



**Motec**<sup>®</sup>  
Heavy-Duty Camera Solutions

MVS

# Mobile Vicinity Scout

The Heavy Duty 360° Panoramic View System

# Mobile Vicinity Scout (MVS)

## Safety around the Vehicle

The Motec Mobile Vicinity Scout (MVS) is a camera system developed specifically for use with utility vehicles, allowing the driver a clear, seamless 270° or 360° panoramic view around his vehicle – to ensure the safety of individuals, prevent accidents, and save costs.

The MVS system complies with all requirements of heavy duty and utility vehicles in the construction, community services, and cargo traffic, agriculture, and logistics sectors: Its sturdy design guarantees a long service life in demanding environments, while its high flexibility allows the adaptation of the system to the most varied vehicle types and visibility issues. The open interfaces allow a comprehensive integration in on-board electronics, and connection to any existing sensor arrays. The system can be simply and quickly calibrated in minutes – as part of a factory-side serial calibration or on-site for a specific vehicle – by one single person, without the need of a laptop or costly service technician deployments.

The Motec MVS system scores top marks for its excellent image quality, flexibility, and reliability – quality “Made in Germany”.



# 360° Panoramic View

One system, many advantages

## Turning corners safely



Clear view of cyclists and pedestrians next to the vehicle: The Motec MVS system allows the driver to recognise dangerous turning situations even in difficult situations.

## Parking with perfect view



No chance for blind spots: The split screen visualisation provides the driver with a full panoramic view and a view of the area at the rear of the vehicle when reversing into a parking space. Costly material damage to the vehicle and other assets can now be pre-empted.

## Safe Starts



Unrestricted visibility in front of the vehicle: The 360° panoramic image allows the driver to quickly and reliably see any obstacle in the immediate vicinity of the vehicle.

## Easy Manoeuvring



Perfect visibility for manoeuvring in tight areas: The 360° panoramic image of the MVS offers the kind of visibility the driver needs for manoeuvring in tight spots – with ease and without having to leave the vehicle.



# System calibration

## Simple and easy

The calibration process of the Motec Mobile Vicinity Scout ensures a simple, quick, and very precise adjustment of the overall system – as part of a factory-side serial calibration or on-site for a specific vehicle. Smart markers ensure that the MVS system can be calibrated within a few minutes and in just 3 simple steps by a single person, and without the need for a laptop or costly service technician deployments.



### Step 1: Position the markers

- Positioning of dirt-repellent markers on the vehicle corners



### Step 2: Enter vehicle size

- Quick and easy input of the vehicle information via a graphic user interface.
- Data import from the vehicle registration document available.



### Step 3: Start calibration

- Start calibration process via the user interface.
- Automatic detection of the Motec MVS markers and their position.
- Display of calibrated MVS image on screen after a few minutes.

# Blending method

## Flexible and reliable

Every utility vehicle is different. Dimensions, peripheral devices and body, mounting positions of the cameras, and in particular visibility requirements can be different from vehicle to vehicle, and from industry to industry. Refrigerated transport vehicles will have completely different visibility requirements than a combine harvester, and excavators will have other needs than a refuse collection or a winter road service vehicle.

The Motec Mobile Vicinity Scout can be easily adapted to all these individual requirements. The key issue here is how the video images of the 4 individual cameras can be blended to create a 360° view, without losing image information at the vehicle corners.

The Motec MVS system is serially equipped with 4 separate blending processes, which can be selected via the device menu. The MVS also offers user-specific blending settings.

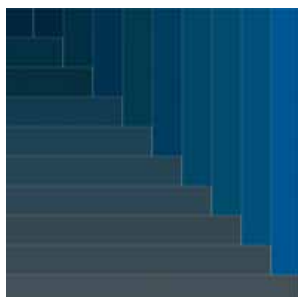
### Stitching

Suitable for the monitoring of large objects



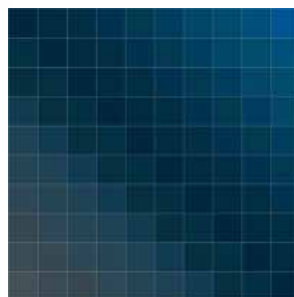
### Complete mix blending

Suitable for the visualisation of small objects



### Level mix blending

Suitable for monitoring objects in the vicinity of vehicles.



### Tile mix blending

Suitable for a realistic visualisation of the immediate vehicle vicinity.

# System components

## Quality “Made in Germany”

The use of state-of-the-art FPGA technology, intelligent software, and complex algorithms allow the Mobile Vicinity Scout to provide a high-performance technology platform for 360° panoramic visibility systems. All system components are developed and manufactured by Motec in Germany specifically for the high requirements of heavy duty and utility vehicles.

### MD3071A Monitor

- 7"- monitor (17.8 cm screen diagonal)
- Horizontal and vertical versions available
- Flat and compact design
- Supply voltage of 9 V...60 V DC
- Direct connection of up to 2 cameras and one external video controller (for up to 4 additional cameras)
- Automatic dimmer function
- Back-lit keyboard



### MC7180N 180° camera

- 180° horizontal view angle
- CMOS 1/4" image sensor with a sensor resolution of 648 x 488 pixels
- Robust aluminium housing
- Temperature range -40°C...+85°C.
- Housing protection class IP69K



### MVCD1000 control unit

- Supports up to 4 cameras
- CAN bus, control cable, and Ethernet interface
- Shock resistance 10 g
- Temperature range -40°C...+85°C.
- Housing protection class IP67 and IP68

### MBE1000 control unit

- CAN bus-based input unit
- Ergonomic user interface for single-handed operation
- Back-lit, long-life, and dirt-repellent membrane keyboard

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