

AutomationDirect Application Note

Connecting an EZ-Text panel to a Entity (Think & Do) Live/Studio WinPLC

INTRODUCTION

This application explains the process of connecting an EZ-Text panel to Entity (Think & Do) Studio/Live WinPLCs.

APPLIES TO ENTIVITY (THINK & DO) VERSIONS

Entity (Think & Do) Studio/Live Version 5.4 or higher is needed.

TOOLS NEEDED

1. Think & Do Studio/Live Version 5.4 or higher.
2. WinPLC loaded with the correct CE Runtime firmware. Check Entivity's website www.entivity.com for latest CE Runtime and programming software versions (*Live 5.4 requires that the WinPLC has the 5.4 CE Runtime installed the same goes for other versions*)
3. EZ-Text panel with firmware B.0 or higher (*All EZ Text panel models are supported*).
4. EZ-TextEdit software (*V2.0 or higher is required to work with all TnD Live and Studio versions*).
5. EZ-Text cables (*EZ-2CBL and EZTEXT-PGMCBL*).

QUICK NOTES

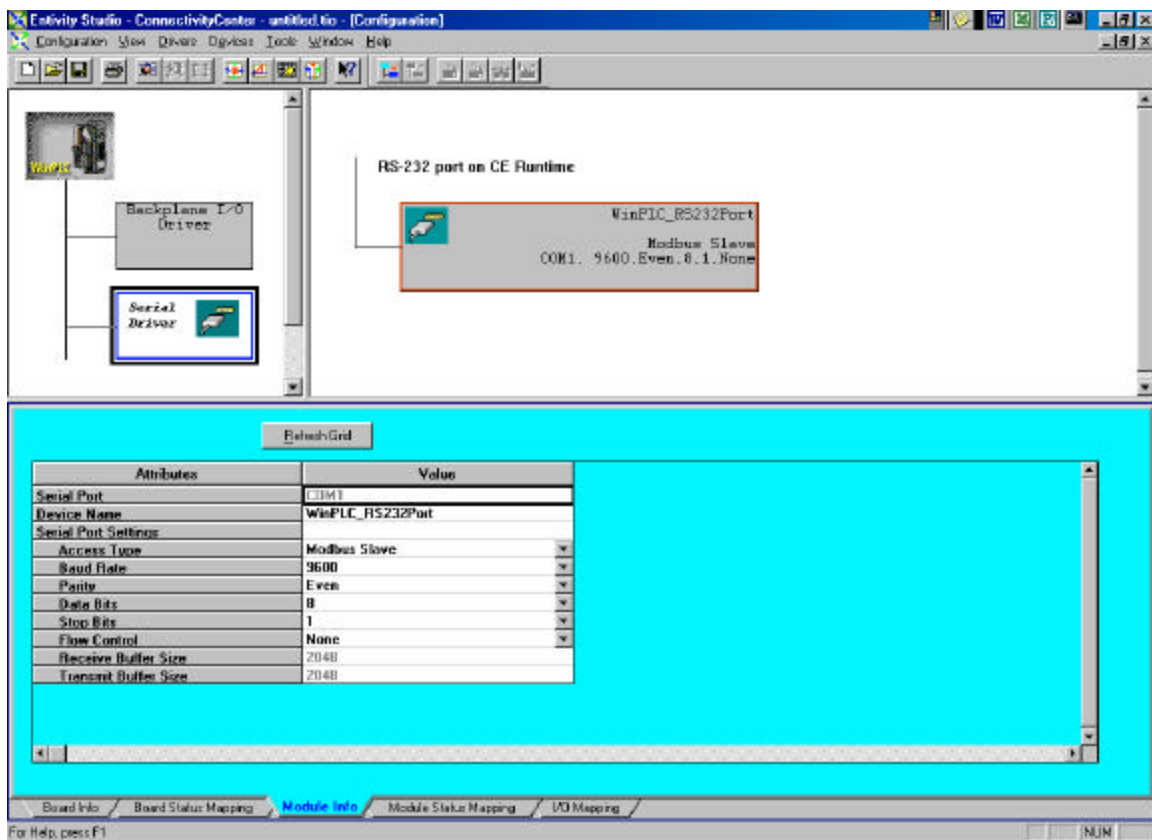
1. ***Please refer to the WinPLC Modbus Addressing Chart on page 5 of this document, it contains very important information about how your TnD Project will be addressed in conjunction with your EZ Text panel.***
2. It is strongly suggested that you complete your TnD project prior to importing your TnD MAP file. (*The MAP file contains all the Data Items you created in your TnD project*).
3. The EZ Text panels only support the **Number** and **Counter** Tag Data Items.
4. The Number Data item can only be used for Numeric Data Display or Entry you must choose Binary/Int32 for the number to display correctly.
5. The WinPLC must be in **RUN** mode in order for the panel to communicate with it. If the WinPLC is not in **RUN** you will get a "PLC Communication Timeout" error on the EZ Text display.
6. The WinPLC supports up to three of the H2-SERIO modules they will also be configured the same as the on-board WinPLC Serial port.
7. The **LED (Bit Read)** and **Buttons (Bit Write)** can only have **Counter** Data items assigned to them. Number Data items will not work.

