



# Service Information

Diagnostic Device Hardware & Windows®

Number: AHW-17-17

Subject: VAS 6154 Diagnostic Interface – Initial Setup Guide

Date: Dec. 8, 2017

**Supersedes VHW-17-09 due to \*New Sections 2.6 & 4.0**

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### ATTENTION!

Personnel tasked with preparing VAS 6154 for workshop service **must have** knowledge of networking systems, and **specific working knowledge of the dealership LAN / WLAN**, as well as any security restriction measures in place that could affect its access and use.



# Service Information

## 1.0 – Introduction and Process Overviews

### 1.1 – General Information

This document describes the **initial setup** and configuration of a **new VAS 6154 prior to startup** on a diagnostic laptop or tablet device with ODIS Service diagnostic software.

### 1.2 – Web Interface – Overview

The initial setup configurations are performed with the VAS 6154 (and connected WLAN Module) plugged in to the base station, which is connected to the diagnostic device. A network address entered into the web browser on the diagnostic device generates a web interface in which the configurations are performed:



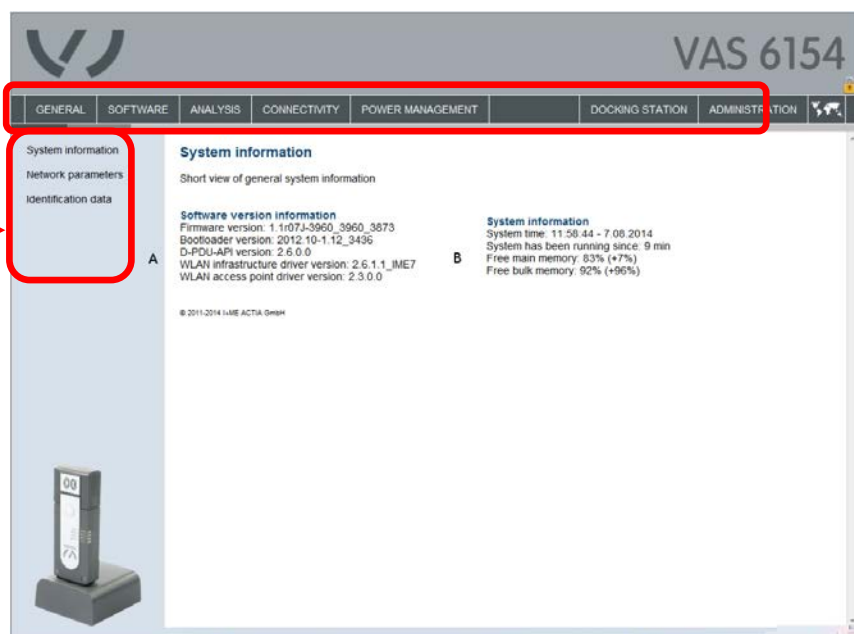
VAS 6154 in Base Station

Diagnostic Device

Web Interface for Configurations

The configuration and information display layout on the VAS 6154 web interface is similar to ODIS Service.

- The **Main Categories** are listed horizontally:
- Selecting a Main Category reveals a number of **Subcategory** menus listed vertically in the left margin:
- The initial setup and configuration instructions that follow will specify a **Main Category** and an applicable **Subcategory** with the necessary instructions.





# Service Information

## 2.0 – Initial Setup and Configuration

### 2.1 – Preparation Prerequisites

#### ATTENTION!

Ensure a successful setup by using the checklist and preparing accordingly!

<input checked="" type="checkbox"/>	<b>Prerequisites</b>
	<b>Person preparing VAS 6154 for service has knowledge of networking systems, and specific working knowledge of the dealership LAN / WLAN.</b>
	<b>Service Information</b> document: <b>VAS 6154 Diagnostic Interface – Introduction Guide</b> read and understood.
	Dealership network performance recommended: <b>6 Mbps</b> (single franchise) / <b>8 Mbps</b> (dual franchise).
	Diagnostic device operating system is known: Either <b>Windows® 7</b> or <b>Windows 10</b>
	VAS 6154 must be able to connect to the same Dealership WLAN as the diagnostic device.
	WLAN must support <b>WPA2 encryption</b> . (It is not possible to connect to other types or open connections.)
	<b>Broadcast services are not blocked</b> by a network firewall or other security measures.
	The latest ODIS Service application version is installed on the diagnostic device.
	Diagnostic device plugged in to power adapter and booted to Windows desktop.
	Wireless switch on diagnostic device in <b>ON</b> position, (“Wireless LAN ON” & “802.11a Enabled”).
	Diagnostic device connects to, and functions without restriction on dealership network.

### 2.2 – Install Base Station Network Drivers

1. Connect the **double end** of USB-Y cable to available USB ports on diagnostic device **-1-**, and then connect the **single end** to base station **-2-**:



2. **Wait** for Windows to locate and automatically install the drivers.
  - ☐ Windows 7: A confirmation window appears near the taskbar.
  - ☐ Windows 10: A very brief progress graphic appears in the taskbar.

