

Teltonika ADAS testing instructions

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1. Wiring and preparation of the ADAS

ADAS and FMxy25 or FMx64 connection should be done with 4 wires, RS232-TX, RS232-RX, and Ground and Power cables. Ground and Power wires are connected to the Power Supply, while the RS232 RX and TX wires are connected to the device, for data transferring. If the device will be tested in the vehicle additional preparation steps might be needed.

2. Camera unit preparation

The camera unit comes factory prepared for vehicles with vertical windshields, like buses and trucks. To set up the unit for vehicles with non-vertical windshields, additional preparation steps would be needed.

The unit preparation instructions are available on the following Teltonika wiki page:

- [ADAS preparation](#)

For full ADAS testing, it is required to mount it in the vehicle; therefore additional calibration steps would be needed. Calibration and CAN configuration steps are described on the following Teltonika wiki pages:

- [ADAS installation in vehicles](#)
- [ADAS calibration](#)

3. ADAS and FMx125,FMx225

Connecting ADAS to FMxy25 devices requires a direct connection of FMxy25 RS232-TX to ADAS output and RS232-RX to ADAS input for data reception, please refer the figure 1, where the connection scheme is displayed. Although the ADAS can be connected to the FMxy25 devices, **only ADAS IO** elements would be available.

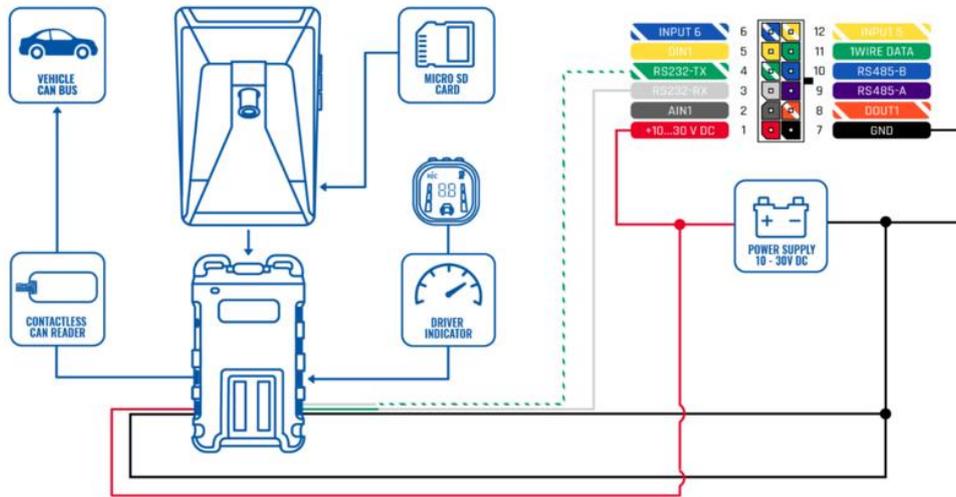


Figure. 1 ADAS and FMxy25 connection scheme

Please note, that ADAS unit should be connected to the ignition source, to ensure that there wouldn't be battery drain.

4. ADAS and FMx64

FMx64 series devices don't have dedicated wires for RS232 RX & TX; therefore RJ45 type of connector is required. Connect the RJ45 cable to the FMx640 device's port 1 or port 2, both slots have RS232 support. Once connected, the other end of the cable should have pins 3 (Rx), and 4 (Tx) shaved and connected to ADAS camera Rx and Tx cable. A detailed connection scheme is displayed in figure 2.

Sometimes pinout of the RJ45 connector might differ; therefore it is recommended to double-check the pins.

