REAPER HD/VLP
INSTALLATION GUIDE
Mobile | VERSION 3.0
## OVERVIEW

- Components

## SYSTEM ASSEMBLY

- VLP Power
- Network Cables
- Camera Cables
- GPS

## PC CONFIGURATION

- Set Your PC Address in Windows Network Settings
- Installing Vigilant Mobile LPR Software

## CONNECTING CAMERAS TO VIGILANT MOBILE LPR SOFTWARE

- Setting Up Vigilant Mobile LPR Software

## APPENDIX A: CONFIGURING THE MOBILE DATA COMPUTER (MDC) PORTS

## APPENDIX B: MOBILE CAMERA AIMING GUIDE
OVERVIEW

This document will help the user to install a Reaper HD + Shield LPR camera system.

COMPONENTS

ReaperHD and Magnet Mount Assembly

VLP

Camera Cable  VLP WIRING HARNESS  GPS

RED = +12V
BLACK = GROUND
YELLOW = IGNITION
SYSTEM ASSEMBLY

VLP POWER

- Give the VLP power by connecting the wiring harness.

NETWORK CABLE

- Connect the Ethernet cable to the shield box.

- Connect the Ethernet cable to your PC.
SYSTEM ASSEMBLY (CONTINUED)

CAMERA CABLES

- Connect the cameras (opposite side of box from power and PC).

GPS

- Connect GPS to GPS port on VLP. Place GPS puck in a location with an unobstructed view of the sky (i.e., dash of vehicle/exterior of vehicle).
PC CONFIGURATION

SET YOUR PC ADDRESS IN WINDOWS NETWORK SETTINGS

STEP 1: Open the Control Panel and click “Network and Internet.”

STEP 2: Click the first icon, “Network and Sharing Center.”

STEP 3: Click “Change Adapter Settings” in the top left of window.
**PC CONFIGURATION (CONTINUED)**

> **STEP 4:** Find the adapter that represents the port on your PC receiving input from the shield box. Right click on it, go to “Properties” and double-click “Internet Protocol Version 4 (TCP/IPv4).”

![Image of Ethernet properties](image1.png)

> **STEP 5:** In the “General” tab of Internet Protocol Version 4 (TCP/IPv4), select “Use the following IP address,” and enter the following information: **IP address:** 192.168.5.55 **Subnet mask:** 255.255.255.0

![Image of Internet Protocol Version 4 Properties](image2.png)

> **STEP 6:** Click “OK” on both windows to set an appropriate IP address.

![Image of Ethernet Properties](image3.png)
INSTALLING VIGILANT MOBILE LPR SOFTWARE

**NOTE:** Software versions may vary from images below.

- Download the software from the following link: http://downloads.vigilantsolutions.com/Software/CDMS_HD_Release.zip
- Unzip this folder:
- Double click “setup.exe”

![File list](image.png)
PC CONFIGURATION (CONTINUED)

- Click “Next.”

- Select checkbox next to “I accept the terms of the license agreement” and click “Next.”

- Enter a user name and company name, and click “Next.”
PC CONFIGURATION (CONTINUED)

- Click “Next.”
- Click “Install.”
- Click “Finish.”
SETTING UP VIGILANT MOBILE LPR SOFTWARE

- Open the Vigilant Mobile LPR Application.
- Choose your DSP. (Hardware Currently Installed)

Double click the “Vigilant Mobile LPR” icon on the desktop or under “All Programs.”

Read the warning message and click “OK” to proceed.

If you have your LEARN Connection File, click ‘Browse’ and navigate to the location of the file.

If you do NOT have your connection file already click ‘Not Now.’

If you selected ‘Not Now,’ select the user “CDM Admin” and use the password ‘12345’. Click “Login.”

If you have loaded your LEARN connection file, select your LEARN username from the drop down and enter your LEARN password and click “Login.”
CONNECTING CAMERAS TO VIGILANT MOBILE LPR SOFTWARE (CONTINUED)

▶ Once logged in, select the checkbox next to "Automatically connect" and click "Connect."

▶ Click "Yes."

