

# VUNO AI with ECOVIEW

Installation and Integration Guide

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# 1. VUNO SDK installation

VUNO Med®- Chest X-ray™

1. Check prerequisites
2. Download CUDA Toolkit
3. Install SDK Service by executing VunoSDK-v1.1.2.XXX-Setup.exe
4. Install API Service by executing ChestXRayAPI-vx.x.x.x-Setup.exe
5. Run API Service “VUNO Med-ChestXray Start”
6. Enter License

*\* Installation process may change later.*

# Workstation Requirements

## ■ Hardware Specifications

HW	Requirement
CPU	Intel i5 8th generation or higher
RAM	DDR4 8GB or more
Storage	SSD/NVME 100GB or more
GPU	GeForce RTX 2070 or compatible GPU with VRAM 8GB or more

## ■ Software Versions

SW	Requirement
OS	Window 10
CUDA	v11.3
cuDNN	CUDA 11.3.1
C++ version	C++11 or higher

# ECORAY

## Download CUDA Toolkit

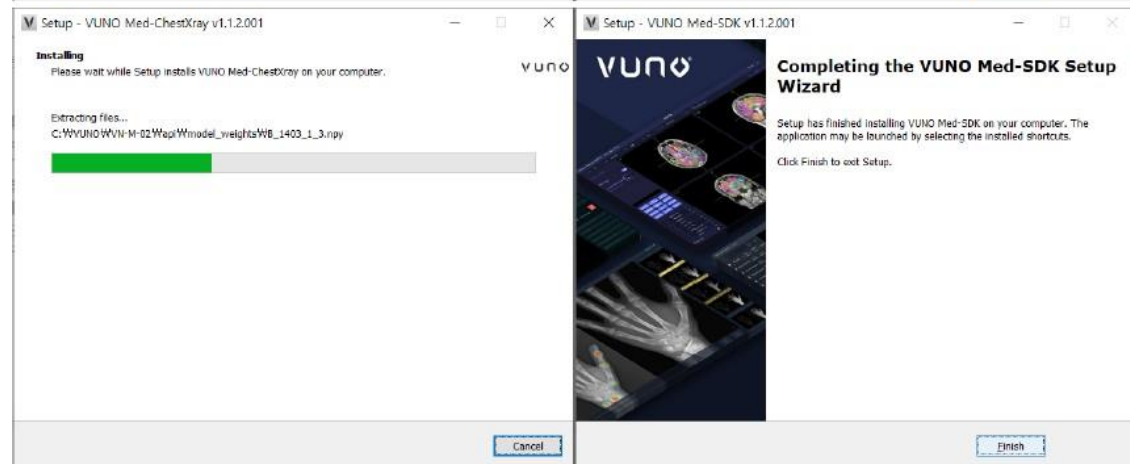
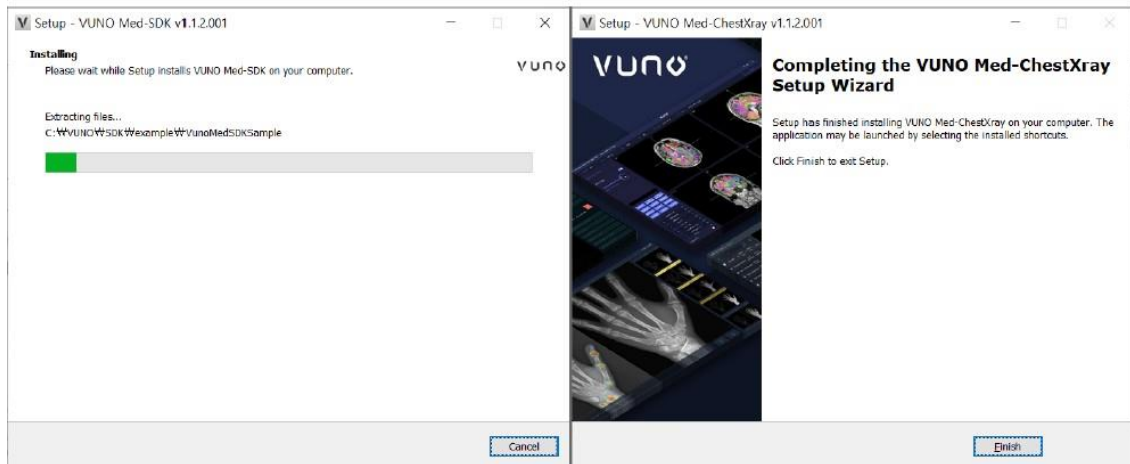
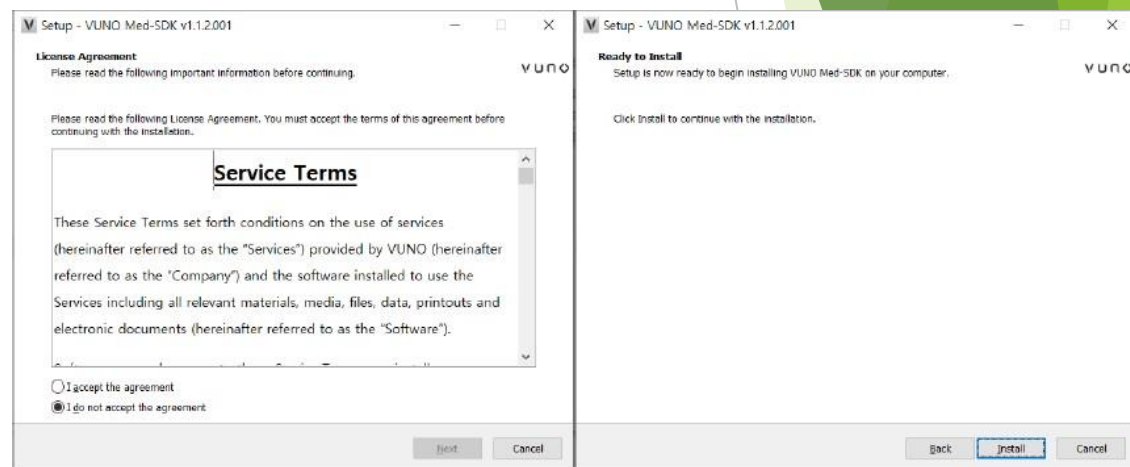
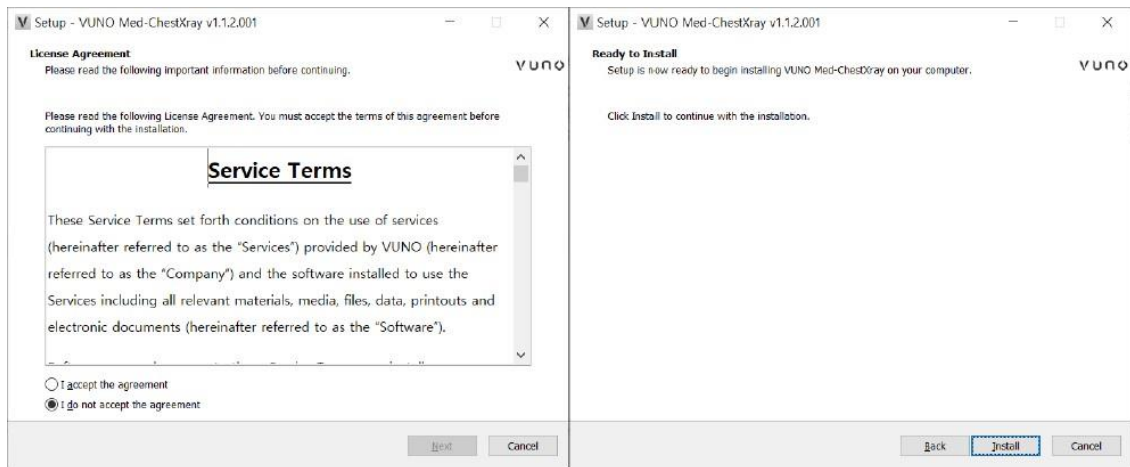
Download the base installer from the link: [CUDA Toolkit 11.3 Downloads | NVIDIA Developer](#)

