

VLS Mobile Tablet Configuration Guide





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- Tel: 925-398-2079
- Fax: 925-398-2113
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Read Me First

Notations Used in This Manual

Throughout the text in this publication, you notice the use of **Warning**, **Caution**, and **Notice**. These notations are used to emphasize that safety hazards exist, and the care that must be taken or observed.



WARNING: An operational procedure, practice, or condition, and so on, which may result in injury or death if not carefully observed.



CAUTION: An operational procedure, practice, or condition, and so on, which may result in damage to the equipment if not carefully observed.



NOTE: An operational procedure, practice, or condition, and so on, which is essential to emphasize.

Special Notations

The following special notations are used throughout the text to highlight certain information or items:

Table 1: Special Notations

Example	Description
Menu key or Camera button	Bold words indicate a name of a key, button, or soft menu item.
The display shows Settings Applied.	Typewriter words indicate the MMI strings or messages displayed.
<required id=""></required>	The courier, bold, italic, and angle brackets indi- cate user input.
Setup→Settings→All Settings	Bold words with the arrow in between indicate the navigation structure in the menu items.

Related Publication

The following list contains part numbers and titles of related publications. To find and download the publications, visit https://learning.motorolasolutions.com.

Part Number	Title
MN008501A01	Vigilant PlateSearch User Guide
MN007806A01	Vigilant ClientPortal User Guide

Part Number

MN007809A01

Target Alert Service User Guide

Title

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Chapter 1

VLS Mobile Tablet

The VLS Mobile Tablet is an all-in-one compute solution for LPR enabled speed trailers and vehicles equipped with Vigilant Mobile LPR systems using Vigilant Car Detector Mobile.

The VLS Mobile Tablet comes equipped with:

- An Intel 8th Gen i7 processor
- Wi-Fi/Bluetooth/GPS/4G Connectivity
- A 1920x1200 touch screen
- A 60 W Battery
- A rear CMOS Camera

VLS Mobile Tablet Setup

An unconfigured tablet received directly from the vendor (DT Research) requires additional driver installation and Windows 10 configuration to be performed before operation in a Vigilant LPR Trailer or Mobile LPR vehicle deployment.

A pre-configured VLS Mobile Tablet requires the following:

- A carrier provisioned 4FF-size Nano-SIM card (ATT or Verizon) and driver installation.
- A CDMP IP license key and software installation.
- An active LEARN account

NOTE: Contact a LEARN Agency Manager to obtain a LEARN account and connection file.

2.1 Installing a SIM Card

Procedure:

1 Remove the tablet, PSU, and power cable from its packaging.

Figure 1: Tablet Computer Package



2 Place the tablet with the screen side face down.

Figure 2: Tablet Screen Face Down





NOTE: Place the tablet on top of a smooth surface to protect the screen.

- **3** Unlatch the top of the rear silicone harness by sliding the top right and top-left eye-latches up towards the handle of the tablet, and pulling the eye-latches up and off of the screws.
- 4 Fold the silicone harness down and under the tablet to hold the harness out of the way.

Figure 3: Tablet Handle



5 Remove the six small screws that border the panel of the SIM card bay. The SIM card bay is located under the panel with the camera lens on it.

Figure 4: Back Panel Screws





NOTE: Temporarily set the screws aside somewhere they will not be lost.

6 Gently lift the SIM card bay panel.

Figure 5: SIM Card Bay Panel





CAUTION: Do not pull the panel completely away. The panel is attached to the tablet by two internal wires.

7 Gently slide the panel down and away.



NOTE: When removing the panel, it may help to tilt the tablet up on its side and carefully let the panel tilt out.

8 Insert the Nano-SIM card into the SIM card slot and press in until a click is felt.

Figure 6: Insert the SIM Card



9 Close the SIM card bay panel.

10 Gently tighten the six small panel screws.

2.2 **Turning On the Tablet**

Procedure:

1 Locate the USB door on the left side of the tablet. Flip the switch to the left to unlatch the door and expose the USB-C charging port.

Figure 7: USB Door



2 Plug the included USB-C cable from the Power Supply Unit (PSU) into the charging port.

Figure 8: USB-C Charging Port



- 3 Plug in the PSU.
- 4 Once powered, the tablet will boot up in several seconds.
- **5** If it does not, press and hold the power button for a few seconds until the touch screen lights up and the Vigilant logo displays.

Figure 9: Power On Indicator



2.3 Performing Initial Windows Setup

When and where to use:When the tablet computer is received directly from the manufacturer in its OEM packaging, initial Windows 10 setup will be performed upon the first boot up. If initial setup has already been performed, the Windows 10 login screen will display instead.

Procedure:

- 1 Perform one of the following actions:
 - For initial windows setup, skip to step 2.
 - For subsequent logins, swipe up on the login screen and enter the Windows password.
- 2 Under Choose an operating system, select Windows 10→English→OK.