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## 2.3 – Prepare WLAN Module

1. Plug the **WLAN Module** into the end of the VAS 6154.
2. Plug the assembled unit into the base station as illustrated:



3. Open ODIS
4. ODIS should see the VAS6154 while it's in the docking station. This will be evident by the Vehicle and USB icons showing as below. You may need to click on Extras > Diagnostic Interface and select the VAS 6154.



**Note:** If the VAS 6154 is new or there was a recent ODIS update, you may see a firmware update window in the bottom right hand corner of the screen. It should take 3-5 minutes to complete. The VAS 6154 will show disconnected in ODIS during some of this process, but will re-connect when complete. **Warning:** Do NOT unplug the VAS 6154 from the docking station while the firmware update is running.



Example of Firmware Update:

**Note:** If ODIS does NOT recognize the VAS 6154 when it's docked, try the below steps before contacting Diagnostic Software Support.

- Click on Extras > Diagnostic Interface and re-select the VAS 6154
- Remove and Re-insert the VAS 6154 into the docking station
- Disconnect and Re-connect the VAS 6154 docking station USB cables from the laptops docking station
- If the VAS 6154 replaced a VAS 5054A, please ensure ODIS was re-installed and you selected the VAS 6154 as the default Diagnostic Interface.



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## 2.4 – Configure Web Interface Language

A **one-time configuration** is necessary to set the language displayed by the web interface.

1. **Open Internet Explorer** and **manually enter** the following IP address in the browser's address bar:

**http://192.168.1.69**

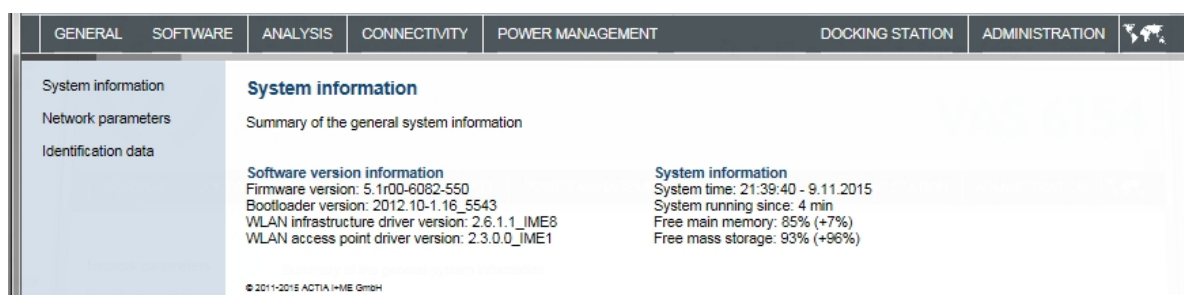
(optional: **http://vas6154-dock**)

A delay before the web interface language selection appears is normal.

2. Select the desired **interface language**, scroll down and apply the selection by clicking the **checkmark**:



The General – System Information page appears first by default every subsequent time the web interface is accessed:





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## 2.5 – Unlock Communication Modes

The communication modes must be unlocked, and the country in which the network operates set.

1. From the web interface: Select the **ADMINISTRATION** main category, and then select the **Communication** subcategory:
2. Check ☒ the **Unlock WLAN access point mode** **AND** **Unlock WLAN infrastructure mode** selections **-A-**: (Click **OK** when the Access Point interference message appears.):
3. Select the applicable **wireless channel selection - Country** from the dropdown **-B-**:
4. Select **Accept**, and then **wait a moment** while the parameters are written:

## 2.6 – Enable Roaming

Roaming is helpful if you have multiple Wireless Access Points located through-out your dealership which have the same SSID name. It allows the VAS6154 to automatically change to another WLAN access point if the connection quality is poor.

**Note:** You should verify with your IT specialist if your network is configured in this manner.

1. Select the **Administration** main category then the **Roaming** subcategory.
2. Place a ☒ in the Activate **Roaming Box**.
3. Leave 15 as the default **Roaming threshold (SNR)**.
4. For the **List of channels (comma-separated)**. Leave this entry blank unless you consult with your IT specialist.

**Note:** Within a large infrastructure it can be advantageous to narrow down the WLAN channels. Please clarify with your IT specialist which channels are appropriate for your dealership.

(cont.)





# Service Information

GENERAL SOFTWARE ANALYSIS CONNECTIVITY POWER MANAGEMENT DOCKING STATION **ADMINISTRATION**

System  
Communication  
**Roaming**  
PINS

**Roaming**

Roaming configuration

Roaming is the automatic change to another WLAN access point if the connection quality is (too) bad. A wise usage of the functionality requires more than one WLAN access point with the same SSID.

**Important: The wrong settings could cause the system to function incorrectly.**

**Roaming parameters**

Activate roaming	<input checked="" type="checkbox"/>
Roaming threshold (SNR)	15 dB
List of channels (comma-separated)	

Accept Reset

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5. Click **Accept**.

## 2.7 – Identify WLAN Module

If more than one VAS 6154 connects to the Dealership WLAN, each must be assigned a **different name and ID number**.

