Guide on Installing JetPack 6.0 with AVerMedia's NVIDIA® Jetson Orin Series Products

This guide is prepared for developers, engineers, and tech enthusiasts who are eager to leverage the full potential of their AVerMedia products with NVIDIA® Jetson Orin modules by using the specialized features of NVIDIA JetPack 6.0.

NVIDIA JetPack 6.0 is the latest in high-performance computing for AI at the edge, offering advanced features such as enhanced AI model performance, support for the latest CUDA and cuDNN libraries, and comprehensive security features for robust applications. This guide will signpost you where you can install JetPack 6.0 on your AVerMedia's NVIDIA Orin module device and how to effectively optimize your development environment.

To learn more about AVerMedia's NVIDIA® Jetson Orin series products:

Equipped with NVIDIA Jetson AGX Orin module

D315AOP	D315AOP 5G	D315AOB	D315AOB 5G	

Equipped with NVIDIA Jetson Orin NX / Orin Nano module

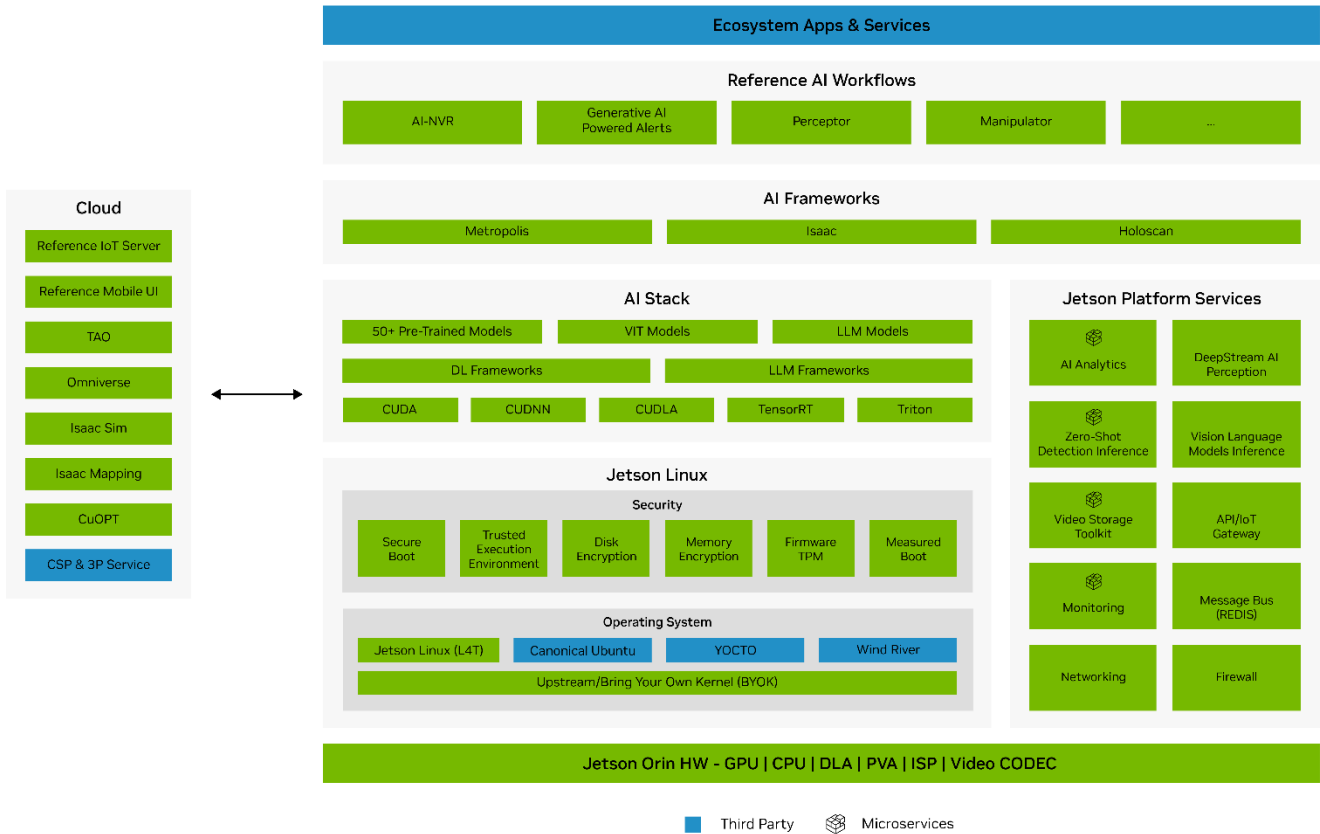|				
ON135B	D135OXD/D135OXB	D133OXB/D133ONB	D115OXB/D115ONB	D115WOXB/D115WONB

