

360° Vision System for 18-foot Cargo Van (Kit # AVMS-3505)

**DUE TO THE COMPLEXITY OF THIS KIT
PROFESSIONAL INSTALLATION IS REQUIRED**

CALIBRATION KIT IS REQUIRED FOR FINAL PROGRAMMING

Please read thoroughly before starting installation and check that kit contents are complete.

Items Included in the Kit:

360° camera module
Key box power/image buttons
Front camera w/grill mount and harness
2 side mount cameras w/brackets and harnesses
2 video output RCA cables
Power/camera input harness
2 side camera templates
1 rear mount camera with bracket and harness
Mounting screws and gaskets
These instructions

Tools & Supplies Needed:

Wire strippers
Wire cutters
Electrical tape
Zip ties
Plastic panel removal tools
Screwdriver
Drill
Large Uni-bit/drill bits
Hole saws
T-15 Torx

Safety Precautions:

- Work in well ventilated area that is clear of obstructions.
- Secure vehicle with tire chucks in both front and rear of tires.
- Turn vehicle accessories OFF and ensure ignition key is in OFF position.
- Wear safety goggles and snug fitting clothes.
- Use tools only for their intended purpose and which are in good repair.
- Only perform this task if confidence, skill, and physical ability permit.

NOTE: We strive to provide accurate and up-to-date installation instructions. For the latest full color instructions, as well as an installation video, please visit www.brandmotion.com

Section 1:

Front camera installation

1. Front camera is mounted in the grill aiming straight or at a 20° angle to the ground.
2. Mount camera in housing using the bracket and screws provided. (The white sticker is up on the camera.)



3. Mount the housing using the provided screws to the grill and putting the caps in the holes to close them.



[Mounted Front Camera]

4. Run the camera harness along the under hood covering, down the drive side hinge. Zip tie the harness to the hinge so the harness will not kink or cut.
5. Run harness into the vehicle through the factory grommet in the driver side firewall.
6. Route the camera harness to the location of the 360° module.

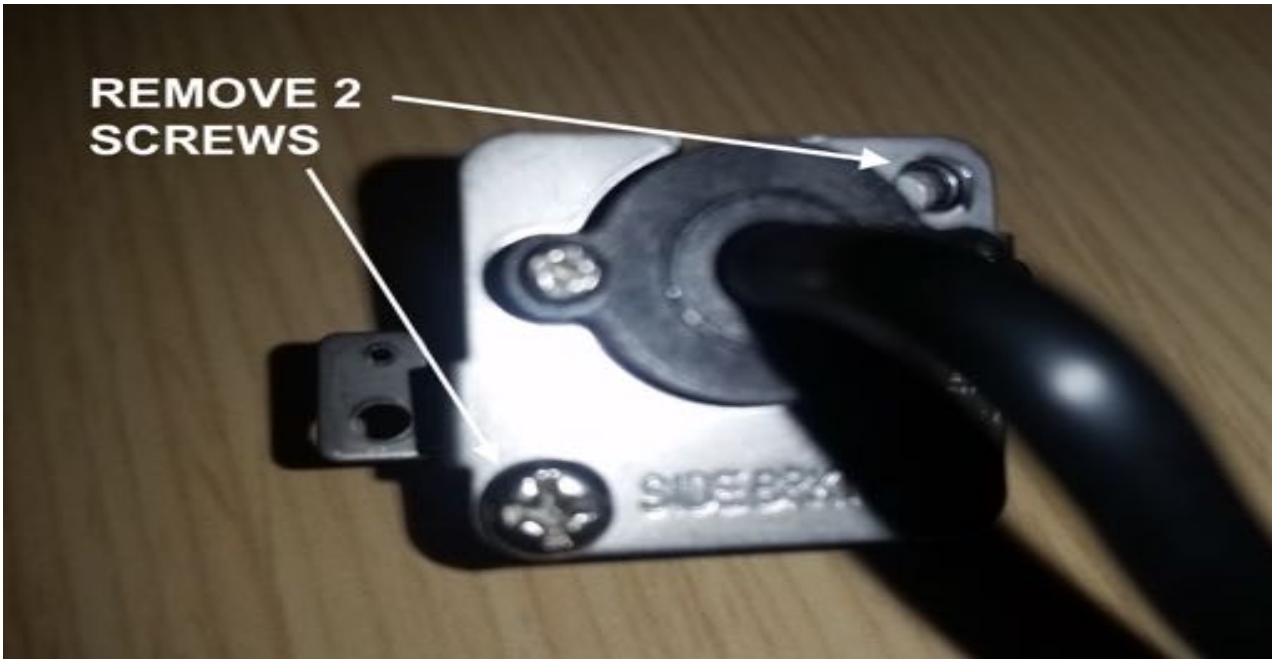
Section 2:

Side Camera installation

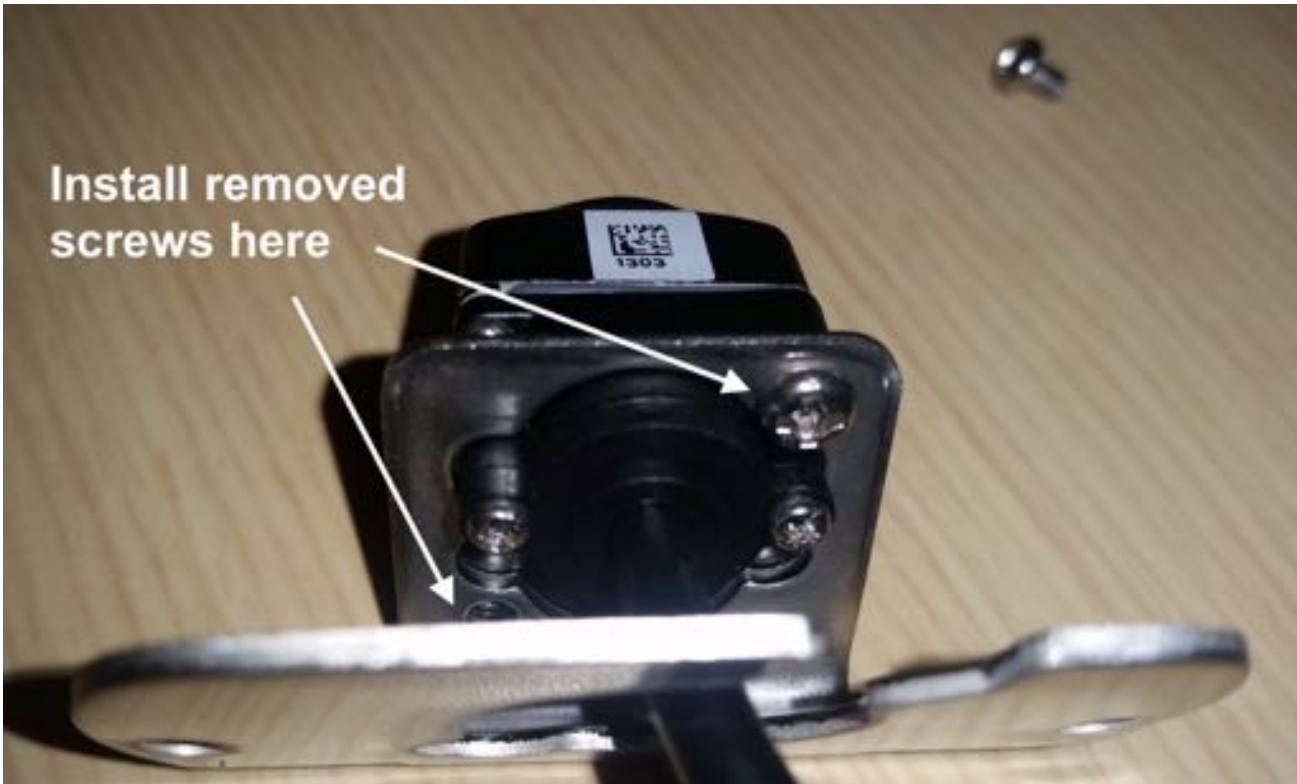
1. Use masking tape to tape up the upper side of the vehicle to mark where to mount the camera.
2. Use one of the rubber gaskets and mark the holes to be drilled.
3. Confirm that the location of the holes will allow the wiring to go inside the vehicle. **(Brandmotion will not be responsible for holes drilled into vehicle and fitment that is not correct due to changes in production of vehicles.)**
4. If the camera housings are going to be painted to match the vehicle do so now before mounting to vehicle.
5. Drill the holes into the side of the vehicle, for the outer screw holes drill a 5/16 hole. The center hole drill a 1/2 hole using a step drill or Uni-bit for a clean hole.