▶ You will see this warning. Click "Cancel."

▶ Click setup tab enter 192.168.5.150. Click "Apply."
CONNECTING CAMERAS TO VIGILANT MOBILE LPR SOFTWARE (CONTINUED)

- The screen should now be displayed as shown below.

- Log back into the Vigilant Mobile LPR and all buttons at the top should be green.

**NOTE:** To complete camera system setup and for optimal performance, please reference the Vigilant CDMS Aiming Guide.
CONNECTING CAMERAS TO VIGILANT MOBILE LPR SOFTWARE (CONTINUED)

- Select your regional OCR Profile.

- Configure Alert settings.
This section outlines the necessary ports and protocols to be authorized on the network for communication of the CarDetector application. Communication between the MDC (In-Car Laptop) and Reaper/LEARN is done via TCP protocol.

The following ports MUST be open on the MDC to communicate with the Reaper DSP Unit (LAN card Recommended):

- TCP Port 2000
- TCP Port 5000
- TCP Port 3000
- TCP Port 22

The Reaper DSP Unit communicates with the LEARN server (Wireless Card Recommended) via the following TCP ports:

- TCP Port 80
- TCP Port 443
APPENDIX B: MOBILE CAMERA AIMING GUIDE

ReaperHD 6MM
For Short Parking

ReaperHD 8MM
For Long Parking

ReaperHD 12MM
For Short Traffic

ReaperHD 16MM
For Traffic

ReaperHD 25MM
For Long Traffic
CAMERA MODEL # RHD 6MM

- Used for square parked cars (such as in parking lots, shopping malls, retail outlets etc.)
- Sweet spot capture distance is 10 ft (character height 45-50 px)*

*Capture distances based on plate characters 69 mm tall.
PARKED CAR SCANNING
RHD 6MM AND 8MM CAMERAS

Camera Use Case Diagram
Parking Lot Scanning - All
Model # VSR-40-906 and 908

CAMERA MODEL # RHD 6MM AND 8MM

» Used for angled or square parked cars (such as in parking lots, shopping malls, retail outlets etc.)

» Sweet spot capture distance is 10 ft (character height 45-50 px)*

*Capture distances based on plate characters 69 mm tall.
CURB PARKED CAR SCANNING
RHD 8MM AND 12MM CAMERAS

Camera Use Case Diagram
Parallel Parked Car Scanning
Model # VSR-40-908 and 912

CAMERA MODEL # RHD 8MM AND 12MM

- Used for parallel parked cars (such as roadsides and main street shopping areas)
- Sweet spot capture distance is 10 to 25 ft (character height 45-50 px)*

*Capture distances based on plate characters 69 mm tall
CURB SCANNING – RADAR STYLE

RHD 16MM CAMERA

- Used for roadside scanning of moving traffic
- Rural or urban roads
- Sweet spot capture distance is 25 ft (character height 45-50 px)*

*Capture distances based on plate characters 69 mm tall.
MONITORING UNDIVIDED HIGHWAYS

RHD 12MM AND 16MM CAMERAS

- Used for monitoring high-capacity boulevards and rural highways
  - No median
  - Next lane over
- Sweet spot capture distance is 25 to 40 ft (character height 45-50 px)*

*Capture distances based on plate characters 69 mm tall.
MONITORING DIVIDED HIGHWAYS
RHD 25MM CAMERA

CAMERA MODEL # RHD 25MM

- Used for monitoring divided roads, highways and multi-lane freeways
  - Over the median
  - Capture passing vehicles
- Sweet spot capture distance is 40 ft (character height 45-50 px)*

*Capture distances based on plate characters 69 mm tall.
CAMERA MOUNTING TIPS

- One (1) lane per camera
- Camera aiming calibration is done with the IR camera - NOT color camera
- Cameras should be positioned before road use LPR scanning
- Cameras are selected based on 'Use Case' scenarios
- Refer to the diagram (above) for generally accepted placement & position
- Use CarDetector 'Camera Aiming Tool' for aiming assistance

QUESTIONS?
Contact support@vigilantsolutions.com or call 925-398-2079.