VXDIAG VXDIAG SP241

VXDIAG VCX Nano GDS2 and Tech2Win Diagnostic Tool User Manual

Model: VXDIAG SP241 | Brand: VXDIAG

1. Product Overview

The VXDIAG VCX Nano is a PC-to-vehicle interface designed for comprehensive diagnostic and programming tasks. It is fully compatible with SAE-J2534-1 & SAE-J2534-2 standards, supporting a wide range of current and legacy vehicle protocols including CAN, UART, KW2000, Class2, and GM LAN. This tool is specifically engineered to work with GM Tech2Win and GDS2 software, serving as an alternative to the original GM MDI tool.

It enables various functions such as ECU programming, key programming, reading and clearing diagnostic trouble codes, freezing frame data, and reading Vehicle Identification Numbers (VINs). The device is firmware updatable and offers efficient and convenient access to vehicle data for maintenance and management reports.



Image 1.1: The VXDIAG VCX Nano GDS2 and Tech2Win Diagnostic Tool.

2. Setup and Installation

2.1 System Requirements

- **Operating System:** Supports Windows XP, Windows 7, and Windows 10.
- **RAM:** At least 4GB recommended for optimal performance.
- **Software Specifics:**
  - Tech2Win software is typically installed on Windows 7 32-bit physical systems.
  - GDS software requires a 64-bit computer and may necessitate a VMware machine setup.
  - For SPS programming online, a Windows 10 64-bit OS and a GM online account subscription are required.

2.2 Software Installation

Before beginning the installation process, it is crucial to**disable any anti-virus programs** on your computer. Failure to do so may prevent the software from installing or functioning correctly.

1. **Download VX Manager:** Obtain the latest version of VX Manager from the official VXDIAG website.
2. **Install VX Manager:** Run the installer. For SPS programming, select only the "J2534 Pass-thru driver" option during installation.
3. **Connect Device:** Connect the VXDIAG VCX Nano device to your laptop via USB. Ensure your laptop has an active internet connection.
4. **Update Firmware:** Open VX Manager. Navigate to the "Firmware" section. Select VCI and DoIP as update status and proceed with the firmware update. Keep the device connected during this process.
5. **Update License:** In VX Manager, locate and select the "Update License" option to ensure your device authorization is current.



Image 2.1: Connecting the VXDIAG VCX Nano to a laptop and a vehicle's diagnostic port.



Image 2.2: VX Manager interface showing the firmware update process.

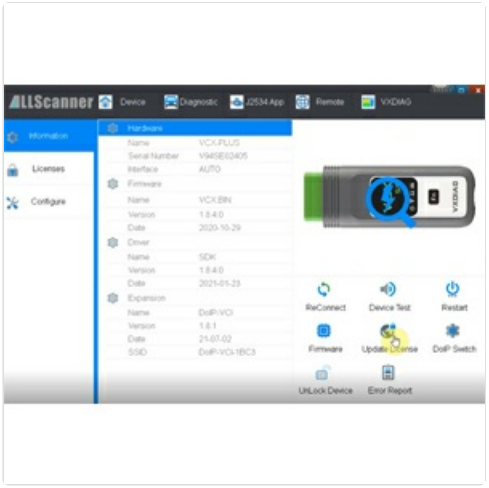


Image 2.3: VX Manager interface showing the license update option.

3. Operating Instructions

3.1 Key Functions

The VXDIAG VCX Nano provides a comprehensive suite of diagnostic and programming capabilities:

- **ECU Programming:** Reprogramming and installation of new ECUs (PCM, ABS, Instrument cluster, air bag, fuel pumps, etc.).
- **Key Programming:** Programming new keys for the vehicle.
- **Read Codes:** Retrieve diagnostic trouble codes (DTCs) from various vehicle modules.
- **Clear Codes:** Erase DTCs after repairs are completed.
- **Freeze Frame:** View a snapshot of sensor values at the moment a DTC was set.
- **Read VIN:** Automatically read and display the vehicle's VIN.
- **Control and Monitor Output Functions:** Activate and monitor various vehicle components.
- **Configure and Reset Functions:** Perform configurations and resets for specific vehicle systems.
- **Diagnostic Session History:** Record, store, and replay previous vehicle diagnostic sessions.



