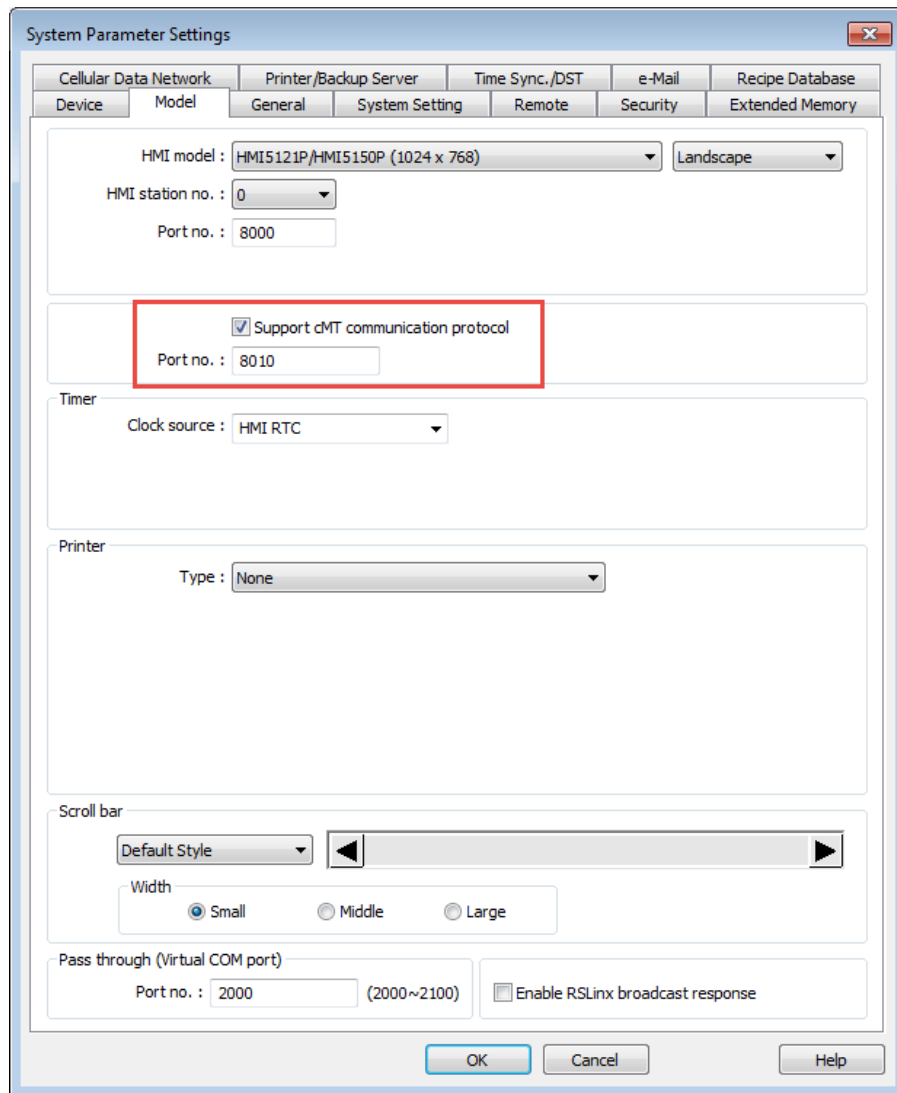
Setting up the Advanced HMI

Like above, add the PLC device to the Device list for the Advanced HMI. Be sure to select the correct COM port and set up the communication settings as required by the device.

In addition to the PLC, add another new device. This will be the cMT device. At the top of the Device Settings window, select HMI and change the Location to Remote. Then, click Settings... and enter the communication settings for the cMT.



With the cMT added as a Remote HMI, there is one more change required. In the Model tab of the System Parameters, check the Support cMT communication protocol checkbox and enter 8010 as the Port no.



With that, your Advanced HMI setup is complete.

Setting up the cMT

To set up the cMT to communicate, open the System Parameters and click New HMI... Enter the communication settings for the Advanced HMI and click OK. Now, go to the Model tab of the System Parameters and check the Support iE/XE/eMT/mTV HMI communication protocol and EasyWatch checkbox. Additionally, enter 8000 as the Port no.

The screenshot shows the 'System Parameter Settings' dialog box with the 'Model' tab selected. The 'HMI model' is set to 'cMT-FHD (1920 x 1080)' and the orientation is 'Landscape'. The 'HMI station no.' is '1' and the 'Port no.' is '8010'. A red box highlights the 'Support iE/XE/eMT/mTV HMI communication protocol and EasyWatch' checkbox, which is checked, and the 'Port no.' field set to '8000' (used as MODBUS server's port no.). Other options include 'Customized resolution' (unchecked) and 'Supported monitors...'. The 'Printer' section has 'Type' set to 'None'. At the bottom, 'Pass through (Virtual COM port)' is set to 'Port no.: 2000 (2000~2100)' and 'Enable RSLinx broadcast response' is unchecked. Buttons for 'OK', 'Cancel', and 'Help' are at the bottom.

Now, go back to the Device tab in the System Parameters and select the Advanced HMI Remote HMI connection. With that device selected, click New Device... and select the PLC connected to the Advanced HMI. In our example, it is the Allen-Bradley DF1. Set up the PLC communication settings as before, ensuring to select the corresponding COM port. Click OK to add the Remote Device. With that, each connection is set up.