

ISP-MIC733-GAIA1

VLM Plugin for Agent Studio and NanoDB on NVIDIA Jetson Platform for SafetyAI Applications



Features

- Leverages AI platforms based on the NVIDIA® Jetson AGX Orin™ with JetPack 6.0 or later
- Pre-installed Agent Studio, a drag-and-drop interactive platform allowing users to plug in with multi-modal LLMs, TTS (Text-To-Speech), prompt templates, and sensors integrate with digital input/output
- Pre-installed NanoDB, a lightweight, resource-efficient database optimized for embedded systems and edge devices
- Supports multiple AI workflows, including pre-trained models, video outputs, video overlays, detection logic, event triggers, and alert logic programmed with nodes
- Suitable for SafetyAI applications such as smart factory, smart city, and smart space

Description

Integrated Solution Packages (ISP) are AI platforms based on the NVIDIA® Jetson Orin™ series, with pre-installed SDKs compatible with JetPack 6.0 and above. These ISPs integrate hardware and software, allowing users to develop applications more quickly than before. After powering on the device, users can follow the ISP setup SOP to complete steps such as booting, installation, and activation. The software's recognition accuracy can be fine-tuned according to different application scenarios, enabling the rapid deployment of edge AI.

This ISP includes the Jetson Platform Service Agent Studio and NanoDB from NVIDIA. It provides an interactive drag-and-drop platform (nodes) to program detection logic for various IoT scenarios. Users can leverage NanoDB as a historic repository for store images triggered by events. The TTS pipeline uses Piper to generate alerts when pre-defined events are detected. It's a solution equipped with NVIDIA's native SDK and tools, helping reduce development time and accelerates project timeline.

Specifications

System Platform	MIC-733-A06A1	
Processor System	CPU	12-core NVIDIA Arm® Cortex A78AE v8.2 64-bit CPU, 3MB L2 + 6MB L3
	GPU	2048-core NVIDIA Ampere GPU with 64 Tensor Cores Maximum Operating Frequency: 1.3GH
	Memory	64GB 256-bit LPDDR5 DRAM
I/O	Ethernet	4 x 10/100/1000 Mbps (PoE support, IEEE 802.3af/at)
	Display	HDMI (Max. resolution 3840 x 2160 @60Hz)
	USB	4 x USB 3.2 Gen 2, 2 x USB 2.0
Power	Mode	AT/ATX (Default AT)
	Input Voltage	9 ~ 36 V _{DC} , 16-4A
Environment	Operating Temperature	0 ~ 60°C with 0.7 m/s air flow
Mechanical	Dimensions (W x D x H)	192 x 230 x 87 mm (7.55" x 9.05" x 3.43")
	Weight	4.5 kg (9.9 lb)
	Installation	Desktop / Wall mount
Certifications	CB/UL/CE/FCC/BSMI/CCC (No RED certification)	
BSP	Above JetPack 6.0	
Built-in SDK	Agent Studio	Drag-and-drop interactive platform allowing users to connect to multi-modal LLMs, speech and vision transformers, vector databases, prompt templates, and sensors with DI/DO integration
	NanoDB	Database optimized for multimodal AI, allowing efficient storage and retrieval of vector-based representations for images
Demo Scenario	Door status (open/closed) detection in controlled areas	
Functions	Offered Capabilities	Edge LLM inference with quantization and KV caching (NanoLLM) Realtime vision/language models (aka Video VILA and Meta-Llama3) Speech recognition and synthesis (Whisper ASR, Piper TTS, Riva) Multimodal vector database from NanoDB Audio and video streaming (WebRTC, RTP, RTSP, V4L2) Performance monitoring and profiling Native bot-callable functions and agent tools Extensible plugins with auto-generated UI controls Save, load, and export pipeline presets Native bot-callable functions and agent tools
		Latest Version
Release Date	2024-09-10	

Ordering Information

P/N	Description
ISP-MIC733-GAIA1	AI platform Based on NVIDIA® Jetson AGX Orin™ 64GB, JetPack 6.0, PoE support, pre-install Agent Studio, and NanoDB.

Accessories

P/N	Description
96PSA-A230W24P4-3	Adaptor A/D, 100-240V, 230W, 24V
96PSA-A150W19P4-4	Adaptor A/D, 100-240V, 150W, 19V
1702002600	Power Cord (USA) UL/CSA, 3-pin, 10A, 125V, 1.83 M, 180 D
1702002605	Power Cord (EU) 2-pin, 10/16A, 220V, 1.83 M, 90 D