3 Select United States as the region.

			Basics				
		Let's	s start with region. Is this i	right?			
			U.S. Minor Outlying Islands				
			U.S. Virgin Islands				
			Uganda				
			Ukraine				
			United Arab Emirates				
			United Kingdom				
			United States				
					Yes		
G	Ĉ.					¢0	

4 Select **US** as the keyboard layout.

	Basics	
Is	this the right keyboard layou Wyou also use another keyboard layou, you can add thut next	t?
	us	
	Canadian Multilingual Standard	
	English (India)	
	Irish	
	Scottish Gaelic	
	United Kingdom	
	United States-Dvorak	
	27.5 100 × 10 1 × 1	
		Yes
с С		¢9

5 Select a Wi-Fi network to connect to and enter a password if necessary.

Let's connect you to a network	
To finish satup, you'll need to connect to the internet.	
Provide the state of the state	
.atil Cellular 12 Insert SIM	
5 Guys 1 Chick	
Secured	
Secured	
Secured	
€ sbasys_md	
"" Secured	
 whiterabbit 	
	Let's connect you to a network The train state, you'r need to connect to the internet Mail Connecting Cadler 13 Cadler 13 Cadle

6 If there are no Wi-Fi networks available, select I don't have internet and tap OK to accept the Windows 10 license agreement.

Figure 10: Windows 10 License Agreement

- 7 If no Microsoft account has been supplied, tap **Domain join**.
- 8 Enter a desired username.
- **9** Set the desired account password.



NOTE: If desired, a customer provided name and password can be used instead.



10 Tap No→Decline.

11 Wait for the Windows 10 desktop to appear.

2.4 **Obtaining Tablet Software**

Procedure:

- 1 Use the Microsoft Edge web browser on the tablet to download the VLS Mobile Tablet drivers and CDMP IP software:
 - https://get.vaasfiles.com/VLSDrivers
 - https://get.vaasfiles.com/CDMSIP



NOTE: If the tablet cannot be provided with Internet access, the drivers and software can be downloaded on a separate computer and moved to the tablet with a USB flash drive.

^{2.5} Tablet Driver Software Installation

There is ONE of two driver files that must be installed on a pre-configured VLS Mobile Tablet depending on the cellular carrier being used:

- 9999999_9904594_SWI9X30C_02.32.11.00_00_ATT_002.070_002.exe (ATT), or
- 9999999_9904780_SWI9X30C_02.33.03.00_00_VERIZON_002.079_001.exe (VERIZON)

There are FIVE driver installation files that must be installed on an unconfigured tablet when it has come directly from the vendor (DT Research):

- 9999999_9904594_SWI9X30C_02.32.11.00_00_ATT_002.070_002.exe (ATT), or
- 9999999_9904780_SWI9X30C_02.33.03.00_00_VERIZON_002.079_001.exe (VERIZON)
- USBDrivers_2312.exe
- ubloxGnss_sensorDeviceDriver_windows_3264_v2.40.exe
- ubloxGnss_vcpDeviceDriver_windows_3264_v3.10.exe
- ubloxGnss_usbcdc_windows_3264_v1.2.0.8.exe

2.5.1

Installing the AirPrime EM7455 4G/LTE Modem Firmware

Prerequisites:The tablet is equipped with a Sierra Wireless EM7455 4G/LTE Modem for cellular Internet access. The modem supports AT&T or Verizon cellular carriers, and a specific firmware version must be installed to support which carrier-specific SIM card that the customer is supplying.

Procedure:

- **1** Perform one of the following actions:
 - If the cell carrier is AT&T, double-tap the following file to run the AT&T firmware installer: 9999999_9904594_SWI9X30C_02.32.11.00_00_ATT_002.070_002.exe
 - If the cell carrier is Verizon, double-tap the following file to run the Verizon firmware installer: 9999999_9904780_SWI9X30C_02.33.03.00_00_VERIZON_002.079_001.exe



NOTE: Only run one file. Do not run both files.

- **2** Wait for the installation to complete.
- 3 In the command prompt window, wait for the **Press enter to continue...** message to appear.

Figure 11: Command Prompt Window

C:\Users\Vigilant\AppData\Local\Temp\FDT\fdt2.exe -	\times
Flashing image / Awaiting adapter Checking update status	
Enabling selective suspend	
Firmware image download succeeded.	
Final Firmware update succeeded.	
Preexisting images information: Current:	
Firmware:	
ImageId: 002.026_000	
BuildId: 02.24.05.06_GENERIC	
Configuration:	
ImageId: 002.026_000	
Bullala: 02.24.05.06_GENERIC	
Final images information:	
Firmware:	
ImageId: 002.079 001	
BuildId: 02.33.03.00_VERIZON	
Configuration:	
ImageId: 002.079_001	
BuildId: 02.33.03.00_VERIZON	
OEM PRI: 9907469 001.000 Generic-M2M	
IMEI: 359073065636080	
Total time elapsed: 112922 ms.	
Time to switch to boot mode: 18688 ms.	
Images downloaded:	
Image ID: ?_?	
Build ID: 02.33.03.00_?	
write time: 4672 ms	
additional flash time: 60/9/ ms	
Image ID: 002.079_001	
write time: 0 ms	
additional flash time: 47 ms	
Time to reset to application mode: 27781 ms.	
Press Enter to continue	

4 Close the command prompt window.

2.5.2

Installing the Garmin USB GPS Driver

When and where to use: The Mobile LPR software uses the Garmin USB GPS driver to activate the GPS light in the software. Without the USBDrivers_2312.exe driver, the GPS light will always stay red.

