



Trailer Vision
Your Safety, Our Priority



Wireless Camera Systems

Trailer Vision's often unique and cutting-edge systems have been developed with a small selection of the world's leading manufacturers, always with a focus on functionality, practicality, durability and ease of installation. Trailer Vision was the first company in the UK to introduce wireless camera systems and more recently the first company to supply completely auto-pairing digital wireless systems.

Additionally, they operate at the forefront of 360° Surround View (SV) technology, offering the UK's largest range of SV systems and can now supply fully Digital HD systems, including Digital DVRs.

Trailer Vision are also at the forefront of optical detection technology with the recent introduction of Cycle-Safe™ and Site-Safe™.

Systems are offered with a large selection of options and can be tailored to the operator's particular requirements. We at Haven Off-Grid provide an installation service or can sell any of the products for self-installation.

360° Surround View Camera Systems

360° Surround View (SV) camera systems (AKA 'Birds-Eye' or 'Look-Down') provide a complete view around the vehicle and eliminate all blind-spots, which are proven to be the cause of the majority of accidents, especially when manoeuvring, or at slow speed. Mirrors and single view cameras help to reduce blind-spots but can only view a single area. This means that drivers have limited information, or need to scan several monitors/mirrors quickly before making decisions, often in busy and challenging environments.

SV systems provides a complete view around the vehicle, in real time, significantly improving vehicle safety and reducing driver workload.

The easy to interpret 'look-down' display, is always displayed helping the driver to manoeuvre in difficult situations and ensuring excellent situational awareness. Additionally, the monitor also displays a single camera view, in the RH window, which is triggered automatically, i.e. a side-view camera is displayed when indicating, ensuring no blind-spots and aiding lane-change at high speeds etc.

Additionally, the rear camera is displayed when reversing (the rear camera is also the default view). Alternatively the monitor/system can be configured to display the 'look-down' view only.

SV systems are usually supplied with a 4CH DVR (128GB SSD) ensuring that all incident/accident evidence is recorded, helping to reduce both false claims ('crash for cash') and insurance premiums.



Why 360° Surround View?

Features

- Surround view in a single image
- Four cameras with ultra-wide angle lenses
- Real-time 360° view, eliminates all blind spots
- Utilise with a DVR for all around recording/evidence
- Configurable 'look-down' view
- Configurable and automatic individual camera views
- Bespoke vehicle top view graphic (see below)

Benefits

- Reduced driver workload and improved safety
- Eliminates all blind spots
- Fast and smooth real time image display
- Reduce insurance premiums/speed claims etc

- The area displayed around the vehicle can be tailored to the operational requirements
- Suitable for installation on any size/type of vehicle
- Recognisable vehicle displayed on the monitor

How 360° Surround View Works

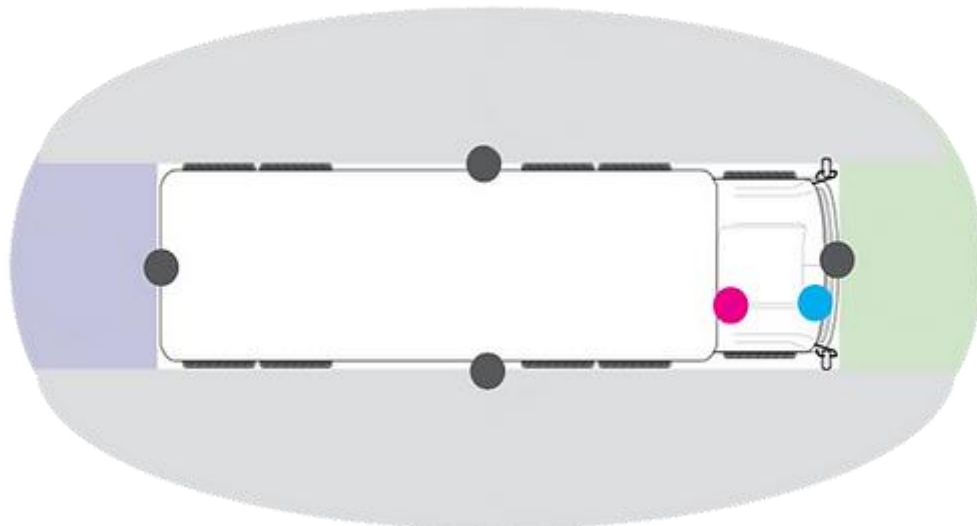
360° Surround View (SV) is an intelligent camera monitor system that utilises four ultra-wide angle cameras and an ECU (Electronic Control Unit).

