

## NeoEdge NG4500 Edge AI Box

Powered by NVIDIA®  
Jetson Orin™ Platform



### Introduction

CamThink NeoEdge NG4500 series is a high-performance edge AI box capable of powerful edge computation with the integration of NVIDIA® Jetson Orin™ NX/Nano core modules while being compatible with the NVIDIA® Super Developer Kit, achieving up to 1.7x performance boost. Featuring a fanless chassis design and an extensive range of I/Os, the NG4500 is an ideal solution for diverse AIoT deployments. With NVIDIA® JetPack 6.0+ and 12-36V DC-in support, it streamlines the adoption of mainstream VLMs, LLMs, and deep learning AI models.



**Powerful AI at the Edge:** Powered by NVIDIA® Jetson Orin™ Platform, delivering up to 157 TOPS computation power.



**Simplified Integration:** Offering hardware development toolkits for the implementation of mainstream LLMs, VLMs, MLLMs AI models, etc.



**Ultra-compact and Industrial-grade Hardware Design:** Durable and scalable for rapid PoC implementation, fanless design with wide operating temperature range from -25°C to 60°C.



**Diverse AI-powered Scenarios:** Ideal for Smart Manufacturing, Robotic Systems, Healthcare, Smart Cities, etc.

### Compatible with Mainstream AI frameworks

#### AI Models:



Open AI



DeepSeek



Gemini



Ollama



Meta/Llama



Azure(SpeechT5)



Qwen-VL

#### AI Frameworks:



Mistral AI



TensorFlow



PyTorch



Open CV



Specifications

| Model Name                 | NG4510                                                                                 |    | NG4511                | NG4520                                                  | NG4521               |
|----------------------------|----------------------------------------------------------------------------------------|----|-----------------------|---------------------------------------------------------|----------------------|
| System Core                |                                                                                        |    |                       |                                                         |                      |
| Module                     | Jetson Orin™ Nano 4GB                                                                  |    | Jetson Orin™ Nano 8GB | Jetson Orin™ NX 8GB                                     | Jetson Orin™ NX 16GB |
| Computation                | 20TOPS                                                                                 |    | 40TOPS                | 70TOPS                                                  | 100TOPS              |
| Computation (Super Mode)   | 34TOPS                                                                                 |    | 67TOPS                | 117TOPS                                                 | 157TOPS              |
| GPU                        | 512 NVIDIA® CUDA® cores   16 Tensor cores                                              |    |                       | 1024 NVIDIA® CUDA® cores   32 Tensor cores              |                      |
| CPU                        | 6-core Arm® Cortex® A78AE (64-bit) HMP 2x Clusters                                     |    |                       | 8-core Arm® Cortex® A78AE v8.2 (64-bit) HMP 2x Clusters |                      |
| Memory                     | 4G                                                                                     | 8G |                       | 8G                                                      | 16G                  |
| DRAM Bandwidth             | 64-bit LPDDR5 DRAM 34 GB/s   51 GB/s                                                   |    |                       | 128-bit LPDDR5 DRAM 3200 MHz 102 GB/s                   |                      |
| Network connection         |                                                                                        |    |                       |                                                         |                      |
| Wired                      | Ethernet 2 x RJ45 (1000Mbps Ethernet)                                                  |    |                       |                                                         |                      |
| Wireless                   | Optional Wi-Fi Halow/4G/5G                                                             |    |                       |                                                         |                      |
| Bluetooth                  | Bluetooth 5.0                                                                          |    |                       |                                                         |                      |
| Interfaces                 |                                                                                        |    |                       |                                                         |                      |
| USB                        | 4 x USB3.1, 1 x Type-C 4x Type-A(USB3.1), 1x Type-C(USB3.2)                            |    |                       |                                                         |                      |
| I/O Connector              | 4 x DI, 4 x DO, 4 x GND_DI, 4 x GND_DO, 1 x CAN, 1 x RS232, 1 x RS485, 1 x DC 5V Power |    |                       |                                                         |                      |
| HDMI                       | x 1                                                                                    |    |                       |                                                         |                      |
| Audio                      | 1 x Audio Jack (Mic Input + Audio L/R output)                                          |    |                       |                                                         |                      |
| SIM                        | 1 x Nano SIM Slot                                                                      |    |                       |                                                         |                      |
| Storage                    | 1 x M.2 Key M PCIe4_Gen3 SSD (NVMe 2280 SSD 256G included)                             |    |                       |                                                         |                      |
| Operating System           | Linux (Supports JetPack 6.2 Super Developer Kit)                                       |    |                       |                                                         |                      |
| Indicator                  | 1 x Power LED, 1 x Wi-Fi LED<br>1 x 4G LED, 1 x Ethernet LED                           |    |                       |                                                         |                      |
| Power Supply               |                                                                                        |    |                       |                                                         |                      |
| Power                      | DC input 12V-36V, Peak Power 120W                                                      |    |                       |                                                         |                      |
| Operation                  |                                                                                        |    |                       |                                                         |                      |
| Temperature                | -25° C to 60° C                                                                        |    |                       |                                                         |                      |
| Storage                    | -40° C to 85° C                                                                        |    |                       |                                                         |                      |
| Dimension and Installation |                                                                                        |    |                       |                                                         |                      |
| Dimension & Weight         | 160 x 125 x 75 mm, metal housing, 1.9 KG                                               |    |                       |                                                         |                      |
| Installation               | Desk, Wall mounting, DIN frame                                                         |    |                       |                                                         |                      |
| Certifications             | CE/FCC/RoHs                                                                            |    |                       |                                                         |                      |



## Standard Accessories

| SKU                  | Item                       | Quan. | Description                                        |
|----------------------|----------------------------|-------|----------------------------------------------------|
| 73.002.000027        | Power Adapter              | 1     | 20V@5A, 120W, Available separately                 |
| Part of Standard Kit | Industrial Terminal Blocks | 2     | 16-pin male terminal,<br>8-pin male terminal       |
| Part of Standard Kit | Mounting Brackets          | 2     | Wall mounting bracket<br>Din-rail mounting bracket |

## Optional Accessories

| SKU                                             | Item                    | Quan. | Description                                                                                                      |
|-------------------------------------------------|-------------------------|-------|------------------------------------------------------------------------------------------------------------------|
| 73.002.000004<br>73.002.000013<br>73.002.000014 | SSD (Selective)         | 1     | SSD PCIe Gen3.0x4, 256GB<br>SSD PCIe Gen3.0x4, 512GB<br>SSD PCIe Gen3.0x4, 1T                                    |
| 73.002.000012                                   | Wi-Fi Module            | 1     | 6221M-PUC dual-band Wi-Fi and Bluetooth 5.0 module                                                               |
| 73.002.000010                                   | 4G Module               | 1     | Quectel EM05 EM05-G 4G M.2 module, compatible with Europe, USA, China, Japan, Australia, and other major regions |
| 73.002.000011                                   | 5G Module               | 1     | Quectel RM520N-GL 5G M.2 module, compatible with major global regions                                            |
| 73.002.000000                                   | Cooling Fan             | 1     | Cooling fan kit, compatible with NG45XX carrier board                                                            |
| 73.002.000001                                   | Raspberry Pi IMX219     | 1     | SONY IMX219 3280*2464 1/4' 1.12um                                                                                |
| 73.002.000002                                   | Raspberry Pi IMX477     | 1     | SC0870 Raspberry Pi M12 High Quality Camera                                                                      |
| 73.002.000022                                   | Power Cable (Selective) | 1     | Standard 3-core power cable 1.5m.<br>Default EU power cord; UK/AU/US versions available separately.              |

