

Track Smart – Calamp

The Motia Calamp tracking unit is a standard 3 wire installation with fused VCC+ and ignition/switched live connectors.

The Motia Calamp unit has 2 auxiliary ports that can be used to connect to expansion devices such as the Motia Connect Squarell unit for CAN-Bus tracking data. The Motia Calamp also has several fly leads that can be used for input and/or output triggers to other devices.

Excluding the 3 wire installation, the primary connectors used by Motia Calamp's are:

- Aux 2 (J3 Connector on Calamp) to connect to the Motia Connect Squarell Unit
- LTA (Left Turn Alarm) Mute – Output 0 (green fly lead on Motia Calamp)
- DVR Relay – Output 1 (brown fly lead on Motia Calamp)
- Squarell DAP (Driver Assistance Panel) On/Off – Output 2 (yellow fly lead on Motia Calamp)

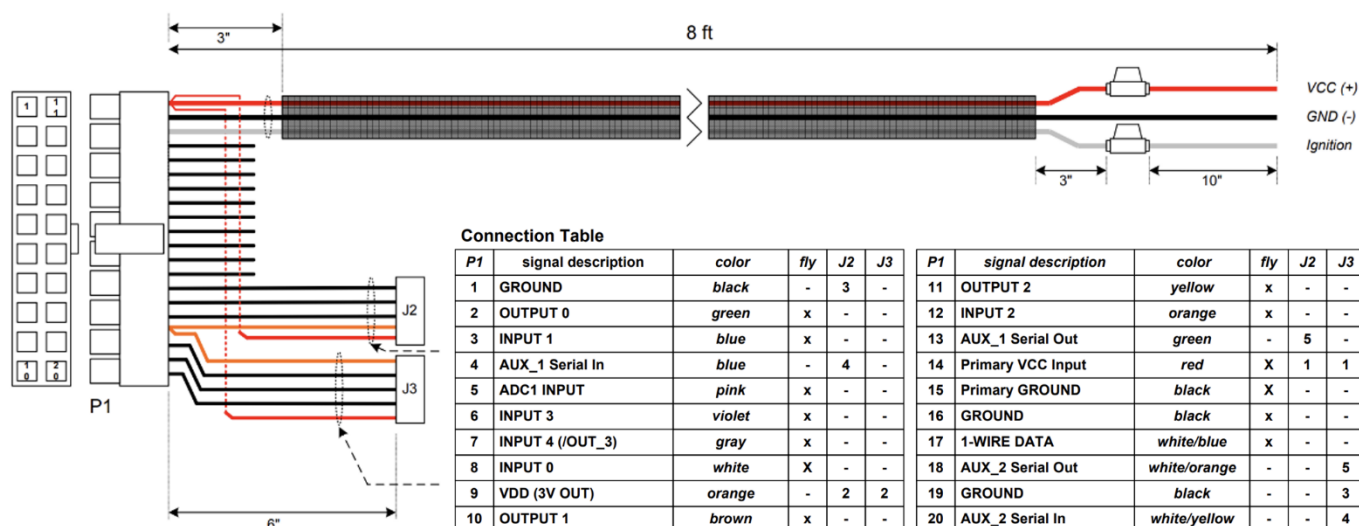
*****Please read further down this document for instructions on how to make the above connections*****

Example images are below of what the Motia Calamp unit looks like and expected installation standard. The Motia Calamp units have many notches around the outer chassis designed for cable ties to firmly secure them to the vehicle's chassis. This is very important to securely fit the unit so that the accelerometer within the unit performs correctly.

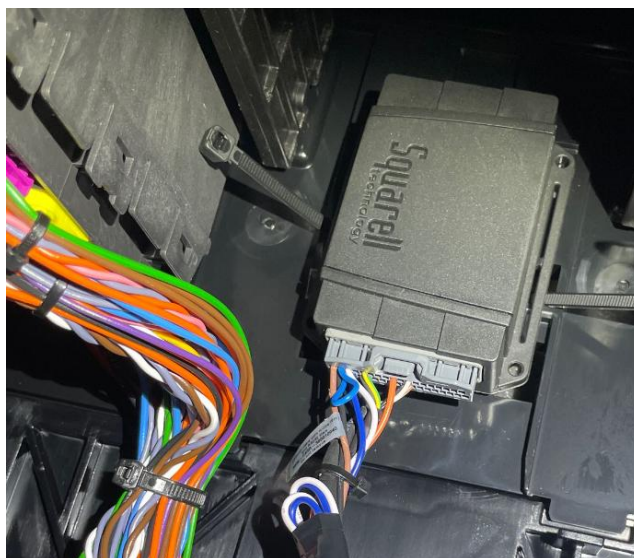
Please install the unit in a discreet location and ensure that adequate GSM (mobile) & GPS (location) connectivity. A solid orange (GSM) and green (GPS) light will indicate the unit is powered and connected to both services.



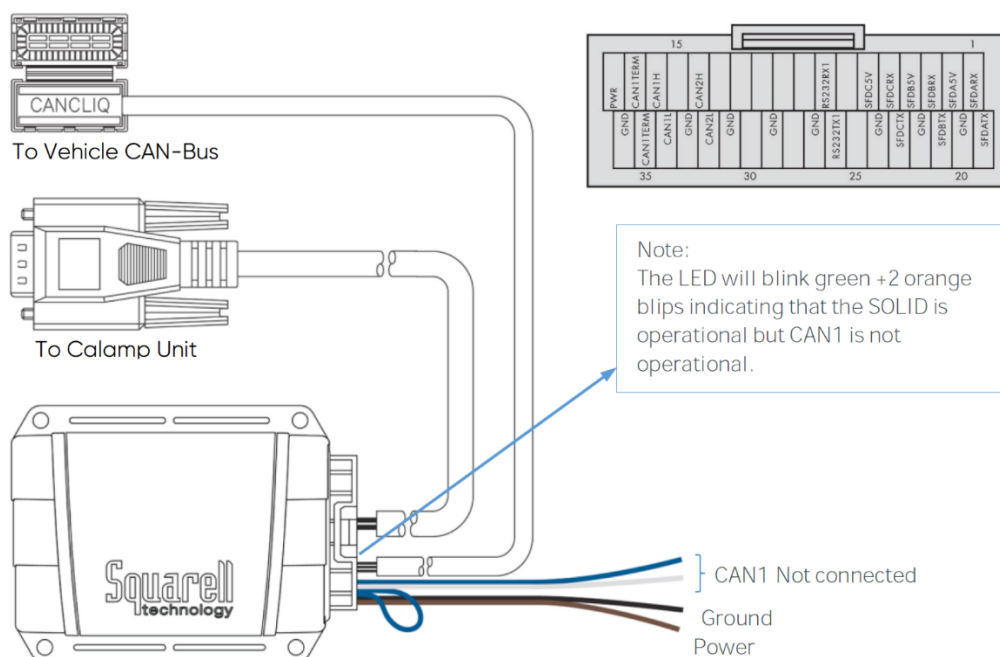
Motia Calamp Harness Diagram

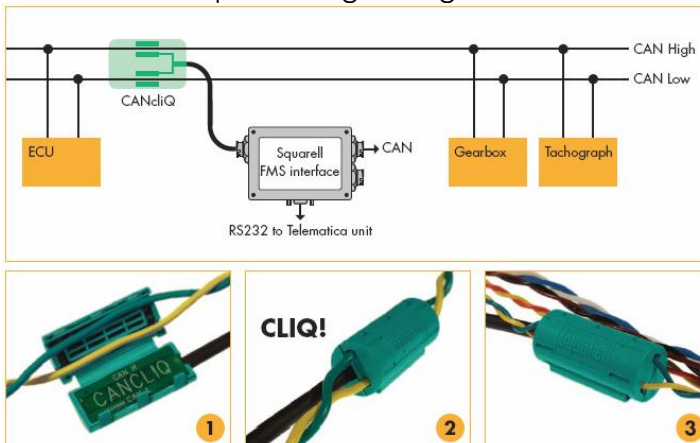


The Squarell Solid unit is Motia's CAN-Bus telematics device used to read CAN data passively from the vehicle's CAN-Bus network. The Squarell requires 3 main connections, power, CAN & RS232. The unit does not require an ignition switched power connection as the unit can determine the ignition state from the CAN connection.

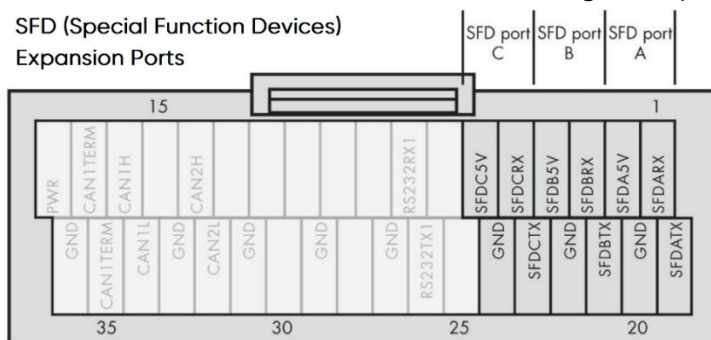


Please see below the 3 main connections for the Squarell unit, the blue and white fly leads are direct CAN connection so are not required. If additional CAN connectors or a DAP (driver assistance panel) are required these need to be connected to the Squarell JAE connector:



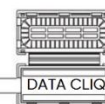


If you need to make a secondary CAN-Bus connection for J1708 (blue), ID180 (purple), ID190 (purple) or DAP (Driver Assistance Panel) then you need to connect to one of the SFD (Special Function Devices) ports on the Squarell Solid unit. There are 3 SFD ports and you can connect to any of them and the Squarell will automatically detect the SFD device. Please see below for the SFD connection points on the Squarell connector and also the cable colourings and pins for the SFD devices.

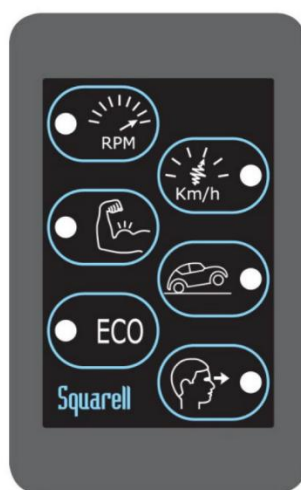


Wire colour	SFD A	SFD B	SFD C
WH	1	3	5
RD	2	4	6
BU	19	21	23
BK	20	22	24

For J1708, ID180, ID190
or DAP Connections

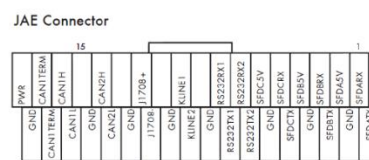


The DAP is connected to the Squarell via one of the SFD ports the same as a secondary Data Cliq. Please see pin out diagram below for the Squarell connector, and also the behaviours expected by the DAP in operation.



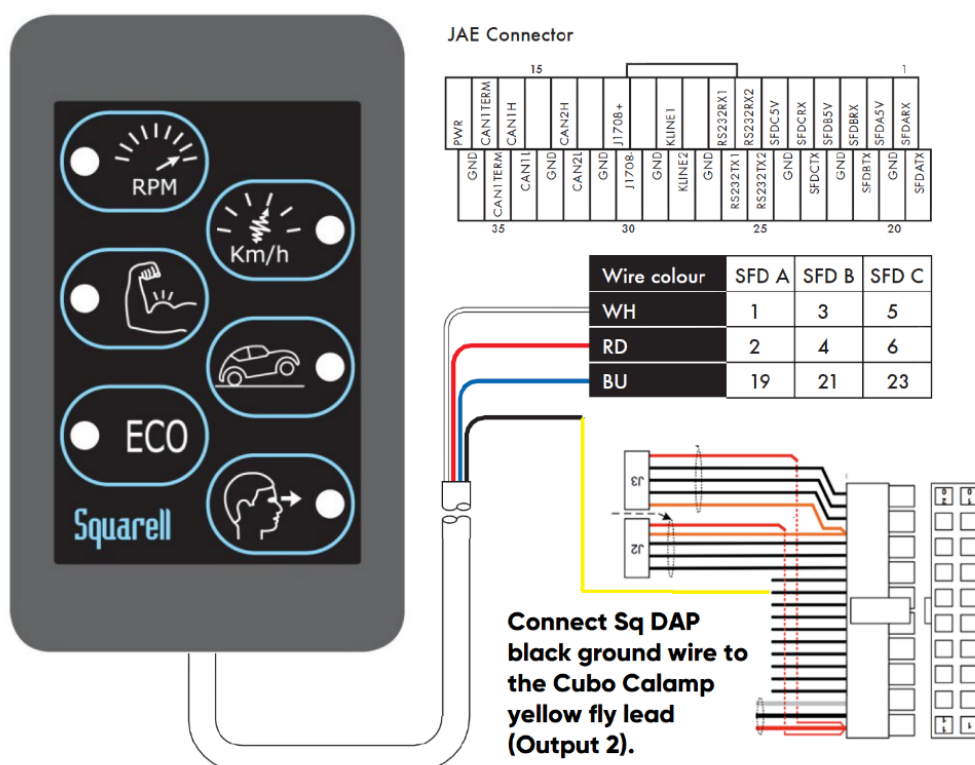
- High RPM**
 - When RPM is high, this LED is orange.
 - When RPM is too high, a red LED lights up.
- Unsteady Drive**
 - The DAP detects fluctuating accelerator pedal pattern.
- Engine power**
 - Orange LED when Torque is getting too high.
 - The DAP detects unnecessary use of Engine Power.
- Harsh Accelerate**
 - If DAP notices that you accelerate too fast, the red LED will light up.
- ECO drive**
 - Good and efficient driving is rewarded with a green LED
 - Red LED lights up when idling for more than 3 minutes
- Anticipate**
 - Green LED lights up when coasting.
 - Red LED when not anticipating/not proactive.

 To get your attention, a flashing LED is occasionally accompanied by a sound signal.



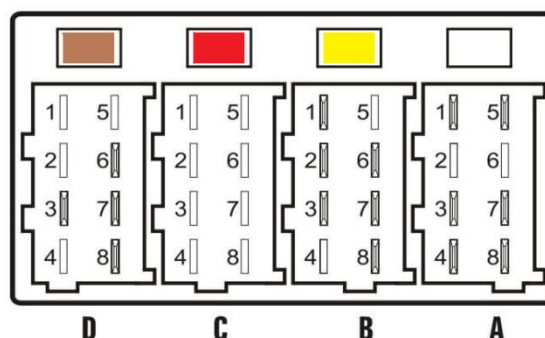
Wire colour	SFD A	SFD B	SFD C
WH	1	3	5
RD	2	4	6
BU	19	21	23
BK	20	22	24

If installing the DAP panel for a driver training requirement such as the CAF (Climate Action Fund) project then you need to cut the ground wire and connect it to Motia Calamp Output 2 (yellow fly lead) so that the DAP can be turned on and off remotely.