The ECU seamlessly blends the four camera images together in order to present the driver with an easy to interpret view of the vehicle's surroundings, eliminating all blind spots.

Trailer Vision offer a range of 360° SV technologies, all of which are calibrated to the vehicle. This ensures that the driver has a seamless view around the vehicle as well as a more detailed individual camera view, when turning and reversing.



Installation and Calibration



360° SV camera systems can be installed on any type of vehicle or machine.

Once installed, systems are calibrated and a choice of default views are set, ensuring that the system can be configured to meet the user's requirements.

In addition, the flexibility of surround view systems means that they can be utilised for both on and off-road applications.

Choose Your Vehicle-Based Surround View System



Omni-Van™ 360°

A3013

- 12V System for LCV's
- 7" Dash or Mirror Mounted Monitor
- No blind spots (& FORS compliant)
- Utilise with a DVR for all round recording

Omni-Vue™ 360° Digital HD

A3328

- 720p Digital HD 360° four camera system
- No blind spots
- FORS/CLOCS etc compliancy
- Utilise with a Digital HD DVR for all round recording



Choose Your Machine-Based Surround View System



Omni-Plant™ 360° Digital HD

A3371

- 720p Digital HD 360° four camera system
- No blind spots
- SKANSKA/CLOCS etc compliancy
- Utilise with a Digital HD DVR for all round recording

Digital Wireless Camera Systems



Digital Wireless (DW) camera systems are ideal for applications where connecting a cable between the camera and monitor can be difficult, or time consuming. They are especially suited to trailer applications and self-installation. Additionally, if power is difficult to access, cameras can be powered via battery packs and monitors can include built-in rechargeable batteries.

Why Digital Wireless?

Features

- Up to 200m range
- Digital wireless
- Cameras and monitors with built-in DW modules

Benefits

- Utilise when cables aren't practical
- No interference
- Quick and easy installation

How Digital Wireless Systems Work



Digital Wireless (DW) systems utilise the 2.4Ghz radio spectrum to transmit and receive video without the need for cables. Digital technology and sub-frequency channel hopping ensure no interference. DW systems include a Receiver (RX) and a Transmitter

(TX) and these can be separate modules, or they can be built-in to the monitor (RX) and camera (TX).

Choose Your Digital Wireless System



Agri-Vue™

A1048

- Semi-automatic pairing (via monitor)
- Utilise with two cameras (split screen), 100m range
- 7 inch monitor

Auto-Pairing DW Modules (No more suzy)

P1058

- Auto-pairing (no driver input required)
- Waterproof, 100m range (digital, no interference)
- Utilise with 'standard' or 'GP' camera systems



Digi-View™

A1001

- 3.5 inch monitor with built-in RX and rechargeable battery
- Utilise up to four cameras with built in TX
- No interference, 200m range



Digi-Max3™

A1084

- 7 inch monitor (AHD) with built-in RX
- Utilise up to four cameras with built in TX
- No interference, 200m range





Digi-Lite™

A1032

- 3.5 inch monitor with built-in RX and rechargeable battery
- Camera built-into number plate surround (separate TX)
- No interference, 200m range



Digi-Lite™ Solar

A1032

- 5 inch monitor with built-in RX
- Camera, battery and TX built into the number plate surround
- Easy installation, no wiring at all

