

Practice April 28, 2016 – IR distance sensor

This practice has to be done with the robot's card, including a MSP430G2553 (as the LaunchPad, but with an other package with more pins). This microcontroller will be programmed by the Launchpat through wires.

You will find on Moodle a document about this module « Capteur de distance infrarouge xDist2IR ». I am sorry, it is in french... Ask me for explanations during the practice !

1) Mesuring a distance

Indications will be given to use the card.

First make blinking a LED (red on P1_0 or green on P1_6).

Write then a “chenillard” on a group of 8 LED.

2) Read a distance

Use the first detector. This is the pin-out of the module :

(1) Gnd (2) +3V (3) Phototransitor left (4) Phototransistor right (5) IR

Write a procedure to measure the distance. Display it on one of the 2 LED's group.

3) Distance reading and PWM by interrupt

Imagine a program that manages in the same time the reading of distances and PWM on the 2 LEDs, using interrupts.