Image 3.1: Overview of functions supported by the VCX Nano GM Kit with GDS and GDS2.

3.2 Global Diagnostic System (GDS & GDS2)

GDS and GDS2 are the primary diagnostic application software required for all GM Global Architecture (Global A) vehicles. GDS2 offers an improved interface and faster operation compared to the original GDS. Updates for GDS and GDS2 are received via TIS2Web.



Image 3.2: Representation of the Global Diagnostic System (GDS2) interface.

3.3 Service Programming System (SPS)

The SPS function allows for pass-through programming on both past model and Global A GM vehicles. This system significantly increases reprogramming speed by 20-70%, preparing the tool to service new models efficiently.

3.4 Vehicle Coverage and Language Support

The VXDIAG VCX Nano is designed for broad vehicle compatibility, adhering to SAE-J2534-1 & SAE-J2534-2 standards. It supports a wide array of vehicle protocols. The software also supports multiple languages for user convenience.



Image 3.3: Example of vehicle coverage selection within the diagnostic software.



Image 3.4: The software interface displaying options for multiple language support.

4. Maintenance

To ensure the longevity and optimal performance of your VXDIAG VCX Nano, regular maintenance is recommended:

- **Firmware Updates:** Periodically check for and install the latest firmware updates via VX Manager. This ensures compatibility with new vehicle models and improved functionality.
- **Driver Updates:** Keep your device drivers updated through VX Manager to maintain stable communication between the tool and your computer.
- **Software Updates:** Ensure your GDS, GDS2, and Tech2Win software are updated as recommended by the manufacturer, typically through TIS2Web for GDS/GDS2.
- **Physical Care:** Keep the device clean and free from dust and debris. Store it in a safe, dry place when not in use.

5. Troubleshooting

This section addresses common issues you might encounter and provides solutions.

Problem	Possible Cause	Solution
Software fails to install or start.	Anti-virus software interference.	Temporarily disable your anti-virus program before installation and during initial setup. Re-enable after successful installation.
Device not recognized by VX Manager or diagnostic software.	Incorrect driver installation; Loose USB connection; Outdated firmware.	Ensure the USB cable is securely connected. Reinstall the J2534 Pass-thru driver via VX Manager. Update device firmware through VX Manager. Try a different USB port or cable.
Tech2Win software not working.	Incorrect operating system (OS) or virtual environment.	Ensure Tech2Win is installed on a Windows 7 32-bit physical system, as specified.
GDS software issues.	Incorrect OS or virtual environment setup.	Verify GDS software is installed on a 64-bit computer, preferably within a VMware machine as recommended.
License expired or invalid.	License requires renewal.	Connect the device to a laptop with internet access and use VX Manager to update the license.

5.1 Technical Assistance

If you encounter persistent installation problems or require further technical support, please refer to the contact information provided by VXDIAG. You may also find assistance by emailing the support team directly, as mentioned in the product's feature list.

6. Product Specifications

Attribute	Detail
Brand	VXDIAG
Model	VXDIAG SP241
OEM Part Number	VXDIAG VCX Nano GDS2
UPC	889327034413
Operating System Compatibility	Windows 10, Windows 7, Windows XP

Attribute	Detail
Automotive Fit Type	Vehicle Specific Fit
Item Weight	6.6 ounces
Product Dimensions	6.89 x 1.97 x 3.54 inches
Connectivity	USB vehicle-to-PC
Standards Compliance	SAE-J2534-1 & SAE-J2534-2

7. Warranty Information

Specific warranty details for the VXDIAG VCX Nano GDS2 and Tech2Win Diagnostic Tool are not provided within this manual. For comprehensive warranty information, please refer to the official VXDIAG website or contact their customer support directly. It is advisable to retain your proof of purchase for any warranty claims.

8. Customer Support

For technical assistance, software installation guidance, or any other inquiries regarding your VXDIAG VCX Nano device, please utilize the following resources:

- **Online Resources:** Visit the official VXDIAG website for FAQs, updated drivers, and software downloads (e.g., VX Manager).
- **Email Support:** Contact the VXDIAG technical support team via email for personalized assistance.
- **VX Manager:** This software is your primary tool for device management, including firmware and license updates, and can often provide diagnostic information about the device itself.

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