

CAN Data

CAN protocols selection – SmartyCam GP HD 2.2

Question:

How can I configure the compatible CAN protocol with my vehicle Engine Control Unit (ECU), to represent data through my SmartyCam GP HD 2.2 overlays, when directly connected to the ECU?

Answer:

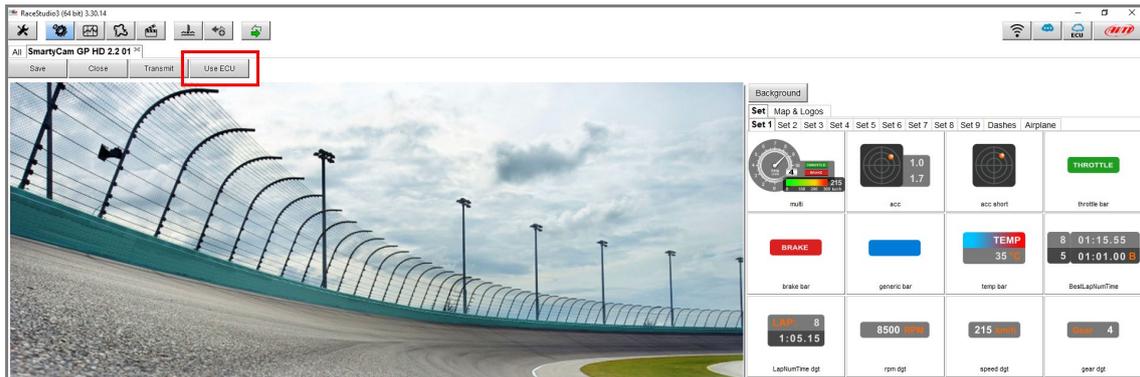
After SmartyCam GP HD 2.2 has been directly connected to the vehicle ECU, it is necessary to proceed selecting the compatible communication protocol through Race Studio 3, in the way explained below:

- Turn the camera on and connect it to the PC, run Race Studio 3, enter the Configurations section () , open an existing configuration or create a new one, pressing "New" (following image), selecting the device and adding a name/comment, then press "OK".

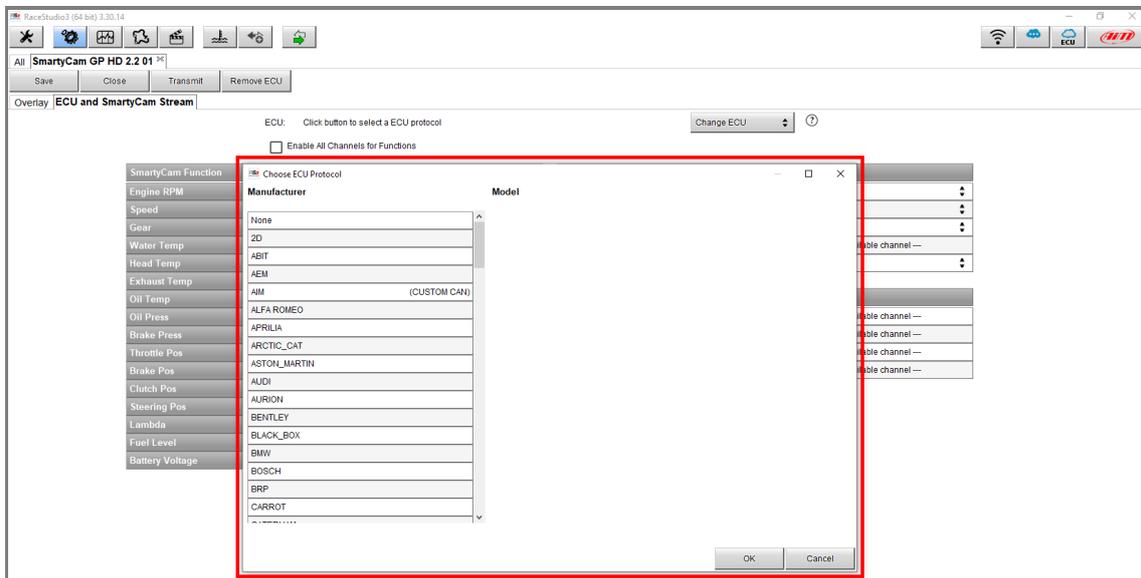


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- The camera configuration window appears, from which it is possible to choose and set the overlays that will be displayed into recorded video, positioning them in the left preview area. To enable the CAN protocol selection, click the “Use ECU” button (red box; following picture).

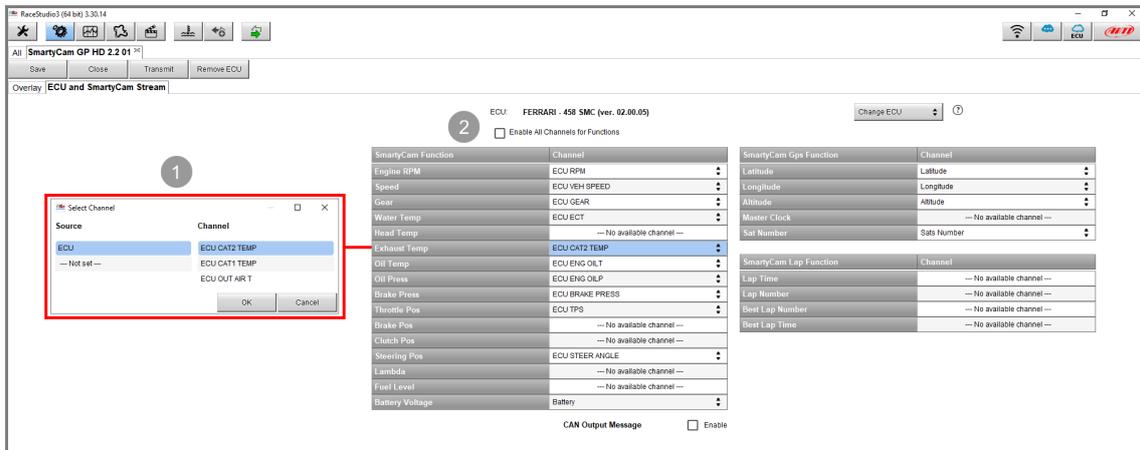


- The “ECU and SmartyCam Stream” tab shows up, displaying the protocol Manufacturer and Model selection window (red box; following picture).