Connecting K-Line to the Tachograph Pin D8

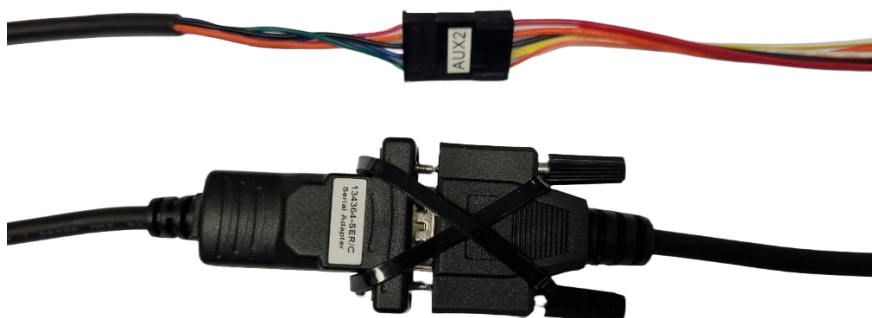
There is a 5m orange fly lead on the Squarell Solid JAE connector which must be connected to the tachograph pin D8 on all HGV's. Please see an example D8 k-line connection and tachograph connector diagram below:



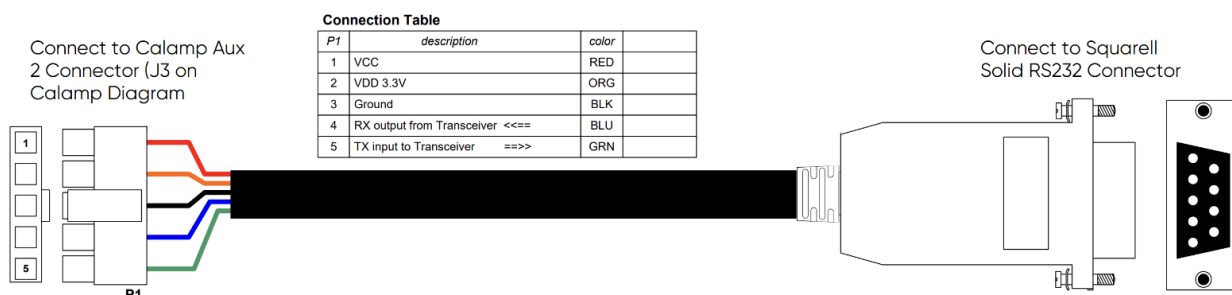
Connecting the Calamp & Squarell Solid Units

In order for the Squarell data to be transmitted it needs to be connected via the Motia Calamp unit. This is achieved by connecting the 9 pin serial RS232 output from the Squarell unit to the 5 pin Aux 2 (J3) connector on the Motia Calamp unit.

It is advised to cable tie the RS232 connection to ensure the connectors do not come lose or detach during driving.



Calamp 5 Pin Aux 2 to RS232 Connector Diagram:

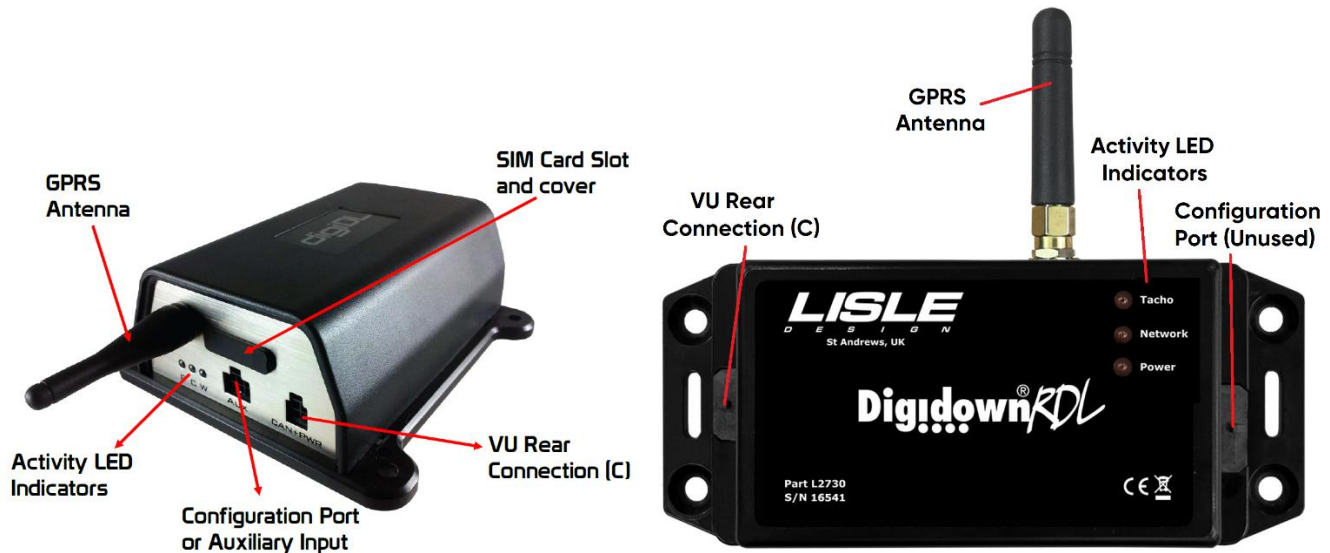


Motia Installation Guide

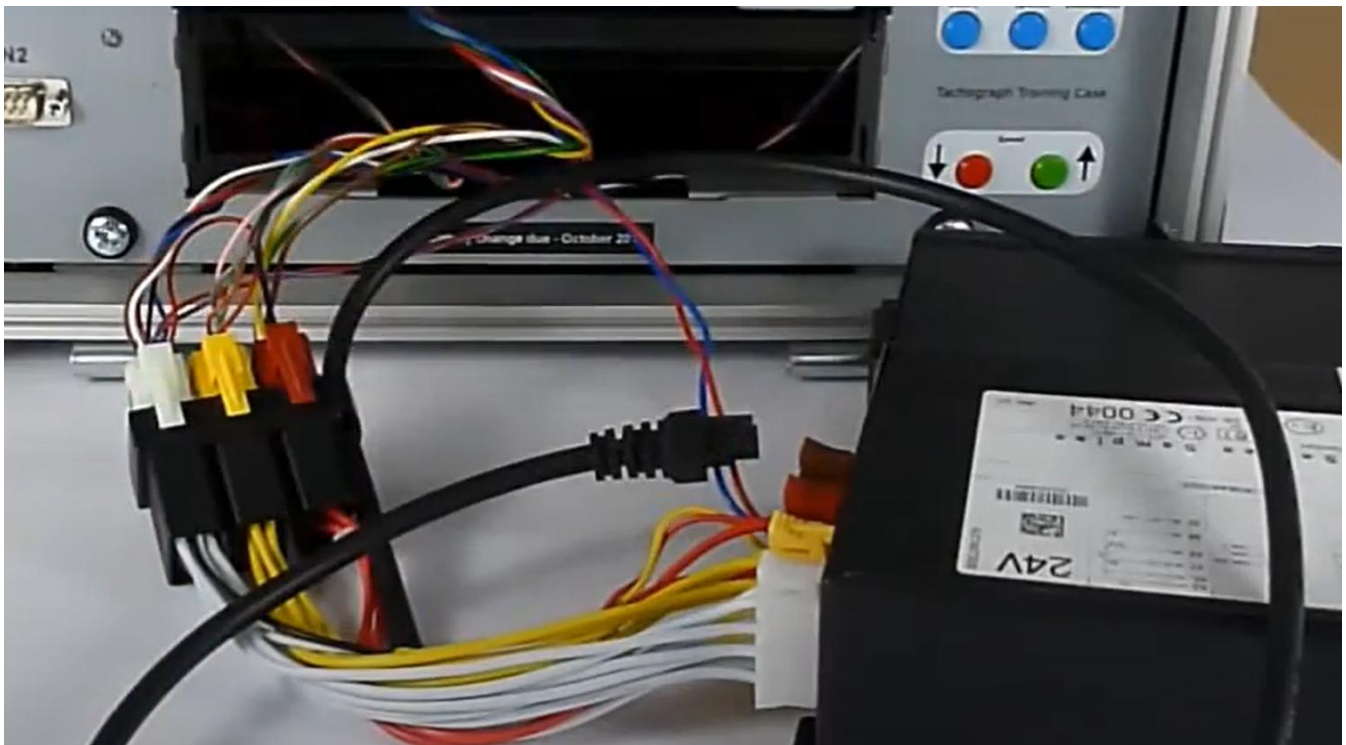
Tacho Smart (TachoSys Digi DL or Lisle Digidown RDL)

Motia use 2 remote tachograph downloaders, Tachosys' DigiDL and Lisle Design's Digidown RDL. Both units connect in a similar way with 1 cable from the unit to a Y-Splitter block connector for connection to the tacho head.

Please see diagrams below of each of the units:

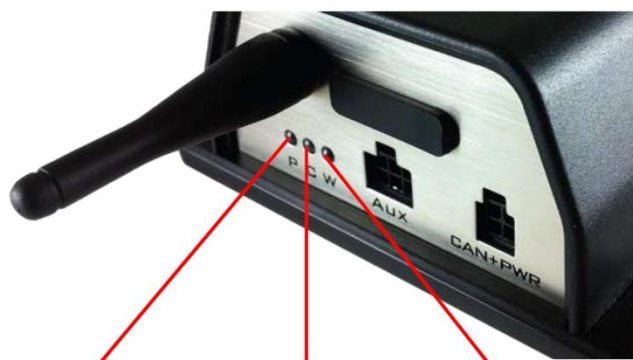


The Y-Splitter block connectors are colour coded to make it easy to identify the correct connector on the back of the tacho head. It is important to replace the any of the connectors that were connected to the tacho head before your installation in to the Y-Splitter male connector. Ensure to check the dashboard for any errors post installation and call Motia Support team for further assistance if required.



Tachosys DigiDL – LED Status Lights

To assist with testing/troubleshooting please see a table below with the LED statuses on, 3 solid lights on P, C & W show successful power, CAN and server connections.



P: Power Status

C: CAN-Bus C
Status

W: WIFI or
GPRS Status

LED	ON	OFF	Flash
P	Power Okay	No Power	Power okay and a Task is in progress
C	CAN okay	No CAN	Infers intermittent CAN connection
W	Comms okay	No Comms	Initiating Comms with GPRS or WIFI

Lisle Digidown RDL – LED Status Lights

To assist with testing/troubleshooting the Digidown RDL please see a table below with each of the LED status lights expected from the unit. 2 solid lights on Tacho & Network show the unit is functioning OK.

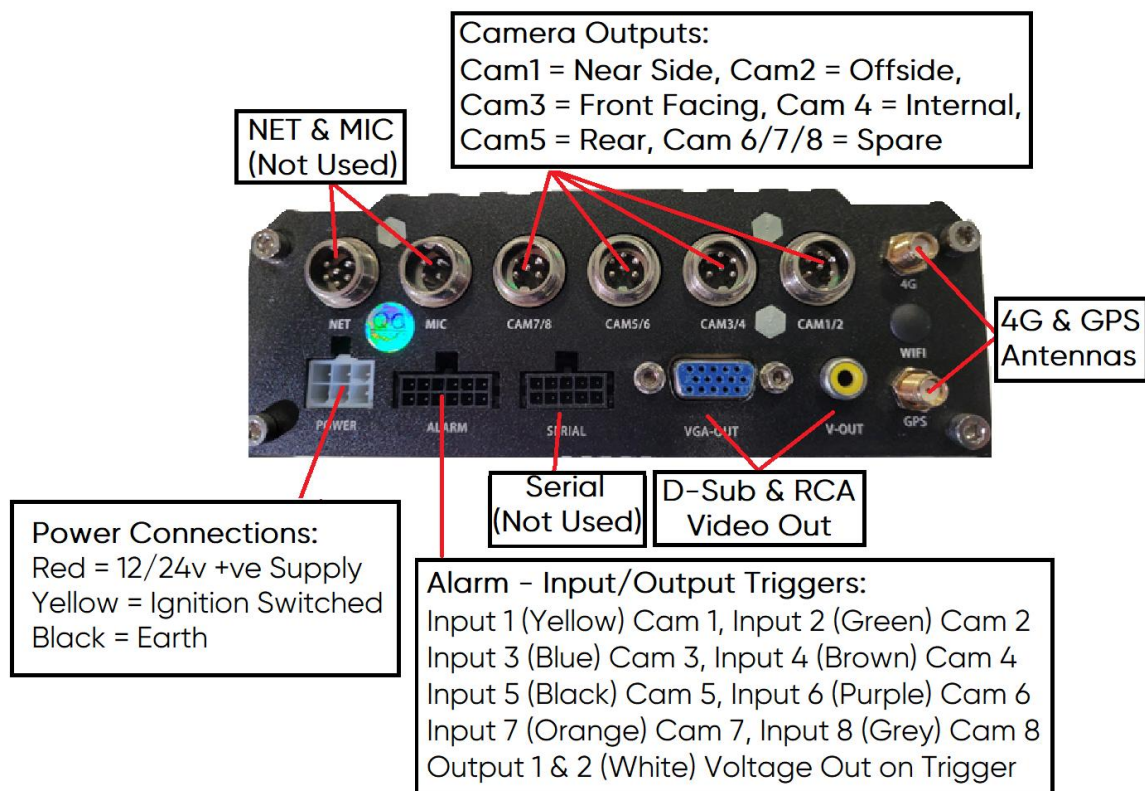
LED	Light	Indicates	Suggested Action
Tacho	ON	System is starting	Wait a few moments
	OFF	OK	-
	Flashing x1	Tachograph comms failure	(1) Check connections (2) Check tachograph is compatible with Remote Downloading
	Flashing x2	Tachograph parameters error	Enable Remote Downloading parameter setting in tachograph
Network	ON	System is starting	Wait a few moments
	OFF	OK	-
	Flashing x3	SIM Card not found	Check SIM Card is installed correctly
	Flashing x4	Network not found	(1) Check aerial is installed correctly (2) Check reception in area
	Flashing x5	No network signal	(1) Check aerial is installed correctly (2) Check SIM has been activated
	Flashing x6	Network registration error	(1) Check SIM has been activated
	Flashing x7	APN error	(1) Check APN by sending SMS: Get APN (2) Set new APN by sending SMS: Set APN
	Flashing x8	Hardware error	Get in touch with your distributor

8 Channel DVR Install

The Motia 8 Channel DVR support up to 8 camera channels with 720P or 1080P cameras.



Support for up to 8 cameras, 8 inputs and 2 output triggers as below:



The Alarm IO connector has 12 pins, the pin out diagram for each pin is as follows:

1	2	3	4	5	6	7	8	9	10	11	12
1	DC12V-Out	5	Sensor In 7	9	Sensor In 3	2	GND	6	Sensor In 8	10	Sensor In 4
3	Sensor Out 1	7	Sensor In 5	11	Sensor In 1	4	Sensor Out 2	8	Sensor In 6	12	Sensor In 2

The default behaviour is if the IO is triggered (+12v/24v) then the same camera channel is activated full screen on the monitor. When the IO trigger is disconnected (0v) then the default view will revert back within 5 seconds. IO5 also has priority for the reverse camera if the hazard lights are on which simultaneously activates IO triggers 1 and 2. This will ensure the reverse camera view is full screen and not flickering between offside, nearside and reverse cameras.

DVR Unit Example Installation



DVR Monitor Installation Examples



DVR Antenna Locations

Ensure the antennas are located as high as possible with no metal or thick items blocking them. Look out for 3rd party equipment such as FM transmitters or unshielded electronic equipment which may block GSM/GPS signals.



