Embedded Systems
COEN20

Optional Assignment

Lab Assignment 8 week 10

Equipment used: AVR Butterfly
To be programmed in: C

EXPERIMENT 1 Serial Communication

Use the serial communication routines for sending data from the AVR Butterfly to a PC.

On the AVR Butterfly: Write a C program to continuously read the light sensor value from the A/D converter and transmit it as a single byte value over the serial line to a PC.

On the PC: Record 100 values that are being sent from the AVR (e.g. using HyperTerminal or TeraTerm Pro). Then display the values as a diagram in Excel.

Bonus Point: On the PC, instead of using HyperTerminal and Excel, write a C program (using MinGW, devC++ or, Visual-C++ or .net) to communicate with the AVR. The program should continuously read the serial transmission from the AVR and graphically plot the values in a window.