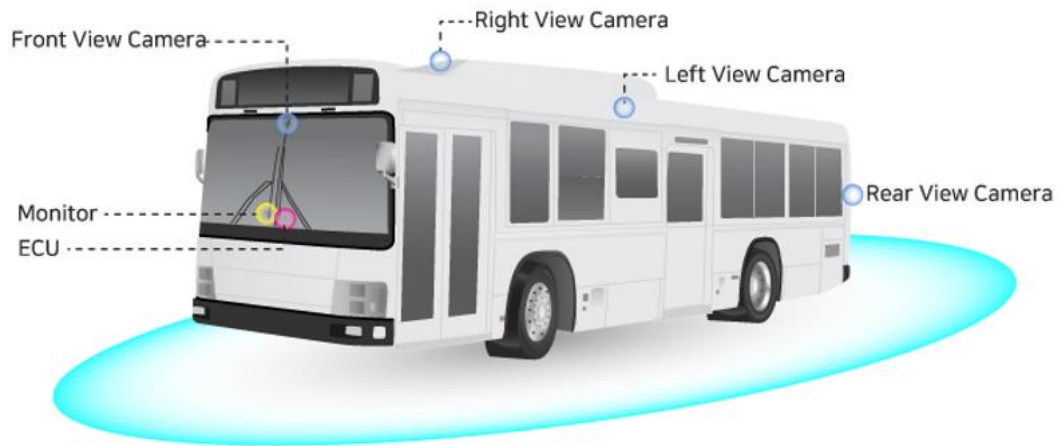


Digi-Lite™ Deluxe

A1033

- 7 inch mirror mounted monitor (separate RX)
- Camera built-into number plate surround (separate TX)

Wired Camera Systems



Wired camera systems can be utilised for many applications where there is a blind-spot. Many different types of camera are available ensuring that whatever your application, or vehicle type, the most suitable system is available. Wired camera systems reduce driver workload and help to prevent incidents and accidents.

Why Wired Camera Systems?

Features

- View a difficult to see area
- Utilise for compliance
- Utilise with a DVR for all around recording/evidence
- Multiple cameras can be utilised with a monitor
- Ultra-wide angle lens cameras can be utilised

Which Products Do I Need?

- Improve safety and reduce accidents
- Eliminate specific blind spots
- Reduce insurance premiums/speed claims etc
- Reduced driver workload
- Improved vision compared to multiple mirrors that could be damaged or not adjusted for a specific driver

Choose Your Wired System

GP System



GP3216

- 7 inch monitor
- Utilise with up to four IP69K cameras
- Suzy cable or auto-pairing DW modules for trailer camera use

Standard (OEM Spec) System

A3408

- 7 inch monitor with 'touch buttons'
- Utilise with up to four 1.3MP/WDR IP69K stainless steel cameras
- Suzy cable or auto-pairing DW modules for trailer camera use
- 3 year warranty