Motia Installation Guide

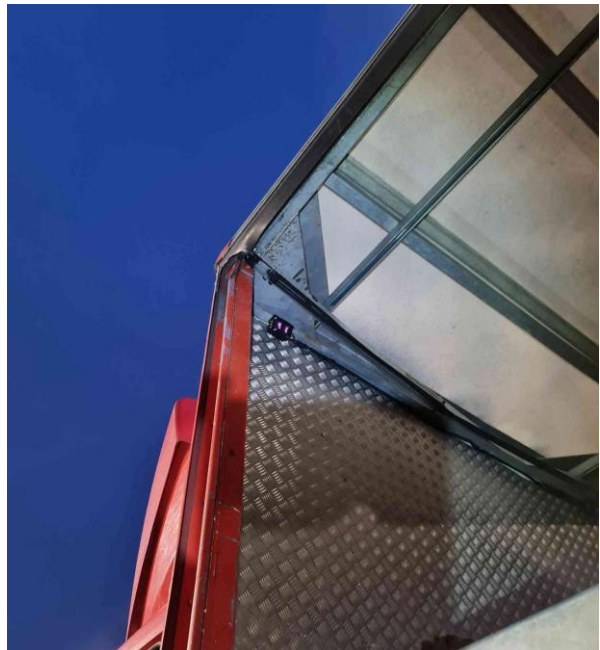
Example FF (Front Facing) & Rear Camera



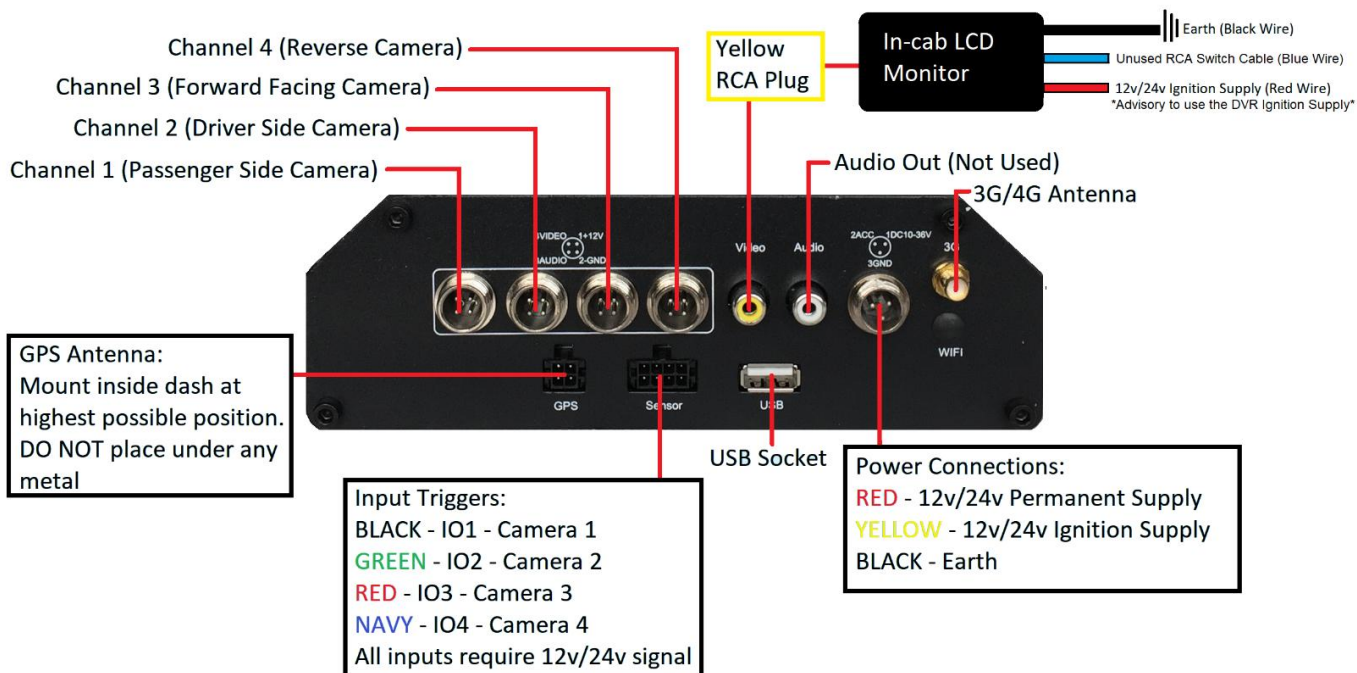
Example Side Camera Installations



Example Internal Dome & Load Camera Installations

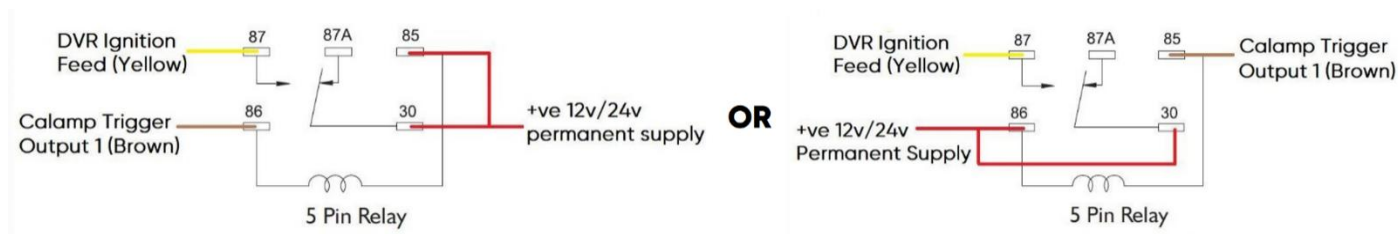


Our legacy 4 Channel DVR supports up to 4 x 720P cameras, please see the wiring diagram below:



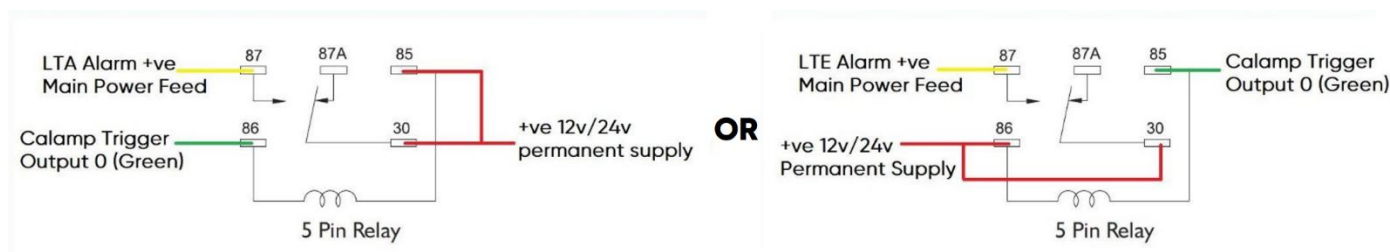
DVR Relay

If installing the DVR with 5 pin relay then the DVR ignition (yellow fly lead on the DVR power connector) should be connected to pin 87 of the relay instead of a switched ignition feed. This means the Motia Calamp will control the power to the DVR by toggling the relay on/off when the Motia Calamp ignition feed is turned on or off. The DVR will still complete its ACC shutdown timer (default 60 mins) when the Motia Calamp ignition is turned off.



LTA (Left Turn Alarm) Relay

If installing the LTA with 5 pin relay then the LTA speaker main power feed should not be connected to a permanent power feed, but instead to pin 87 of the relay instead of a switched ignition feed. This means the Motia Calamp will control the power to the LTA based on the ignition state of the Calamp and the time of day (daytime only).



Testing/Troubleshooting Relays

When installing relays or doing a service call on them it is very important to test they function as expected. The expected behaviour of each of the relays pins is as follows, you should hear the relay click within a few seconds of the vehicle ignition (Calamp white wire +Ve) being switched on:

- Pins 30 + 85 should read +Ve 12v/24v permanently and confirm a good power connection to the relay.
- Pin 86 with the ignition off should read +Ve 12v/24v, and when the ignition is switched on should read 0v. *****For the LTA relay this will only switch to 0v during the day*****
- Pin 87 with the ignition off should read 0v, and when the ignition is switch on should read 12/24v. *****For the LTA relay this will only switch to 12/24vv during the day*****

For assistance with the above or if you are not reading the expected values above please contact Motia Support on fleetsupport@Motia.com or 02894 485 423

City Smart Pro (AI Side Scan DVS Oct-2024)

There are 3 variations of the City Smart Pro system depending on the customer requirements, these are:

- **MOIS** (front moving) sensor only
- **BSIS** (blind sport) sensor only
- **MOIS** (front moving) & **BSIS** (blind spot) sensors

The MOIS & BSIS will be the most common for retro fitting to existing vehicles, but for new vehicles they may already come with MOIS & BSIS systems fitted by the manufacturer. For installation of a MOIS only or BSIS only system the only difference is fitting one less camera, and the configuration of the AI module via mobile app requires the 2nd camera zone disabling to prevent false alerts.

The City Smart Pro system reports back to a central AI control module which has multiple cable connections as shown/described below:

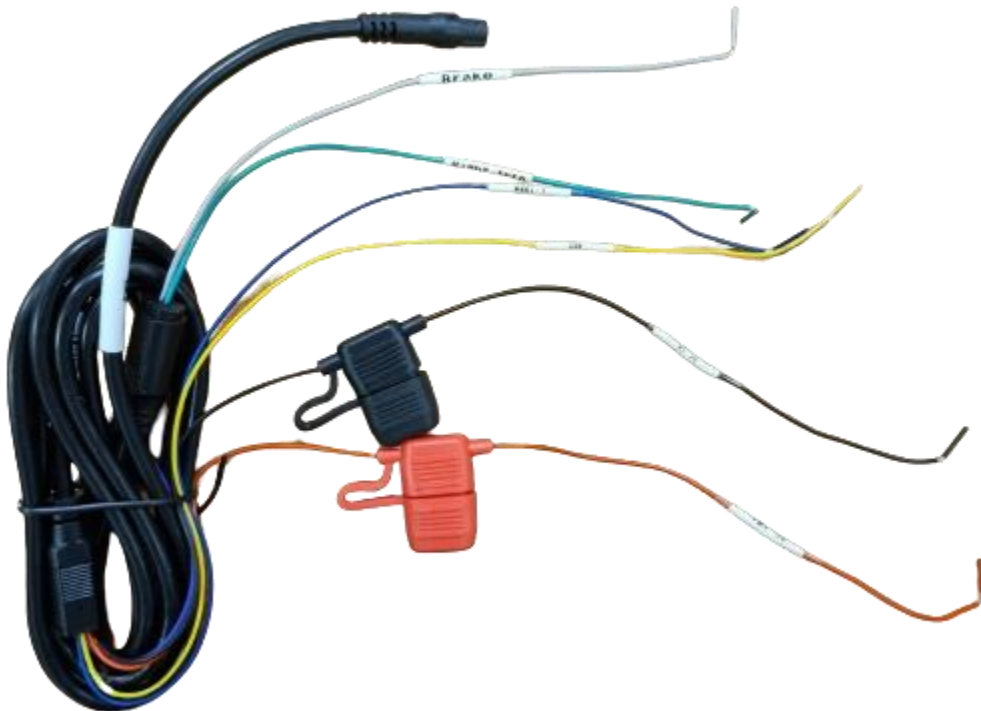


- **CAMERAS** - Connect the BSIS blind spot camera to the input VIN1 (video in 1) and the MOIS front camera to the input VIN2 (video in 2). If fitting BSIS only or MOIS only then you will have no camera in the relevant VIN port.
 - **INTERNAL SPEAKER** - Connect the internal speaker to the 4-pin aviator connector. There is an extra yellow fly lead on this connector, leave this disconnected as it is not required for this installation.
 - **EXTERNAL SPEAKER** - Connect the speaker to the 4-pin aviator connector with the corresponding 'SPEAKER' label. Standard aviation extension leads can be used.
-

Motia Installation Guide

- **GPS ANTENNA** - Place the GPS antenna facing upwards in an internal location that has minimal obstruction by the metal cab. It is important that the AI control module has adequate GPS signal otherwise the speed detection triggers required for operation will not function.
- **VIDEO OUTPUT** - Connect the video output (CVBS) to the monitor via the RCA cable. An aviation to RCA converter is provided with City Smart Pro kit to allow conversion from the aviation connector.

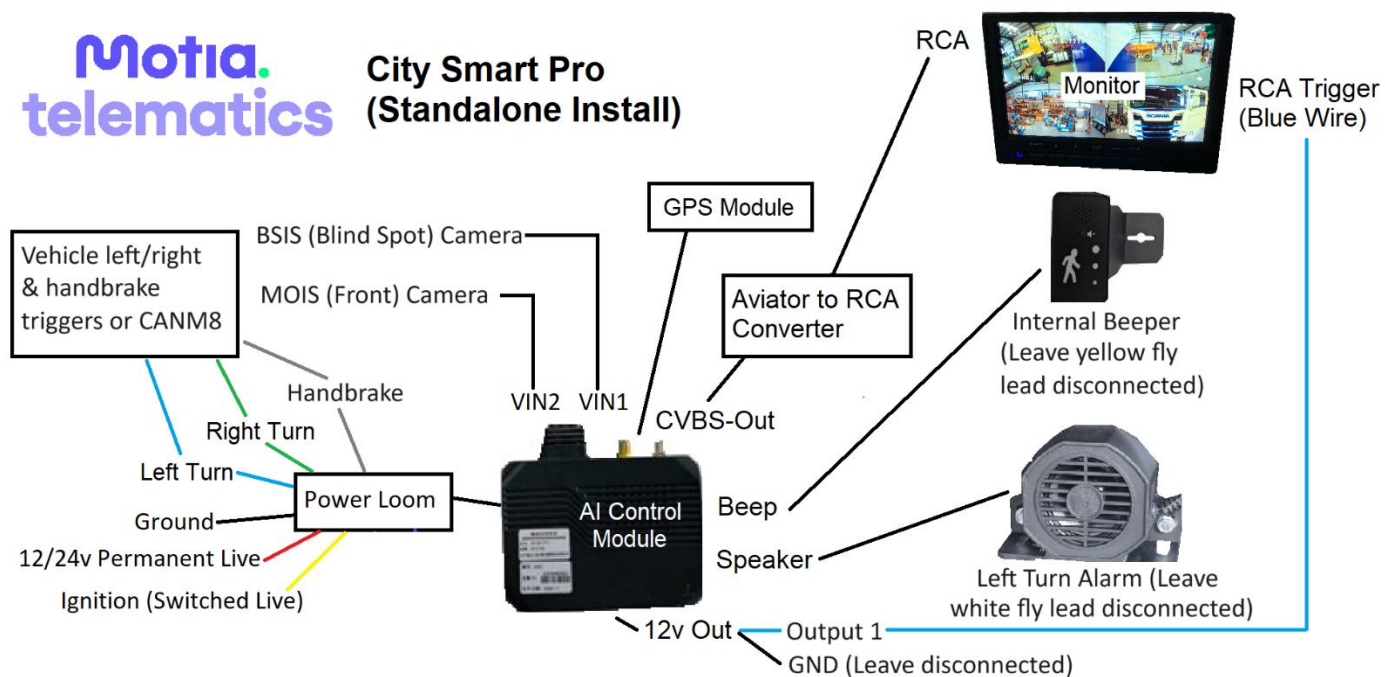
The power loom has 6 coloured fly leads all labelled with the required input as shown below:



- **GROUND / CHASSIS** - Connect the black wire to the chassis or a solid ground wire.
- **POWER** - Connect the red wire to a permanent power supply. This can be 12 V or 24 V.
- **IGNITION / ACCESSORY** - Connect the ignition "ACC" yellow wire to a switched positive that is live whilst the the ignition is turned on. Be sure to test that this wire does not drop to ground during vehicle operation.
- **LEFT TURN SIGNAL** - Connect the left turn signal wire to the left turn indicator wire that is positive when the indicator is on or flashing. If this is not available on the vehicle then use a CAN-pickup device such as CANM8.
- **RIGHT TURN SIGNAL** - Connect the right turn signal wire to the right turn indicator wire that is positive when the indicator is on or flashing. This is a MUTE signal. If this is not available on the vehicle then use a CAN-pickup device such as CANM8.
- **HANDBRAKE SIGNAL** - Connect the brake wire to the handbrake indication wire. This wire must be positive when the handbrake is up. If there is a negative wire for the handbrake then use a relay to invert the signal. If there is no handbrake signal present on the vehicle then use a CAN-pickup device such as CANM8.
- **FINALISATION** - Once the physical installation is complete the AWAI unit must be set up using the application. [Please refer to the Application Setup instructions on how to do this.](#)