1. Choose and record a **unique name** and **two-digit ID number**.
2. Carefully peel-off the self-adhesive numbers chosen for the **ID Number** and apply them to the **add-on WLAN Module** as illustrated (number shown is example only):



3. Select the **GENERAL** main category, and then select the **Identification data** subcategory:
4. **If** the display contains the **WARNING:** text illustrated below, select **Train now**:

GENERAL SOFTWARE ANALYSIS CONNECTIVITY POWER MANAGEMENT DOCKING STATION ADMINISTRATION

System information  
Network parameters  
**Identification data**

**Identification data**

Identification and configuration of the ID data

Identification data

Serial number	5108742	Hardware revision	IR12583E / IR12548F
---------------	---------	-------------------	---------------------

Identification

Diagnosis interface identification	/ 00	Hostname (optional)	VAS6154-5108742
------------------------------------	------	---------------------	-----------------

Accept Reset

**WARNING: The diagnosis interface cannot be used for diagnostics at this time as the WLAN module has not been trained with it yet! The WLAN module can be paired with the VAS6154 docking station.**

**Train now**



# Service Information

5. Enter the name chosen for the module in the **Diagnostic interface identification** entry field **-A-**:
6. Enter the **Module ID** chosen for the module in the **Diagnostic interface identification** entry field **-B-**:
7. Record the **Hostname** on a piece of paper, **Diagnostic interface identification** entry field **-C-**  
It will be required in later in [Section 4.0](#) below
8. Select **Accept**, and then **wait a moment** while the parameters are written:

## Note:

If the dealership WLAN operates in a **Remote Authentication Dial In User Service (RADIUS)** environment, the name chosen for the VAS 6154 should be used as the hostname for the RADIUS certificate.

## 2.8 – Configure Connection Parameters

### Prerequisites:

- ☐ The following details of the dealership WLAN **must be known**:
  - ☐ Dealership WLAN SSID (network name)
  - ☐ Network IP set up for either **DHCP OR Static IP**
  - ☐ **If Static IP:** Dealership specific address information available for manual entry
  - ☐ WPA2 encryption method and applicable key/password/certificate information as applicable

### Notes:

- The WLAN Module's default IP setting is **DHCP**. The default IP address and network mask are pre-set in the applicable web interface configuration windows.
- The network **must support WPA2 encryption** for WLAN Infrastructure mode. Connection to other encryption types or open networks is not possible.

### 2.8.1 – Configure WLAN Infrastructure Connection Parameters

1. Select the **CONNECTIVITY** main category, and then select the **WLAN Infrastructure** subcategory:
2. Check ☒ the **WLAN operating mode after startup** selection **-A-**:





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- ☐ If the dealership WLAN is set up for **DHCP**: Skip to **Step 5** below.
  - ☐ If the dealership WLAN is set up for **Static IP**: Continue with **Steps 3 & 4** below.
3. **For Static IP Only**: Select **No** to deselect the DHCP default **-B-**:
  4. **For Static IP Only**: Enter the **dealership-specific IP address /network mask etc.** information **-C-**:

5. If necessary, **scroll down the window** to reveal the selection - entry fields illustrated below:

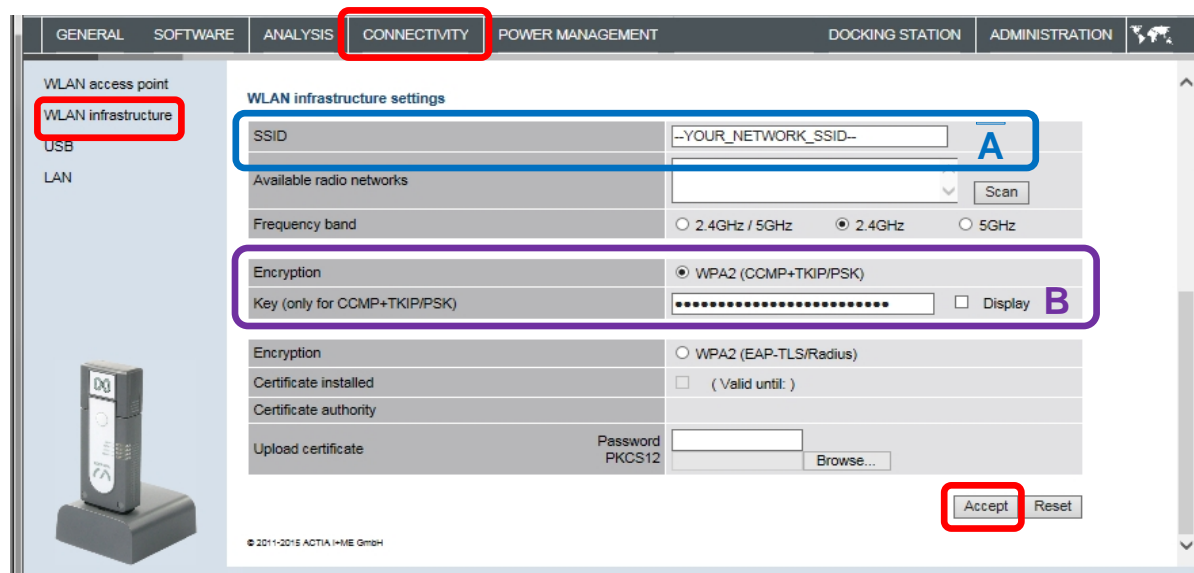
**Note:**

- The default encryption method is **WPA2 (CCMP+TKIP/PSK)**, and its configuration is described below.
- If the network is set up for **WPA2 (EAP-TLS/Radius)**, activate this method in the web interface and enter the required information.

