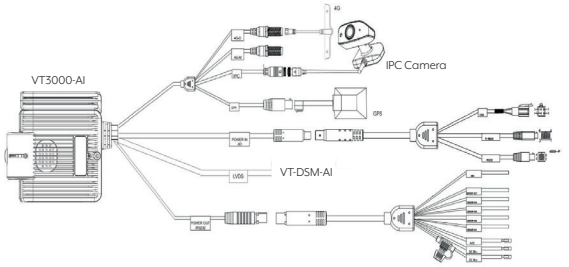
VISIONTRACK

VT3000-AI
INSTALLATION GUIDE



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Intallation Example:

Intallation Notes:

- When fitting the ADAS camera, you are advised to warm the windscreen up using the vehicle demisters.
- Clean the surface with a cleaner or alcohol; wipe and leave to dry.
  Line the camera up and ensure the positioning is correct before sticking the mounting bracket in place.
- Once stuck, rub the pad to push out any trapped air to ensure it is well bonded.
- The ADAS camera should always be fitted at the top of the windscreen but avoid the hatched area around the mirror as this can interfere with the communications.
- The R-Watch is best installed at the base of the driver's "A" pillar.
- The DSM camera should be mounted on the driver's "A" pillar, the camera should be mounted between shoulder and head height for best functionality.

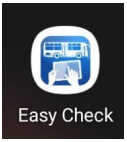
Connectivity:

Network	Function	Notes
DC in +	+30 Permanent supply	12 / 24V Fused 3A
DC in -	-31 Chassis ground	12 / 24V Fused 3A
ACC	+15 Ignition signal	
Sensor in 1	Left Turn Signal	
Sensor in 2	Right Turn Signal	
Sensor in 3	Reverse Signal	
Sensor in 4	Panic Button	
Sensor out	Output	Event out to trigger telematics or similar devices
Sensor GND	Ground for Sensor in's	

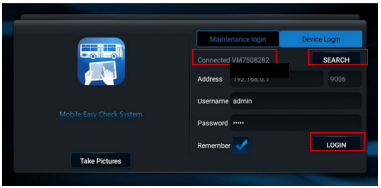
- If the ADAS lane departure event is being used, you will need to connect the turn signals from the vehicle. Connect these by either using the Sensor ins or via the CANbus interface.

Device Setup

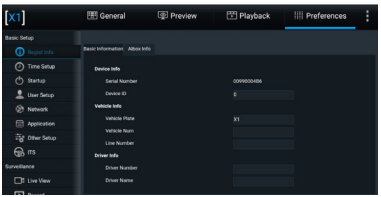
- Using a tablet or phone, download the free “RM EasyCheck” app for IOS or Android from the store.



- Once you’ve powered up the camera, wait a few seconds and then using your tablet or phone, search for a Wi-Fi network. A Wi-Fi network should appear that matches the serial number of the camera. Connect to this network. When connected, it may say no data available and give you an option to keep trying or revert to cellular connections, select keep
- trying.



- Use the “search” button right-hand side and the camera serial number should appear.
- Enter the Username and Password and click “login”.

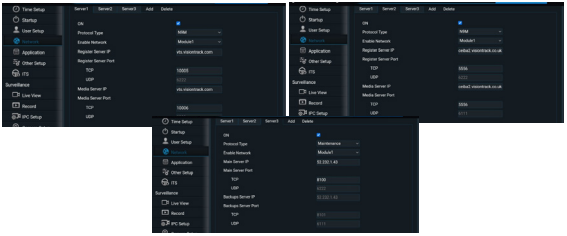


- On the top menu bar, select “preview” this will bring up a quad image and show what cameras are connected. Double tap on the image to make it full screen if needed.
- Once all cameras are connected and working, we can begin the calibration process.
- If any of the cameras are not being detected go to (channel set up and image below) and make sure the channels are set to active using the check box next to each channel, if any changes are made always scroll to the bottom and select “ok” or “save”. Go back to “preview” and now the cameras should be visible.

Basic System Setting & Server Settings:

- For the device to be able to communicate with the server it requires the correct APN to be set according to the sim that is being used.

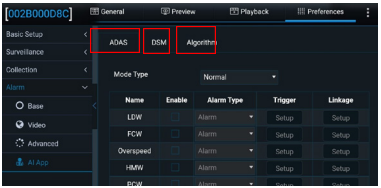
- It also needs the sever address, the device can have 3 servers listed in its settings.



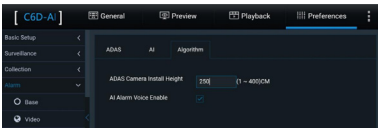
- These settings should come preloaded onto the device. If the device is not functioning correctly, check these are correct on your device.

Calibration & Set-up Process:

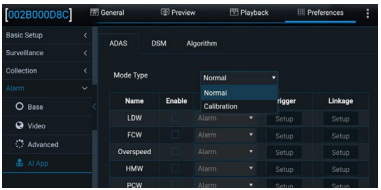
- It is important at this stage to know exactly which event the customer requires. Some customers do not use the ADAS forward facing events and only use the DSM Driver Events.
- Using the menu across the top got to “preferences”, on the menu down the left-hand side, go to Alarm/AI APP.
- In here you have 3 tabs “ADAS” – “DSM” – “ALGORITHM”.



- Select the “Algorithm” tab.

