



TECHNICAL NOTE **TNOI22**

Title: The Port Input Function in Crimson 2

Product(s): G3 HMI Series

Crimson 2 provides a Port Input function. This function, when used in conjunction with the Red Lion's Raw Serial Port driver, will provide the same results as the General ASCII Frame driver. Thus this function will capture all input on a specified port that meets the requirements of the arguments provided.

PORT INPUT FUNCTION SEMANTICS

```
cstring PortInput(int Port, int Start, int End, int Timeout, int Length)
```

Where Port is the port that will be used to capture the input. Valid values are as follows:

```
Port 1 - Programming Port  
Port 2 - RS232 Port  
Port 3 - RS485 Port  
Port 4 thru 7 - Ethernet Ports
```

Start and End represent the beginning and ending delimiters, respectively. In the event that no beginning and/or ending delimiters are desired, a value of 0 for the appropriate delimiter should be used.

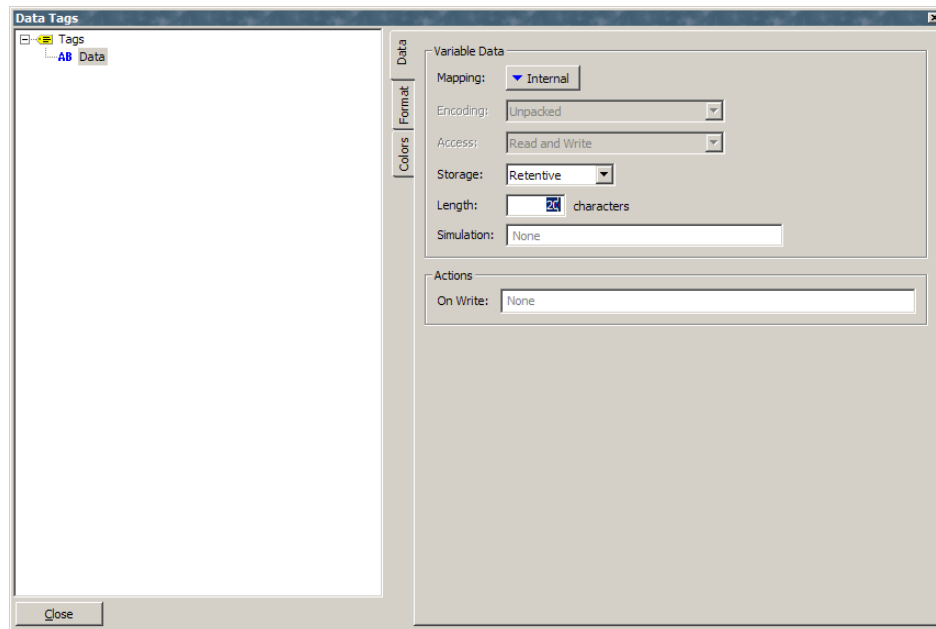
Timeout should be specified in milliseconds and is used as a character based time-out. If this time-out value expires before all requirements are satisfied, an empty string will be returned. If no time-out is desired, enter a value of zero for this argument.

Length is the maximum length of the string that should be captured. A specified length of 0 will default the maximum length to 256 characters.

USING THE PORT INPUT FUNCTION

STEP 1 - CREATE A DATA TAG

Double click on the Data Tag icon. Create a new variable of type “string”. In the example, the string tag has been renamed “Data” and set to Retentive storage. A length of 20 characters is specified.

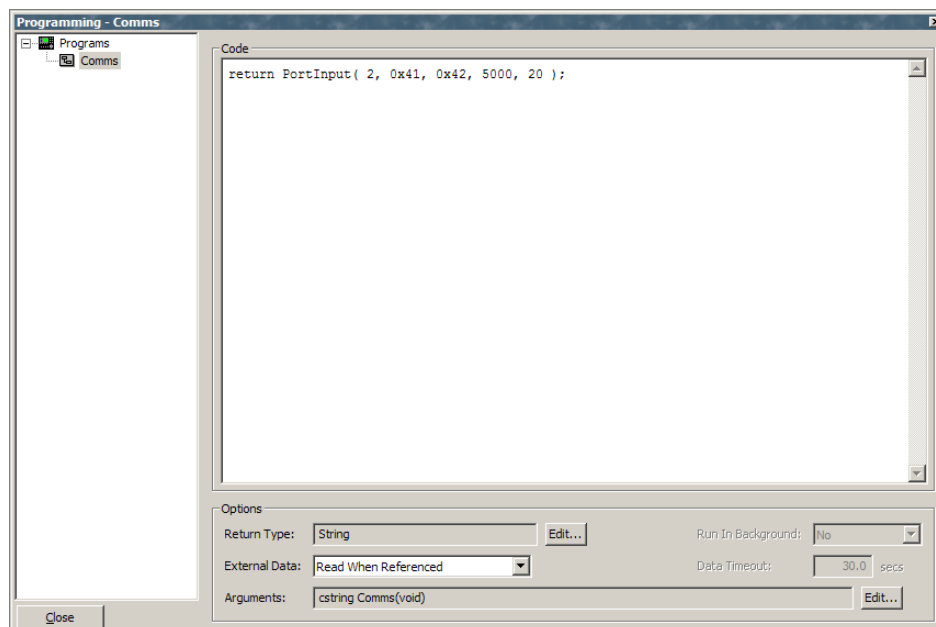


STEP 2 - CREATE A PROGRAM

Enter the programming area by double clicking on the Programming icon.