CITY SMART PRO (STANDALONE) WIRING DIAGRAM

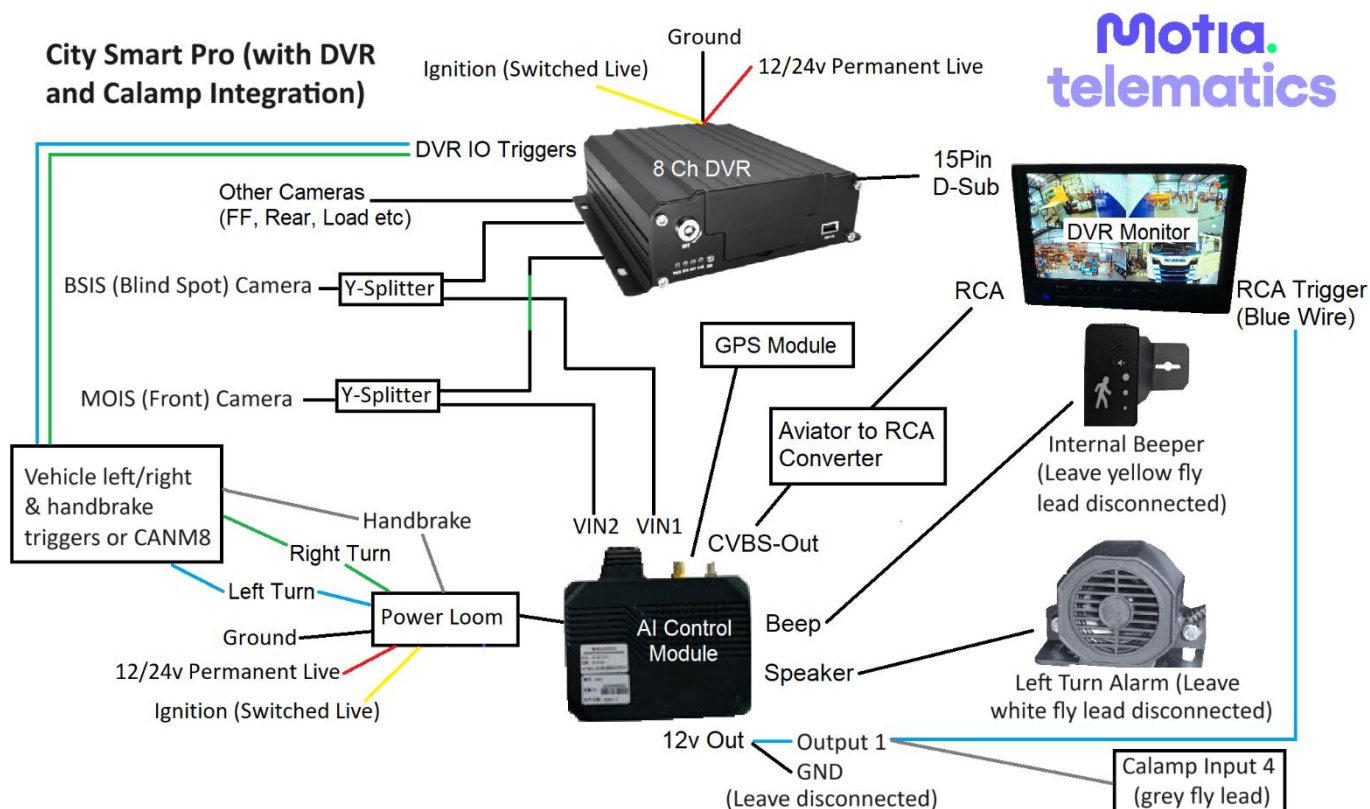
City Smart Pro (Standalone Install)



CALAMP AND/OR DVR INTEGRATION

If connecting the City Smart Pro AI control module to a Calamp and/or DVR then you will need to make the below additional connections:

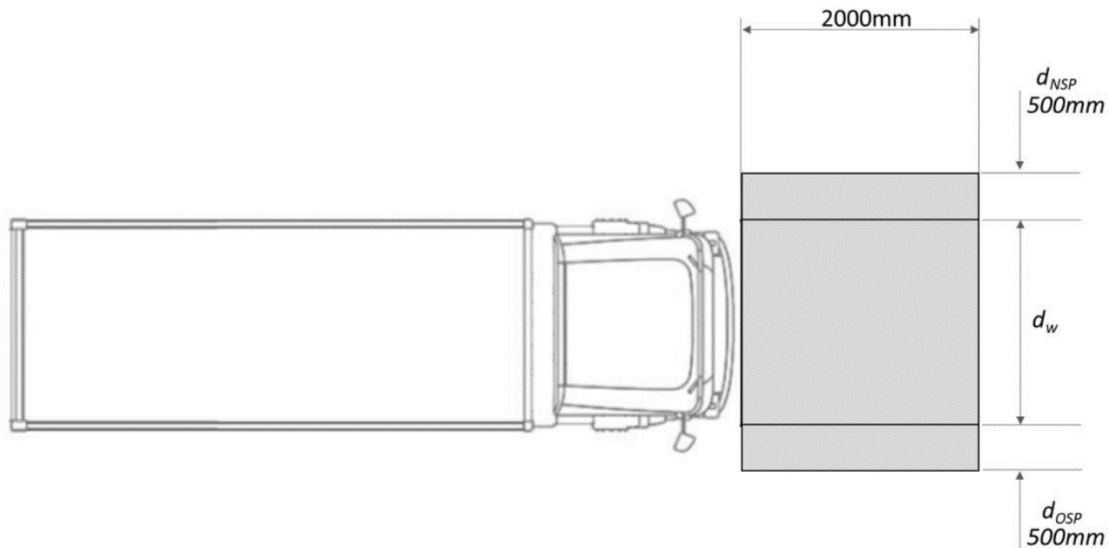
- **DVR Y-SPLITTERS** - the y-splitter aviation cable splits the camera feed from the MOIS (front) & BSIS (blind spot) cameras to go to the DVR and AI control module so that all footage is recorded on the DVR.
- **CALAMP INPUT 4** - use the 12v out feed (the same one used to trigger the monitors RCA feed) to connect to the Calamp input 4 grey fly lead. This will generate an input high trigger for all events sensed by the AI control module and display them on the customer's MyMotia telematics portal.



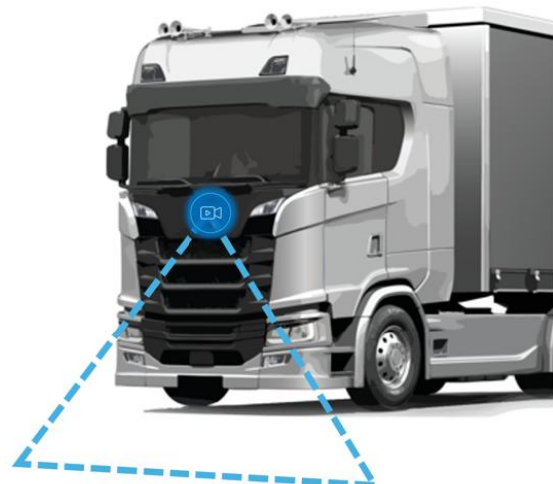
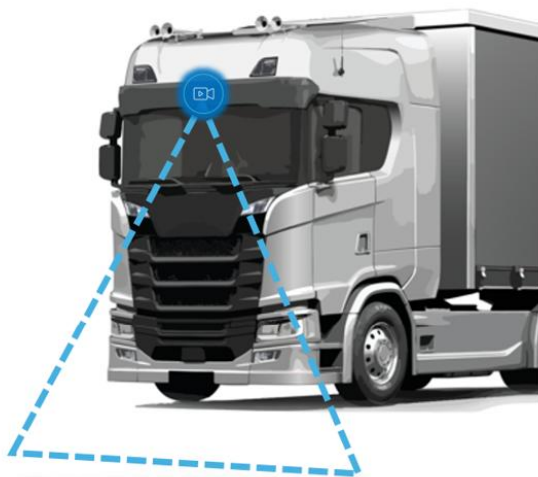


MOIS (MOVING OFF INFORMATION SYSTEMS) FRONT CAMERA:

As per the TFL (Transport for London) Progressive Safe System Technical Specifications, the front camera detection zone must cover the below space 2m ahead of the vehicle and 50cm to the left and right of the vehicle as shown below:



A wide lens external side camera (2.1mm or less) must be used to give a wide angle and the best mounting position is above the windscreen as shown below. If there are any obstacles in the way preventing the mounting in this location then it is ok to mount below the windscreen but the above detection zones must be covered for it be compliant with the MOIS requirements.



Motia Installation Guide

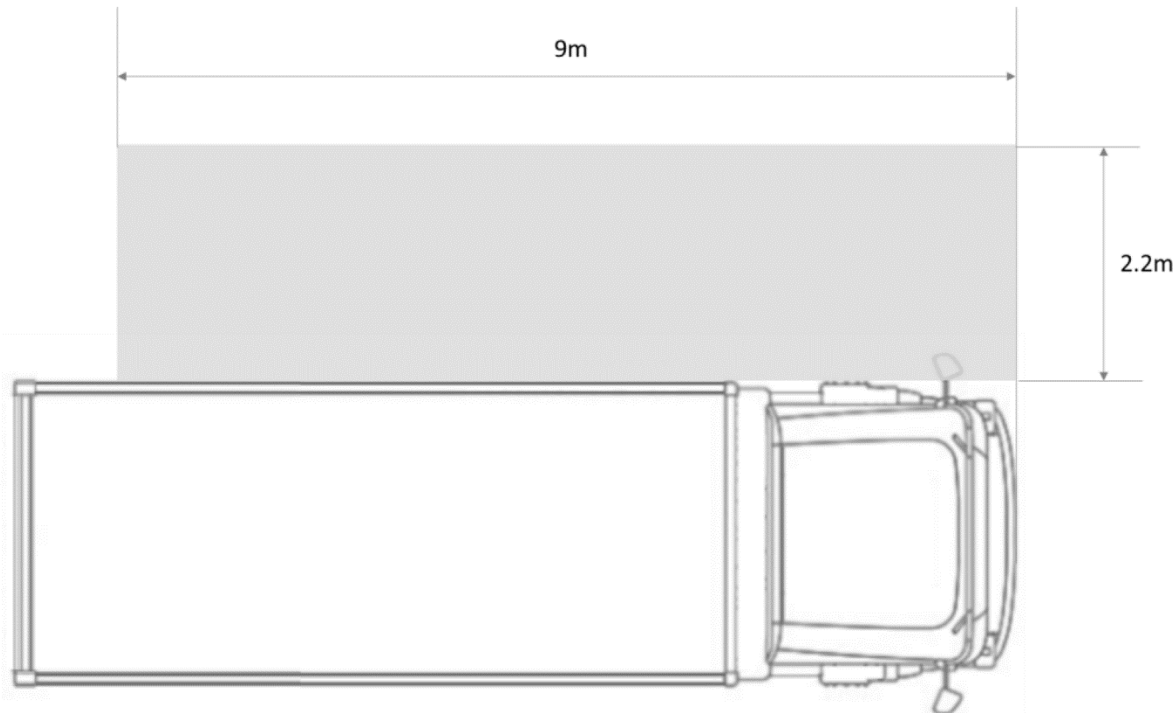




BSIS (BLIND SPOT INFORMATION SYSTEMS) SIDE CAMERA:

As per the TFL (Transport for London) Progressive Safe System Technical Specifications, the blind spot detection zone must cover 9m adjacent to the near side (left) of the vehicle and 2,2m away from the vehicle as shown below. Ensure to use a suitable grommet or panel adhesive/sealant to seal the hole around the camera to prevent water ingress.

Motia Installation Guide



A wide lens external side camera (2.1mm or less) must be used to give a wide angle and the best mounting position is above near side (passenger) door with the camera angled to reach the 9m x 2.2m detection zone requirement from the front left corner of the vehicle as shown below. Ensure to use a suitable grommet or panel adhesive/sealant to seal the hole around the camera to prevent water ingress.





Ensure to use a suitable grommet or panel adhesive/sealant to seal the hole around the camera cable to prevent water ingress.



INTERNAL MONITOR DISPLAY & BUZZER PLACEMENT:

The internal monitor display & buzzer is the primary way that the driver gets warnings about the presence of pedestrians in the warning zones. The internal buzzer connects to the AI control module via an aviation connector to the connector labelled 'BEEP'.

The yellow fly lead is to be left disconnected, but its intended usage is as an auxiliary 12v output and must be configured via the mobile app.



Motia Installation Guide

The internal beeper and monitor need to be mounted in a visible location with no obstructions. The preferred location is on the inside of the near-side A pillar as shown below:

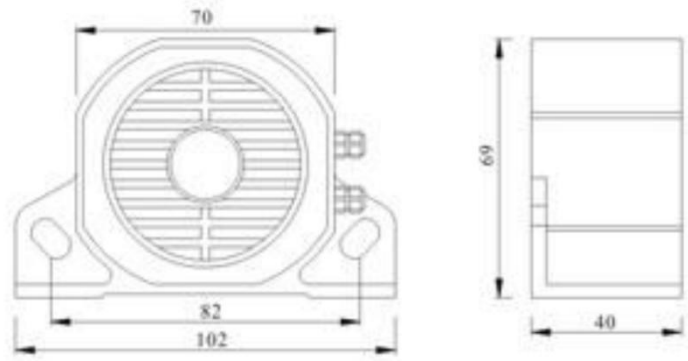


EXTERNAL SPEAKER:

The external speaker must be mounted externally to the cab either in the front or the rear of the cab, close to the near side. The GR01AI speaker uses standard 4pin aviation connectors so camera extension cables can be used to allow the desired placement of the speaker.

Common placement is under the front cover as close to the near side corner as possible to ensure the alerts can be heard by passing pedestrians.

Motia Installation Guide



Once installation is complete, the next stage is to configure the AI control module via the Android mobile/tablet app. [Click here for instructions on how to configure the mobile/tablet app.](#)

City Smart Pro (AI Side Scan) Mobile App Setup Guide

Following the hardware installation of the City Smart Pro AI hardware the next step is to connect to the unit via the AWAI Android mobile app.