Procedure:

- 1 Double-tap on the .exe file to start the installation.
- 2 Follow the on-screen instructions to complete the installation.
- 3 Tap Exit to close the window when setup is complete.

Figure 12: Command Prompt Window

C Germin USB Driver	×	Carmin US8 Driver	×
Garmin USB Driver	GARMIN.	Garmin USB Driver	GARMIN.
Rease wait while USB Driver Installs. This may take a few minut Get the Latest any Carbon We describe the one of the one of the one of the one of the one of the one of the one my gammin.com	tes.	Setup of Garmin USB Driver cc	mplete! rd.
	Exit		Exit

2.5.3 Installing the u-blox M8 GNSS/GPS Module Drivers

When and where to use: There are three u-blox M8 GNSS Module drivers that must be installed. These drivers allow the Mobile LPR software to communicate with the GNSS/GPS module and receive GPS signals.

Table 2: u-blox M8 GNSS/GPS Module Drivers

Driver	Filename
GNSS/GPS module device driver	ubloxGnss_sensorDeviceDriver_win- dows_3264_v2.40.exe
Virtual Com Port driver for the GNSS/GPS mod- ule	ubloxGnss_vcpDeviceDriver_win- dows_3264_v3.10.exe
UART Serial Port emulator over USB	ubloxGnss_usbcdc_win- dows_3264_v1.2.0.8.exe

Procedure:

- **1** For each driver file, double-tap the file and follow the on-screen instructions to complete driver installation.
- 2 Select English \rightarrow OK.



3 Click Next.



4 To agree to the license agreement, tap I agree.

	License Agreement	
locate, communicate, accelerate	Please review the license terms before installing u-blox GNS: Sensor Device Driver for Windows.	5
Press Page Down to see	the rest of the agreement.	
J-BLOX USB DRIVERS SC	OFTWARE LICENSE AGREEMENT	^
E F S F F F F F F F F F F F F F F F F F	it) and the black for the second s	
Individual or a single ent SLA, which includes com, materials, "online" or ele- ("Software"). An amendr YOU AGREE TO BE BOUN OTHERWISE USING THE OR USE THE SOFTWARE "SOFTWARE", E.G. BY C	Ity) and U-blox for the U-blox software that accompanies this puter software and may include associated media, printed actronic documentation, and Internet-based services ment or addendum to this SLA may accompany the Software. ND BY THE TERMS OF THIS SLA BY INSTALLING, COPYING, OR SOFTWARE. IF YOU DO NOT AGREF, DO NOT INSTALL, COPY, 5. YOU MAY CONTINUE TO USE U-BLOX PRODUCTS WITH THE COMMUNICATING VIA UART, DDC OR SPI INTERFACES.	*
Individual or a single enti SLA, which includes com, materials, "online" or ele ("Software"). An amendi YOU AGREE TO BE BOUN OTHERWISE USING THE OR USE THE SOFTWARE "SOFTWARE", E.G. BY C "SOFTWARE", E.G. BY C	Ity) and U-blox for the U-blox software that accompanies this puter software and may include associated media, printed cctronic documentation, and Internet-based services ment or addendum to this SLA may accompany the Software. ND BY THE TERMS OF THIS SLA BY INSTALLING, COPYING, OR SOFTWARE. IF YOU DO NOT AGREE, DO NOT INSTALL, COPY, .; YOU MAY CONTINUE TO USE U-BLOX PRODUCTS WITH THE COMMUNICATING VIA UART, DDC OR SPI INTERFACES. of the agreement, click I Agree to continue. You must accept the box GNSS Sensor Device Driver for Windows.	~

5 To start the installation, tap **Install**.

locate, communicate, accelerate	Choose Components Choose which features of u-blox GNSS Sensor Device Driver for Windows you want to install.				
Check the components you install. Click Install to start	want to install and uncheck the com the installation.	ponents you don't want to			
Select components to insta	II: GNSS Sensor Device Drive	Description Position your mouse over a component to see its description,			
Space required: 7.2MB	< >				

6 In the second Device Driver Installation Wizard window, tap Next.

Device Driver Installation Wizard	1
	Welcome to the Device Driver Installation Wizard! This wizard helps you install the software drivers that some computers devices need in order to work.
	< Back Next > Cancel

7 When the installation completes, tap **Finish**.

Completing the Device Driver Installation Wizard				
The device driver installation v software for your hardware de the software you currently hav	wizard did not update any of your vices because it was not better than re installed.			
	Completing the D Installation Wiza			

8 To complete the installation, tap **Finish** in the first **u-blox GNSS Device Driver for Windows** window.



2.6 Windows Configuration

In order for the VLS Mobile Tablet to operate properly, Windows must be activated, a Windows 10 Setup Script must be run, and a few registry values must be modified.

2.6.1 Activating Windows

When and where to use: Windows activation will happen automatically when the tablet is connected to the Internet.

