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Description for hipecs COM test demo project

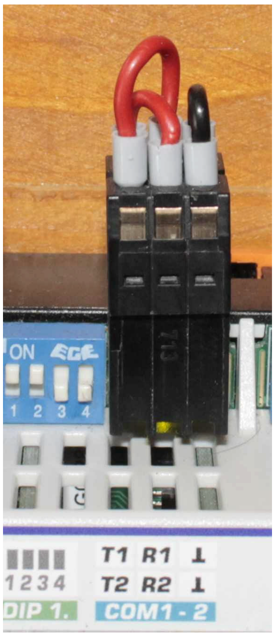
The hipecs COM test demo project is a Example for all functions available for serial connections with hipecs COM interfaces for the hipecs PLC and Core modules of frenzel + berg electronic.

Introduction

For this demo application you need at least a hipecs core module or a hipecs PLC. It is recommended to connect the COM1 and COM2 port of the hipecs with each other. It is also possible to connect the hipecs to any other device with a serial interface.

Preparation

If using the two COM ports of the hipecs, it is very easy to establish the serial connection with two short wires.
Connect: T1 => R2 and T2 => R1 and if possible both ground with each other.



hipecs setup

When using a frenzel + berg Visu-P Panel, you have to use the COM3 (RS422) interface for the SGI connection to the panel. Baudrate is 460.000 Baud. Check Visu-Panel DIP switches, too.

The “app_hipecsplc_comtest_v1r1_en.prj” file is the CoDeSys PLC program for this example. The communication parameters are COM15 and 57600 Baud. **This must be changed to your demands!**

Starting and using the demo project

It is recommended to use the target visualisation to operate the demo application. In the “Serial_VISU” visualization, there are several grey buttons. these buttons trigger the corresponding function once. The blue fields are meant to enter strings, that shall be sent or to enter the length which shall be received.

The different CoDeSys POUs and functions

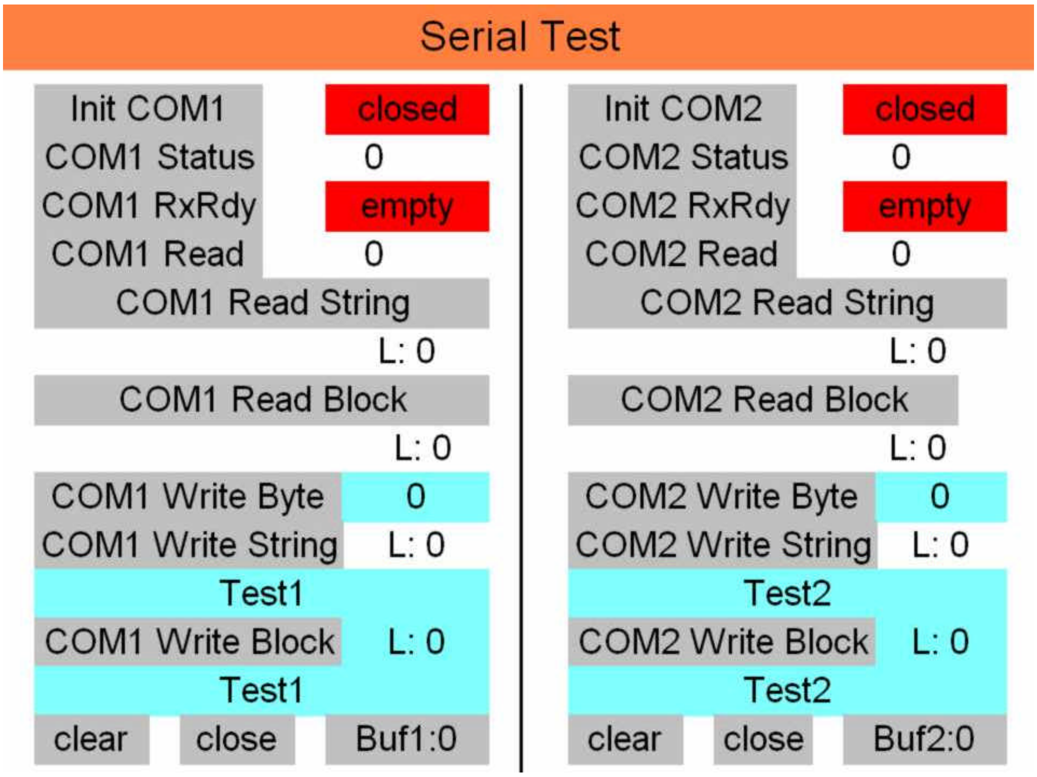
PLC_PRG

The only action for the PLC_PRG is to call the Serial_Test POU.

Serial_Test

In this POU, all functions of the FBESysSerial.lib are used. By clicking a grey button in the visu, the corresponding value is assigned to the Serial_step variable. By the IF selection the corresponding function is called and the step is set to 0 again. Every function is only called once. All IF selections are commented.

Visu



Button	**Function**
Init COMx	Initalize COM port by calling function: SysCom_Init(COM1,9600,8,COM_PARITY_NONE,1)
COM1 Status	get status of COM port: SysCom_GetStatus()
COM1 RxRdy	check receive buffer for pending data bytes
COM1 Read	read single character from receive buffer
COM1 Read String	read string from receive buffer
COM1 Read Block	read block from buffer (no len to enter! default is set to 255)
COM1 Write Byte	Write a single character to transmit buffer. Enter character in the blue box beside!
COMx Write String	Write String to transmit buffer. May be changed in blue box below.
COM1 Write Block	Write Block to transmit to buffer. Length is calculated by LEN function when sending.
clear	clears receive buffer of COM port
close	closes COM port
Bufx:	checks the number of characters still pending in the receive buffer.