The screenshot shows the NVIDIA Developer website interface. At the top, there is a navigation bar with the NVIDIA Developer logo and links for HOME, BLOG, FORUMS, DOCS, DOWNLOADS, and TRAINING. A search icon and a JOIN button are also present. Below the navigation bar, there is a section for selecting the operating system and architecture. The Operating System is set to Windows, and the Architecture is set to x86\_64. The Version is set to 11.3, and the Installer Type is set to exe (local). Below this, there is a section for downloading the installer for Windows Server 2019 x86\_64. The base installer is available for download below. A download button for the Base Installer (2.7 GB) is shown. Below the download button, there are installation instructions: 1. Double click cuda\_11.3.0\_465.89\_win10.exe, 2. Follow on-screen prompts. At the bottom, there is a note that the checksums for the installer and patches can be found in the Installer Checksums, and for further information, see the Installation Guide for Microsoft Windows and the CUDA Quick Start Guide.

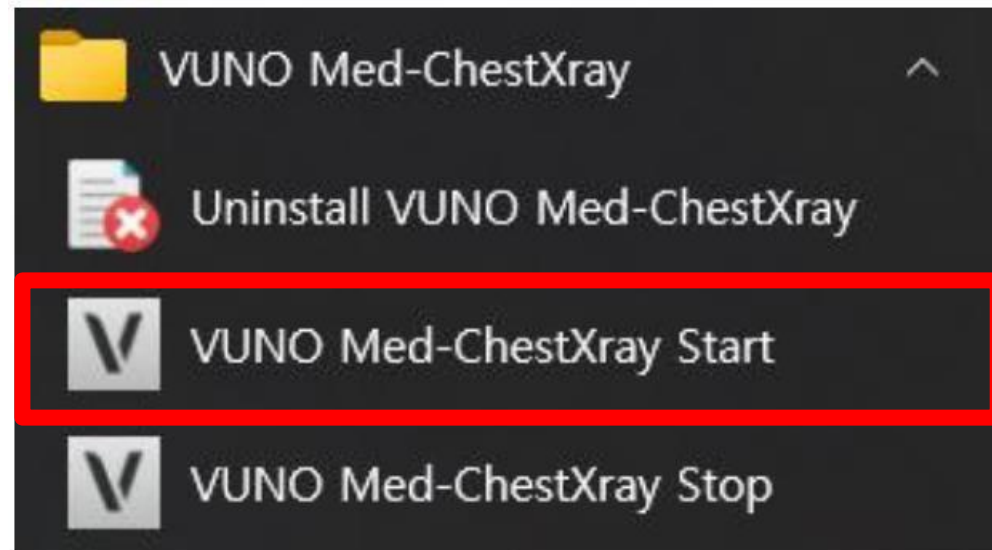
Note: The cuDNN is included in the API Installer and is installed automatically.

### Execute the Setup files of both the API and SDK Services

 ChestXRayAPI-v1.1.2.008-Setup	2021-10-21 오후 2:01	응용 프로그램	1,803,874KB
 VunoSDK-v1.1.2.008-Setup	2021-10-21 오후 2:00	응용 프로그램	2,726KB