Procedure:

- 1 If Windows has not yet been activated, connect the tablet to a Wi-Fi access point.
- 2 Select Activate Windows.

2.6.2

Installing Windows 10 Setup Script

The Windows 10 Setup Script is a custom Windows PowerShell script that disables numerous Privacy, Security, Network, Services, and other Windows 10 features to optimize the OS environment for CarDetector Mobile system field operations.

Procedure:

- 1 Download the Win10SetupScript.zip file containing the script files at https:// get.vaasfiles.com/Win10Setup.
- 2 Extract the Win10 Setup Script folder from the zipped file to the Windows desktop and open it.
- 3 Run the Options.cmd file.
- 4 Wait for the script to complete until the message Press any key to continue... appears.
- 5 Press any key to close the PowerShell script window and restart the computer.

2.6.3 Editing Windows Registry

Prerequisites:Two Windows registry keys must be modified to allow the tablet to simultaneously use the 4G/LTE Cellular Modem and the Ethernet adapter.

Procedure:

- 1 Tap the Windows Search Bar and type regedit.
- 2 Tap Run as Administrator.

All Apps Docume	nts Web More	•	R
Best match			
Registry Editor			B
Search the web	lts	>	Registry Editor App
			□ Open □ Run as administrator □ Open file location →□ Pin to Start →□ Pin to taskbar
✓ regedit			

- 3 In the left navigation pane, navigate to Computer→→HKEY_LOCAL_MACHINE→SOFTWARE→Microsoft→WcmSvc.
- 4 Press and hold in the right pane to open the context menu.
- 5 Tap New→ DWORD (32-bit) Value.



- 6 Name the new registry value IgnoreNonRoutableEthernet.
- 7 Double-tap the new registry value to edit it.
- 8 In the Value data text field, enter 1.
- 9 Tap OK.

- File Edit View Favorites Help				
Computer\HKEY_LOCAL_MACHINE\SOFTW	ARE\	dicrosoft\WcmSvc		
WcmSvc CellularFailover HotspotAuth Interfaces Policy	^	Name (Default) CMPOL IgnoreNonRoutableEthernet	Type REG_SZ REG_MULTI_SZ REG_DWORD	Data (value not set) a0c92e1c-7faa-4176-ad48-7c70fdff0efo 0x00000000 (0)
Frovisioning Selection SubscriptionManager Tethering TetheringManager		Edit DWORD (32-bit) Value Value name: IgnoreNonRoutableEthernet		×
Wifinetworkmanager WiMount Windows Windows Advanced Three		Value data: Ba	se Hexadecimal Decimal	
Windows Defender Windows Defender Serue	~		OK Can	cel

- 10 In the left navigation pane, navigate to Computer→HKEY_LOCAL_MACHINE→SOFTWARE→Policies→Microsoft→Windows→Wc mSvc→Local.
- **11** Press and hold in the right pane to open the context menu.

12 Tap New→ DWORD (32-bit) Value.

📑 Registry Editor				-		×			
File Edit View Favorites Help									
Computer\HKEY_LOCAL_MACHINE\SOFTWAR	omputer\HKEY_LOCAL_MACHINE\SOFTWARE\Policies\Microsoft\Windows\WcmSvc\Local								
Safer SettingSync System WrmSvc WrmSvc WrmSvc WorkplaceJoin Windows Advanced Windows NT Windows NT Realtek RegisteredApplications RTLSetup Sierra Wireless Inr	Name	Type REG_SZ REG_DWORD String Value Binary Value DWORD (32-bit) Value QWORD (54-bit) Value Multi-String Value Expandable String Value	Data (value not set) 0x00000001 (1)						
< SonicFocus ×	<					>			

- 13 Name the new registry value fMinimizeConnections.
- 14 Double-tap the new registry value to edit it.
- 15 In the Value data text field, enter 0.
- 16 Tap OK.

📑 Registry Editor					—	\times
File Edit View Favorites Help						
Computer\HKEY_LOCAL_MACHINE\SOF	TWARE	\Policies\Microsoft\Windows\W	cmSvc\Local			
- 📜 BITS	^	Name	Туре	Data		
CurrentVersion		(Default)	REG_SZ	(value not set)		
— DataCollection		fMinimizeConnections	REG_DWORD	0x00000001 (1)		
DriverSearching		8 WCMPresent	REG_DWORD	0x00000001 (1)		
— EnhancedStorageDevices		-				
- 📜 Explorer		Edit DWORD (32-bit) Value		×		
> IPSec						
Network Connections		Value name:				
NetworkConnectivityStatusIndica	tor	fMinimizeConnections				
NetworkProvider		Value data:	Base			
> 📕 safer		d				
SettingSync		<u>Ч</u>				
- 📒 System			ODecimal			
V B WcmSvc						
- 📙 GroupPolicy	~		OK Cano	el		
<	>	<				2

2.7 Installing Mobile LPR Software

Procedure:

- 1 Double-tap the CDMP_RHD_IP_6.3.172.21.080420.1100_FullBuild archive to open it.
- 2 Tap Extract all and wait for the extraction to complete.