6. Enter the **Dealership WLAN SSID** (network name) **-A-**:
7. Enter the **WPA2 encryption key for the Dealership WLAN** **-B-**: (as applicable).
8. Select **Accept**, and then **wait a moment** while the parameters are written:



# Service Information



## 2.8.2 – Configure WLAN Direct Connection Parameters

A **DHCP** wireless access point with **WPA2** encryption and a **unique SSID** name are pre-set by default. After the pre-set default or alternate settings are “**Accepted**”, the wireless access point network **must be configured in the applicable Windows system on the diagnostic device**.

**WLAN Direct Connection** configuration steps **differ slightly between Windows 7 and Windows 10 devices**. Please follow the section titles carefully.

### Notes:

- **VAS 6154 and ODIS Service software cannot detect network IP address conflicts.** Please review the default settings in all displayed categories carefully.
- Alternate settings should only be made to resolve network IP conflicts, fulfil dealership network requirements, or as required by dealership IT policies where applicable.

1. Select the **WLAN access point** subcategory:
2. Ensure that the **WLAN operating mode after startup** box is **NOT CHECKED** as illustrated below.
3. **Review the categories and pre-set default settings** displayed to **determine if they need to be changed** as per the **Note** on Page 9. If alternate settings are necessary, **perform them now**.
4. **Record** the access point **SSID**, **Encryption** type and security **Key -A-** on a piece of paper for the steps that follow: *Note: The information displayed below is an example only! Each VAS 6154 is different!*
5. Select **Accept**, and then **wait a moment** while the parameters are written:

(cont.)



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GENERAL SOFTWARE ANALYSIS **CONNECTIVITY** POWER MANAGEMENT DOCKING STATION ADMINISTRATION

**WLAN access point**

WLAN infrastructure  
USB  
LAN

**WLAN access point configuration (direct connection)**  
Parameters for the wireless connection to the diagnostic unit in WLAN access point mode

**General**  
WLAN operating mode after startup ☐ **Not Checked!**

**IP settings**  
IP address: 192.168.61.54  
Network mask: 255.255.255.0

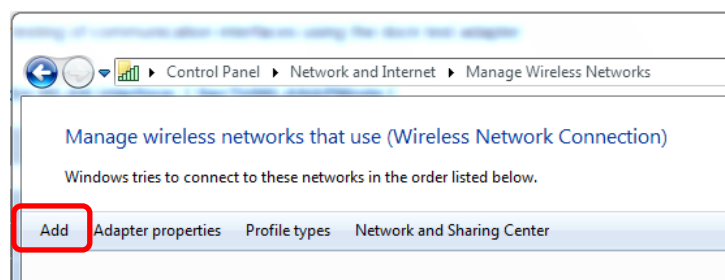
**Diagnostic unit settings**  
IP address range: 192.168.61.240 ... 192.168.61.248  
Activate DHCP server: ☒ Yes ☐ No

**WLAN access point settings**  
SSID: VAS6154\_5108742  
Encryption: ☒ WPA2 ☐ WEP128  
Key (if encryption is enabled): PSK\_VAS6154\_5108742  
Channel: 8  
SSID visible: ☒  
**Accept** Reset

6. **Minimize** the browser displaying the VAS 6154 web interface.

## 2.8.2.1 – Continuation - Windows 7

1. Go to: **Start > Control Panel > Network and Sharing Center > Manage Wireless Networks**, and then select **Add**:

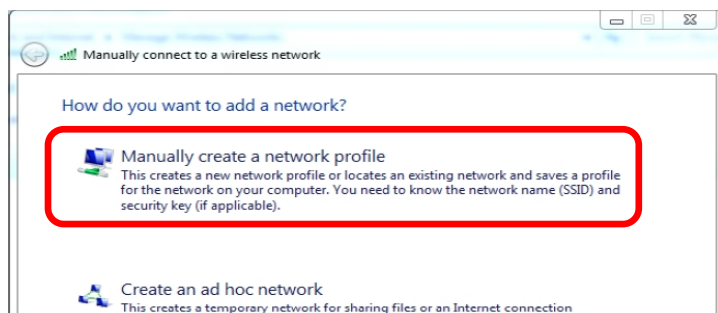


(cont.)



