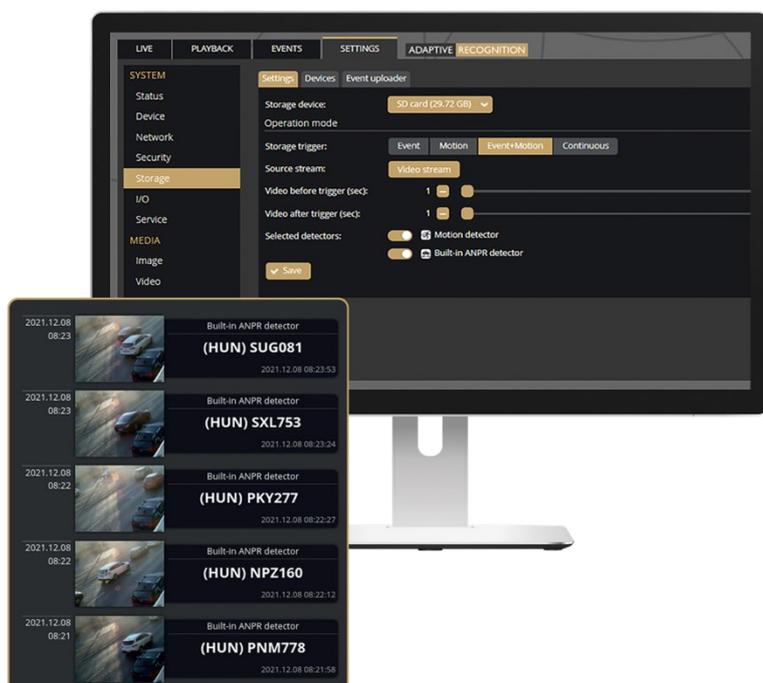




Carmen[®] Nano

Installation Guide



This guide contains an overview of the hardware and required components, suggested scenarios and step-by-step guide for installation, and safety and maintenance instructions.

Carmen® Nano

INSTALLATION GUIDE

Document version: 2025.03.31.

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1. PREREQUISITES

To install and run Carmen Nano, you need the following elements:

1. Hardware device with Jetson Nano module:
 - NVIDIA® Jetson Nano™ GPU Board (Maxwell GPU, 128 CUDA core)
 - Quad Core ARM Cortex A57 CPU
 - 4GB LPDDR4 memory
 - 16GB eMMC flash memory
 - Linux Ubuntu operating system
2. Carmen license file – License file will be sent at the time of purchase via email
3. Carmen NNC (USB dongle or miniPCIe card)
4. Region specific Carmen Engine file for Carmen Nano – the download link will be sent at the time of purchase via email
5. Carmen Nano Installation file - the download link will be sent at the time of purchase via email

2. INSTALLATION

The installation steps are demonstrated on an Axiomtek AIE100-903-FL device.

1. Copy the downloaded Carmen Nano installation file to a USB flash drive that you have previously formatted to FAT32 file system.
2. Connect a monitor (via HDMI), and an USB keyboard to your device.
3. Switch on your device (you may need to press the Power button on the device).
4. Sign in to your device (in case of Axiomtek the username is "nvidia", password is "nvidia")
5. If you use the Graphical User Interface (GUI), open a Terminal window (Ctrl+Alt+T). Or use the console without the GUI.
6. Connect your USB flash drive to your device.
7. Mount your USB flash drive if your device's operating system would not have done it. Type the following commands:

lsblk – it lists information about all available block devices. Find your USB flash drive identification name, it will probably be: "sda", "sda1", etc.

mount /dev/sda /mnt – it mounts your USB flash drive to /mnt (if the USB flash drive name is "sda" – change it to the identifier you have).

cd /mnt – it changes the current directory to /mnt

ls – it lists all files in the current directory. If you see the Carmen Nano installation file in the directory, go to the next step.

8. Start the installation with the following command:

```
sudo bash JetsonBox_installer_1.1.0.266_20220511.run
```

9. Type "yes" when the installer asks it. Be careful, the installer will replace the device's operating system and you will lose all your data on the device.

```
Jetson Box installer

This installer will install the Jetson Box firmware to this device
(which will replace the current operating system).

By installing this software product distributed by Adaptive Recognition
Hungary Zrt and/or otherwise using all or any part of this software product,
You agree to be bound by the EULA (publicly available on the following URL:
https://adaptiverecognition.com/eula).
Before proceeding with the installation, make sure that You have read and
understood the terms and conditions contained in the EULA.

Do you want to install to this device? (yes/no): █
```

10. The installer continues the process. It shows the product name, the software version number and the serial number. Based on the serial number and/or the MAC address (the last 4 digits are the same in both numbers), it shows the link local IP address as well (169.254.xxx.yyy). With this link local IP address you can always access the device after installation. If a DHCP server exists on the network, the device can be found on a DHCP provided IP address as well. Type "yes" once more to start the installation.

```
Do you want to install to this device? (yes/no): yes

Checking the system...

Compatible hardware detected:
  Model name: NVIDIA Jetson Nano Developer Kit
  Serial number: 1421421076785
  Board ID: 3448

After the successful installation, the device (with its new Jetson Box
firmware) will be available with a DHCP IP address (if there is a DHCP
server on the network) and a unique link local IP address.
The second ethernet port will simply work as a second switch port.

MAC address: 48:b0:2d:3e:8f:c6
Link local IP address: 169.254.143.198/16

Product type: CARMEN_NANO
Product serial number: JB3E8FC6
Product version number: 1.3.0.84 (2023-02-03)

You will lose all your data on this device!

Do you want to start the installation? (yes/no): █
```



11. After installation process, the device reboot automatically.
12. Connect the device to your network. Disconnect the monitor and the keyboard from the device.
13. Open a browser on your PC and use the link local IP address or the DHCP provided IP address to access the device on the network. You can find Carmen Nano device on the network using the [ARDeviceTool](#) as well.
14. Follow instructions in [User Manual](#).

