MATROX® VIDEO
MULTI-DISPLAY GRAPHICS CARDS

Matrox® **LUMA Series**
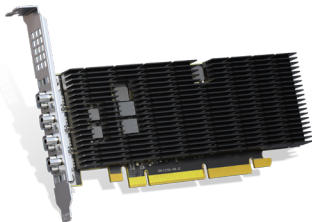### Drive Multi-Display 8K HDR Desktop Applications

Drive two 8Kp60/5Kp120 displays or up to four high-resolution displays or projectors—up to 5Kp60—from a single Matrox® LUMA Series graphics card. Designed and built for reliability, stability, and ease of deployment, these PCI Express® 4.0 x8 boards are ideal to power multi-screen desktops and workstations in a range of commercial and critical environments. OEMs, system integrators, AV installers, and developers can also benefit from a complete range of software, APIs, SDKs, and libraries to create custom control functions and applications for any multi-display installation. Matrox LUMA Series is powered by Intel® Arc™ graphics.

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matrox® video

Key features and benefits

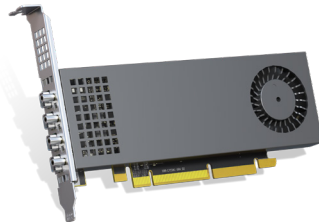|	
8Kp60 HDR support	Be 8K HDR ready and power up to two high-resolution displays from a single LUMA Series graphics card.
5K resolution support	Power up to two 5Kp120 or four 5Kp60 displays from a single LUMA Series board.
Advanced capabilities	Support advanced hardware media codecs including H.264, HEVC, AV1, and VP9, along with Microsoft® DirectX® 12 Ultimate, OpenGL® 4.6, OpenCL™ 3.0, Vulkan® 1.3, and Intel® oneAPI Video Processing Library (oneVPL) and OpenVINO™. And with up to 6 GB of graphics memory, LUMA Series graphics cards bring superior video playback and performance to a wide variety of multi-display desktop applications.
Long product lifecycle and dedicated support	Benefit from a product longevity of five years and dedicated customer support. Your product carries a three-year warranty and has an available extended warranty to ensure maximum protection.
DisplayPort™ 2.1	Deliver the best display density, resolution, and performance for demanding multi-monitor applications with PCIe® 4.0 x8 graphics cards featuring four native DisplayPort connectors (DP++) and supporting DVI/HDMI passive adapters.
TAA-compliant SKU available	Integrated design, engineering, and manufacturing based in a TAA-designated country for guaranteed quality and reliability.
Custom control	Manage your video walls with the intuitive Matrox MuraControl™ software or develop custom functions and applications for any video wall installation using the complete range of APIs, SDKs, and libraries.

DisplayPort graphics cards to drive multi-display configurations of any size

LUMA Series, powered by Intel® Arc™ graphics, supports numerous types of multi-display configurations enabling you to create the optimal setup for every need. You can power four-monitor setups to deliver high-impact configurations—with a single card.
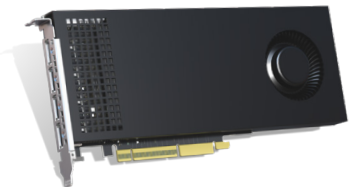

LUMA A310

Low-profile PCIe® Gen4 x16 (x8 electrical) quad-output graphics card provides increased reliability through its fanless design for both small form factor and full-height systems.

LUMA A310F

Low-profile PCIe Gen4 x16 (x8 electrical) quad-output graphics card delivers increased performance for small form factor systems.

LUMA A380

Standard height single slot PCIe Gen4x 16 (x8 electrical) quad-output graphics card delivers the best display density, resolution, and performance for demanding multi-monitor applications.

Matrox PowerDesk software and API

Leverage the stability of PowerDesk software to quickly configure enterprise-wide multi-monitor deployments. PowerDesk offers a comprehensive set of tools to easily deploy and control a variety of display configurations. Create your custom multi-monitor desktop/output management software with the PowerDesk API.

