

atlasMX-720 for road inspection

blind spot free vision for safe operation



use real-time imagery

to document road defects without leaving the vehicle

transfer data instantly

from the vehicle to the office for immediate use

drive efficiency, safety, and cost

by utilising latest technology to redefine your processes

efficiency redefined

Road surfaces need constant monitoring for defects however, the time-honoured methods for defect assessment have not changed in decades.

An inspector is typically required to:

- » stop his vehicle in a safe place,
- » document a road defect while maintaining safety,
- » and manually submit data for analysis and rectification.

The process is time consuming, unsafe for personnel, paperwork intensive, and ultimately inefficient. The atlasMX-720 redefines this process.

The atlasMX-720 is a state-of-the-art vision system that allows an inspector to pick up road defects at speed, **without leaving the vehicle**. It instantly

sends all imagery and location data to the office via a cellular network, **categorised** to enable appropriate action depending on the defect type. Assessment of each road defect is then instantly possible with clear imagery from **several angles**. Rectification plans can be defined with confidence and correct asphalt amounts can be prepared, **minimising wastage**.

The whole process is completed with **total safety**. The inspector never leaves the vehicle. Immediate response to critical issues is possible as imagery is directly transmitted to appropriate response staff. The **efficiency gains** enabled by the new process means that the atlasMX-720 begins paying for itself immediately and is a must-have solution for today's council's and road contractors.

atlasMX-720

immediate return on investment

The atlasMX-720 provides 180° vision from each of its four smartMX-180 cameras. Blind spot free surround vision is recorded in high definition with HDR filtering [High Dynamic Range] for premium quality, even in the harshest extremes of temperature and rain, and dusty bright sunlight.

The system enables a complete modernisation of the road defect inspection process.

- » An inspector triggers an image as he approaches a defect.

- » Categorisation is made at the time of pickup, for example:
 - **Critical** - burst water main, severe pothole, etc.
 - **Standard** - normal road defect requiring repair
 - **Dumping** - documentation of dumped rubbish
 - **Graffiti sites** - documentation of graffiti sites
- » A series of images is taken as the vehicle approaches and departs the defect.
- » Imagery, location and street address are immediately uploaded.
- » Correct staff receive the imagery based on categorisation.
- » Road defects are analysed and correct asphalt amount is planned.
- » Correct truck size is scheduled for dumped rubbish removal.
- » Documentation is irrefutable and permanently stored for the future.

The new process enables instant efficiency gains, allowing the new running cost to replace the existing outdated and expensive running costs, positively affecting budget projections.

system benefits

- » **Staff Safety:** As inspectors do not leave the vehicle, safety is dramatically increased.
- » **Field Efficiency:** Field pickup is reduced to simply triggering an image once a defect is detected. Huge time savings and safety benefits are achieved from the elimination of the need to park, and manually inspect and document the road defect.
- » **Instant Imagery Transfer:** Imagery is available for analysis seconds after pickup. Scheduling of maintenance can easily be completed by the time the vehicle returns to base.
- » **Categorisation Benefits:** Categorised defects are instantly delivered to correct staff. Emergency response teams can react immediately to critical defects, assessing the issue from the imagery.
- » **Material Savings:** Simple estimation of the size of defects allows correct ordering of the asphalt required. Oversupply of material is reduced and wastage is eliminated.
- » **Documentation:** As imagery, routes, and GPS locations are all seamlessly recorded for future review, documentation obligations to rate payers is achieved in an efficient, paperless, and timely process.
- » **Accident Documentation:** Video footage is stored on the server on a one month rolling loop. In the event of an accident, full video footage is retrieved to prove fault.



system highlights

high quality imagery

- » Footage is recorded in **high definition** using **High Dynamic Range** [HDR] sensors for best possible image quality, even in poor lighting conditions.

environment-proof components

- » The system utilises four smartMX-180 cameras built to withstand the **harshest environments** and **high pressure** wash downs [IP69K].
- » Ratings for **temperature** [-40°C to +65°C], **vibration**, and **dust and water ingress** are all at the highest levels, ensuring operation even in toughest conditions.
- » Cable connectors are all Swiss high quality **LEMO®** components.
- » The tigerMX-5 server contains a **480GB SSD hard drive** and the housing is a **single cast** fanless design.
- » Combined with the viewMT-101 **sunlight readable** LCD touch screen, this is the toughest, most fit-for-purpose, and powerful system on the market.

optional fifth camera

- » A fifth camera can be optionally located **anywhere** on the vehicle to record actions that occur as part of any normal day to day operation.

remote access

- » In the case of an incident, either on-site or while roading, footage is able to be **immediately retrieved** remotely via the **built-in cellular module**.
- » **Update software** and **wake up switched off systems** remotely by simply sending an **SMS** message.
- » Data can be downloaded automatically when in range of the base **Wi-Fi** hub without any interaction from the operator.

zero operator interaction

- » The **built-in power management** of the atlasMX-720 allows a synchronised starting and stopping with vehicle operation [incl. cranking periods]. No operator interaction is required.



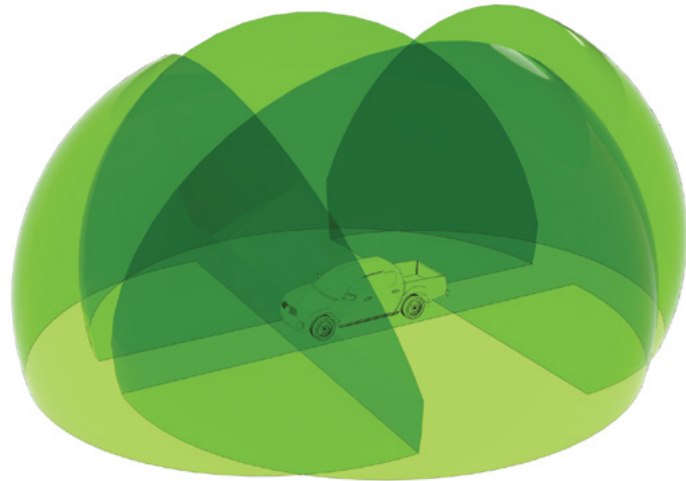
atlasMX-720 system for 360° blind spot free vision



smartMX-180 camera

The smartMX-180 delivers high-quality streamed imagery for efficient and seamless monitoring of operations.

- » Has a secure cast **aluminium enclosure**
- » Uses industrial grade high sensitivity **HDR image sensors**
- » Equipped with a powerful **multi-core ARM® processor**
- » Operates from **-40°C to +65°C**
- » Offers the **highest available ingress protection** [IP69K]



viewMT-101 display

The viewMT-101 displays clear and detailed footage in a wide viewing angle, to improve safety around vehicles.

- » True **sunlight readable** 10.4" touch screen
- » Variable **backlight functionality** for night operations
- » Equipped with **DEUTSCH** and **LEMO®** connectors
- » Configurable to **wide angle** or **split-screen scenarios**
- » **Compact design** allows ease of set up
- » **Internal speaker** for audio and warning tones



tigerMX-5 server

The tigerMX-5 records high resolution imagery providing conclusive evidence in the event of an incident.

- » Provides **two computer modules**
- » Processes footage of up to **five smartMX-180 cameras**
- » **CAN interface** for vehicle communication
- » **Wi-Fi** for enhanced compatibility
- » **Cellular module** to connect to **3G/4G** phone networks
- » Tested for **severe vibration** and **extreme temperature**



Vision in Motion

Black Moth's intelligent mobile vision and communication solutions improve worksite safety for heavy machinery. We provide cutting-edge technology and rugged products to support operations in a wide range of transport and heavy industries.

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