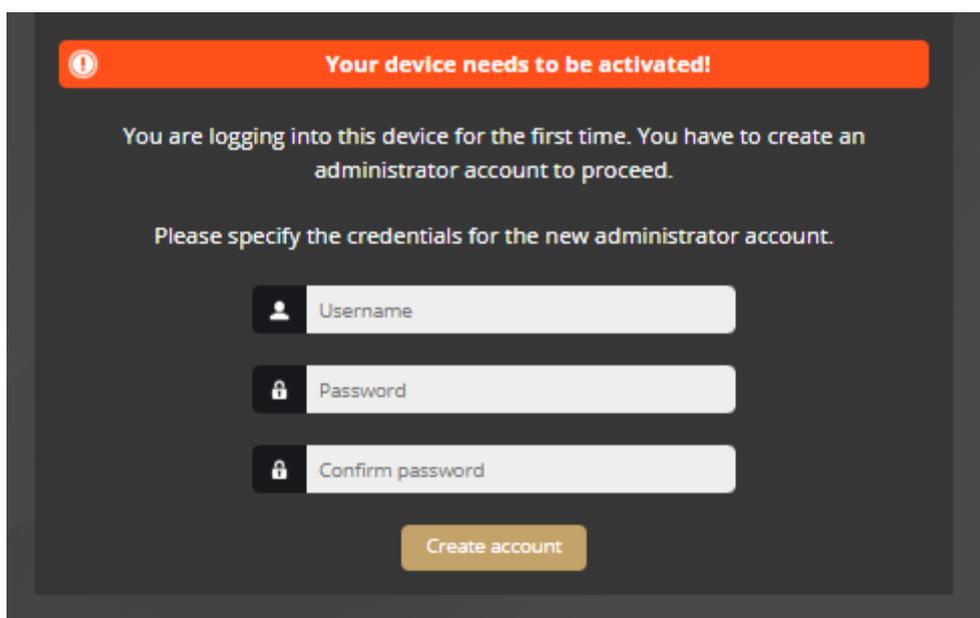


2.1. ACCESSING THE WEB INTERFACE

Accessing the web interface:

1. Start a browser and enter the device IP address into the address bar of the browser.
2. You are logging into this device for the first time. You have to create an administrator account to proceed.

Please specify the credentials for the new administrator account.



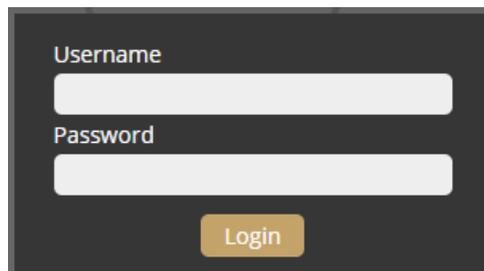
The screenshot displays a dark-themed web interface. At the top, an orange banner with a white exclamation mark icon contains the text "Your device needs to be activated!". Below this, white text reads: "You are logging into this device for the first time. You have to create an administrator account to proceed." and "Please specify the credentials for the new administrator account." The form consists of three input fields: "Username" (with a person icon), "Password" (with a lock icon), and "Confirm password" (with a lock icon). A yellow "Create account" button is positioned at the bottom of the form.

If the device has firmware earlier than firmware version 1.6, this step is skipped. You will also be welcomed at the login screen.

The default user account is the following:

- **Username:** admin
- **Password:** admin

3. Type the username and the password on the displayed login interface and click on [Login].



4. After signing in, the web interface of the camera is displayed on which the required settings can be performed.

Default IP Address

The link-local IP address of the device can be calculated using the device's MAC address or serial number. The last four characters are two hexadecimal numbers that can be converted into the last two parts of a link-local address (169.254.XX.YY).

Example: the device with the MAC address 48-B0-2D-3E-42-1A ends with 42 and 1A, representing the decimal values 66 and 26. The link-local address of this device is 169.254.66.26.

Link-Local IP Address

The IP address of the device is displayed on the product sticker at the bottom of the device. This is always in the format 169.254.aaa.bbb..

Finding Devices

You can find Carmen Nano on the network using the [AR DeviceTool](#). Double-click on the selected device, and the Carmen Nano web interface will open in the default browser.

While running, the program continuously looks for detectible devices on the network and displays them in a list with their current IP addresses. If the device does not appear, ensure that the firewall does not block the multicast protocol on the network and that the device and the PC are in the same network range.

CONTACT INFORMATION

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Adaptive Recognition Hungary Technical Support System (ATSS) is designed to provide you the fastest and most proficient assistance, so you can quickly get back to business.

Information regarding your hardware, latest software updates and manuals are easily accessible for customers via our [Documents Site \(www.adaptiverecognition.com/doc\)](http://www.adaptiverecognition.com/doc) after a quick registration.

New User

If this is your first online support request, please contact your sales representative to register you in our Support System. More help [here \(www.adaptiverecognition.com/support/\)](http://www.adaptiverecognition.com/support/)!

Returning User

All registered ATSS customers receive a personal access link via e-mail. If you previously received a confirmation message from ATSS, it contains the embedded link that allows you to securely enter the support site.