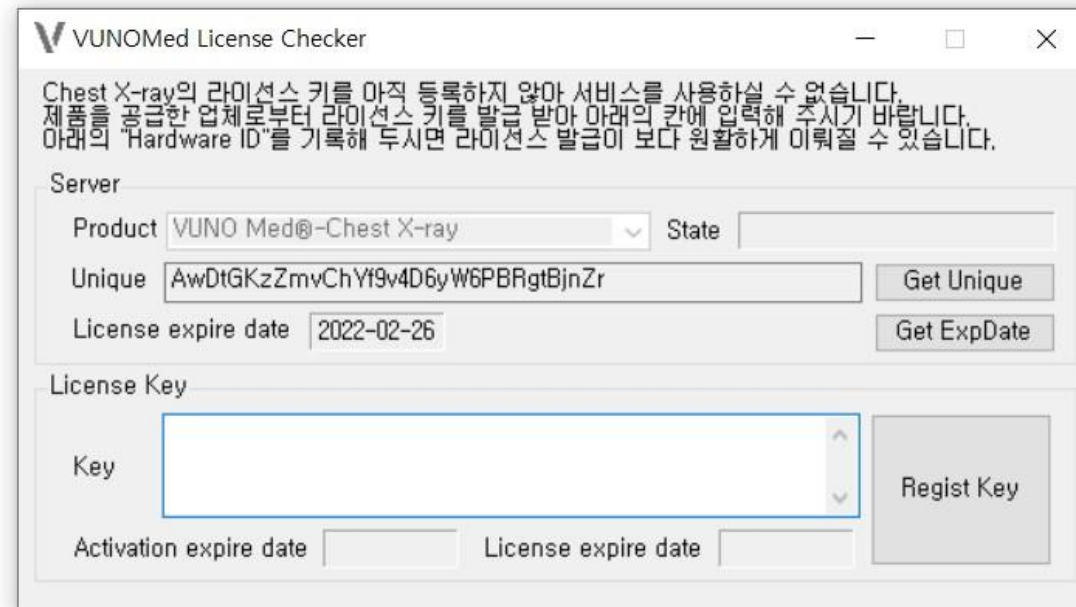
Click the Windows start button and run 'VUNO Med-ChestXray Start' from the items below.



# ECORAY

## License Checker

1. Go to C:\VUNO\SDK\LicenseChecker folder
2. Execute “LicenseChecker.exe”
3. Click the “Get Unique” button to see the unique value for your workstation.
4. Using this unique value, you can get the License Key.  
(We will give further guide on this part once the license-related-policy gets settled.)
5. Enter the license key and click the “Registration” button.



VUNOMed License Checker

Chest X-ray의 라이선스 키를 아직 등록하지 않아 서비스를 이용하실 수 없습니다.  
제품을 공급한 업체로부터 라이선스 키를 발급 받아 아래의 칸에 입력해 주시기 바랍니다.  
아래의 "Hardware ID"를 기록해 두시면 라이선스 발급이 보다 원활하게 이뤄질 수 있습니다.

Server

Product: VUNO Med@-Chest X-ray State:

Unique: AwDtGKzZmvChYf9v4D6yW6PBRgtBjnZr

License expire date: 2022-02-26

License Key

Key:

Activation expire date:  License expire date:

## 2. Using VUNO in **ECOVIEW**

Demonstration

Five Common Thoracic findings associated with lung disease

1. Nodules/Mass
2. Consolidation
3. Interstitial Opacity
4. Pleural Effusion
5. Pneumothorax

Before

After

The interface shows a chest X-ray on the left. On the right, there is a 'Request an analysis' button, an empty 'Detected list' table, and three checked options: 'Insert findings name', 'Insert probability text', and 'Copy original image'. At the bottom are 'OK' and 'Cancel' buttons.

No.	Use Descriptions	Probability
-----	------------------	-------------

Options

- Insert findings name
- Insert probability text
- Copy original image

The interface shows the same chest X-ray, but with a green bounding box around the lower lung area and the text 'PleuralEffusion 99%' overlaid. The 'Detected list' table now contains one entry. The options and buttons remain the same.

No.	Use Descriptions	Probability
1	<input checked="" type="checkbox"/> PleuralEffusion	99%

Options

- Insert findings name
- Insert probability text
- Copy original image

Thank You