You can also check out the comparison information from the links below:
- Full AVerMedia Carrier Board Comparison Chart
- Full AVerMedia Box PC Comparison Chart
- FullAVerMedia Engineering Kit Comparison Chart
- Nvidia SOM Comparison

The JetPack 6.0 Installation Guide Table

Components	Feature	JetPack 6.0	Summary of Benefits	AVerMedia BSP update	Link for Installation
Jetson Linux	Operating System	Ubuntu 22.04 LTS, Kernel 5.15	Improved security, compatibility, and performance with newer kernel and OS.	Yes, via the BSP download on AVerMedia website	https://www.avermedia.com/professional/support/download-and-faq
Jetson Linux	Security and OTA Updates	Enhanced security features, OTA updates	Streamlined and secure updates, better management of deployed devices.	Yes, it is part of the BSP update via the download on AVerMedia website	https://www.avermedia.com/professional/support/download-and-faq
Jetson AI Stack	CUDA Toolkit	CUDA 12.2.1	Improved GPU perforamnce, enhanced computing capabilities and support for newer software architectures.	No. please install via NVIDIA website	https://developer.nvidia.com/cuda-downloads
Jetson AI Stack	TensorRT	TensorRT 8.6.2	Increased inference performance and efficiency in deep learning applications.	No. please install via NVIDIA website	https://developer.nvidia.com/tensorrt
Jetson AI Stack	cuDNN	cuDNN 8.9.4	better training and Improved inference performance in deep learning operations (DL models) through optimized routines.	No. please install via NVIDIA website	https://developer.nvidia.com/cudnn
Jetson AI Stack	CUDA-X AI Libraries	Older versions of libraries	More efficient and optimized AI computations	More details on NVIDIA website	https://developer.nvidia.com/embedded/jetpack
Jetson AI Stack	VPI	VPI 3.1	Advanced computer vision and image processing capabilities on newer hardware.	No. please install via NVIDIA website	https://developer.nvidia.com/embedded/vpi
Jetson AI Stack	Multimedia API	Advanced encoder features and new colorimetry support	Better media processing with dynamic bitrate and enhanced color support.	More details on NVIDIA website	https://developer.nvidia.com/embedded/jetpack
Jetson AI Stack	Graphics API	Vulkan 1.3, Vulkan SC 1.0	Advanced graphics and computation features for more robust application design.	More details on NVIDIA website	https://developer.nvidia.com/embedded/jetpack
Jetson AI Stack	Developer Tools	Updated Nsight Systems 2024.2, Nsight Graphics 2024.1	More effective debugging and profiling with updated tools for modern development environments. Easier and more effective development and troubleshooting	More details on NVIDIA website	https://developer.nvidia.com/tools-overview
Jetson Platform Services	Jetson Platform Services	Comprehensive API-driven services for edge AI	Modular, cloud-native services accelerate AI application deployment on the edge.	More details on NVIDIA website	https://developer.nvidia.com/embedded/jetpack
Additional Feature, partnered with SecEdge	SecEdge fTPM Security Solution	Implemented with SecEdge; hardware root-of-trust, crypto-agility, secure remote management	Future-proof, enhanced device security, AI model protection and chip-to-cloud data security for edge AI and edge-to-cloud IoT.	Available at the next release of JetPack 6.1. For more details please visit the SecEdge website	Releast at JetPack 6.1. For more details please visit https://www.secedge.com/nvidia/

NVIDIA Jetson Software Stack (Source: [NVIDIA Website](#))

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