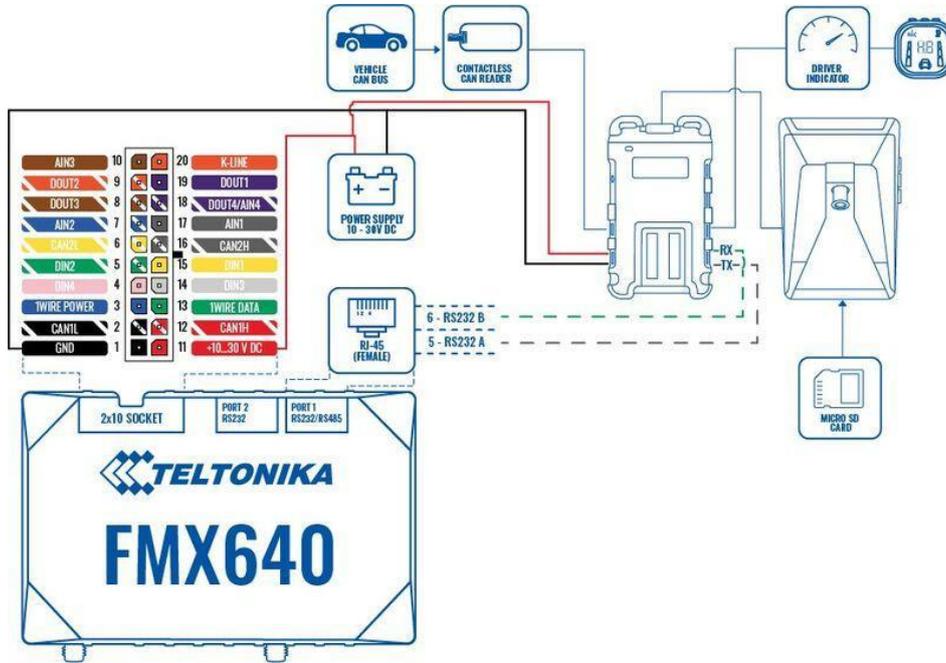


Figure. 2 ADAS and FMx64 connection scheme

Please note, that ADAS unit should be connected to the ignition source, to ensure that there wouldn't be battery drain.

5. Teltonika FMx64 device configuration

Once the ADAS and FM device preparation is done, configuration from the FM device side would be needed. Please make sure, that the latest FW and configurator version is used, currently, it is 01.02.22.Rev.101 for FMx64

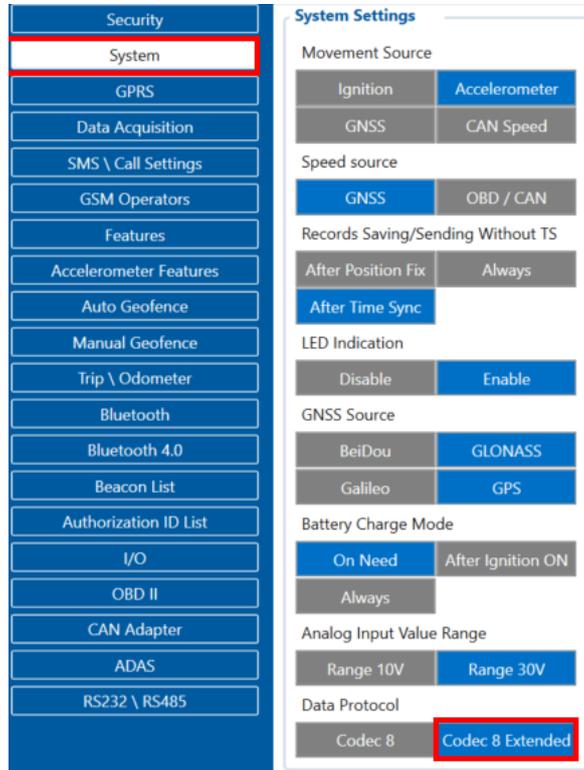
For ADAS working it is mandatory to enable Codec 8 Extended.