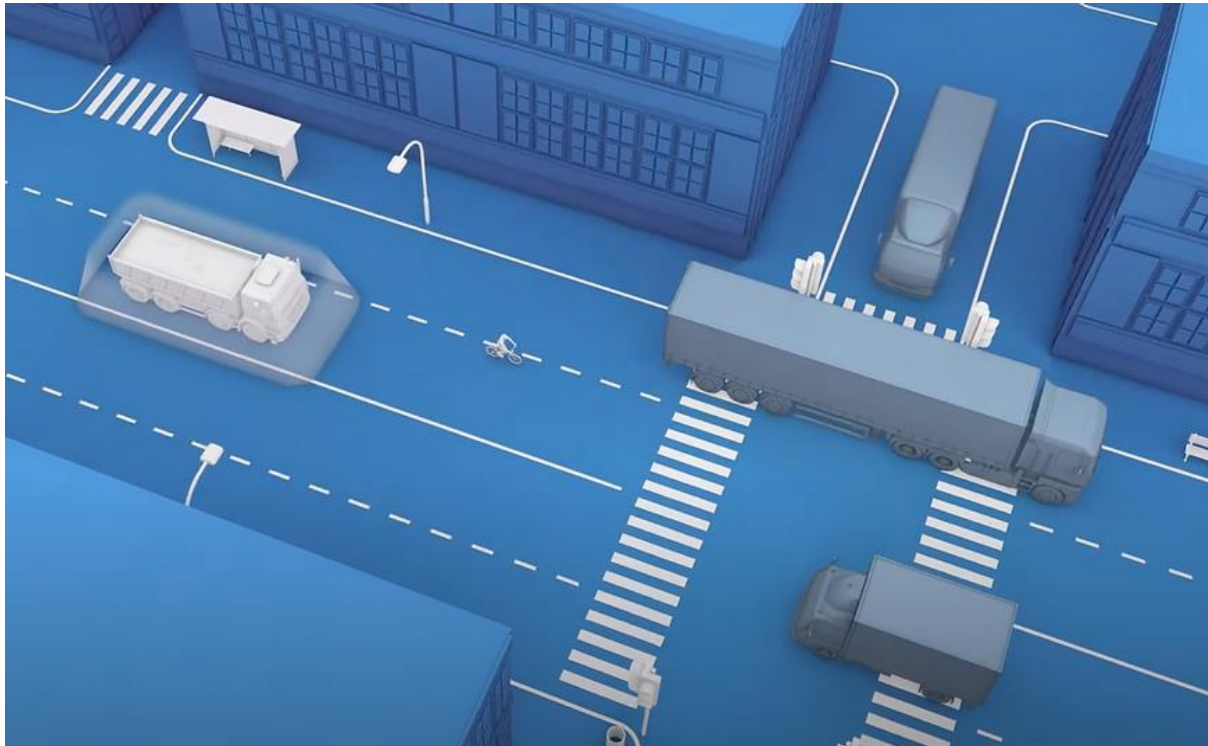
Multi-View™ System



A3189

- Choice of 5 inch dash-mounted or 7 inch mirror-mounted monitor
- One lens (1.3MP / WDR) with two views
- 2 year warranty

Detection Systems



Detection Systems are designed to warn the driver of impending 'danger', whether it's an obstacle that may damage the vehicle, or a Vulnerable Road User (VRU) that may have strayed into the vehicles path (or blind spot).

There are currently several types of sensor / detection technologies employed on vehicles, including:

- Ultrasonic
- Optical (electro-optical / video processing)
- RADAR
- LiDAR

Ultrasonic Sensors

Ultrasonic sensors work by emitting sound waves at a high frequency (i.e. 58kHz & above 18kHz), which is not audible. The sensors receive the reflected sound waves back, calculating distance based on the time taken. Due to the relatively small detection area, multiple sensors are utilised on vehicles (i.e. 4 sensors per side).

- Short range (<2.5m)
- Do not differentiate between moving and static objects (e.g. roadside furniture)

- Susceptible to high levels of false detection / alarms by wind shear, rain and dirt; also static object false alarms when utilised for side-scan/VRU detection (ADAC Test Report [here](#))



- Installation can be time consuming as multiple sensors are utilised and different sensor mounts may be required
- 'Low' cost

LiDAR (Light Imaging Detection and Ranging)

LiDAR sensors work by emitting light (laser) waves at a high frequency (not visible), they receive the reflected light waves back, calculating distance based on the time taken.

- Long Range
- Can be utilised to 'map' an area (for autonomous vehicles etc)
- Can differentiate between moving and static objects
- Reliable detection
- 'High' cost



RADAR (Radio Detection and Ranging)

RADAR sensors work by emitting radio waves at a high frequency (i.e. 24GHz & above 2GHz), they receive the reflected radio waves back, calculating distance based on the time taken.