6. Through the center hole, insert a pull wire or fish tape to see if it is all the way to the inside of the vehicle.
7. Drill hole all the way through if not or try to find an opening to go through to the inside of the van.
8. From the inside of the vehicle, connect the harness that is labeled left or right depending on what side of the vehicle is being worked on. Connect the end of the harness that has the loose terminals. Tape that end to the pull wire or whatever is being used to pull through to the outside of the vehicle.
9. Once to the outside of the vehicle insert the terminals into the provided connector. (Follow the diagram on the last page.)
10. Remove the two (2) small screws from the brackets installed on the side cameras now. *(If there are no brackets on the side cameras then the screws will be in a enclosed zip lock bag with (6) screws in it for the front and side cameras.)*



11. Mount the camera to the angle camera mount bracket with the (2) small silver Phillips screws. (The white sticker on the camera is the up position on the camera.)



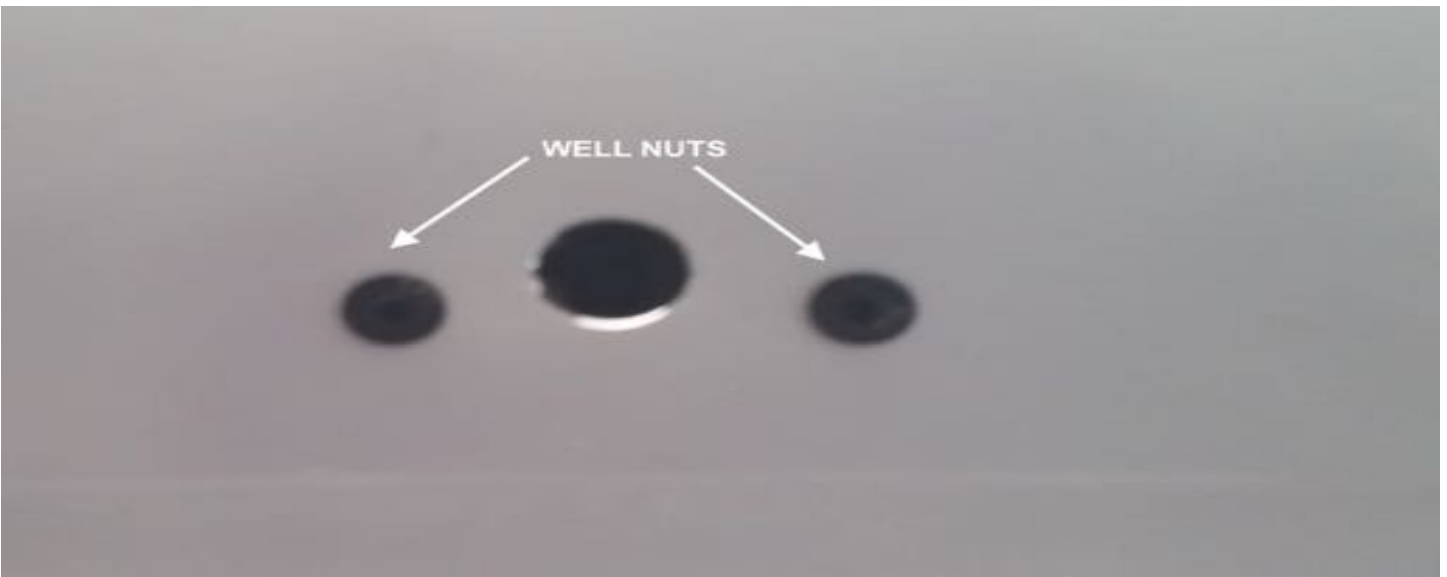
12. Place the black sticker gasket on the bottom of the angle bracket.