3 In the new extracted folder, double-tap the **setup.exe** application file.

📕 🛃 📜 🖛 C	📕 🖸 📕 = CDMP_RHD_IP_6.3.172.21.080420.1100_FullBuild — 🗆 🛛 🛛						
File Home	Share View				~ 🕐		
Pin to Quick Copy access	Paste Cut Paste Paste shortcut	Move Copy to*	New folder	Properties	Dpen - Select all dit Select none History Invert selection		
Cli	pboard	Organize	New	Open	Select		
$\leftarrow \rightarrow \checkmark \uparrow$	Model Complete Complete Complete	RHD_IP_6.3.172.21.080420.1100_Fu	II ¥	с v	Search CDMP_RHD_IP_6.3.17		
E Pictures	* ^ 🗆	Name	Date modified		Type Si: ^		
b Music		ISSetupPrerequisites	9/2/2020 5:27	PM	File folder		
🕎 Videos		Program	9/2/2020 5:28	PM	File folder		
OneDrive		🕤 0x0409	9/2/2020 5:27	PM	Configuration settings		
		🕤 Autorun	9/2/2020 5:27	PM	Setup Information		
S This PC		📳 data1	9/2/2020 5:27	PM	Cabinet File		
3D Objects		data1.hdr	9/2/2020 5:27	PM	HDR File		
📃 Desktop		🗊 data2	9/2/2020 5:27	PM	Cabinet File		
Documents		🕤 Install	9/2/2020 5:27	PM	Configuration settings		
🖊 Downloads		ISSetup.dll	9/2/2020 5:27	PM	Application extension		
Music		layout.bin	9/2/2020 5:27	PM	BIN File		
E Pictures		Readme	9/2/2020 5:28	PM	Text Document		
Mida		Setup	9/2/2020 5:28	PM	BMP File		
videos		📓 setup	9/2/2020 5:28	PM	Application		
💺 Windows (0	.:)	📓 Setup	9/2/2020 5:28	PM	lcon		
🥌 Data (D:)		🕤 setup	9/2/2020 5:28	PM	Configuration settings $~~$ \checkmark		
18 items	~ <				> [[]		

Windows 10 will display a SmartScreen warning.

4 Tap More info→Run Anyway→Install→Next.

Windows protected your PC							
Microsoft Defender SmartScreen prevented an unrecognized app from starting. Running this app might put your PC at risk.							
App: setup.exe Publisher: Unknown publisher							
Run anyway Don't	run						

5 Tap I accept the terms of the license agreement→Next.

Vigilant Mobile LPR 6.3.0 Setup License Agreement Please read the following licens	e agreement carefully.
	VIGILANT SOLUTIONS SOFTWARE LICENSE AGREEMENT Vigilant Mobile LPR IMPORTANT - READ CAREFULLY: THIS VIGILANT SOLUTIONS SOFTWARE LICENSE AGREEMENT ("AGREEMENT") IS A LEGAL AGREEMENT BETWEEN VOU (EITHER AN INDIVIDUAL OR AN ENTITY) AND VIGILANT SOLUTIONS. ("LICENSOR") FOR THE SOFTWARE ASSOCIATED SOFTWARE COMPONENTS, MEDIA, PRINTED MATERIALS, AND "ONLINE" OR ELECTRONIC DOCUMENTATIONS. By any of the following acts, you ("Licensee") agree to license the Software and to become a party to, and be bound by all of the terms and conditions of, this Arreement:
InstallShield	< Back Next > Cancel

6 Type a company name into the **Company Name** field and tap **Next**.

Vigilant Mobile LPR 6.3.0 Setup					×
Customer Information Please enter your information.					
	Please enter your r	name and the na	me of the compan	y for which you work.	
	User Name:				
	Vigilant				
	Company Name:				
	Vigilant				
InstallShield		< <u>B</u> ack	<u>N</u> ext >		Cancel

- 7 In the **Select default region** drop-down menu, select the state that the tablet will be operating in.
- 8 Tap Install all profiles→Next.

Vigilant Mobile LPR 6.3.0 Setup Select Default Regions. Select your default region profi	e:		×
	Select default region you want to Select default region Instal all profiles Instal profile for this select	use: ral ed region only	_
Install Shield	< <u>B</u> ack	Next >	Cancel

9 Tap Next→Install.

Vigilant Mobile LPR 6.3.0 Setup			Х
Ready to Install the Program The wizard is ready to begin instal	lation.		
Artes	Click Install to begin the installation.	9	
	If you want to review or change any wizard.	of your installation settin	gs, click Back. Click Cancel to exit the
InstallShield	< <u>B</u> ack	[Install]	Cancel

10 Wait for the installation to complete, then tap Finish.

NOTE: A **Mobile LPR** shortcut icon will be placed on the Windows desktop.

11 Restart the tablet.

^{2.8} Installing the ReaperHD Camera Firmware

When and where to use: The Mobile LPR software will automatically update connected ReaperHD cameras with the firmware file that is present in the Tool folder of the software.