- Long Range
- Can differentiate between moving and static objects (different types of RADAR)
 - Reliable detection
 - Can be a single unit, depending on application & beam pattern etc
 - 'High' cost

Why Optical Detection?

Features

- Combined camera and detector
- Only detects moving objects/VRUs
- Ultra-wide angle (1.3MP/WDR) lens
- No requirements for additional/multiple detectors
- Can be integrated
- 12V/24V

Benefits

- DVS** and FORS** compliant (simplified/neat installation)
- Reduced driver workload (false alarms)
- No blind spot
- Quick, simple and neat installation
- Utilise with other cameras, alarms and a DVR
- Suitable for all applications

** With additional equipment.



See Cycle-Safe™ In Action

Captured on one of our high-quality DVRs, the footage to the right provides a great insight of the system's capabilities.

Cycle-Safe™ Optical Detection

Next generation optical detection technology combine detection and vision in single 'smart camera'.

The intelligent system provides drivers/operators with audible alerts and visual warnings, either via a monitor and/or a separate LED/buzzer.

Operators can choose whether the monitor is always on, or switched off above 20MPH. Audible warnings are enabled only when turning (indicating).

Unlike ultrasonic sensors, optical detection systems differentiates between moving (VRUs) and static objects, reducing driver workload/false alarms.

Optical detection systems can also be integrated with other cameras (including additional 'smart cameras'), sensors, alarms and DVRs.



Installation and Calibration

Installation is quick and easy, compared to multiple sensor systems. This is because the camera is also the detector. Additionally, no calibration is required.

Vehicle-Based Optical Detection System



Cycle-Safe™

A3386

- Camera with combined detection (detects moving objects only)
- 7 inch monitor
- DVS compliance
- LED/buzzer

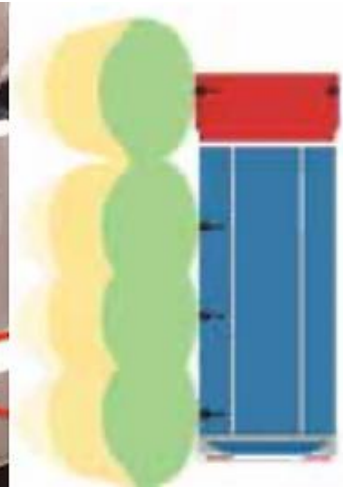
Machine-Based Optical Detection Systems

Standard (OEM Spec) System



A3408

- Camera with combined detection (detects moving objects only)
- 7 inch monitor (plastic or metal/waterproof)
- LED/buzzer (optional)



How Ultrasonic Detection Works

Ultra-sonic sensors are designe to detect/static objects and are usually utilised at the front/front corners, or at the rear of the vehicle.

They are also used at the side of the vehicle, although this can mean that static objects create false alarms.

Ultra-Sonic Detection Systems

Short Range/Corner Detect



P3373

- Digital ECU
- 4 sensors
- LED/Buzzer
- Short range (0-60cm)

