

## APPENDIX 'A' : VISOR-6P UNDER VEHICLE IMAGING SYSTEM

### Visor-6P : Portable UVIS System

The Visor-6P, portable Under Vehicle Imaging Surveillance (UVIS) system is used by law enforcement agencies, and other organisations, to help protect facilities from threats or people concealed under vehicles.

Designed to image a wide range of vehicles, from cars to HGVs / trucks, including; buses and coaches. The VISOR-6P is the portable variant of the VISOR UVIS, optimised for use at temporary checkpoints.

Key features of the Visor-6P include:

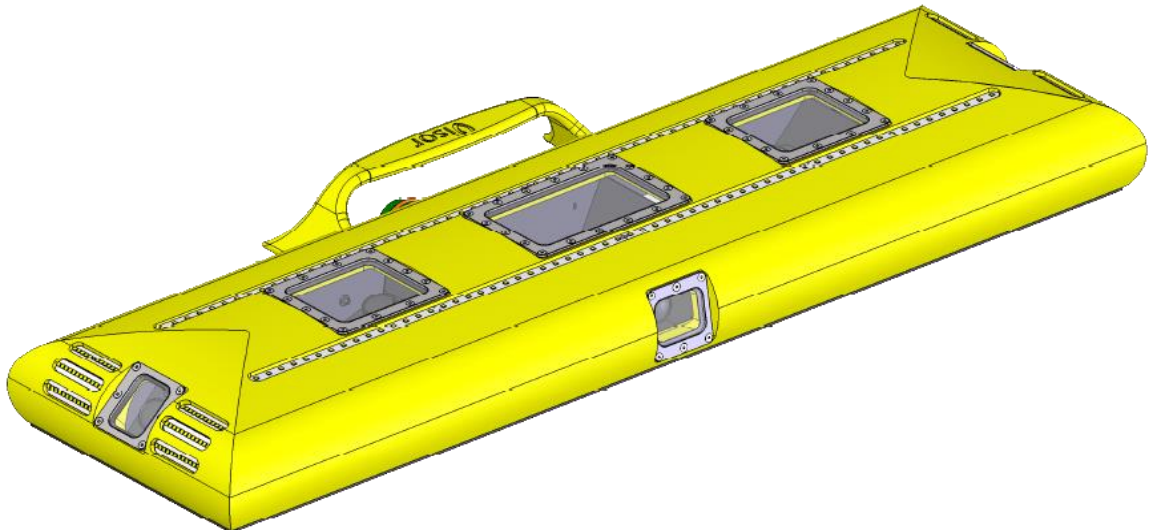
- Fast response.
- Up to 15 km / hour vehicle speed.
- Five high resolution colour digital cameras; 1280 x 1024 resolution.
- Single composite colour image of vehicle underside.
- Individual frame zoom.
- Forward / reverse vehicle flows.
- Image comparison.
- Robust aluminium and steel construction.

The Visor-6P consists of three elements; the Visor Survey Unit (VSU), the Visor Control Unit (VCU) and the Visor Connecting Cable (VCC), based on modular components.

The five cameras in the survey unit are aligned to provide overlapping fields of view, providing a 'see-around' capability as the cameras image either side of features on the vehicle underside as it passes over the survey unit.

The control unit is built in a 3U 19" rack unit and includes a high specification PC, running Windows 10, loaded with VisorSoft imaging and analysis software.

Standard internal storage for nominal 25,000 car images, optional larger internal storage available.



