

Embedded Systems

ELEC3020

Lab Assignment 6 – Communication

Points: 10

- TEAMS:** This lab will be conducted in teams of 2 students
- EQUIPMENT:** 2 x TTGO Embedded Controller
USB cable to connect to laptop
Protoboard with cables
1 Servo
1 analog PSD sensor



EXPERIMENT 1 (5 points)

Connect your TTGO controller to that of a classmate via a serial link (2 pin). The two controllers are to exchange 8-bit numbers with each other.

- The TTGO on which the button-1 is pressed becomes the master, the other TTGO becomes the slave.
- The Master sends number 1 to the slave
- Each controller displays a received number on its screen, then increments it and returns it to the other controller.
- When button-2 is pressed, the communication stops.

EXPERIMENT 2 (5 points)

Connect the PSD sensor to an analog controller input of TTGO-1.
Connect the servo to a PWM output of TTGO-2.

TTGO-1 should continuously read, display and transmit the PSD value.
TTGO-2 should display the value and move the servo accordingly.