Procedure:

1 Download the ReaperHD Camera Firmware: https://get.vaasfiles.com/RHDFW

- 2 Open the Windows File Explorer and navigate to the Tool folder: C:\Program Files (x86)\Vigilant Solutions\Vigilant Mobile LPR\EngineProfiles\General\Tool
- 3 Copy the downloaded ReaperHD.fff into the Tool folder.
- 4 Tap Replace the file in the destination to overwrite the existing firmware file

2.9 Configuring Ethernet Adapter IP Address

Prerequisites:The tablet must be on the same subnet as the ReaperHD cameras in order for them to communicate with the Mobile LPR on the tablet.

Procedure:

- 1 Tap Windows Icon→Settings→Network and Internet→Change adapter options.
- 2 Tap and hold on the **Ethernet adapter**.
- 3 Tap Properties.
- 4 Double-tap Internet Protocol Version 4 (TCP/IPv4).

Ethernet Properties	×
Networking Sharing	
Connect using:	
Intel(R) Ethemet Connection I219-V	
	Configure
This connection uses the following items:	
Client for Microsoft Networks	^
File and Printer Sharing for Microso	t Networks
QoS Packet Scheduler	
Internet Protocol Version 4 (TCP/II)	v4)
Microsoft Network Adapter Multiple	xor Protocol
Microsoft LLDP Protocol Driver	
Internet Protocol Version 6 (TCP/II)	v6) v
<	>
Install Uninstall	Properties
Description	
Transmission Control Protocol/Internet Pr wide area network protocol that provides across diverse interconnected networks.	otocol. The default communication
	OK Cancel

- 5 Enter 192.168.3.99 into the IP Address field.
- 6 Tap the **Subnet Mask** field to auto-populate the field.
- 7 Tap **OK** on both windows.

Internet Protocol Version 4 (TCP/IPv4) Properties X			
General				
You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.				
Obtain an IP address automatica	lly			
Use the following IP address:				
IP address:	192.168.3.99			
Subnet mask:	255.255.255.0			
Default gateway:				
Obtain DNS server address autor	matically			
• Use the following DNS server add	iresses:			
Preferred DNS server:				
Alternate DNS server:				
Validate settings upon exit	Advanced			
	OK Cancel			

2.10 Licensing the CDMP IP Mobile LPR Software

Prerequisites:

The Mobile LPR software must be licensed before extended operation in the LPR Trailer. To obtain a license key, visit the License Key Request webpage and fill out the form. The license key will be sent to the Contact Email Address provided.

The request process requires review by a support representative and may take up to 24 hours to process.

If necessary, the CDM software can operate for a limited time without a license for testing.

The license key request form can be completed on the tablet in the Microsoft Edge browser or on another PC.

Procedure:

1 Double-tap on the Vigilant Mobile LPR desktop icon.

NOTE:

If this is the first time the software has been run, the Upgrade License window appears.

If the software has already been run but not licensed, the **Upgrade License** window can be viewed again by tapping on the **About Car Detector**→**Upgrade License**.

- 2 Open the License Key Request page at https://www.vigilantsolutions.com/support/license-keyrequest/ and fill out the form.
- 3 Copy the Current Version, Sitecode, and MachinelD from the Upgrade License window into their respective fields in the request form.

Figure 13: Upgrade License

Upgrade license	×
Current Version CDM DSP 6.3.172.21.202008041100.R Sitecode CAD54F6A	
MachineID 7811-8256-6582-4713	
Upgrade Close	

4 Once the license key has been received, copy it into the **New license code** field and tap **Upgrade**.



NOTE: The license key is 80 characters long. It is easier to copy the key into a text file and transfer the key to the tablet with a USB thumb drive instead of manually typing it in from the support email.

2.11 Mobile LPR Software Configuration

Mobile LPR software requires a LEARN connection file, GPS configuration, and LPR profile selection before operation in the LPR Trailer.



NOTE: Contact a LEARN Agency Manager to obtain a LEARN account and connection file.

2.11.1 Selecting LEARN Connection File and Login

Procedure:

- 1 Double-tap on the Vigilant Mobile LPR desktop icon.
- 2 Tap Browse.
- 3 Browse to the LEARN connection .ini file and double-tap the file to select it.
- 4 Tap the drop-down menu arrow next to the **Username** field to select a LEARN username.
- **5** Tap the **Password** field and enter the password associated with the selected LEARN Username.
- 6 Tap Login.



NOTE: If a connection file has already been added, a new one can be selected by tapping the three dot button next to the System field during login.

Figure 14: Connect to LEARN

co	nnection file to	Connect to L	EARN?
	Browse	Not Now	I
System	Justin Tablet Test		
System Username	Justin Tablet Test		Login

2.11.2 Setting the GPS Device

Procedure:

- 1 In the Windows search bar, type keyboard and tap the On-Screen Keyboard app.
- 2 Tap the Vigilant Mobile LPR window, then tap Alt+F on the onscreen keyboard to open a context menu in CDM.
- 3 Tap Settings→GPS Settings.