## VISOR-6P Portable Survey Unit (VSU)

### Visor Portable UVIS System Survey Unit (VSU)

The Visor Survey Unit is manufactured from a powder coated aluminium welded casing, fitted with a stainless steel sub-frame, designed to withstand ‘drive-over’ loads imparted by a 40T vehicle with typical 10T maximum axle weights.

|  |   |                              |
|--|---|------------------------------|
| Length (between the wheels)                | : | 88cm                         |
| Width (direction of motion of the vehicle) | : | 25cm (32cm including handle) |
| Height                                     | : | 6.5cm                        |
| Weight (unpacked)                          | : | 21kg 25kg in carry case      |

### Camera & Lighting Specification

|             |   |                                 |
|-------------|---|---------------------------------|
| Sensor      | : | Colour CMOS, global shutter     |
| Data format | : | GigE, up to 1000Mbps            |
| Frame rate  | : | Up to 48 fps, typical 30 fps    |
| Resolution  | : | 1280 x 1024 pixels, sub-sampled |

The under vehicle is lit by high efficiency, high CRI, led modules mounted to the survey unit.

## Visor Portable UVIS System Control Unit (VCU)

The control unit, consisting of a high specification PC and power controls is built into a 19” rack case, manufactured from sheet steel, housed in a 4U moulded wheeled carry case. In addition to the control unit, the 4U VCU also includes: keyboard, mouse and 19” high brightness monitor.

|              |   |   |
|--------------|---|---|
| Length       | : | 61cm                                      |
| Width        | : | 57cm                                      |
| Height       | : | 25cm                                      |
| Weight       | : | 29kg when packed                          |
| Power Supply | : | 110 - 240 VAC @ 50 / 60 Hz - 5A @ 230 VAC |

## Visor Portable UVIS System Connecting Cable (VCC)

As standard, the Visor-6P is supplied with a 10m data communication and power connecting cable; the survey unit being powered by low voltage DC. IP67 connectors are used to ensure system integrity.

| <u>Environmental</u> | Survey Unit                  | Control Unit                      |
|----------------------|------------------------------|-----------------------------------|
| Temperature          | : -10°C to +40°C, +45°C Peak | : -5°C to +40°C, +45°C Peak       |
| Humidity             | : 90% non condensing         | : 90% non condensing              |
| Dust / liquid        | : IP68                       | : Indoor conditions - when in use |

Note: when installed in a location where the VSU will be exposed to direct sunlight for extended periods, it is recommended that the survey unit is shaded.

## Visor Portable UVIS System Options

Optional system upgrades include:

Extended system connecting cable, up to 65m.

Additional high brightness monitor - for detail / zoom view.

Traffic guidance cushions to centralise traffic flow.



**Visor Portable UVIS System Survey Unit**

**Visor Portable UVIS System Control Unit (VCU) & Optional Detail / Zoom View Monitor**



**Visor Portable Under Vehicle Surveillance System Survey Unit, Control Unit & Connecting Cable**

## VisorSoft Imaging Software

As standard, VisorSoft provides the following features:

- Single and ‘freeflow’ modes to allow vehicles to be imaged singularly or as a constant traffic stream / flow.
- Automatic trigger to start and stop the imaging of each vehicle.
- Image vehicles up to 15 km / hour, optimum speed being 8 to 10 km / hour.
- Generates a full colour composite image of the vehicle underside, displayed in approximately a second, after the rear edge of the vehicle has passed over the survey unit.
- Detail / Zoom images, allowing the user to inspect / interrogate the composite image on a frame by frame basis.
- LPRAssist, assisted license plate reading, using a forward looking camera. Providing the operator with assistance to read / recognise the license plate.
- Archive and retrieval of images from the internal storage.
- Automatic retrieval of “history” or previously “verified” images for comparison, based on vehicle license plate details.
- “Watchlist” facility, identifying suspect vehicles and / or vehicles banned from site.
- “Known List” facility, identifying vehicles whose license plate details have been previously entered into the system.
- Full statistics and reporting package.
- Export and storage of images and data onto removable storage media.
- Remote access for system analysis and upgrade – if allowed.

## Software System Options

Optional system features include:

- Full automatic license plate recognition system.
- Transmission of images to secondary search using a Dropbox facility.
- Network integration.
- VisorViewer software license, allowing examination of archived records on a separate PC.





**Visor Portable Under Vehicle Surveillance System  
Survey Unit, Control Unit & Connecting Cable**

