SEMIC GPU-Flash® Specification Sheet

Category	Specification
GPU Model	SEMIC GPU-Flash®, Soft High Performance GPU X1
Architecture	SoftCore Next-Gen Parallel Compute Architecture
CUDA / Stream Units	18,432 ALUs
Ray Tracing Cores	96 RT Cores (Next-Gen Ray Acceleration)
AI Accelerator Units	512 AI Matrix Engines
Base Clock	1.80 GHz
Boost Clock	2.45 GHz
FP32 Compute Performance	45.6 TFLOPS
FP16 / Tensor Performance	182 TFLOPS
INT8 AI Compute	364 TOPS

Memory Specifications	
Memory Type	GDDR7
Memory Capacity	32 GB
Memory Interface	512-bit
Memory Bandwidth	1.5 TB/s

Connectivity & Interfaces	
Virtual PCIe Interface	PCIe 5.0 x16
Virtual Display Outputs	3× DisplayPort 2.1, 1× HDMI 2.1
Virtual Multi-Monitor Support	Up to 4 simultaneous displays
Max Output Resolution	8K @ 120Hz (DP/HDMI)
VR Ready	Yes

Software & Driver Support	
Supported APIs	DirectX 12 Ultimate
	Vulkan 1.4
	OpenGL 4.7
	OpenCL 3.0
Supported ML Frameworks	TensorRT
	PyTorch
	ONNX Runtime
	TensorFlow
Developer Tools	GPU SDK, Performance Profiler, Model Optimizer

Operating System Support	
Linux	Ubuntu 22.04 LTS, RHEL 9, SUSE Enterprise
Virtualization Support	SR-IOV, GPU Partitioning

Target Workloads	
Primary	AI Training & Inference
	3D Rendering & VFX
	High-Performance Computing
	Simulation & Scientific Modeling
	Big-Data Acceleration
Secondary	CAD/CAM, VR Simulation, Enterprise Rendering