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## 2. Select **Manually create a network profile**:

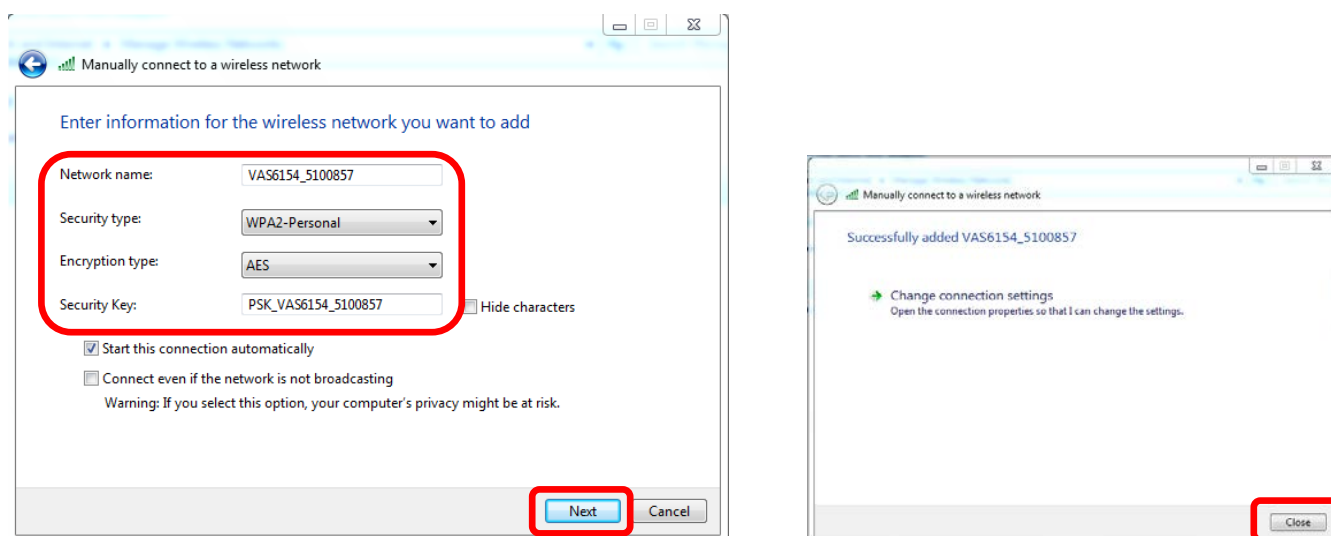


## 3. Enter the **WLAN access point SSID (Network name)** recorded in **Step 4 - Page 10**

## 4. From the **Security type** dropdown: Select **WPA2 – Personal**

## 5. From the **Encryption type** dropdown: Select **AES**

## 6. Enter the **Security Key** recorded in **Step 4 - Page 10**, and then select **Next /Close**:



### 2.8.2.2 – Continuation – Windows 10

## 1. Go to: **Control Panel > Network and Sharing Center**.

## 2. Select **Set up a new connection or network**

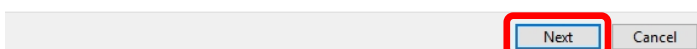
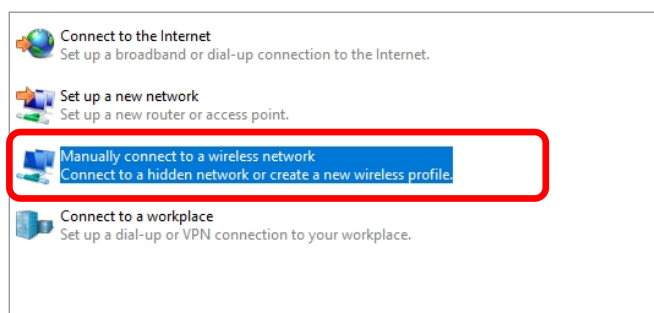
## 3. Select **Manually connect to a wireless network**, and then select **Next**:

(cont.)

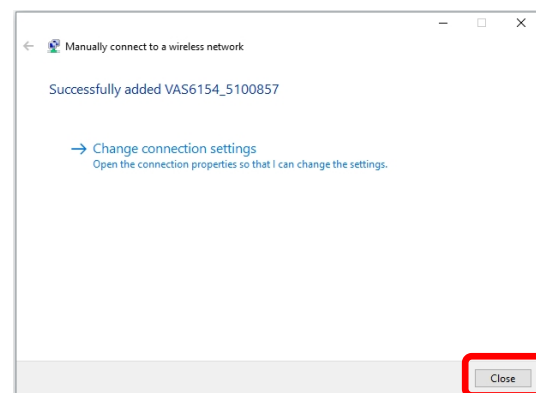
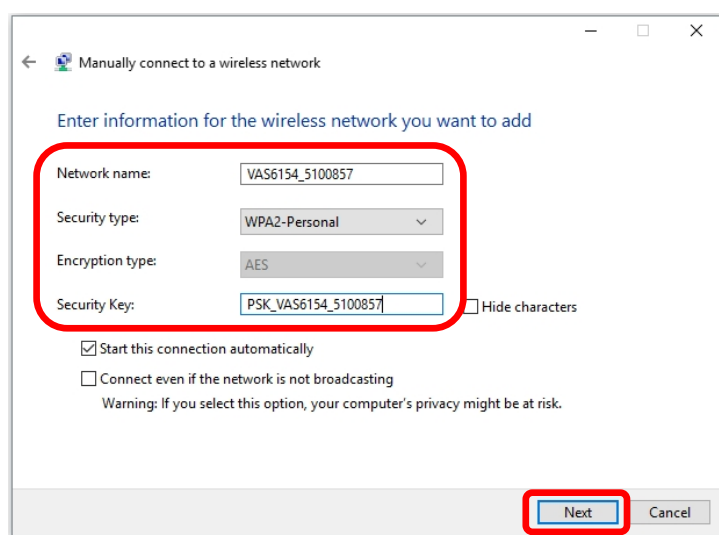