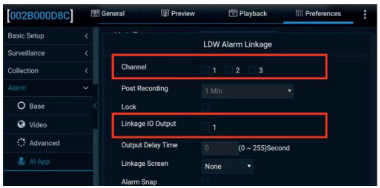


- Enter the camera height from the ground in centimetres and click “save”.
- Go back to the “ADAS” tab and select “calibration” from the dropdown box.

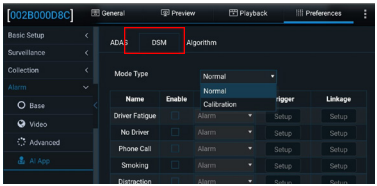


- All the of the events are set up using the same process. Use the check box in the column.
- “Enable” to select or deselect the events. Make sure you click save at the bottom of the pages once you have selected all the events required.

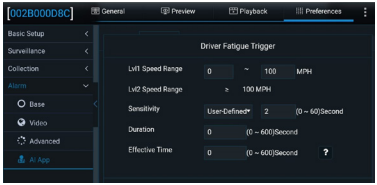
- You need to set the speed thresholds for the events, in normal operation these should generally be set 10 – 100MPH and Lvl2 to >100mph. For the testing purpose these should be set to 0mph so that we can safely trigger the events to test, then set this back to the operational settings once tested.
- The Sensitivity should be changed to “user-Defined” and set to “2”, this is the optimum set up but can be changed on customer preference.
- Click save and repeat this process for each event required.
- Once this complete we move onto the “linkage” settings. Click on the “linkage” option and you will get the screen below.



- You need to select the channels to record when the event it triggered (select all channels).
- If the event needs to output to a telematics unit, you can select the “linkage IO output” and set how long the output should last.
- Do this for each of the required events and make sure to click “ok” or “save” after each change.
- Next go onto the “DSM” tab.



- Again, set the mode type to “calibration”.
- Use the check box in the column “Enable” to select or deselect the events. Make sure you click save at the bottom of the pages once you have selected all the events required.
- Once you have selected the events required, we can move onto the “trigger” settings. Click on “trigger” and the window below will appear.



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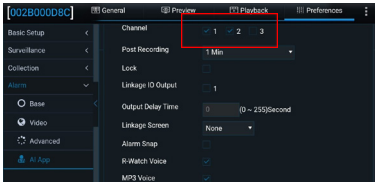
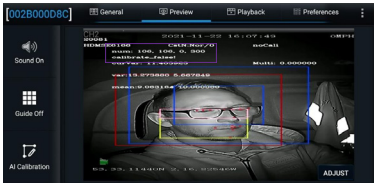
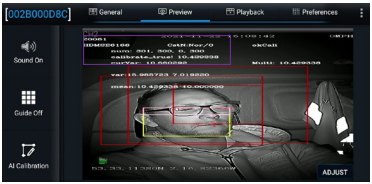
- Click save and repeat this process for each event required.
- Once this complete we move onto the “linkage” settings. Click on the “linkage” option and you will get the screen below.



- You need to select the channels to record when the event it triggered (select all channels)
- If the event needs to output to a telematics unit, you can select the “linkage IO output” and set how long the output should last.
- Make sure the “R-Watch Voice” in enabled.
- Do this for each of the required events and make sure to click “ok” or “save” after each change.
- Next go to “Preview” on the top menu.
- Double tap the DMS camera image to make it full screen.
- Your image will appear with some coloured boxes on it and the calibration details like below.



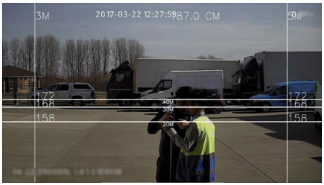
- The calibration will start, it is vital you stay still for 30 – 60 seconds during the calibration process.
- Notice the “false!” value in the purple box and the numbers above it, as the device is calibrating, these values will increase. The values need to reach 300 for the calibration to complete. If you move during the process the values will go back to 0 and start counting again.



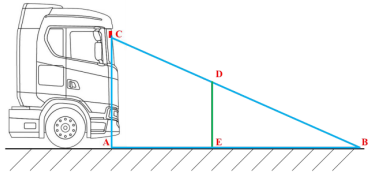
- Once it has counted to 300, the calibration is complete. The calibration state will change to “True!”.
- You can now return to the “AI APP” window and set the DSM camera mode type back to “normal” and click save.
- Once saved, the events will now trigger. Go through and test the DSM events you have set by removing seatbelt, yawning, looking away from the road, using your phone etc. the events will trigger on the R-watch and the audio alert will sound.

ADAS Camera Calibration:

- To calibrate the ADAS camera, go to preview. The image from the ADAS camera should appear and you will have 3 marker lines on the image: 20meter, 30 meters and 40 meters.
- See the image below.



- If you do not have the space or flat ground in front of the vehicle to do the 20meter markers you can use the equation below to plot a reference point.



Basic trigonometric functions:

$$\frac{AC}{AB} = \frac{ED}{EB}$$

Assume the ADAS cams install height is **AC=3 meters**, ideal calibration reference point AB = 30 m and we only have AE=5 m level ground in front of the truck.

Thus, find ED:

$$ED = 2.5m$$

Then place a 2.5m high reference point **in front of the lens** that 5 meters away. (Please note the ED might change with cams install high)

- Once you are happy with the angle of the camera, you can now return to the "AI APP" window and set the ADAS camera mode type back to "normal" and click save.
- The device is now fully calibrated.

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VT3000-AI INSTALLATION GUIDE

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