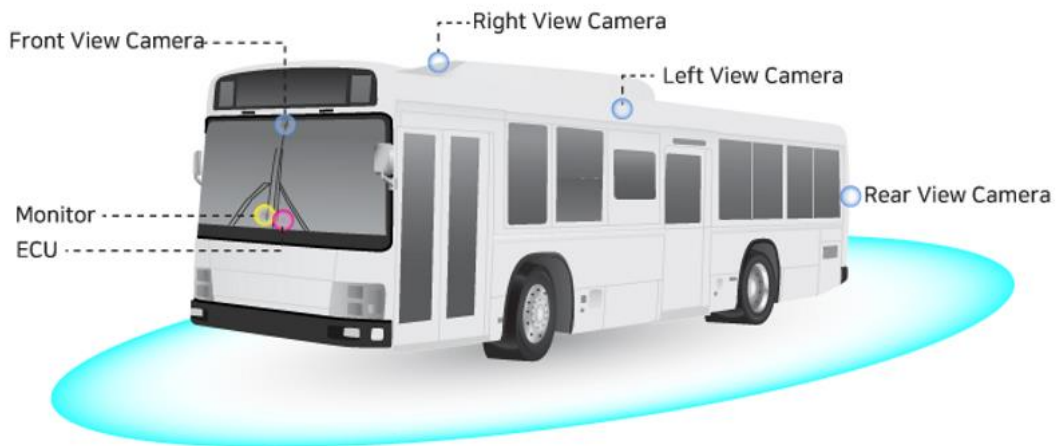
Standard Range



P3373

- Digital ECU
- 4 sensors
- LED/Buzzer
- Short range (0-250cm)

Recording



With the rise of 'crash for cash' schemes and various other scams, our range of DVRs and accident recorders are an excellent addition to any of our camera systems and an absolute must have for complete peace of mind.

Each solution is compatible with any wired system but for our surround view systems, we recommend a DVR that has at least 4 channels. This is so that each camera's complete output is recorded without missing any potentially important data.

Why Utilise A DVR?

Features

- Record vehicle cameras
- HD recording
- GPS
- Shock sensor

Benefits

- Reduce insurance premiums/speed claims etc
- Good quality recording
- Recording time/date and location 'stamped'
- Separate 'incident' files (quicker searching for data)



How DVR's work

DVRs are usually installed with 'splitter' cables, which enables the camera(s) to be simultaneously connected to the DVR and monitor. DVRs also require power.

Choose Your DVR

DR-220

R3035

- HD/WDR 'Dash-Cam' (16GB included)
- Utilise with an additional camera
- Built-in GPS and 3-axis shock sensor



DR-120

D3027

- 2CH HD SD card recorder (16GB included)
- H-264/AVI/30fps
- Built-in GPS and 3-axis shock sensor



DR-400N

D3021

- 4CH HD SSD recorder (128GB included)
- H-264/AVI/30fps
- Built-in GPS and 3-axis shock sensor



2CH Digital DVR

D3451

- 2CH Digital (TVI) SD recorder (32GB included)
- H-264/AVI/30fps (1280 x 720)
- Built-in GPS and 3-axis shock sensor
- Wi-Fi or 3G/4G module available for remote access
- Waterproof (IP69K)



4CH Digital DVR

D3452

- 4CH Digital (TVI) SD recorder (32GB included)
- H-264/AVI/30fps (1280 x 720)
- Built-in GPS and 3-axis shock sensor
- Wi-Fi or 3G/4G module available for remote access
- Waterproof (IP69K)



Auto Pairing DW Modules

Another first from Trailer Vision; our new auto-pairing digital wireless (DW) modules feature the very latest digital technology, meaning that there is no requirement for an additional suzy cable, or any driver input.

The waterproof DW modules auto-pair when switched on and have a range of up to 100m, ideal for operators with multiple trailers.

Why DW Modules?

Features

- Digital Wireless (30fps)
- Automatic Pairing
- Waterproof (IP67)
- No Suzy
- 12V / 24V

Benefits

- No video cable between the camera and monitor, 100m range

- No driver/operator input
- Utilise with any type of trailer
- Quick/easy installation
- Suitable for all applications

How Auto-Pairing DW Modules Work

The DW modules utilise 2.4Ghz digital wireless technology; the waterproof transmitter (TX) connects, by a cable, to any of our wired cameras and transmits the images to the waterproof receiver (RX). The RX is connected, by a cable, to any of our wired monitors. DW technology ensures that there is no interference from other wireless devices (Bluetooth etc).

When power is applied the DW modules automatically begin pairing; if the previously paired TX (camera) is transmitting then the RX 'stays paired' otherwise the RX will 'look' for any other transmitting TX (that's in pairing mode).