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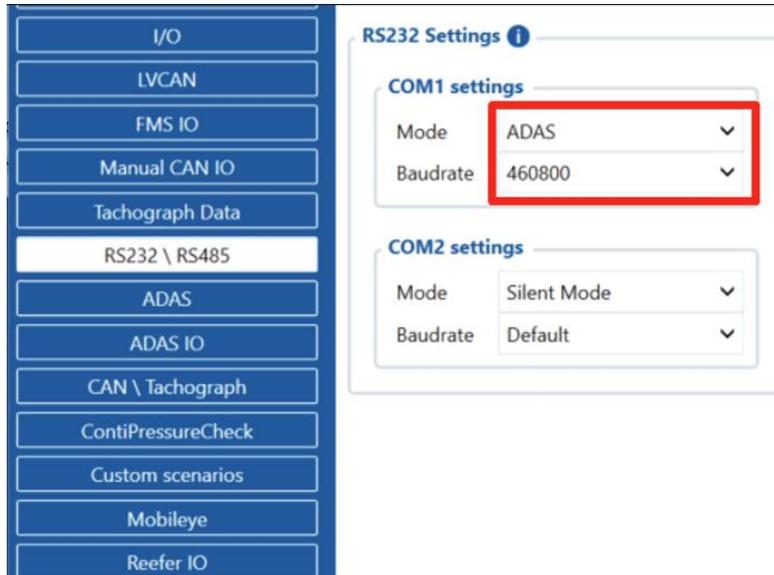
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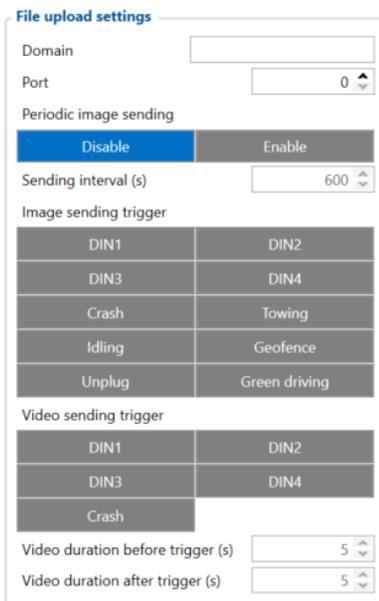




In RS232/RS485 setting select ADAS under RS232 mode and select baudrate of 115200 for FMx25 or Auto/46080 for FMx64.



After the ADAS mode will be selected additional Configurator tabs will appear, ADAS and ADAS IO.



Once the FMX64 device is set up with the required settings, a server has to be entered which will allow the user to send the videos/photos to their desired server. This can be tested by entering the server IP address and port number into the requested fields and activating a trigger or setting up periodic image sending.

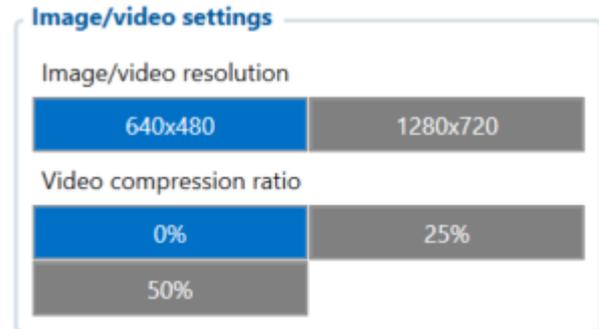
Different resolutions and compression can be selected for the picture quality, in some cases, when the picture quality is low, it is beneficial to play around with image resolution and compression to see which settings would suit the user the most.

Regarding picture resolution, Teltonika Telematics cannot advise on the most suitable solution as it is heavily dependent on the user's use case scenario and their requirements. Therefore, please proceed to

this wiki page ([here](#)) where image resolution, sizes and transfer speeds are described.