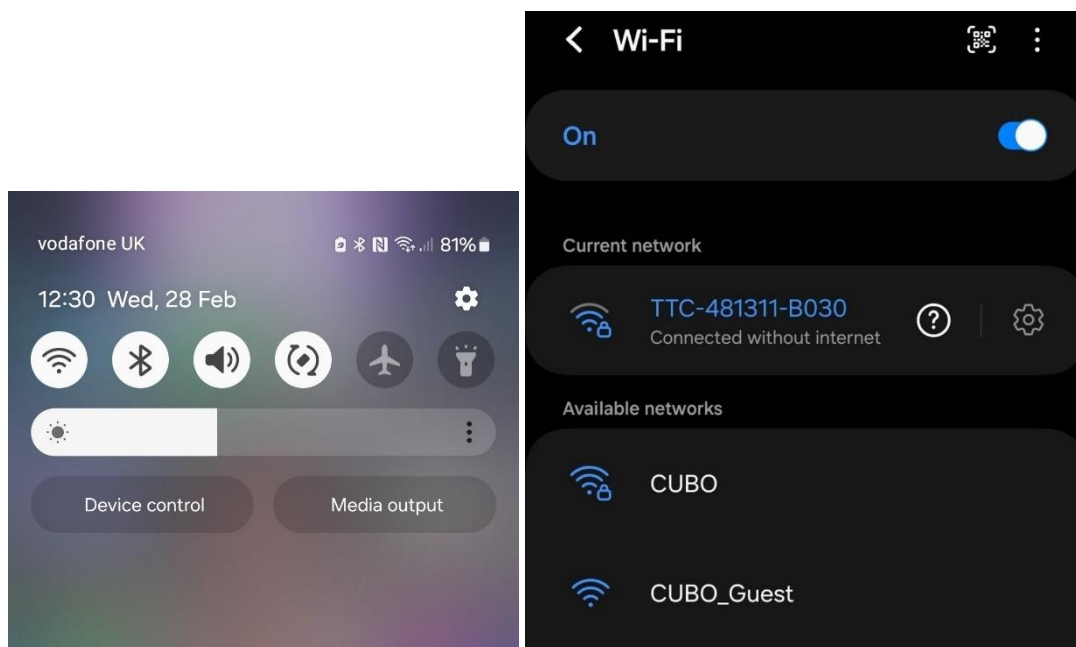
If you have not yet installed the City Smart Pro hardware then a guide for this is available [here](#).

Download the Android mobile app

The AWAI Android app can be downloaded on to your mobile or tablet by clicking [here](#). Before opening the app the next step is to connect to the unit via Wi-Fi.

Connect to the City Smart Pro AI unit using Wi-Fi

The mobile app connects to the City Smart Pro AI unit via Wi-Fi so open your Wi-Fi settings on your Android device and search for available Wi-Fi networks. For most Android devices this is achieved by scrolling down from the top screen and holding the  Wi-Fi icon. It can also be accessed by selecting the  Android settings icon followed by Connections >> Wi-Fi.



The AI unit will present a network SSID with a name prefixed TTC such as "TTC-xxxxxx-xxxx" with a unique value in place of the x's. The password to connect to all units is **TTC123456**

Your Android device may prompt you to say no internet connection is available on this network and do you still want to connect, click yes always connect.

Motia Installation Guide

Open the AWAI Configuration App:

Once connected to the unit via Wi-Fi locate the AWAI app as shown below and click to open it:



Upgrading the Firmware and/or Configuration File

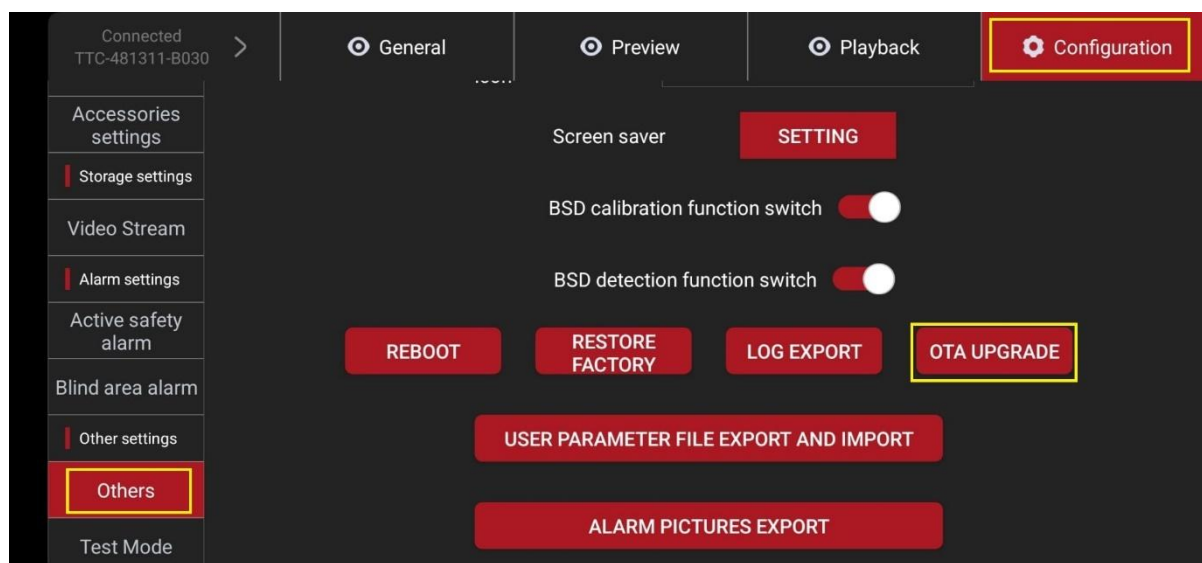
If you have instructed by Motia to upgrade the firmware and/or configuration file then you will need to download the following file/s to your Android device. If you have not been asked to do this then please **skip this step**.

The latest firmware can be downloaded by clicking [here](#)

The latest configuration file can be downloaded by clicking [here](#)

Upgrading the Firmware

To access the firmware upgrade page go to '**Configuration**' in the top right hand corner and then select '**Others**' from the left hand menu as shown below. The '**OTA Upgrade**' button is display on the right hand side approx. half way down the screen. Click on this button to launch the firmware upgrade process.



Motia Installation Guide

Click **'Select'** and then locate the firmware file that you downloaded in the earlier steps, the name of the file will be similar to 887-rd-c039-v01r001b030-part-20240224071940-tar-gz. Click **'Confirm'** to begin the upgrade process.

Upgrade

Firmware version number:

MCU version number:

Upgrade file path: **SELECT**

Cancel Confirm

Upgrade

Firmware version number:

MCU version number:

Upgrade file path: **SELECT**

/data/user/0/com.c019app.common/cache/1532339241.x-gzip

Cancel **Confirm**

Please note, the firmware upgrade takes approx. 7 mins to complete and you must wait until the status bar completes to 100, it will automatically disconnect from the Wi-Fi and the upgrade will only be complete when the local Wi-Fi becomes available again and the name changes to TTC-xxxxxx-xxxxB030 or whichever FW version it is.

Upgrading the Configuration (User Parameter) File

To upload the latest configuration file select **'Configuration'** in the top right corner and then **'Others'** on the left hand side as shown below. Click on the **'User Parameter File Export and Import'** button to launch to configuration file menu:

Connected
TTC-481311-B030

Accessories settings

Storage settings

Video Stream

Alarm settings

Active safety alarm

Blind area alarm

Other settings

Others

Test Mode

General

Preview

Playback

Configuration

Screen saver **SETTING**

BSD calibration function switch ☐

BSD detection function switch ☐

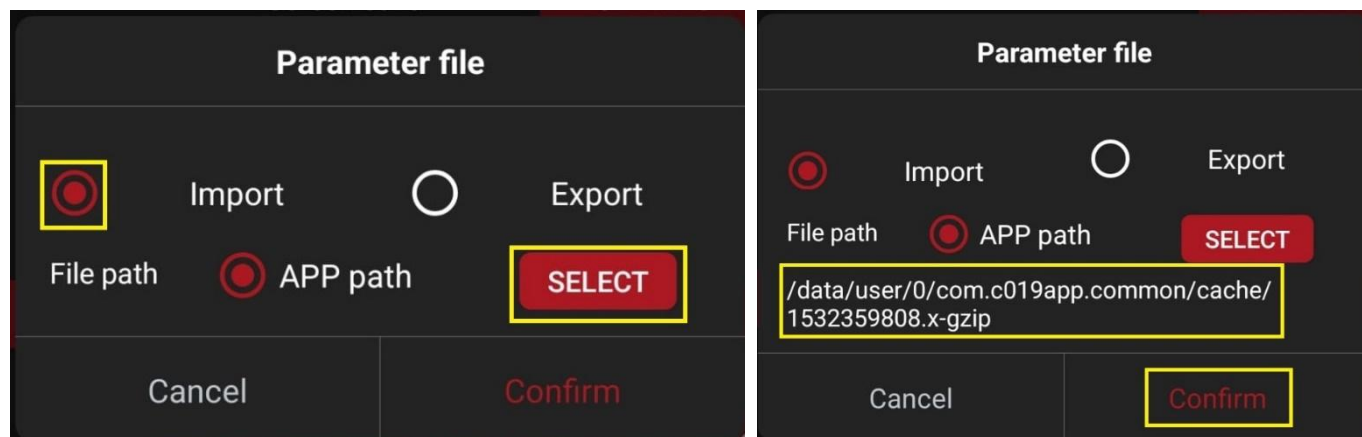
REBOOT **RESTORE FACTORY** **LOG EXPORT** **OTA UPGRADE**

USER PARAMETER FILE EXPORT AND IMPORT

ALARM PICTURES EXPORT

Motia Installation Guide

Ensure the 'Import' button is highlighted and the click 'Select' to upload to the configuration file. Locate the configuration file on your Android device that you downloaded in the earlier steps of this guid and then click 'Confirm'.



The file will be uploaded to the City Smart Pro AI unit and then it will restart. The Wi-Fi connection may drop during this process so please reconnect if required before continuing setup.

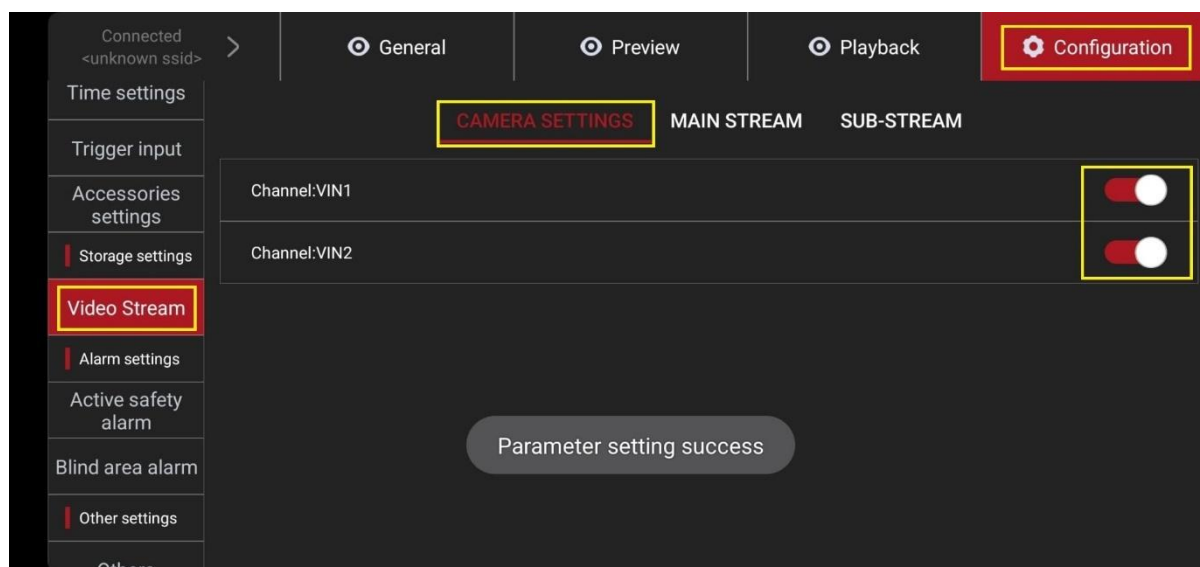
Configuring the City Smart Pro AI unit for MOIS and/or BSIS mode

Depending on whether the vehicle requires the MOIS (Front) and/or BSIS (Blind Spot) detection zones you will need to enable/disable these as applicable. To access this page on the AWAI app go to 'Configuration' >> 'Video Stream' >> 'Camera Settings' as shown below.

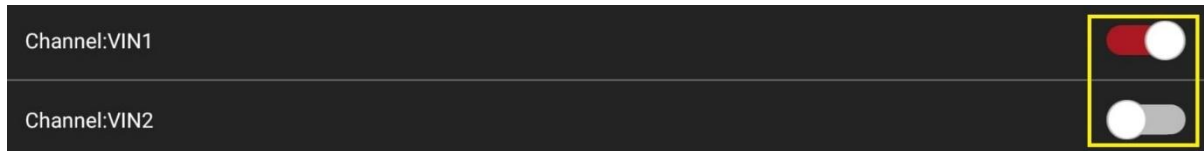
Toggle the VIN1 and VIN2 enabled/disabled buttons to match the installation requirement.

Vin 1 = BSIS (Blind Spot Information Systems) Blind Spot Camera Zone

Vin 2 = MOIS (Moving Off Information Systems) Front Camera Zone

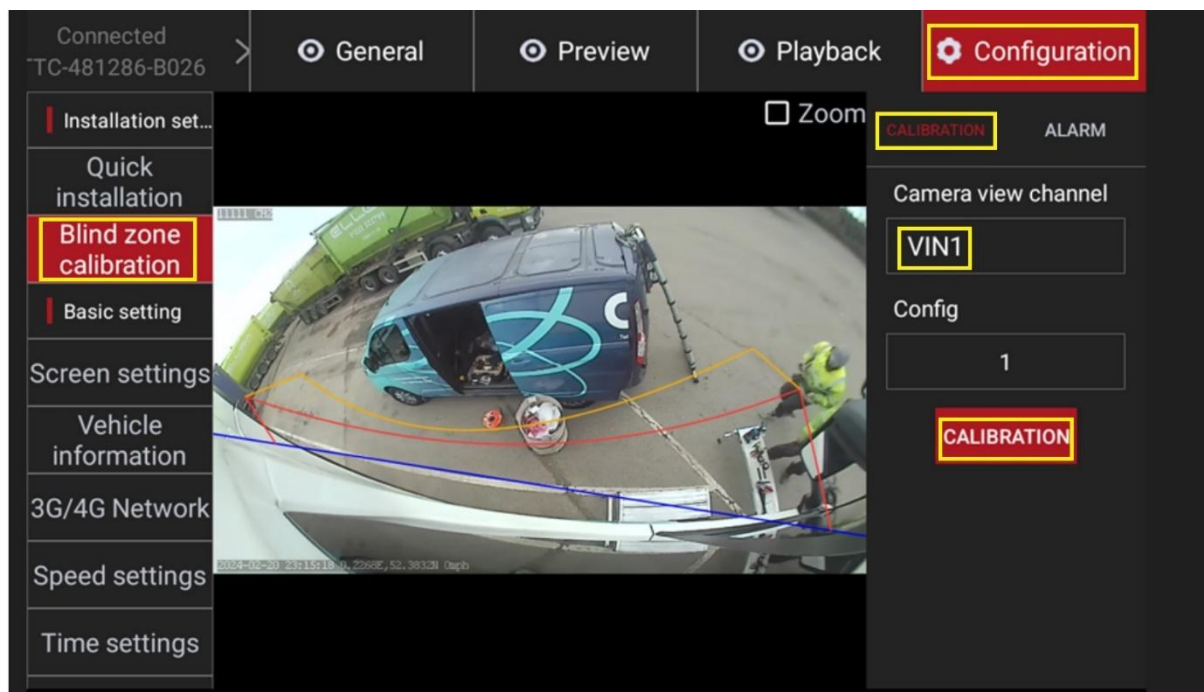


Example of setting the AWAI app to be a BSIS only system:



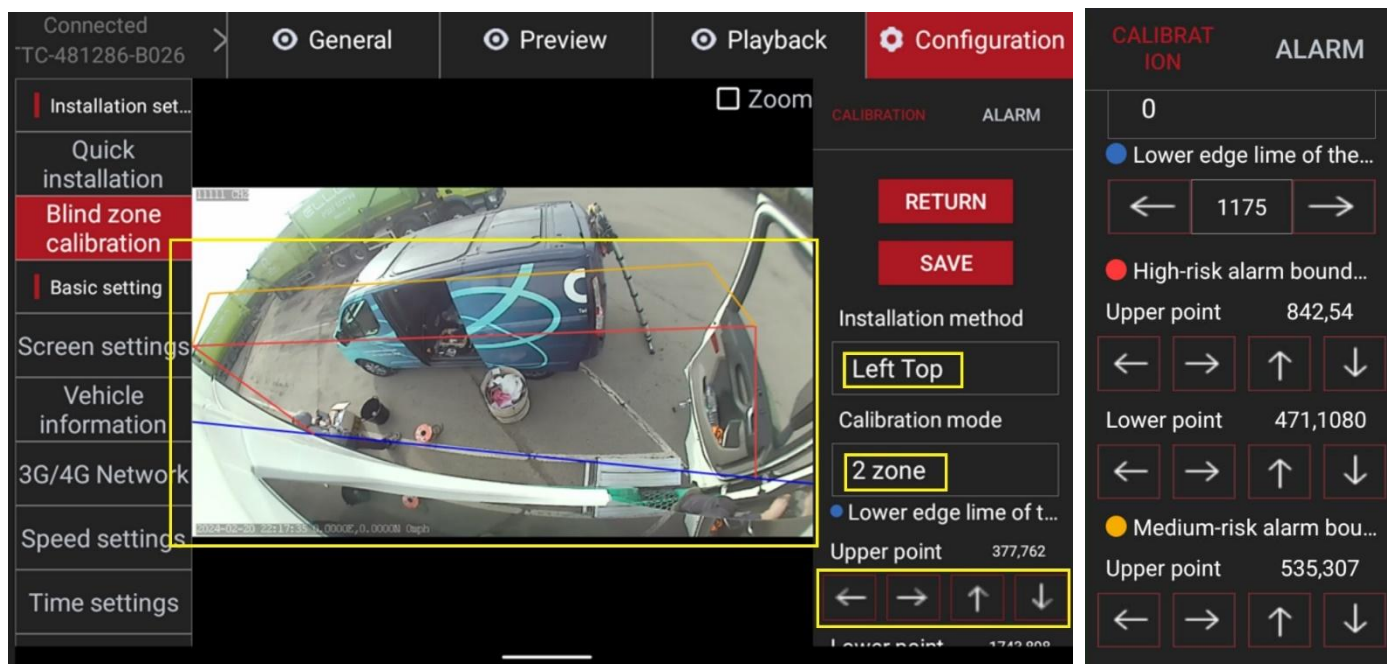
BSIS (Blind Spot Information Systems) Camera Setup

If your system has the BSIS zone you will need to configure the BSIS detection zone on the AWAI app, Access this menu by selecting 'Configuration' << 'Blind zone calibration' >> 'Calibration' as shown below. Check VIN1 is selected as the camera view channel and then click 'Calibration':

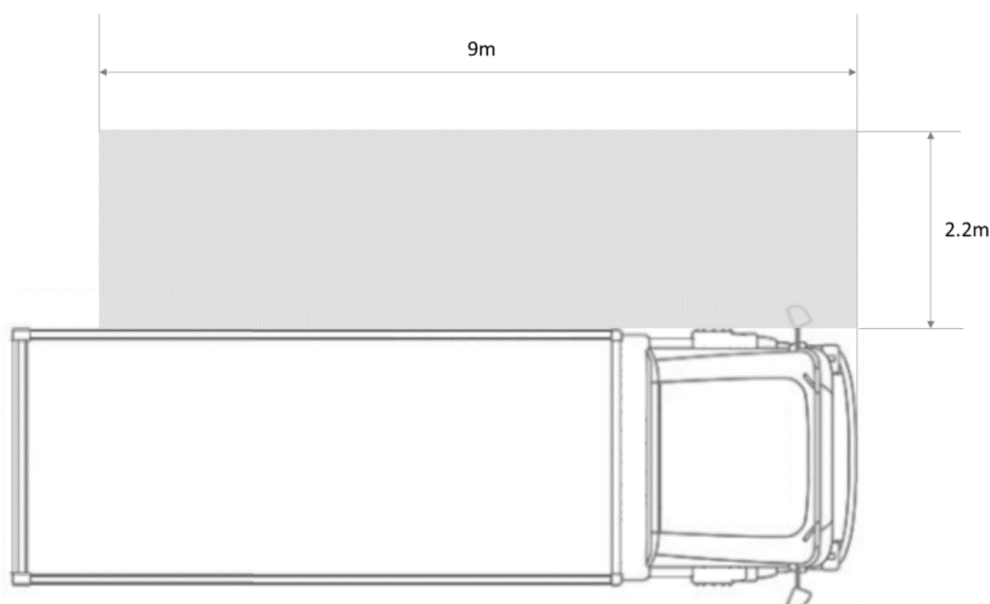


Ensure the 'Installation Method' is set to "Left Top" and that the 'Calibration Mode' is set to '2 Zone' as shown below.

Using the up/down/left/right arrows adjust the zones as required. Scrolling down the page will allow you to see the blue (vehicle baseline/edge), yellow (medium risk zone) and red (high risk zone) lines. You need to ensure the yellow zone covers the full BSIS 9m x 2.2m detection zone, the red zone can be narrowed for closer proximity to be approx. 0.8m – 1m from the vehicle.



The below image shows the TFL (Transport for London) BSIS requirement zone that the above detection area must cover. Please ensure the zone covers to the front left corner of the vehicle and does not stop at the wing mirror.



BSIS Zone Alarm Configuration

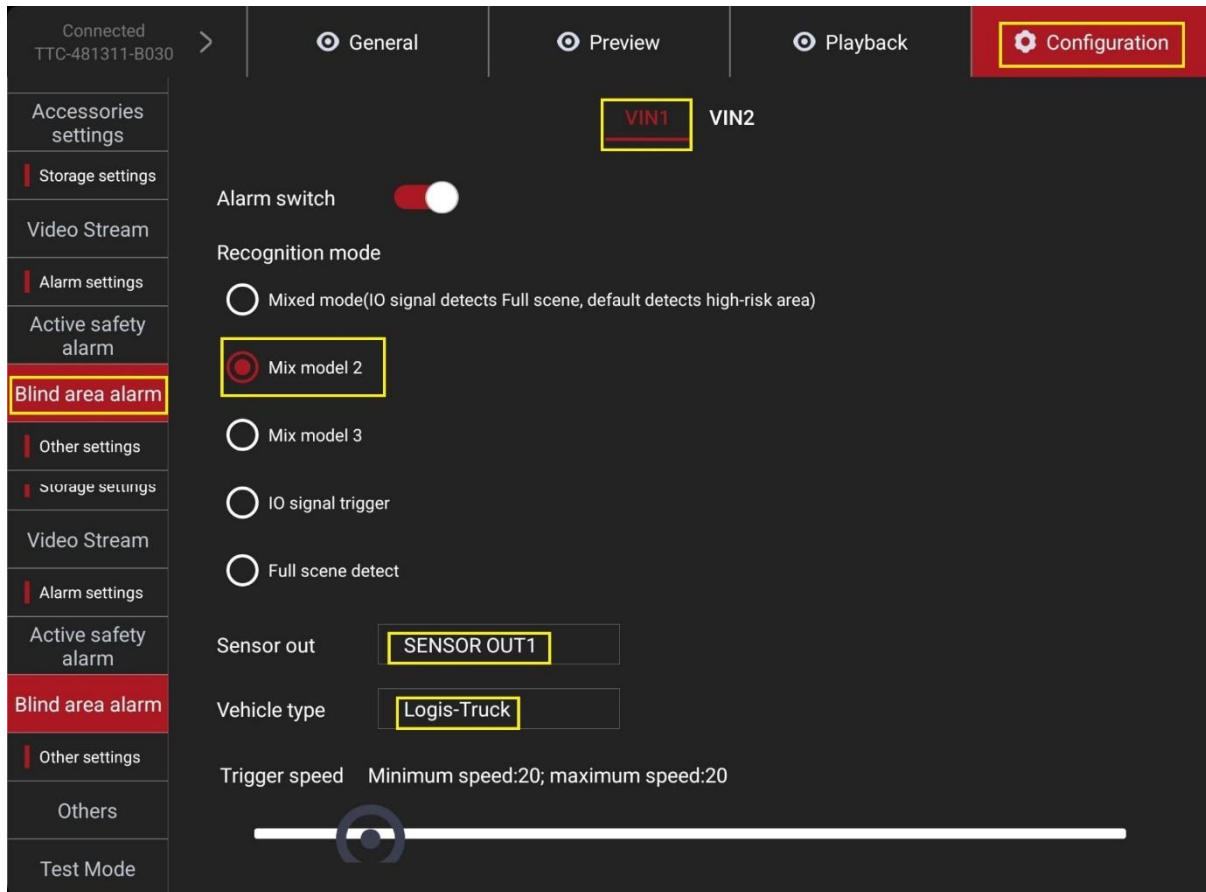
The next step is to configure the alarms for the BSIS detection, to access the Blind area alarm menu go to '**Configuration**' >> '**Blind Area Alarm**'.

Ensure '**VIN1**' is selected at the top for the BSIS zone and then select '**Mix model 2**' for the recognition mode which will configure the audible alert to sound once in the yellow detection zone and repeatedly in the red detection zone.

Motia Installation Guide

The **Sensor out** setting needs to be set to 'SENSOR OUT1' to enable the LTA alarm for the BSIS zone when the left indicator is on, and set the **vehicle type** to be 'Logis-Truck' as shown below.

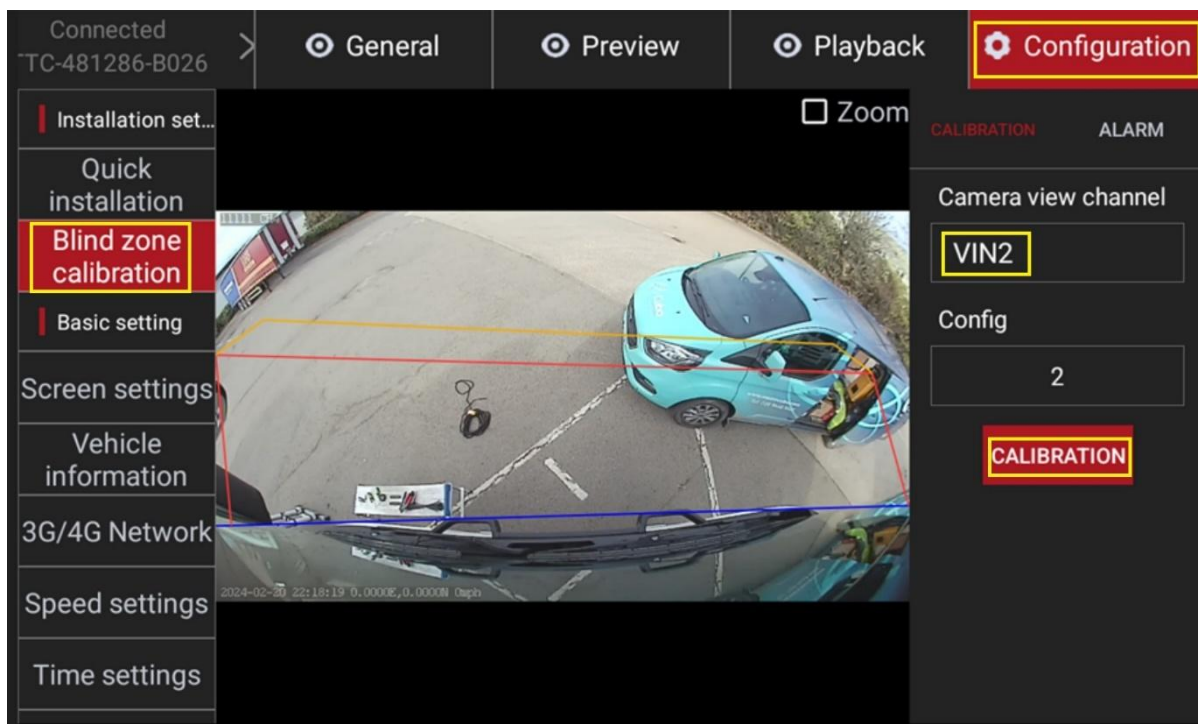
The trigger speed is hard encoded to 20mph to prevent the alert going off over 20mph so no changes are required here. When you have finished scroll to the bottom and click '**Setting**' to save the changes.



MOIS (Moving Off Information Systems) Front Detection Camera Configuration

If your system has the MOIS zone you will need to configure the MOIS detection zone on the AWAI app, Access this menu by selecting 'Configuration' << 'Blind zone calibration' >> 'Calibration' as shown below. Check **VIN2** is selected as the **camera view channel** and then click 'Calibration':

Motia Installation Guide

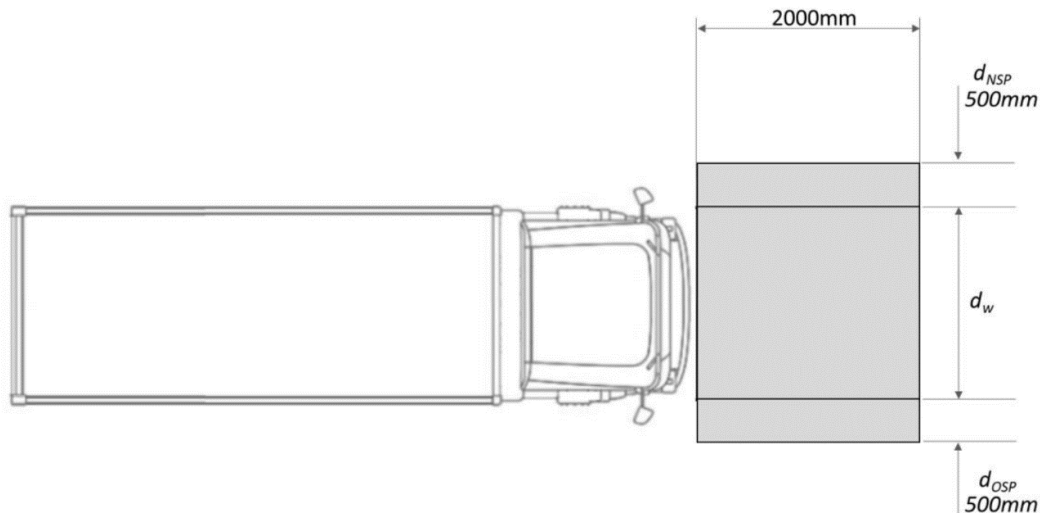


Ensure the 'Installation Method' is set to "Front" and that the 'Calibration Mode' is set to '2 Zone' as shown below.

Using the up/down/left/right arrows adjust the zones as required. Scrolling down the page will allow you to see the blue (vehicle baseline/edge), yellow (medium risk zone) and red (high risk zone) lines. You need to ensure the yellow zone covers the full MOIS 2m x (vehicle width + 0.5m overhang left + right) detection zone, the red zone can be narrowed for closer proximity to be approx. 0.8m – 1m from the vehicle.



The below image shows the TFL (Transport for London) MOIS requirement zone that the above detection area must cover. Please ensure the zone covers 0.5m over hang to the left and right of the vehicle and does not stop at the vehicle edges.