13. Insert the camera and angle bracket into the outer camera housing and then place the grey rubber gasket on the bottom of the assembly.



14. In the (2) outer holes drilled insert a rubber well nut in each one, push until lip is flush with the metal of the vehicle.



15. Connect the camera cable to the harness and tape up or heat shrink the connector to make sure that it does not come unplugged.

16. Insert the extra cable into the vehicle. (Pull from the inside until it is tight.)

17. Use clear silicone to fill center hole to prevent water from entering vehicle.

18. Insert the long Phillips screws in each hole to mount the assembly.



19. Tighten the (2) screws to hold the camera assembly in place.

20. Make sure gasket is in place and not curled under the housing.



21. Repeat for the other side of the vehicle.
22. After other side is complete route the harness to the passenger side and run the sides and rear camera to the front of the vehicle towards the glove box area. (Follow the headliner to the passenger side A-pillar and run down to the glove box.) The plier unclips from the top to the bottom.

Section 3:

Rear camera installation

1. Repeat mounting of camera using instructions for side camera, but in the rear of the vehicle.
2. Mount camera to be able to see the ground and both outer edges of the vehicle.
3. Run harness to the front of the vehicle to where the 360° Main control module will be.
4. Zip tie the harness in place to make sure it does not rattle.

Section 4:

360° module installation

1. Connect the correct camera plugs to the 360° module. Front, rear, left side, right side, CVBS and CVBS RV.
2. The CVRS output is video output controlled by the power on/off button to the system. It is connected to the AUX video input on the aftermarket radio/display.
3. The CVRS RV output is video output when the accessory is powered on. It is connected to the back-up camera input on the aftermarket radio/display.
4. If not done so yet connect the power harness to the 360° module. Wire up the power connections, yellow is constant, red is accessory, black is ground, blue is reverse.
5. Do not mount the 360° module; you will need to get to it for calibration of the cameras.
6. Plug in the Key Box and mount to the right side of the steering column on the dash trim with the tape provided. (Or any place that is flat and within reach of the driver.)

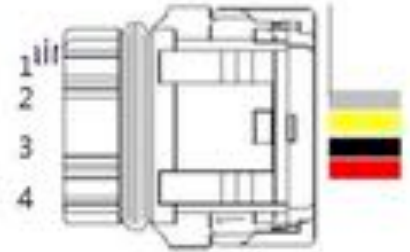


7. To turn on the system press the power button on the Key Box. To change camera views, press the car image button. A long press will show a full front view another long press will show a full rear view.
8. Place the vehicle into reverse to see the rear camera image on the screen. Or turn on screen to see image. (Warning will be displayed on the screen until the unit is calibrated.)

Diagram 1a.

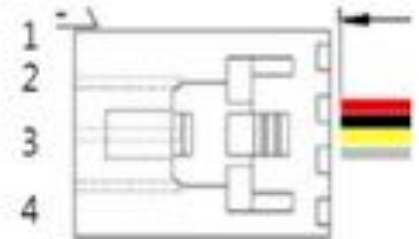
1.2.2 Front Camera Connector pin map

Pin No.	Description
1	V-GND(White & Drain)
2	Video(Yellow)
3	Power_GND(Black)
4	Power(Red)



1.2.3 Rear Camera Connector pin map

Pin No.	Description
1	Power(Red)
2	Power_GND(Black)
3	Video(Yellow)
4	V-GND(White & Drain)



1.2.4 Side Camera Connector

Pin No.	Description
1	Power(Red)
2	Power_GND(Black)
3	Video(Yellow)
4	V-GND(White & Drain)