THINK & DO PROJECT

The TnD project will be setup the same as any normal WinPLC project. You will create data items and flow charts as you normally would. In Connectivity Center (*Studio 6.XX*)/ I/O View (5.4,5.5) the WinPLC COM port must be setup as a **MODBUS Slave**. This will allow the WinPLC project to talk to the EZ-Text panel. You will need to configure the Serial port settings of **BOTH** devices to match. The default settings for the EZ Text panel driver are as follows:

BAUD= 9600 **PARITY= Even**
DATA BITS= 8 **STOP BITS= 1**
FLOW CONTROL= None

The settings for the WinPLC are illustrated below.

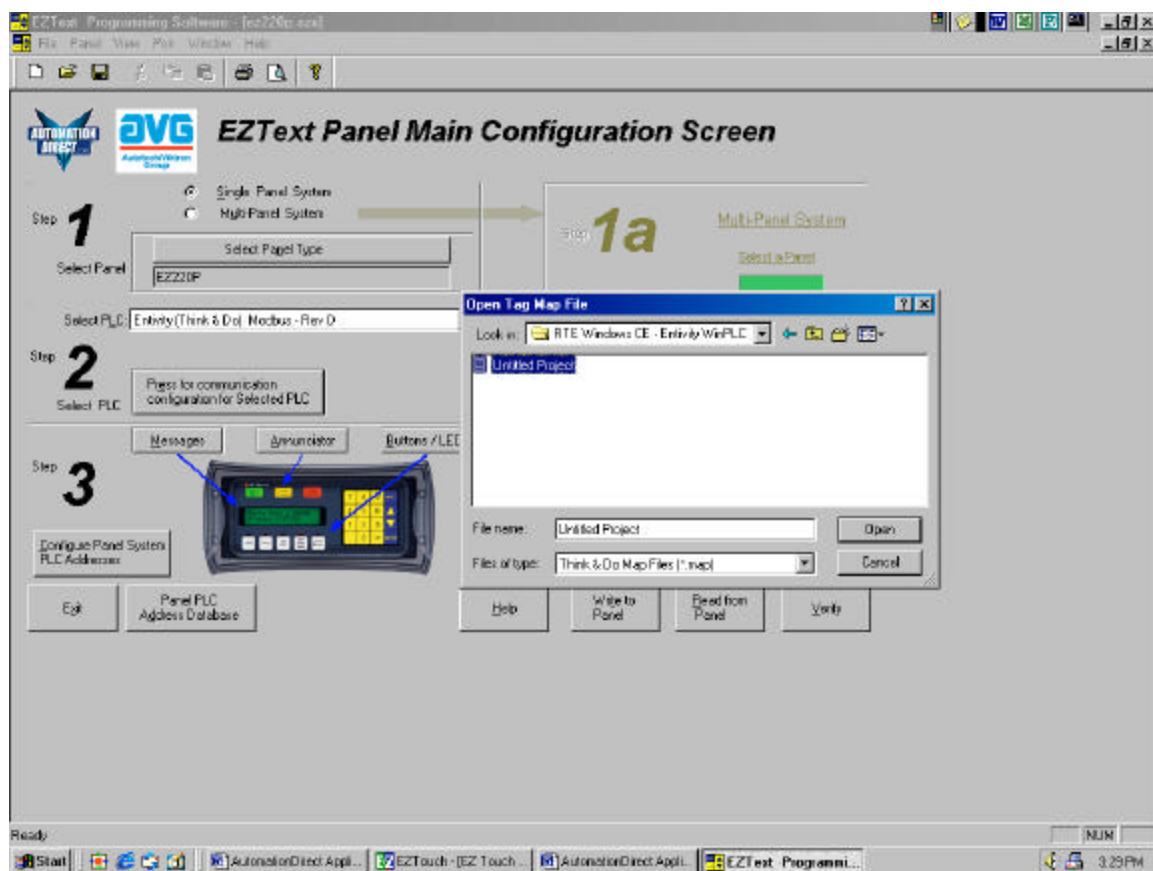


EZ-TEXT PROJECT

Step1 – Open an EZ Text project

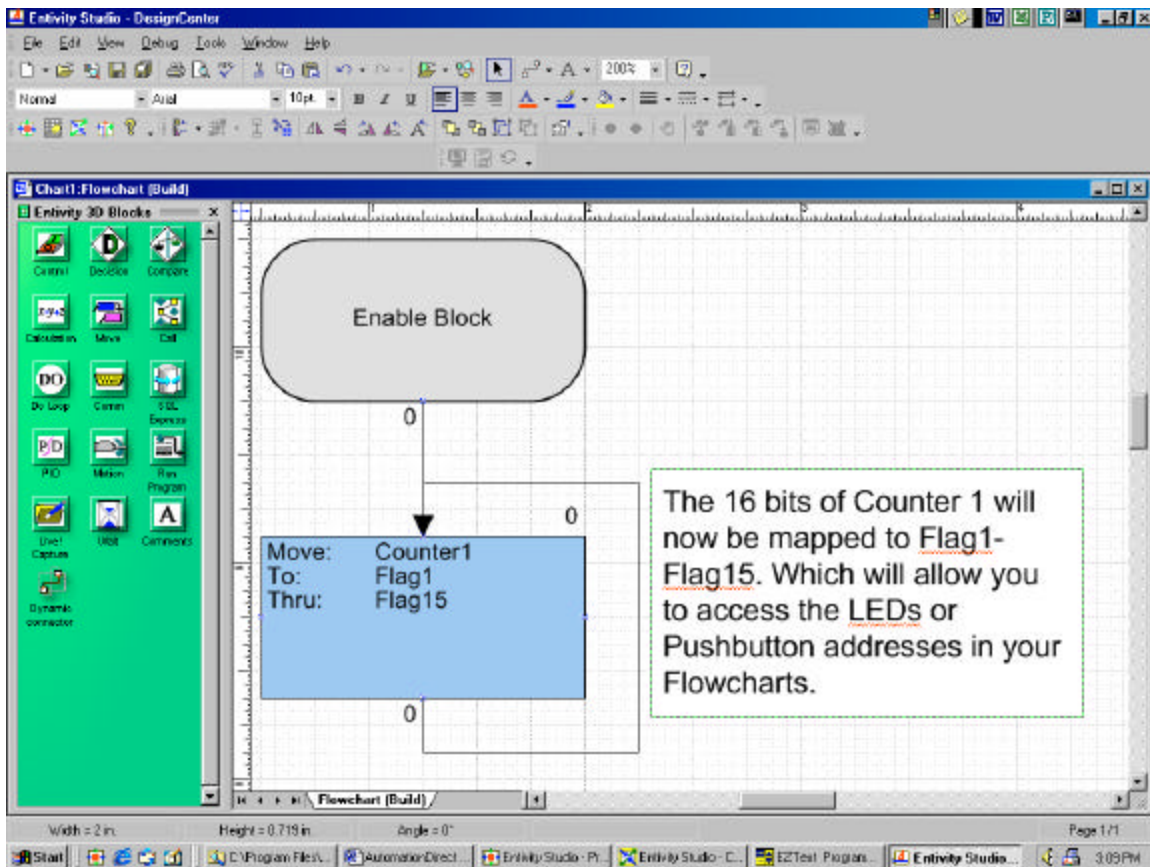
Choose **NEW SYSTEM** give the project a name and then save the project. The software will open up to the “ **EZ-Text Panel Main Configuration Screen**”.

