
Engineering Design Challenge 2.0

Drive Smarter

Communication format

Before the start of the shawarma express rounds, the organizers will pair our communication server with your car. We will ask you what the pairing PIN code is. Note that only our own server is allowed to communicate with your car during the round.

The competition organizers will host a Bluetooth master that will send a message to your car, via a Bluetooth-serial bridge connection; the same method we used to communicate with the HC-06 in our Bluetooth workshop (slides available on our website) – basically, if you are able to connect to your car from a computer using PuTTY/Tera Term, your car would be compatible with our communication server. Note that it is your responsibility to ensure that your car will be able to accept the Bluetooth connection from our server.

The orders message will be sent at the start of the round. The operator can prompt the organizers to re-send the message to the robot at any time during the round, up to 3 times.

The following is an example of the orders message

ORDERS 13 7 16

The message will start with the word ORDERS, followed by a space, then 3 space-separated destination numbers, in no particular arrangement, indicating the on-the-spot orders. The message will be terminated with the newline character '\n'.

This is an example of a valid confirmation message for the previous orders

CONFIRM 16 13 7

The message needs to start with the word CONFIRM capitalized, followed by a space, then the 3 space-separated destination numbers. The message should be terminated with a newline character '\n'. Note that the message needs to adhere exactly to this format to guarantee the confirmation message points. The confirmation can be sent at any point during the round.