INSTALLATION MANUAL
FOR
UNDER VEHICLE INSPECTION SYSTEM
PORTABLE UNIT

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Chapter 1 – INTRODUCTION

Machina™ Mobile allows for fully automated threat assessment by checking for the modifications of a vehicle’s undercarriage. Vehicles drive over the bi-directional platform while the system compiles multiple high-resolution images of a vehicle’s undercarriage, making it easier to see any threatening objects that may be hidden on top of an axle or within a wheel well.

When the vehicle passes over the platform, a motion detector turns on high beam light LEDs and activates a high-resolution color camera. A separate portable camera located in the platform’s vicinity can capture the license plate of the vehicle as well as the face of the driver.

Images transfer from the platform and portable cameras to the system controller that will process them and will display a full image of the undercarriage. With an active database, the system will provide license plate as well as driver information. The system can automatically provide visual and audible alarms about foreign objects in the undercarriage area, driver IDs or license plates.

This manual will address the hardware installation of both portable and in-ground units.

1.1. System Components

Portable UVIS has the following parts:
- UVIS Platform (or Scanner);
- Road Strips;
- LPR Camera (with tripod);
- Flight Case with built-in workstation, monitor, keyboard and mouse.
Chapter 2 – PHYSICAL INSTALLATION

2.1. Installation instructions for portable UVIS unit

With all doors closed, locate the Flight Case in its final position. Location of the case shall be within 40’ [12 meters] of the future position of the UVIS Platform. When choosing the location, position the LPR camera facing the traffic, in order to read license plates information and to provide face recognition (Image 2.1.a).

| Note: | 1. Face recognition is an option and needs to be purchased separately. |
|       | 2. The angle formed by the perpendicular on the center of the UVIS platform and the LPR camera shall not be larger than 30 degrees. |

Open Flight Case both front and rear doors. From the bottom of the case remove the road strips (cable protectors), the tripod and the box containing the LPR camera. From the drawer, remove the UVIS platform (scanner).

Place the UVIS platform centered in the middle of the traffic lane. Connect the cable to the UVIS platform. The cable is located in the Flight Case’s side pocket.

| Note: | The provided cable has a length of 50’ [15 meters], and at one end is connected to the equipment inside the case. The other end has a 1-1/4” mil spec connector to connect to the UVIS platform. |

Image 2.1.a – Site preparation
Place furnished road strips on each side of the platform. Make sure the cable is routed underneath the road strips, in order to protect it from incoming traffic.

The LPR camera is factory connected to the controllers mounted inside the case. Install the camera on the provided tripod. Uncoil the cable and place the camera in front of the platform. Connect the power cable located inside the case to 110Vac outlet (or use adapter for 220Vac outlet). On the rear side of the rack, locate the power distribution strip. Turn on the red switch. In front of the rack, open the cover of the workstation and turn on the power switch. Slide the top tray with the KVM controller. Press the power button and wait for the software to load.

| Note: | The Flight Case and the equipment inside it, it is not weather proof. Make sure the Flight Case is located in a protected environment, do not expose it to weather. Warranty will be void if equipment is damaged due to exposure to weather conditions. |

2.2. Optional equipment – Monitoring CCTV cameras

Additional monitoring cameras can be installed to activate video analytics functions. Licentia™ License Plate Recognition and Voltus™ Face Recognition are options of the Cerebrus Intelligent Video Analytics software.

Install the License Plate Recognition (LPR) camera and Face Recognition camera facing the incoming vehicle, behind UVIS platform. If necessary, for vehicles with rear license plates only, the LPR camera can be installed in front of the UVIS platform, see Image 2.2.a. The angle formed by the perpendicular on the center of the UVIS platform and the LPR camera shall not be larger than 30 degrees. The height of the camera shall be no more than 62” [1.5 meters]. See image 2.2.a for camera placement options.

Image 2.2.a – Monitoring camera placement options
Chapter 3 – WIRING DETAILS

Maximum power consumption is 500W. The unit is provided with a 10 foot [3 meters] power cord, and it has a NEMA 5-15P plug (110Vac US).

If the connection to existing network is required, connect a network cable to the network switch located in the flight case.

The following are factory provided cables:

- Pre-fabricated composite cable between the portable platform and the flight case. The flight case end of the cable is factory terminated. The platform end of the cable has a 1-1/2” MIL-spec connector that can be twist-locked to the portable platform.
- Pre-fabricated composite cable between the monitoring camera and the flight case. The cable is factory terminated at both ends.

Chapter 4 – SOFTWARE INSTALLATION DETAILS

4.1. System requirements

The software used for monitoring is called Aventura Vantage Video Intelligence System (or VVIS). By default, it is used to view and “manipulate” images provided by the UVIS camera. Optional software licenses are for analytics software like Licentia License Plate Recognition (LPR) or Voltus Face Recognition.

The minimum hardware requirements for the workstation/Analytics Server are:

- CPU: Intel i7 six-core processor
- RAM: 8GB DDR3
- Storage: 2TB hard drive
- Network: Dual LAN, 1Gbps

4.2. Getting started

On the provided CD (or USB flash drive), locate the software installation kit: VVIS_setup-x.y.zzzz, where x.y.zzzz is the software version. The installation application will automatically install all required software packages.

The installation has two steps. The first one will install all required software for the VVIS to run on the workstation. The second step will install the actual VVIS software.

Step one: Click Install to proceed with the installation of various package necessary for the VVIS software to be able to run on the client workstation:
When prompted proceed to next step and accept the terms of the license agreement.
Next, fill in the desired User Name and Organization:

![Customer Information](image1)

The next step, you can choose a new destination folder for the VVIS software. By clicking Change, you can choose the destination folder. If default, click Next.

![Destination Folder](image2)
Step two: Click Install, to proceed with the installation of the actual VVIS software.

The installation package will create a desktop icon that will enable the user to access the program.

See User’s Manual for software operation.

Chapter 5 – TROUBLESHOOTING AND SUPPORT

For Troubleshooting and Support, please contact Aventura Technologies Inc.:

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