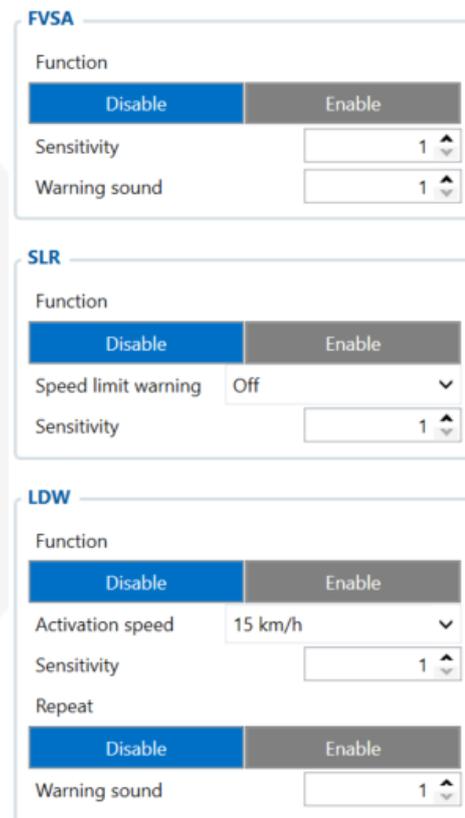
Periodic image sending and image triggering are also selectable parameters which can be set to automatically send images to the designated server or a trigger can be used to send photos taken at the time the trigger was initiated.

Testing triggers can be done by selecting any of the applicable triggers, either DINs or features and manually activating them by either adding a DIN to a power output on the power supply or activating some of the features like Crash. Where the user lightly hits the device onto a table or a hand to activate the gyroscope which in turn activates the Crash feature and the image will be taken. Some of the other features can be tested inside the vehicle, like Green Driving. Please make sure that these features are turned on in the “Features” tab and configured.



It is possible to enable additional features:

- FVSA — Forward vehicle start alarm.
- SLR — Speed limit recognition.
- LDW — Lane departure warning.
- FCW — Forward collision warning FCW.
- SDA — Safety distance alert.
- PCW — Pedestrian collision warning.
- FPW — Forward proximity warning



Overlay

Function

Disable	Enable
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Overlays

Date and time	GPS information
Speed	

Overlay information update period (ms)

Overlay speed source

GPS	LVCAN
FMS	KLINE

Garbage collector

File history storage period (days)

Additionally, different overlays and overlays speed sources can be tested. 3 overlays options are available:

- Date and time
- GPS information
- Speed

When the speed option will be selected, the overlay speed source will become configurable, which would allow more flexible configuration for a specific use-case. E. g. if the CAN wiring scheme is not available, different speed sources can be selected, to ensure, correct speed representation on the overlay.

For a more detailed each feature description on [ADAS configuration wiki page](#).

After the ADAS installation, calibration and configuration the device can be tested in real environment. The device will output necessary information via the display, and the telematics device will be able to send the data to the server with help of , to test video/image sending „mdas_camreq“ might be used:

mdas_camreq:<file_type>,<file_source>,<timestamp>,<duration>,<domain>,<port> - is a command that sends video/photo requests to the FMx64 device and the device will start taking either the video or photo and send it to the designated server.

- <file_type> 0 – Video, 1 – Snapshot
- <file_source> 0 – hardcoded MDAS. 1, 2 and 3 are reserved for DualCam project.

- <timestamp> Unix timestamp in decimal
- <duration> Video duration in seconds from provided timestamp (not required for photo download) (up to 30 s)
- <domain> Optional – domain to where file has to be sent
- <port> Only required if domain is used

Example command without domain:

mdas_camreq:0,0,1672531200,15

This command would request **15** seconds long **video** from **2023-01-01 00:00**.

Example command with domain:

mdas_camreq:0,0,1672531200,15,212.59.13.226,7000

This command would request **15** seconds long **video** from **2023-01-01 00:00** and send it to server with IP **212.59.13.226** and port **7000**.

Credits

If you have any further questions/issues with connection of the ADAS, please contact your direct sales representative OR create a VIP Helpdesk query where a technical support member will be assigned to you.

After completion of the testing, please provide feedback to your direct sales representative, we would appreciate your contribution to improving our services and quality of provided information.