**CAN BUS**

CAN (Controller Area Network) is a protocol for sending data without hosts, every device can send data within the CAN bus.

This protocol simpler how the data send from one device to another, without connect each one to multiple devices.  
(this days, the average number of ECU ([electronic control units](https://en.wikipedia.org/wiki/Electronic_control_unit)) is more then 70)

Every device on the CAN bus called Node and contain more hardware for communication with the bus.

CAN uses in 2 cables, low and high, when they idle the have 2.5v,  
and when they loaded: the high go to 3.5v and the low go to 1.5v.

When the bus is used, no node can send data, the node needs to wait for the bus being idle, and then he can send data.

The CAN use only with 2 layers from OSI, so it's fast.  
(the first layer is only bits- 1 or 0, the second can collect from the bits information)

There are many types of frames that develop in the years, but they have the same format.  
The mains fields are the ID and the DATA itself (each one divided in more fields).

Links used:

<https://www.csselectronics.com/pages/can-bus-simple-intro-tutorial>

<https://en.wikipedia.org/wiki/CAN_bus>

<https://www.youtube.com/watch?v=v_y65h68z3U>

<https://www.youtube.com/watch?v=ulcKnrPmJqM>