In Step1 choose the panel type. In Step 2 you will choose **Think & Do Modbus** upon choosing the driver you will be prompted to **Open a Tag MAP file**. You will need to open the folder that contains the TnD MAP file for your project. This file is typically located in the (*RTE Windows CE Entivity WinPLC*) folder of your project. The window will look like the following.



Step2 - Configure your panel

1. Choose Messages to configure Local and PLC messages.
2. Keep in mind that only Number and Counter Data Items will be selectable for all address areas of the EZ-Text panel's setup.
3. In order to use the (*ANNUNCIATORS*), (*LED PLC WORD*) and the (*BUTTONS PLC WORD*) you will need to create a flow chart in your TnD Project. Use a MOVE Block to MOVE the Number or Counter Data Items to a range of Flag Data Items for each one of Functions listed above.
4. See example below.



Step3 - Write your project to the panel

Once you have setup and configured your Buttons, LEDs, Annunciators, Local and PLC Messages you can write your project to the panel.

1. Put the panel in Setup Mode by pushing the Up and Down Arrow adjust buttons simultaneously.
2. Select *Write To Panel*
3. Click on Verify to compare the program open in EZText Programming Software to the program loaded in the EZText Panel or the EZ Multiplexer.

WinPLC MODBUS Address Chart

1. The address ranges depicted in this chart are not modifiable. It is very important that you take into consideration the information in this chart prior to creating your TnD project.
2. When creating the data items that will be used in conjunction with your EZ Text panel it is imperative that the Data Item Addresses fall within this chart. For example: If you create a large project with a lot of Number Data Items and those Numbers exceed beyond address N-1023 they will ***NOT*** be mapped into your EZ Text project. There are ***NO*** MODBUS Address equivalents beyond N-1023 as far as TnD is concerned when used with the EZ Text panel.

Note: Only Counter and Number Data Types will import into your EZ-Text project. The Counter data type is available in all versions of Live and Studio V6.3 and higher. Counters must be enabled in Studio to be available. Refer to your Studio Help file and documentation for more information.

MODBUS OBJECT	MODBUS ADDRESS	THINK & DO DATA TYPE	THINK & DO LOGICAL ID
COILS	00001-04096	OUTPUTS	O-0 to O-4095
COILS	04097-08192	FLAGS	F-0 to F-4095
INPUT STATUS	10001-14096	INPUTS	I-0 to I-4095
HOLDING REGISTERS	40001-42048	COUNTERS	C-0 to C-2047
HOLDING REGISTERS	42049-44096	FLOATS	FP-0 to FP-1023
HOLDING REGISTERS	44097-46144	NUMBERS	N-0 to N-1023

Floats and Numbers use double word addressing with Modbus addresses. Therefore, to address N-O you will use Modbus addresses 44097 & 44098. To address FP-0 you will use Modbus address 42049 & 42050.