📓 Vigilant Mobile LPR Username: justin.bull@vigilantsolut	ons.com System: Justin Tablet Test	- 8 X
View > Expert Settings	Cam-1 Cam-2 Cam-3 Cam-4	LEARN GPS System
Help > Camera Shutter Setting >)
Database connection		
Reaper Health Monitor		
Setup GPS Setting		
Reset Database		
Hot-List >	and a second second second	
Import Hot- Optimize Tables on startup		
Engine Type		
Start Shir Enter Debug Mode		
Instant		
Log Removal Setting		
Add Plat Switching Language	amera #2 Camera #3 Camera #4	
Engine Statistics		
Canada Canad		
OCK Accuracy for White-List		
Day/Night 🖼 On-Screen Keyboard		- II X
		era
Esc ~ ! @	#_\$_%_^_&_*_(_)+ 🗷	Home PgUp Nav
1 2	3 4 5 6 7 8 9 0 - =	
Exit Tab q w e	rtyuiop{_}_\ ^{Del}	End PgDn MvUp
Caps a s	d f g h j k l : " ^{Enter}	Insert Pause My Dn
Shift Z X	cvbnm<>//shitt	PrtSch ScrLk Dock
En Ced Alt		Ontine Hale Fade
		oparte Help Hode
About CarDetector		
P Type here to search	o H 条 📃 🔯 👮	^ // d0 d ⁴ 9/1/2020 ₹

- 4 In the GPS Device drop down menu, select Other (NMEA).
- 5 In the GPS Format drop down menu select the COM port created in Installing the u-blox M8 GNSS/GPS Module Drivers on page 18.
- 6 Tap Apply.

GPS Setting ×
Configuration:
GPS Device : Other (NMEA)
GPS Format :
GPS Postion
Latitude 0.00000000000
Longitude: 0.00000000000
GPS Error Setting
GPS error 2 Meter(s)
Apply

- 7 Close the on-screen keyboard.
- 8 Check that the GPS status light in the main Mobile LPR window is green.

Driver Installed	ver Installed	
GPS Device Connected		
Satellite Sync		
Location C	oordinates (Live)	
Location C	coordinates (Live) -121.9059000000	

9 Tap on the light to open the GPS Receiver Status window.



10 If all lights are not green after a few moments, additional troubleshooting may be required.

NOTE: For troubleshooting information, see GPS Troubleshooting on page 35.

2.11.3 Setting an OCR Profile and Verifying the LEARN Connection

Procedure:

1

1 On the Vigilant Mobile LPR window, tap Setup.



- 2 Tap the OCR tab.
- **3** Select the state in which the tablet will be operating.
- 4 Tap Apply.

Camera	Audio	OCR	Alert	Clean	LEARN	Proxy	
		Select	a regio	nal OCR	profile		
	Regio	on Select	Califo	rnia		-	
		Apply			Close		

- 5 Tap the **LEARN** tab.
- 6 Tap Test Connection.

Camera	Audio	OCR	Alert	Clean	LEARN	Proxy	
	Webs	site [http	s://learn-r Test Cor	NS.COM/le	earn 1		
		Apply			Close		

If the LEARN connection is correctly configured and the tablet is connected to the Internet, the Status will be reported as Complete Success.

7 Tap OK.



GPS Troubleshooting

Windows 10 versions 1903 and later will unconditionally treat the u-blox GNSS module driver as a Universal GNSS module driver and render the GPS in Mobile LPR unable to function.

This is due to the new way that Microsoft configures Windows to handle GNSS devices. There is no feasible solution for disabling Windows 10 updates indefinitely to prevent these changes. However, the u-blox GNSS device manufacturer provides a work-around for this issue. The GPS status light in Mobile LPR will not turn green after normal setup if it is not configured correctly.

3.1 Troubleshooting GPS Configuration

Procedure:

- 1 Open the Windows File Explorer.
- 2 Navigate to This PC \rightarrow Manage \rightarrow Device Manager.



- 3 Double-tap Ports, then tap and hold on u-blox Virtual COM Port.
- 4 Tap Uninstall device.

🎥 Computer Management				\times
File Action View Help				
⇐ ᆃ│ 🖄 🗊 🖳 🖳 🖳 💺 🗙 ④				
🛃 Computer Management (Local) 🛛 👻 🛃 DESKTOP-6UOHLFQ	^	Actions		
✓ [™] System Tools ✓ [™] Audio inputs and outputs		Device Manager		
> 🕑 Task Scheduler 🛛 🚽 🍃 Batteries		Device Manager		
> 🛃 Event Viewer 🛛 🔰 🕴 Bluetooth		More Action	าร	•
> 😥 Shared Folders > 👰 Cameras				
> 🎂 Local Users and Groups 🔰 🚽 Computer				
> 🚫 Performance 💦 🚽 Digital Media Devices				
🕂 Device Manager 🔰 🕳 Disk drives				
🗸 🔚 Storage 💦 🚽 Display adapters				
📅 Disk Management 🔰 📓 Firmware				
> 🚋 Services and Applications 🔰 > 🙀 Human Interface Devices				
> Mice and other pointing devices				
> 📲 Modems				
> 🛄 Monitors				
> 🚽 Network adapters				
> Other devices				
V 📮 Ports (COM & LPT)				
🐺 Sierra Wireless Snapdragon™ X7 LTE-A DM Port (COM6)				
Sierra Wireless Snapdragon™ X7 LTE-A NMEA Port (COM8)				
💭 u-blox Virtual COI	П.			
> Print queues				
Processors Disable device	-1			
> III SD host adapters Uninstall device				
> P Security devices	-1			
Scan for hardware changes				
u-blox GNSS Locat Properties				
> Smart card readers	_			
Software components				
Software devices				

- 5 Check Delete the driver software for this device check box.
- 6 Tap Uninstall.

