



# Xplorer® X1600P PCIe Accelerator

## PRODUCT BRIEF

### Accelerate low-latency edge AI inference with higher system-level efficiency and lower power vs. CPU, GPU and FPGA solutions

The Blaize® Xplorer® X1600P accelerator is designed for AI inference at the edge via an easy plug-in PCIe interface enabling servers and other products to easily integrate AI inference. The X1600P accelerator is based on the Blaize Graph Streaming Processor (GSP®) architecture that enables new levels of processing power with energy efficiency ideal for AI inferencing workloads at the edge. The half-height, half-length (HHHL) X1600P accelerator conveniently plugs into any standard 16-lane PCIe slot and is suitable for different server systems.

With low power, low latency, and more efficient use of memory, the X1600P can be used for computer vision applications and new AI inferencing solutions across a range of edge smart vision use cases, like autonomous optical inspection, traffic and parking management and more.

#### Features

- 1 Blaize 1600 SoC with 16 GSP cores, providing 16 TOPs
- Soft ISP available to run on Blaize 1600 SoC
- 4 GB LPDDR4
- PCIe Gen 3.0, 4 lanes

#### Programmability to Build Complete AI Apps, Keep Pace with Rapid Evolution of AI Models

The X1600P is a software defined AI inference accelerator making it easy to update and maintain after deployment. The X1600P GSP architecture is designed to run efficiently in a streaming fashion, and is fully programmable via the Blaize® Picasso® SDK and AI Studio software. The hardware and software are purpose-built to enable developers to build entire edge AI inference applications optimized for deployment and consistent updates by end users.

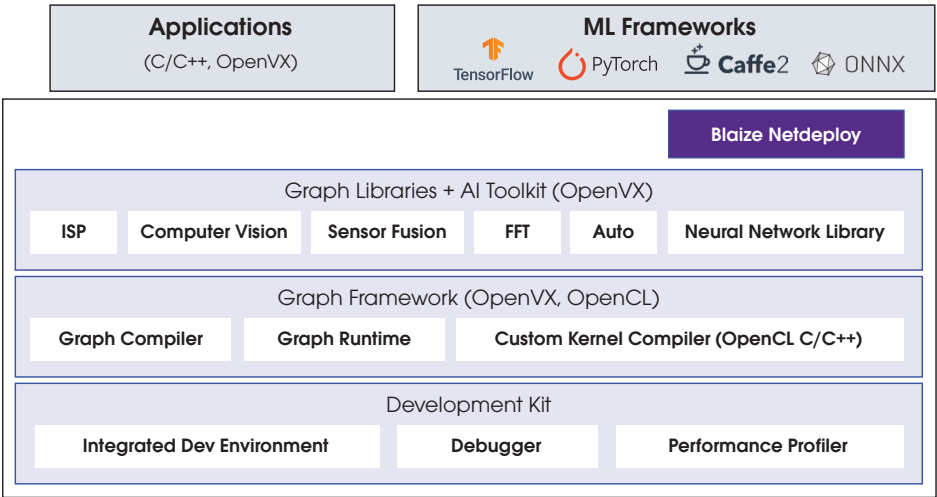
#### Edge and Enterprise Servers & Applications

- Smart Parking & Traffic Management
- Smart Retail
- Warehouse and Factory Safety
- Autonomous Optical Inspection
- Network Video Recorders
- Security Systems



Blaize® Picasso® Software Development Kit Accelerates AI Development Cycle

- Extensive support for Machine Learning frameworks and modern neural networks
- NetDeploy toolkit to automatically quantize, compress and optimize neural networks for resource-constrained environments
- Extensive libraries to build end-to-end AI applications, integrate soft ISP, Tracker, Sensor Fusion and FFT
- Standard Languages: OpenVX extended, OpenCL C/C++ kernels to build custom layers



Specifications

Features	Description	X1600P
GSP	1 Blaize GSP 1600 SoCs Data formats INT8, INT16, BF16, FP16, FP32, FP64	16 TOPs
ISP	Programmable GSP accelerated Soft ISP	●
Memory	Blaize 1600 SoC memory	4GB LPDDR4
Power	Typical / Max	10W / 20W
Storage	Quad SPI NOR Flash	1MB
Communications Interface	PCIe Gen 3.0, 16 lanes	HHHL single slot
Temperature Range	Commercial, Ambient Temperature	0°C to +70°C
	Extended Commercial	-40°C to +85°C
Thermal	Thermal solution provided	Active
Compliance	RoHS, WEE, CE, FCC	●



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