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Choose a connection option



4. Enter the **WLAN access point SSID** (Network name) recorded in **Step 4 - Page 10**:
5. From the **Security type** dropdown: Select **WPA2 – Personal**
6. From the **Encryption type** dropdown: Select **AES**
7. Enter the security **Key** recorded in **Step 4 - Page 10**, and then select **Next . . . Close**:



## 2.8.3 – Configure USB Connection Parameters

A **DHCP - USB network** is pre-set as a default.

1. **Restore** the browser displaying the VAS 6154 web interface.
2. Select the **USB** subcategory:
3. Select **Accept**, and then **wait a moment** while the parameters are written:

(cont.)



# Service Information

GENERAL SOFTWARE ANALYSIS **CONNECTIVITY** POWER MANAGEMENT DOCKING STATION ADMINISTRATION

WLAN access point  
WLAN infrastructure  
**USB**  
LAN

### USB configuration

Parameters for the wired connection to the diagnostic unit via USB

#### IP settings

IP address	192.168.13.69
Network mask	255.255.255.0

#### Diagnostic unit settings

IP address range	192.168.13.240 ... 192.168.13.248
Activate DHCP server	<input checked="" type="radio"/> Yes <input type="radio"/> No

**Accept** **Reset**

## 2.8.4 – Reboot Module (to save configurations)

All configuration parameters must be saved by rebooting the module as follows:

1. Select the **ADMINISTRATION** main category, and then select the **System** subcategory:
2. **Scroll down** and then check **Reboot system**:
3. Select **Accept**, and then **wait a moment** while the parameters are written:

GENERAL SOFTWARE ANALYSIS CONNECTIVITY POWER MANAGEMENT DOCKING STATION **ADMINISTRATION**

**System**  
Communication  
Roaming  
PINs

### Other settings

Display function red LED	DolP activation line
Deactivate button	<input type="checkbox"/>
Deactivate online help	<input type="checkbox"/>

### Device settings

Load settings	Browse...
Save device settings	Save settings
Save global network configuration	Save settings
Reset to factory settings	<input type="checkbox"/>
<b>Reboot system</b>	<input checked="" type="checkbox"/>

**Accept** **Reset**

(cont.)



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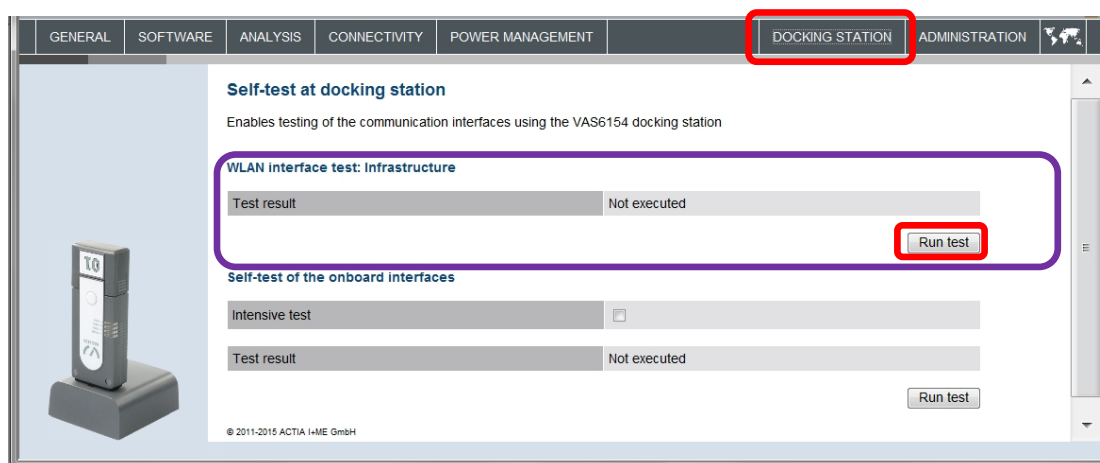
3. **Wait** until the system reboots (the display briefly goes blank) and “**parameters successfully written**” is displayed in the page footer:



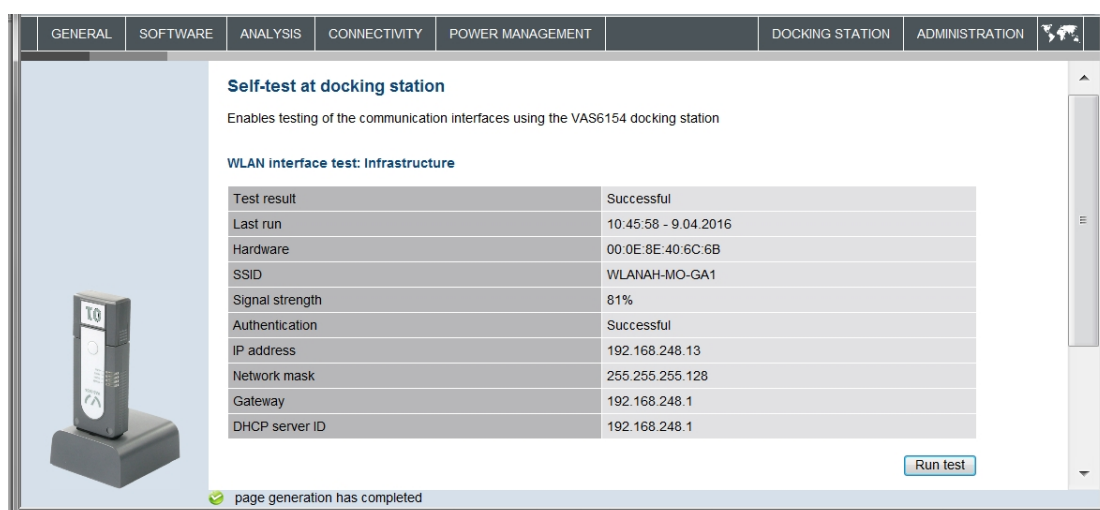
## 2.8.5 – Perform Module Self-Test

Confirm successful VAS 6154 WLAN Infrastructure setup and function on the configured dealership WLAN by performing a self-test as follows:

1. Select the **DOCKING STATION** main category: Retry selection if no connection is made initially.
2. From the **WLAN interface test: Infrastructure** subcategory, click **Run test**:



The approx. 90-second test checks the network broadcast functions of the VAS 6154 on the WLAN.



If the self-test is unsuccessful, follow the **Prerequisites** in subsections 2.1, repeat the WLAN Infrastructure setup instructions.

(cont.)



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3. Close the web browser displaying the VAS 6154 web interface.
4. Disconnect the USB-Y cable from the docking station and diagnostic device.
5. **Remove the VAS 6154 from the docking station.**
6. Depress the retainer clips and separate the WLAN Module from the VAS 6154:



## ATTENTION!

**DO NOT** connect or disconnect any of the add-on modules from the 6154 when it is powered-up and transmitting (LEDs on).

**Module malfunctions will result!**

**Connections and disconnections of add-on modules must ONLY take place when the 6154 is removed from the base station or vehicle DLC.**

## 3.0 – Setup USB Module

### 3.1 – Install USB Drivers

1. Connect the **USB Module with cable -1-** to the VAS 6154:



2. Plug the end of the USB cable into a **Rugged USB 2.0** port on the diagnostic device:



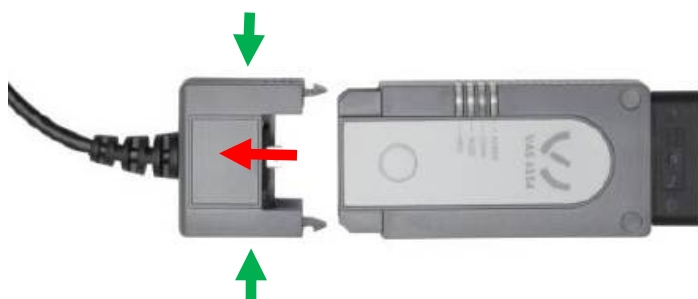
(cont.)



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When the USB connection is established with the diagnostic device for the first time, a Windows USB driver installation routine automatically installs the necessary drivers.

3. Close the installation confirmation pop-up(s) as necessary.
4. **Disconnect the USB cable from the USB 2.0 port on the diagnostic device.**
5. Depress the retainer clips and separate the USB Module with cable from the VAS 6154 housing:



## 4.0 – Setup USB Module Add Static IP Address & Host Name to Interface Software

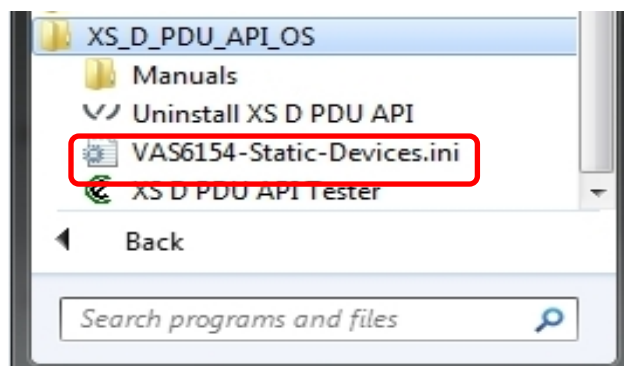
1. Reference the VAS hostname you recorded in Step 8, Page 8 above. Example **VAS6154-5103691**.