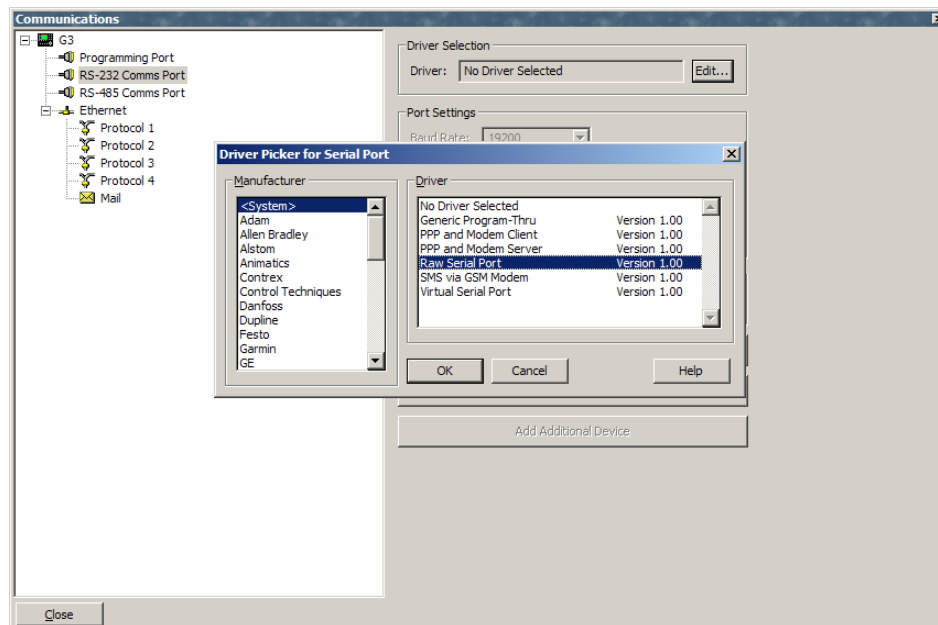
Create a program and specify the “Return Type” within the “Options” group as “String”. In the “Code” area, simply return the Port Input function with the desired arguments. In the example, the program has been renamed as Comms and the Port Input function indicates that the input will be captured on the RS232 port, using a start character of “A” and an end character of “B”. A character time-out of 5000 msec is specified and the maximum length of the string to be captured is set to a value of 20.

From the “Program” menu, select “Translate...” to ensure the program is error free.



STEP 3 - COMMUNICATIONS SETUP

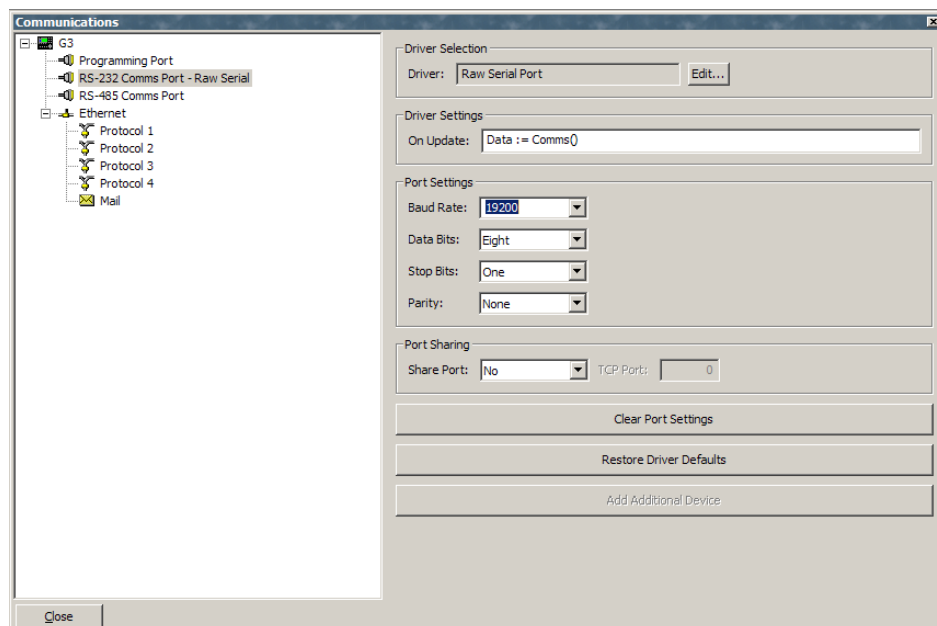
Finally, double click on the Communications icon. Highlight the port that corresponds to the Port indicated in the Port Input function in the previous step, then click on the “Edit” button within the “Driver Selection” area. In the “Driver Picker for Raw Serial Port” dialog box, select “System” as the Manufacturer then select “Raw Serial Port” for the Driver. Click “OK”.



In the “Driver Settings” group, set the “On Update” field as follows: string data tag := program()

In the example, since the string data tag is named “Data”, and the program is named “Comms”, Data := Comms() has been entered in this field. This action will call the program with the Port Input function and set the string variable to the input captured.

Port Settings should also be configured as appropriate.



SUMMARY

Through the string data tag, the input captured by the Port Input function can now be used as any other string data tag for a variety of purposes.