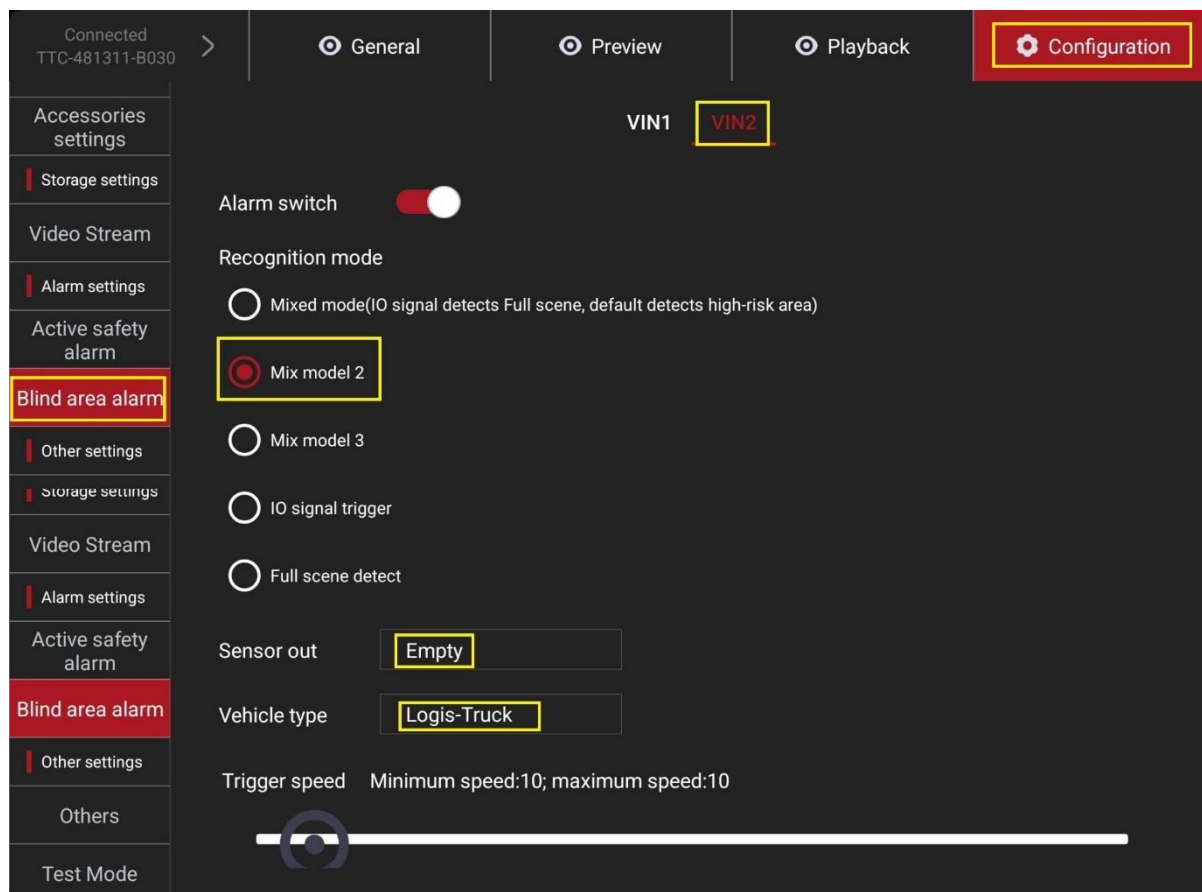
MOIS Zone Alarm Configuration

The next step is to configure the alarms for the MOIS detection, to access the Blind area alarm menu go to '**Configuration**' >> '**Blind Area Alarm**'.

Ensure '**VIN2**' is selected at the top for the MOIS zone and then select '**Mix model 2**' for the recognition mode which will configure the audible alert to sound once in the yellow detection zone and repeatedly in the red detection zone.

The **Sensor out** setting needs to be set to '**Empty**' so that it does not sound the LTA alarm when the left indicator is on, and set the **vehicle type** to be '**Logis-Truck**' as shown below.

The trigger speed is hard encoded to 20mph to prevent the alert going off over 10mph so no changes are required here. When you have finished scroll to the bottom and click '**Setting**' to save the changes.



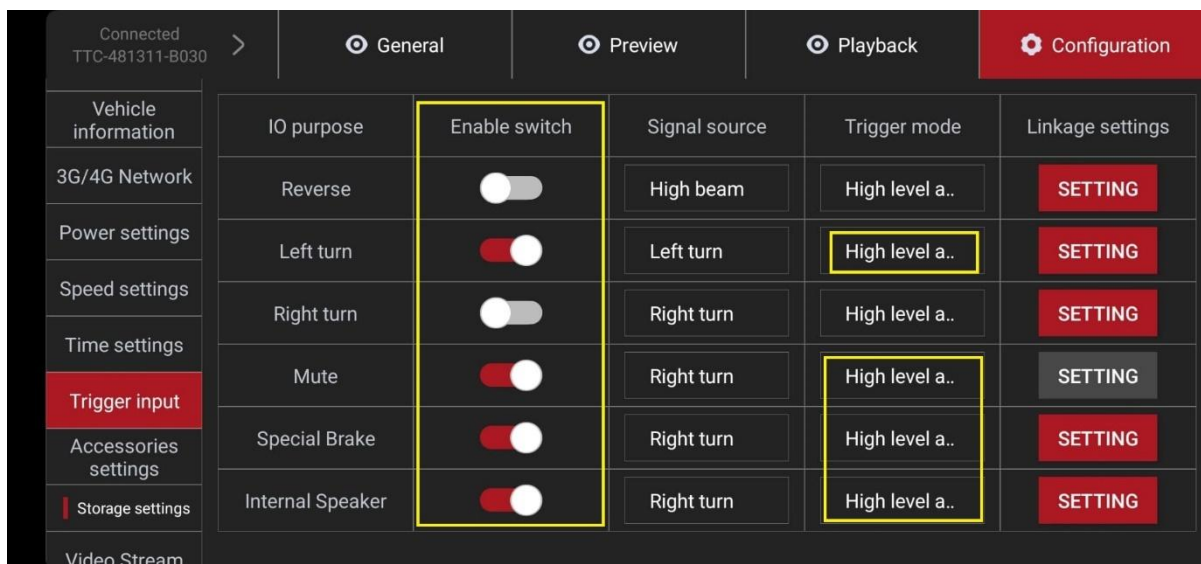
Trigger Inputs Setup

The next step is to configure the trigger inputs. Go to **Configuration >> Trigger input** to enable/disable the required triggers.

Disable 'Reverse' and 'Right Turn' and Enable the remaining 4 triggers, 'Left Turn', 'Mute', 'Special Brake' and 'Internal Speaker' as shown below

Set the **Trigger Mode** for the enabled option to be 'High Level'.

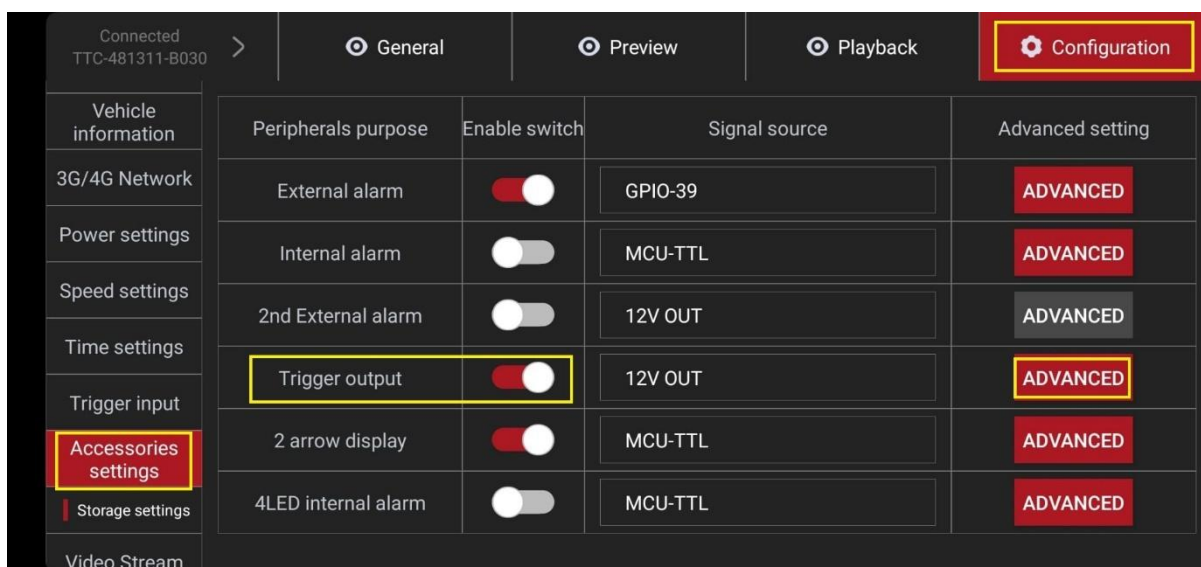
Once configured, the trigger input settings page should look like this:



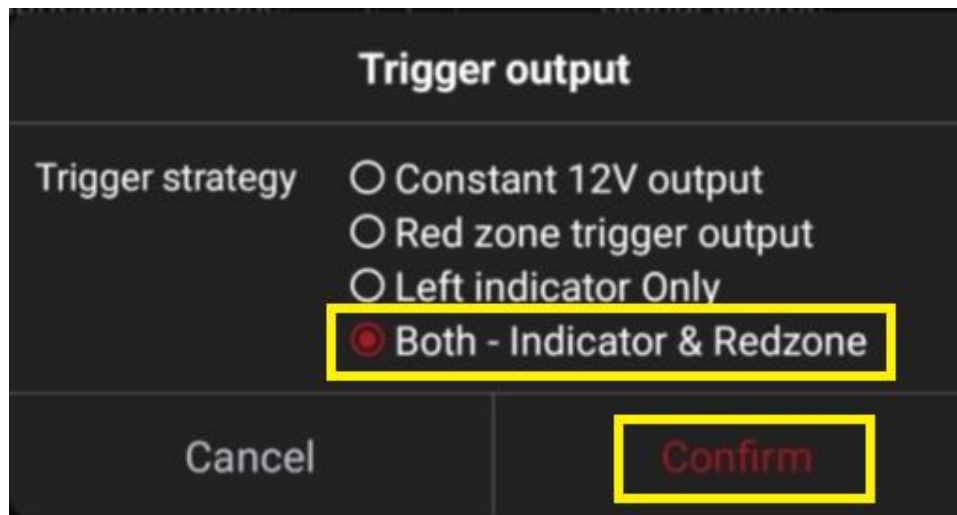
Trigger Output Setup

In order to ensure the monitor turns on (if off) and also switches to the RCA channel the 12v out trigger wire is connected as part of the hardware installation but it needs to be enabled as a trigger output in the AWAI mobile app as well. (If installing the City Smart Pro system with a Calamp this is also the same trigger connected to the grey fly lead input 4 of the Calamp)

Go to 'Configuration' << 'Accessories Settings' as shown below and ensure the 'Trigger output' toggle is enabled. To configure the output settings click on 'ADVANCED' as shown below:



Select 'Both Indicator & Redzone' as the trigger output and click 'Confirm' to save the settings:

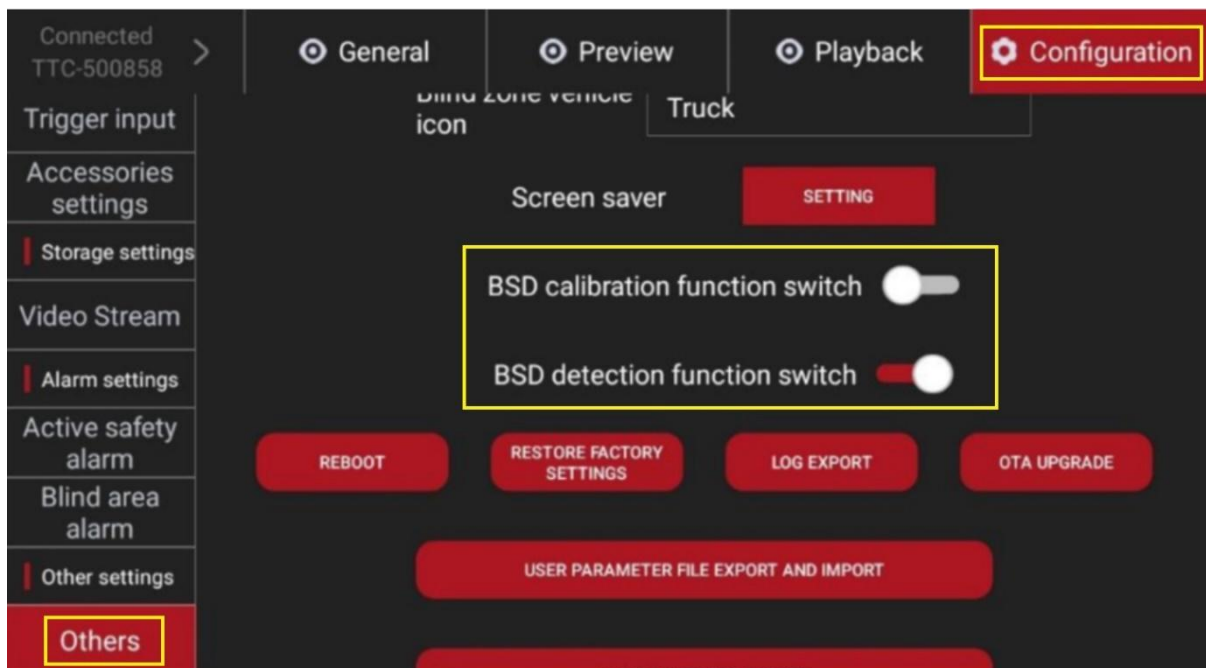


Driver Monitor Settings for BSD (Blind Spot Detection)

The monitor can be configured to give the driver a visual aid for the BSD (blind spot detection) zones. These can be accessed from the **Configuration >> Others** page as shown below.