Stretched Desktop

Bezel Management

Independent Desktop

Pivot Mode

Clone Mode

EDID Management

Edge Overlap

Applications

Retail

Industrial

Transportation and Aviation

Healthcare

Commercial Gaming

Education

Federal and Defense

Control Rooms

Utilities and Process Control

Technical specifications

Product	LUMA A310	LUMA A310F	LUMA A380
Part number	LUMA-A310	LUMA-A310F	LUMA-A380
Bus type	PCIe 4.0 x16 (x8 electrical)	PCIe 4.0 x16 (x8 electrical)	PCIe 4.0 x16 (x8 electrical)
Number of video outputs	4	4	4
Video output connectors	4x Mini DisplayPort (secure)	4x Mini DisplayPort (secure)	4x DisplayPort
DisplayPort specification	2.1 UHBR10	2.1 UHBR10	2.1 UHBR10
Maximum number of cards in a system	4	4	4

Performance

	LUMA A310	LUMA A310F	LUMA A380
Maximum resolution	2x 8K60/5K120 or 4x 5K60 HDR 12b	2x 8K60/5K120 or 4x 5K60 HDR 12b	2x 8K60/5K120 or 4x 5K60 HDR 12b
Bit depth and color space	• Up to 36 bpp (Bits per Pixel) • YCbCR 4:4:4 • YCbCR 4:2:0 • RGB	• Up to 36 bpp (Bits per Pixel) • YCbCR 4:4:4 • YCbCR 4:2:0 • RGB	• Up to 36 bpp (Bits per Pixel) • YCbCR 4:4:4 • YCbCR 4:2:0 • RGB
Memory	4GB GDDR6	4GB GDDR6	6GB GDDR6
GPU	Intel® Arc™ A310	Intel® Arc™ A310	Intel® Arc™ A380
Multi-stream audio	High-Definition audio streams on four digital ports simultaneously		

Additional features

	LUMA A310	LUMA A310F	LUMA A380
DisplayPort features	VESA DSC 1.2a and Adaptive Sync		
HDCP compliance	2.3	2.3	2.3
Board-to-board framelock	—	—	—
Supported graphics API	DirectX 12 Ultimate, OpenGL 4.6, OpenCL 3.0, Vulkan 1.3, oneAPI, OpenVINO™		
Hardware video encode/decode	H264/H265/AV1/VP9		

Environmental & Power consumption

	LUMA A310	LUMA A310F	LUMA A380
Cooling	Passive	Active	Active
Power consumption	30W	50W	75W
Operating temperature	0 to 45 ℃ (32 to 113°F)	0 to 45 ℃ (32 to 113°F)	0 to 45 ℃ (32 to 113°F)

Hardware

	LUMA A310	LUMA A310F	LUMA A380
Form factor	Low Profile Single Slot	Low Profile Single Slot	Standard Height Single Slot
Dimensions	Length: 16.76 cm (6.6") Height: 6.86 cm (2.7")	Length: 16.76 cm (6.6") Height: 6.86 cm (2.7")	Length: 25.38 cm (9.99") Height: 12.68 cm (4.99")
Bracket	Standard Height (Mounted) Low Profile (in the box)	Standard Height (Mounted) Low Profile (in the box)	Standard Height

Environmental & Power consumption

	LUMA A310	LUMA A310F	LUMA A380
Regulatory compliance	FCC (US) Class B, CE (European Union) Class B, RCM (Australia/New Zealand) Class B, KC (Korea) Class B, ICES-3 (Canada) Class B, UKCA (United Kingdom) Class B.		
Environmental compliance	EU RoHS, China RoHS, REACH		
Warranty**	3 years	3 years	3 years

Software & API

	LUMA A310	LUMA A310F	LUMA A380
Matrox PowerDesk for Windows	✓	✓	✓
Mura Developer tools	✓	✓	✓
Operating systems	Windows 10/11		
System requirements	Single available PCIe 3.0 (or newer) x8 slot, Resizable BAR (reBAR) or Smart Access Memory (SAM)		

Accessories (sold separately)

	LUMA A310	LUMA A310F	LUMA A380
Mini DisplayPort to DisplayPort adapter	CAB-MDP-DPF	CAB-MDP-DPF	—
Secure cable solution	SK-SLNB-4	SK-SLNB	—

*   Restriction may apply. Contact your Matrox Video representative for more information.
** Extended two-year warranty available.

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