### Note:

A dash ( - ) must separate the prefix from the serial number! An underscore ( \_ ) should NEVER be used.

The number created above will be entered as a **network hostname** in the following procedure.

2. From the Windows desktop, go to: **Windows Start > All Programs > XS\_D\_PDU\_API\_OS**
3. Select: **VAS6154-Static-Devices.ini**

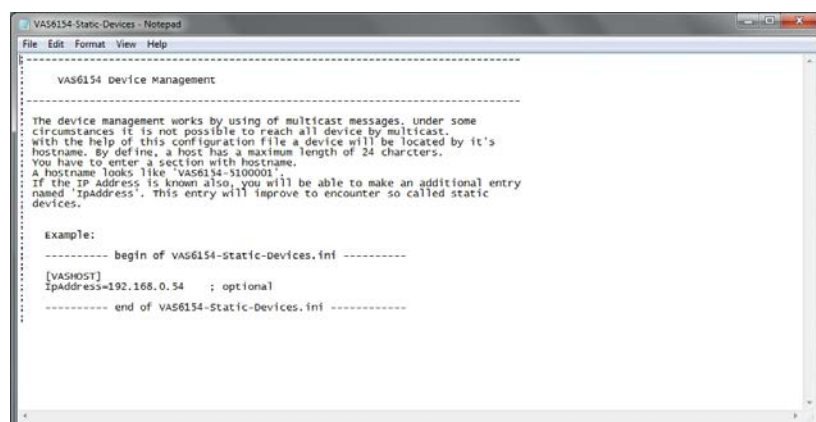


(cont.)

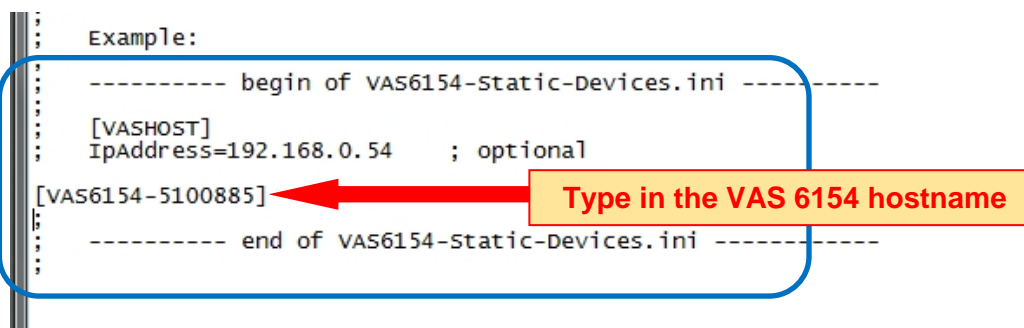


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An editable VAS6154 Device Management .ini "Notepad" document is displayed:



4. In the ----- **begin of VAS6154-Static-Devices.ini** ----- section, below the **example text**, type in the **network hostname** created in Step 8 - Page 8 **in brackets** as illustrated below:



## Notes:

- The hostname **must** be typed-in in **brackets** [ . . . . ]
- A **semicolon ( ; )** must **NOT** precede the typed-in hostname.
- The hostname illustrated above **is an example only!** All VAS 6154 serial numbers are different!
- An **underscore ( \_ )** should **NEVER** be used.

5. In the ----- **begin of VAS6154-Static-Devices.ini** ----- section, below the **example text**, confirm that the network hostname created above appears **in brackets**.

6. Type in **IpAddress=** followed by the **dealership-specific network static IP address** **below the hostname** as illustrated below:

(cont.)



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```
Example:
----- begin of VAS6154-Static-Devices.ini -----
[VASHOST]
IpAddress=192.168.0.54 ; optional
[VAS6154-5100885]
IpAddress=192.168.13.54
----- end of VAS6154-Static-Devices
```

Type in the static IP address: The equal sign ( = ) must appear before the address.

## 7. Save and close the .ini Notepad document.

### Notes:

- A semicolon ( ; ) must **NOT** precede the typed-in static IP address.
- The static IP address illustrated above **is an example only!** All dealership-specific static IP details are different!

When configured as described above, the interface software will automatically locate and connect to the VAS 6154 whose hostname (serial number) was entered in the .ini. This essentially “pairs” the VAS 6154 with the diagnostic device, and the two should be used together at all times.

### Notes:

- Before using the VAS 6154 for vehicle diagnostics, a number of startup steps must be performed in conjunction with the ODIS Service application. For startup and use details, refer to **Service Information – Diagnostic Device Hardware and Windows** document title:

#### ***VAS 6154 Diagnostic Interface – Startup Guide***

- For tips on proper handling of the VAS 6154 and its add-on modules, refer to **Service Information – Diagnostic Device Hardware and Windows** document title:

#### ***VAS 6154 Diagnostic Interface – In-Use Best Practices***

- For tips on WLAN optimization, refer to **Service Information – Diagnostic Device Hardware and Windows** document title:

#### ***VAS 6154 Diagnostic Interface - WLAN Performance Optimizations***