



AMBA Developer Kit

Key Features

AI Software Stack

- Cooper Foundry that includes core SDK APIs, performance analytics, and sample applications
- Multi-modal vision language models up to 8 billion parameters
- Convolutional neural network (CNN) and deep neural network (DNN) which includes detection, classification, and more
- Model profiler and optimizer for easy porting of neural networks implemented in ONNX frameworks

Advanced Vision Stack

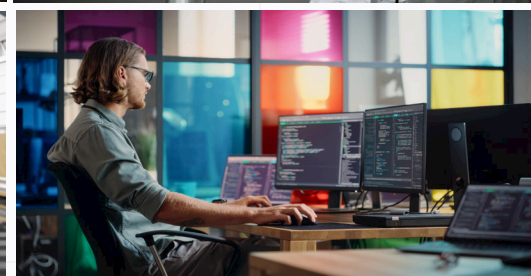
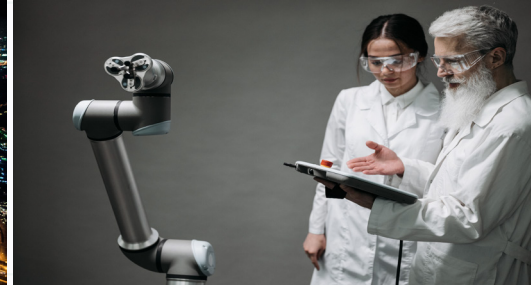
- Decoding support for up to 12 full HD streams running at 30 fps
- One GMSL port for supporting multiple cameras

Networking Stack

- One 1 Gb Ethernet for multi-modal sensor input or networking
- One 10 Gb Ethernet for server class networking performance

Target Applications

- Industrial Robotics
- Smart Cities
- Multi-modal AI processing hub
- Autonomous Fleet Telematics



Overview

AMBA Developer Kit is a development kit for the N1-655 family of SoCs, providing industry-leading AI performance per watt for neural network computation, including support for large language models (LLM) and vision transformers (ViT).

The kit comes pre-loaded with Cooper Foundry 2.2, which is a multi-layer software platform including Cooper Core for commercial OS, compilers and SDK, Cooper Foundation for building & deploying machine learning applications at the edge, Cooper Vision for state-of-the-art computer vision, and Cooper UX for advanced analytics and development.

Target applications include industrial robotics, smart cities, multi-modal AI processing hub, autonomous fleet telematics, and more.

Specifications

Industrial Grade AI Performance	Server-class AI performance (SOTA transformer network support)
CPU Cores	8x A78AE Arm® cores
System on Chip (SoC)	Neural processor generation 1 (N1-655)
Software	Cooper foundry 2.2
Networking	1x 1 Gb Ethernet RJ45 port 1x 10 Gb Ethernet RJ45 port
Wireless	Wireless dongle included
Bluetooth	Bluetooth dongle included
Sensor Interfaces	1x GMSL Quad
LPDDR5	32 GB
Storage	128 GB
USB Debug	1x USB 2.0 Type-C
USB Data	2x USB 3.2 SS Type-C
Display	1x HDMI 2.0
Audio	1x 3.5 mm headphone / microphone
Max Power	50 W

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