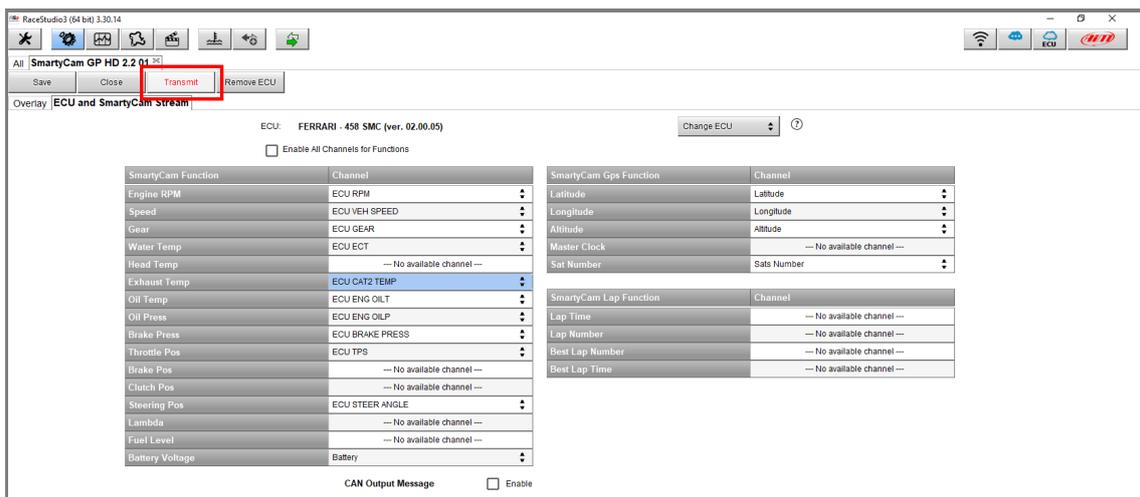


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- Once the protocol has been selected, its channels are automatically associated to the camera overlays functions (in the following picture, “Ferrari – 458 SMC” communication protocol has been chosen). To change reference channel, click on its name: the window to select the new reference channel appears (1), that shows a filtered list of protocol channels with the same function; to remove the filter and enable all the channels, tick the “Enable all Channels for Functions” box (2).

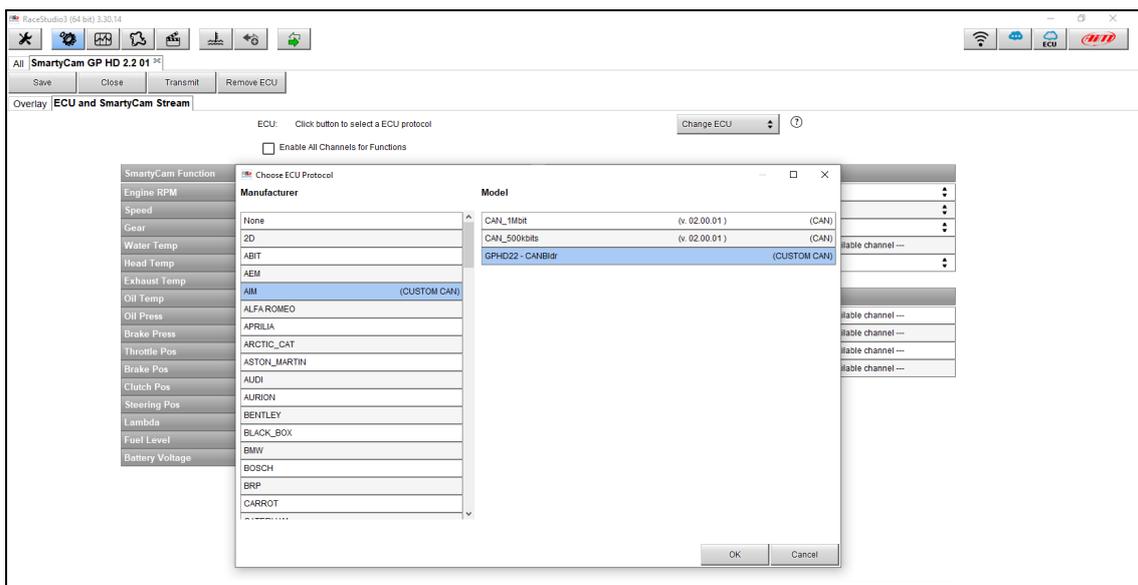


- When this operation is ended, press “Transmit” to transmit the configuration to the camera, making the new settings effective (red box; following picture).



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If the ECU communication protocol is not included into the Race Studio 3 list and the user has relevant details to build a custom protocol (ID, baud rate, endianness, gain/offset...), the ECU driver can be independently created from Race Studio 3 CAN Builder section () . Once completed, it will be included in the protocol selection window as "CUSTOM CAN" (following image).



N.B.: SmartyCam GP HD 2.2 only handles standard CAN communication protocols that are automatically broadcast by the ECU: no CAN protocols simulating serial streams nor CAN protocols with remote frame messages (requests for data transmission) are allowed.