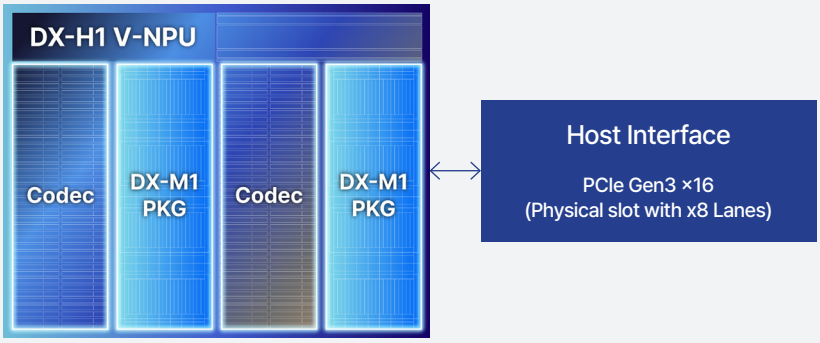
DX-H1 V-NPU

Redefining AI Power:
Massive,sustainable intelligence at 30W

Type: AI Accelerator + Codec **Performance: 50 TOPS / 30W**

Functional Block Diagram



Specifications

Features	Details
AI Performance	50 TOPS (INT8)
Codec Performance	Video Decoding: H.264/265 64CH (1080P @ 30fps)
	Video Encoding: H.264/265 32CH (1080P @ 30fps)
Host Interface	PCIe Gen3 ×16 Physical slot with x8 Lanes
Memory	VPU : 4GB x 4 LPDDR5, NPU : 2GB x 4 LPDDR5
Power Consumption	30W
Thermal Solution	Active Cooling (Integrated Fan & Heatsink Module)
Form Factor	Low Profile PCIe Card
Dimensions	166.9 mm × 68.10 mm × 18.33 mm (without Braket)
OS Support	Windows 11/10
	Debian-based Linux (Ubuntu 24.04/22.04/20.04 LTS), Docker
	Yocto Linux
	Android
AI Frameworks	Ultralytics, TensorFlow, PyTorch, ONNX, Keras
System Support	x86, ARM Based Architecture

Overview

Integrated decoding, encoding, and transcoding turn the DX-H1 V-NPU into a complete foundation for real-time, large-scale monitoring.

What once required rooms full of expensive, power-hungry servers can now be placed into the hands of any organization.

The barrier to advanced AI falls away, and what remains is possibility, accessible, sustainable, and inevitable.

Target Applications

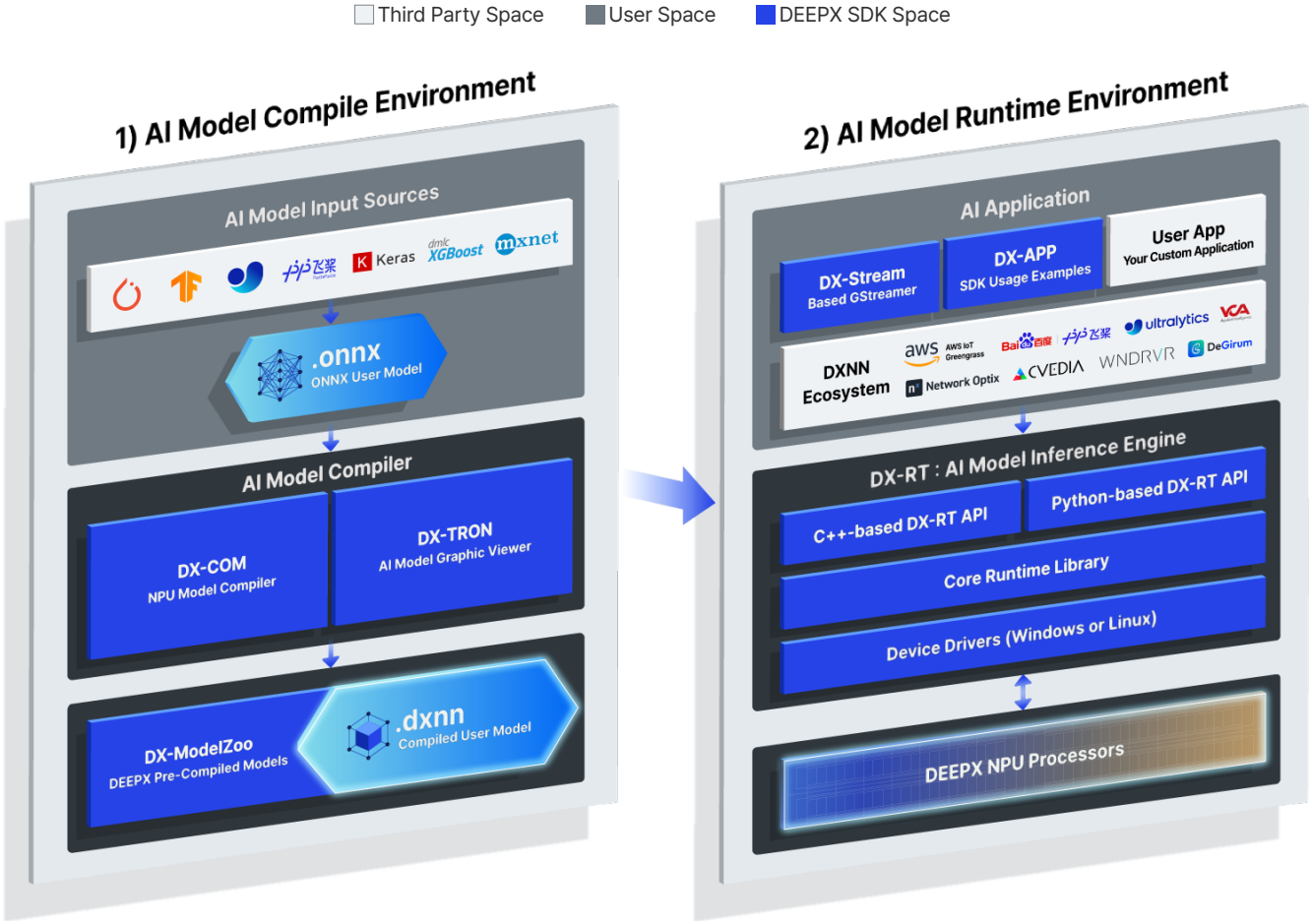
- Security
- Smart Buildings
- Smart Factory
- Smart Cities
- Content Delivery Network (Smart Search)
- Content Delivery Network
- Logistics & Warehouses
- Smart Transportation
- Smart Retail

DEEPX

DXNN® - DEEPX SW Development Kit

DXNN® (DEEPX Neural Network) SDK streamlines the AI deployment pipeline on DEEPX NPUs. By integrating essential tools for compilation, optimization, simulation, and inference, it ensures high development efficiency. Experience a ready-to-use development environment with DX-AS (All Suite), a fully integrated and version-aligned package designed for rapid scaling.

DXNN SDK Full Stack Architecture



1) AI Model Compile Environment

Optimizes models from various sources into DEEPX-specific .dxnn formats via the ONNX framework.

2) AI Model Runtime Environment

Deploys optimized models onto hardware via DX-Stream and DX-RT engines using C++ or Python APIs.

DX-AllSuite

DX-AllSuite: The Single Package for Your Complete DXNN Environment. Simplify setup, installation, and updates across local machines and Docker.

Step 1
Supported Environments

- DEEPX Developers — Learn more
- GitHub — Learn more
- aws AWS IoT Greengrass

Step 2
Auto Install & Update

DX-AllSuite

Step 3
Finalize & Start Development

- Docker Install
- Local Install

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