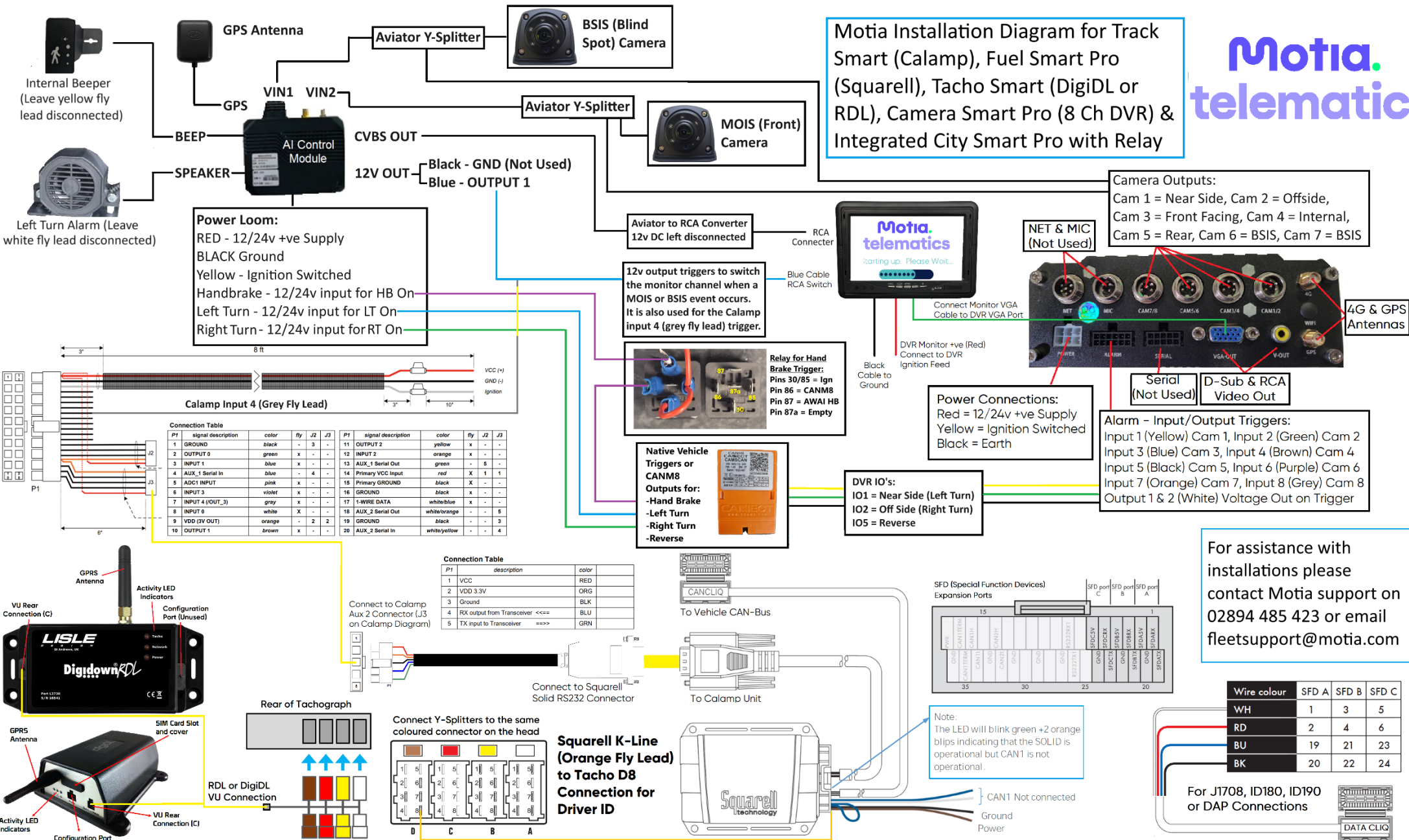
There are two settings available:

- 'BSD calibration function switch' when enabled this will show the detection areas in the video output. The preference for this feature is to be **disabled** by most drivers.
- 'BSD detection function switch' when enabled this will show a box around a detected object. The preference for this feature is to be **enabled** by most drivers

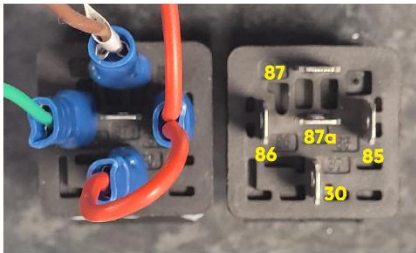


This completes the setup of the City Smart Pro, please ensure to capture all job photos and a video of the detection zones as prompted by Nexus or your engineer job card.

Motia Installation Diagram for Track Smart (Calamp), Fuel Smart Pro (Squarell), Tacho Smart (DigiDL or RDL), Camera Smart Pro (8 Ch DVR) & Integrated City Smart Pro with Relay



5 Pin Relays



Pin 30 = +ve
Pin 85 = +ve (Pins 85 & 86 Can Be Reversed)
Pin 86 = Calamp Trigger
Pin 87 = Output (DVR or LTA)
Pin 87a = No Connection

GR-01 Left Turn Warning Speaker Installation With Autowatch AASDS Side Detection System

Option 1 Connected To The Autowatch AASDS Side Detection System
 This Left Turn Warning Speaker is designed to integrate into the Autowatch AASDS Side Detection system. Warning message is: "CAUTION, VEHICLE TURNING LEFT". Warning message is only given when the vehicle is below the set speed and the left indicator is turned on. It will be continuous whilst a trigger a complete message is given every time except when mute is enabled.

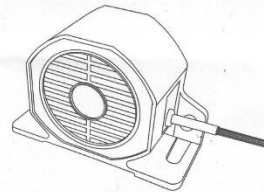
RED Power 12/24VDC (+ve)
 Connect to a constant 12/24V +ve supply

BLACK Ground (-ve)
 Connect to chassis ground or bolt

YELLOW Warning Trigger (+ve input)
 Connect to AASDS Blue +ve speaker output

GREEN Right Indicator Input/Mute Trigger (+ve input)
 Connect to RIGHT +ve pulsing indicator

WHITE Warning Light Output (-ve output) (200mA)
 (Optional)
 Connect to a relay (Pin 85) to give an output whenever there is a trigger on the YELLOW wire



NOTES
 The WHITE wire must only be connected to the -ve side of a relay (Pin 85) to control external warning lights. Please check the relay to see if it is diode protected.
TAKE CARE TO NOT TO HIGH-PRESSURE CLEAN THE SPEAKER!

Operating Voltage	9 - 32VDC
Standby Current@24V	11mA
Operating Current Max@24V	200mA
Operating Temp	-40°C - +85°C
Waterproof	IP67

Motia Installation Diagram for Track Smart (Calamp), Fuel Smart Pro (Squarell), Tacho Smart (DigiDL or RDL), Camera Smart Pro (8 Ch DVR)

Motia.
telematics



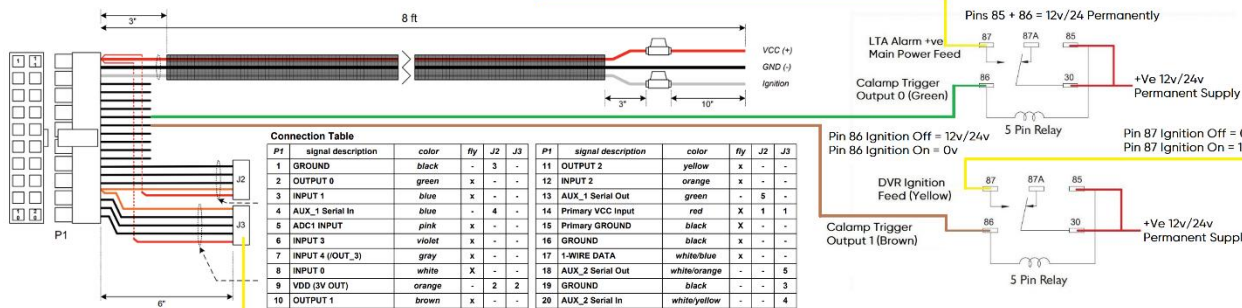
Camera Outputs:
 Cam1 = Near Side, Cam2 = Offside,
 Cam3 = Front Facing, Cam 4 = Internal,
 Cam5 = Rear, Cam 6/7/8 = Spare

Power Connections:
 Red = 12/24v +ve Supply
 Yellow = Ignition Switched
 Black = Earth

**If using DVR Relay then
 do not connect the DVR
 ignition to a switched
 ignition feed.**

Alarm - Input/Output Triggers:
 Input 1 (Yellow) Cam 1, Input 2 (Green) Cam 2
 Input 3 (Blue) Cam 3, Input 4 (Brown) Cam 4
 Input 5 (Black) Cam 5, Input 6 (Purple) Cam 6
 Input 7 (Orange) Cam 7, Input 8 (Grey) Cam 8
 Output 1 & 2 (White) Voltage Out on Trigger

For assistance with
 installations please
 contact Motia support on
 02894 485 423 or email
fleetsupport@motia.com



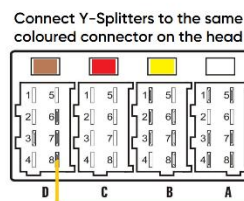
P1	signal description	color	fly	J2	J3	P1	signal description	color	fly	J2	J3
1	GROUND	black	-	3	-	11	OUTPUT 2	yellow	x	-	-
2	OUTPUT 0	green	x	-	-	12	INPUT 2	orange	x	-	-
3	INPUT 1	blue	x	-	-	13	AUX_1 Serial Out	green	-	5	-
4	AUX_1 Serial In	blue	x	4	-	14	Primary VCC Input	red	x	1	1
5	ADC1 INPUT	pink	x	-	-	15	Primary GROUND	black	x	-	-
6	INPUT 3	violet	x	-	-	16	GROUND	black	x	-	-
7	INPUT 4 (OUT_3)	gray	x	-	-	17	1-WIRE DATA	white/blue	x	-	-
8	INPUT 0	white	x	-	-	18	AUX_2 Serial Out	white/orange	-	5	-
9	VDD (3V OUT)	orange	-	2	2	19	GROUND	black	-	3	-
10	OUTPUT 1	brown	x	-	-	20	AUX_2 Serial In	white/yellow	-	4	-

P1	description	color
1	VCC	RED
2	VDD 3.3V	ORG
3	Ground	BLK
4	RX output from Transceiver <<<<	BLU
5	TX input to Transceiver >>>>	GRN

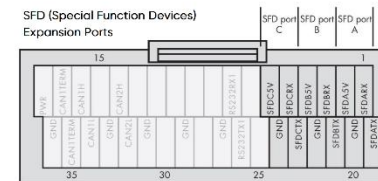
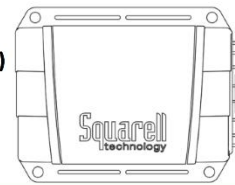


Rear of Tachograph

RDL or DigiDL
 VU Connection



**Squarell K-Line
 (Orange Fly Lead)
 to Tacho D8
 Connection for
 Driver ID**



Note:
 The LED will blink green +2 orange
 blips indicating that the SOLID is
 operational but CAN1 is not
 operational.

CAN1 Not connected
 Ground
 Power

Wire colour	SFD A	SFD B	SFD C
WH	1	3	5
RD	2	4	6
BU	19	21	23
BK	20	22	24

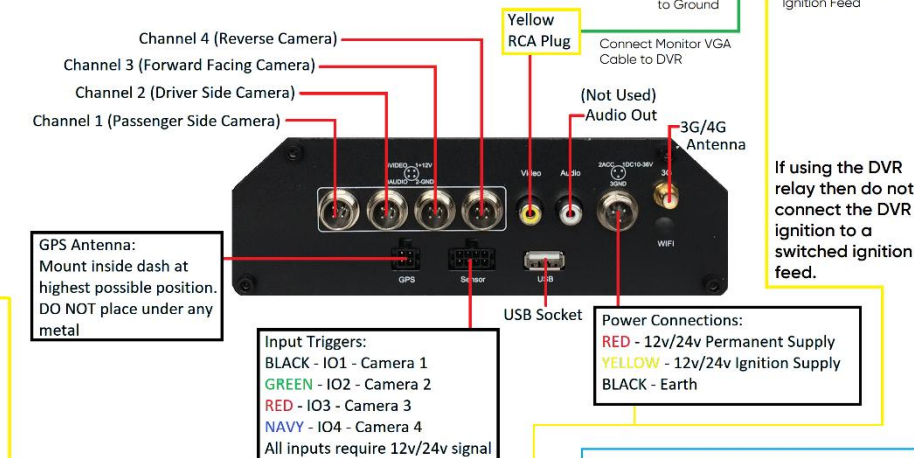
For J1708, ID180, ID190
 or DAP Connections





Blue Cable RCA Switch (Unused)
Black Cable to Ground
DVR Monitor +ve (Red) Connect to DVR Ignition Feed

Motia Installation Diagram for Track Smart (Calamp), Fuel Smart Pro (Squarell), Tacho Smart (DigiDL or RDL), Camera Smart Pro (4 Ch DVR)



For assistance with installations please contact Motia support on 02894 485 423 or email fleetsupport@motia.com

Wire colour	SFD A	SFD B	SFD C
WH	1	3	5
RD	2	4	6
BU	19	21	23
BK	20	22	24

For J1708, ID180, ID190 or DAP Connections



GR-01 Left Turn Warning Speaker Installation With Autowatch AASDS Side Detection System

Option 1 Connected To The Autowatch AASDS Side Detection System
This Left Turn Warning Speaker is designed to integrate into the Autowatch AASDS Side Detection system. Warning message is: "CAUTION, VEHICLE TURNING LEFT". Warning message is only given when the vehicle is below the set speed and the left indicator is turned on. It will be continuous whilst a trigger a complete message is given every time except when mute is enabled.

RED Power 12/24VDC (+ve)
Connect to a constant 12/24V +ve supply

BLACK Ground (-ve)
Connect to chassis ground or bolt

YELLOW Warning Trigger (+ve input)
Connect to AASDS Blue +ve speaker output

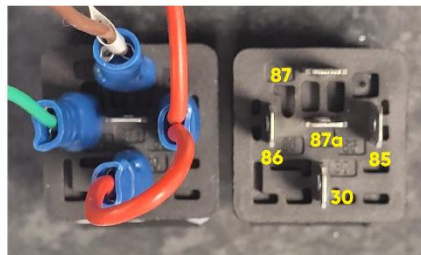
GREEN Right Indicator Input/Mute Trigger (+ve input)
Connect to RIGHT +ve pulsing indicator

WHITE Warning Light Output (-ve output) (200mA)
(Optional)
Connect to a relay (Pin 85) to give an output whenever there is a trigger on the YELLOW wire

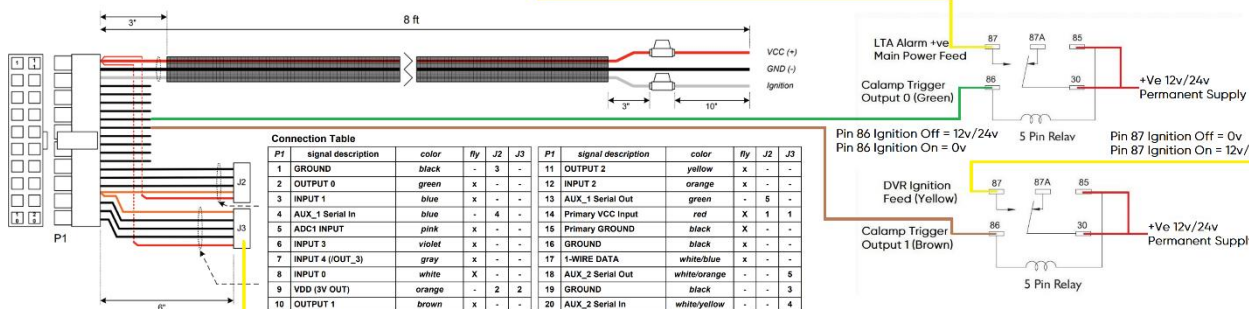
NOTES
The WHITE wire must only be connected to the -ve side of a relay (pin 85) to control external warning lights. Please check the relay to see if it is diode protected.
TAKE CARE TO NOT TO HIGH-PRESSURE CLEAN THE SPEAKER!

Operating Voltage	9 - 32VDC
Standby Current@24V	11mA
Operating Current Max@24V	200mA
Operating Temp	-40°C - +85°C
Waterproof	IP67

5 Pin Relays



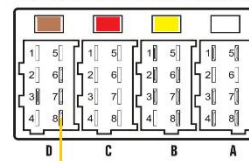
Pin 30 = +ve
Pin 85 = +ve (Pins 85 & 86 Can Be Reversed)
Pin 86 = Calamp Trigger
Pin 87 = Output (DVR or LTA)
Pin 87a = No Connection



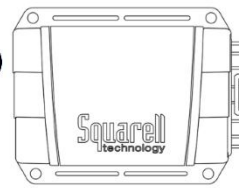
Rear of Tachograph

RDL or DigiDL VU Connection

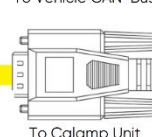
Connect Y-Splitters to the same coloured connector on the head



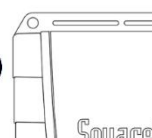
Squarell K-Line (Orange Fly Lead) to Tacho D8 Connection for Driver ID



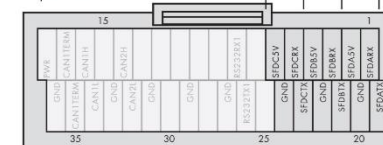
To Vehicle CAN-Bus



Connect to Squarell Solid RS232 Connector



SFD (Special Function Devices) Expansion Ports



Note: The LED will blink green +2 orange blips indicating that the SOLID is operational but CAN1 is not operational.

CAN1 Not connected

Ground Power