Uninstall Device	×	
u-blox Virtual COM Por	t (COM12)	
Warning: You are about to uninstall this device from your system.		
☑ [velete the driver software for t	nis device.	
	Uninstall Cancel	

7 Select Sensors \rightarrow u-blox GNSS Location Sensor \rightarrow Update driver.



8 Select Browse my computer for driver software.

	×
Update Drivers - u-blox GNSS Location Sensor	
How do you want to search for drivers?	
→ Search automatically for updated driver software Windows will search your computer and the Internet for the latest driver software for your device, unless you've disabled this feature in your device installation settings.	Dr
→ Browse my computer for driver software Locate and install driver software manually.	
	Cancel

9 Select Let me pick from a list of available drivers on my computer→USB Serial Device.

← 📲 Update Drivers - u-blox GNSS Location Sensor	
Browse for drivers on your computer	
Search for drivers in this location:	
Browse	
☑ Include subfolders	
→ Let me pick from a list of available drivers on my computer This list will show available drivers compatible with the device, and all drivers in the same category as the device.	
Next Cancel	
×	
← 📲 Update Drivers - u-blox GNSS Location Sensor	
Select the device driver you want to install for this hardware. Select the manufacturer and model of your hardware device and then click Next. If you have a disk that contains the driver you want to install, click Have Disk.	
Show compatible hardware	
Model	
u-blox GNSS Location Sensor u-blox GNSS Receiver	
📮 u-blox Universal GNSS	
USB Serial Device	
This driver is digitally signed. Have Disk	
Tell me why driver signing is important	
Next Cancel	
0 Reinstall the three u-blox M8 GNSS/GPS module drivers in the following order	er:
1 ubloxGnss sensorDeviceDriver windows 3264 v2.40.exe	
2 ubloxGnss vcpDeviceDriver windows 3264 v3.10.exe	

 \times

- 3 ubloxGnss_usbcdc_windows_3264_v1.2.0.8.exe
- **11** Note the new u-blox Virtual COM Port. In this case, (COM12).

Ports (COM & LPT)

- Sierra Wireless Snapdragon™ X7 LTE-A DM Port (COM6)
- Sierra Wireless Snapdragon™ X7 LTE-A NMEA Port (COM8)
- 🛱 u-blox Virtual COM Port (COM12)

12 Restart Windows and log back in.

13 Launch the Mobile LPR software and open the GPS Settings menu.

📓 Vigilant Mobile LPR	Usemame: just	in.bull@vigilants	olutions.com	System: Justin 1	fablet Test							- 🗆 X
View >	Expert Settings	al kardi	200			-	im-1 Ca	im-2 Cam-	3 Cam-4	LEARN GP	'S Syste	. 201
Help >	Camera Shutter S	etting	,									
	Database connect	tion										
Dou:	Reaper Health Mo	onitor	1									
Setup	GPS Setting		- S									
	Reset Database					NS						
	Hot-List		>		-	- Contraction of the local diversion of the local diversion of the local diversion of the local diversion of the						
Import Hot-	Optimize Tables o	on startup					3					
	Engine Type			1								
Start Shi	Enter Debug Mod	le										
	Log Level		>									
1	Log Removal Sett	ting										
Add Plat	Switching Langua	age	amera #2	Carner	a #3	Camera #4	_11					
	Engine Statistics						– וו ר					
Search	OCP Accuracy to	r Mhtail irt		•	J 🗈							
	OCK ACCURCY TO				ND 4	뛰 😣						
				L	>							
Day/Nigh	t 👻 On-Screen Keyb	oard								_		J .
Minimize												era
	Esc ~		, # <u></u> {						(2)	Home PgU	p Nav	
		6		4 5		/ 8	9 (
Exit	Tab q	w	e r	ty	/ u	i o	р		Del	End PgD	in Mv Up	
	C							LJ	· · ·			
	Caps	a s	d 1	g	n	ј к			nter	insert Pau	se Mv Dn	
21/2/20	Shift	-	v (c			m		2	Shift	PrtSco Scri		
		2	× .	v .	5 11	ш÷,			5	The series	. DOCK	
	Fn Ctrl	Alt				Alt	Ctrl			Options Hel	- Fade	
About CarDetactor												
August Cardenetter					-							617.0%
🗄 🔎 Type h	iere to search		0		🦇 🥫	28 🗐						9/1/2020 🔞

14 In the GPS Setting window, select the new COM port in the GPS Format drop down menu.

15 Tap Apply.

GPS Setting ×
Configuration:
GPS Device : Other (NMEA)
GPS Format : COM12
GPS Postion
Latitude 37.763573333333
Longitude: -121.90580000000
GPS Error Setting
GPS error 2 Meter(s)
Apply

The GPS status light in Mobile LPR lights up green.