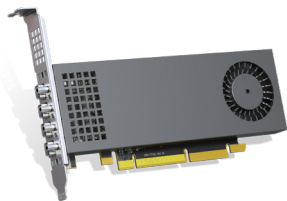# Matrox® **LUMA Pro Series**
Drive 8K HDR IP-Based Video Walls with Extraordinary Performance

Drive up to four 8K displays or up to eight synchronized 5K displays or projectors from a single Matrox® LUMA Pro Series graphics card. Designed and built for reliability, stability, and ease of deployment, these PCI Express® 4.0 boards are ideal for powering demanding IP-based video wall systems and digital signage applications in 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. TAA-compliant SKUs are available. Matrox LUMA Pro Series is powered by Intel® Arc™ graphics.

matrox®
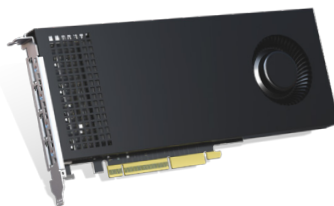— video —

Key features and benefits

8Kp60 HDR support	Be 8K HDR ready and power up to two synchronized high-resolution displays from a single LUMA Pro A310/A380 Quad card—or drive up to four 8k displays with the LUMA Pro A380 Octal card.
5K resolution support	Power up to two 5Kp120 or four 5Kp60 displays from a single LUMA Pro Quad Series board. Double the number of displays with the LUMA Pro A380 Octal card.
DisplayPort™ 2.0	Deliver the best display density, resolution, and performance for demanding multi-monitor applications with PCIe® 4.0 cards featuring Mini DisplayPorts or DisplayPorts.
Synchronized video outputs	Drive up to sixteen synchronized 5K displays and reduce tearing by framelocking up to four LUMA Pro A310/A380 Quad or two LUMA Pro A380 Octal cards with the included board-to-board framelock cables—and save slot space as a separate card isn't needed for the synchronization. Option to drive up to 64 Full HD displays by pairing Matrox LUMA Series with Matrox QuadHead2Go.
HDCP compliant	Display protected content, or capture and display protected content, when paired with Matrox Mura HDMI and Mura C4K Series capture cards.
Low-profile form factor	Install low-profile LUMA Pro A310 Quad cards in a wide range of small form factor and standard-height systems, and use only a single slot—thanks to their low-profile design.
Long product lifecycle and dedicated support	Benefit from a product longevity of seven years and dedicated customer support. Your product carries a three-year warranty and has an available extended warranty to ensure maximum protection.
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.
TAA compliant SKU available	Integrated design, engineering, and manufacturing based in a TAA-designated country for guaranteed quality and reliability.

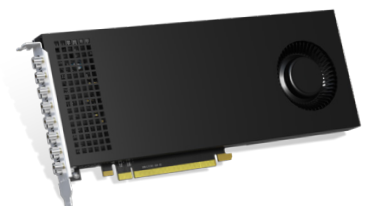# DisplayPort boards to drive powerful IP-based video walls

LUMA Pro A310 Quad

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

LUMA Pro A380 Quad

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.

LUMA Pro A380 Octal

Standard height single slot PCIe Gen4 x16 eight-output graphics card with 12GB of memory delivers extreme performance for multi-display applications.

Applications

Retail

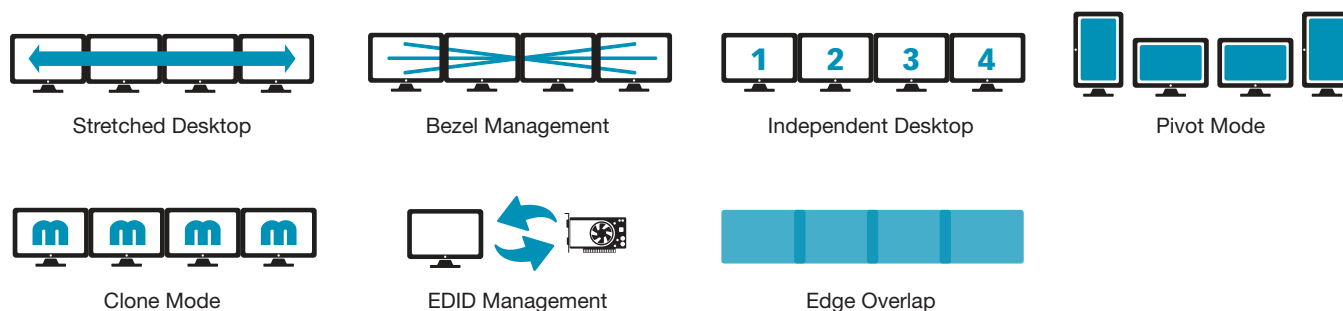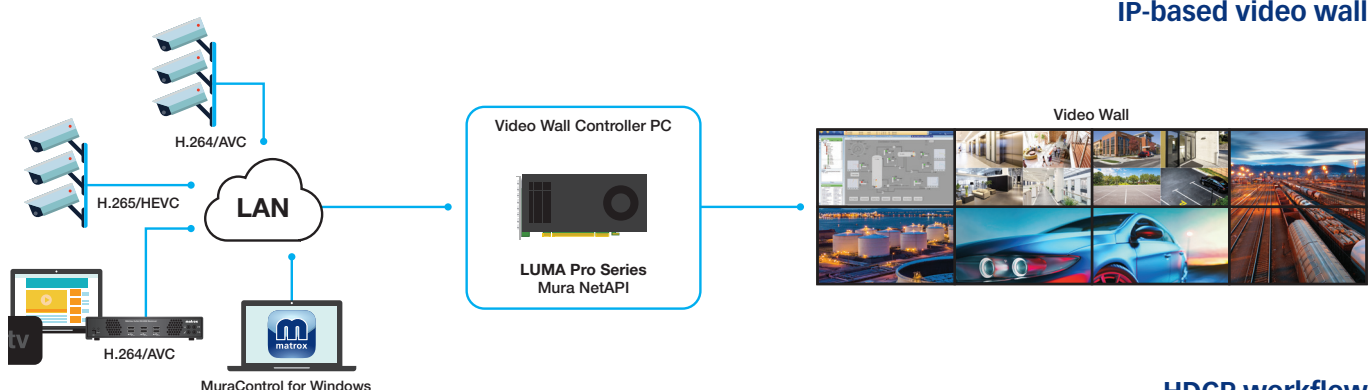Education

Industrial

Commercial Gaming

Healthcare

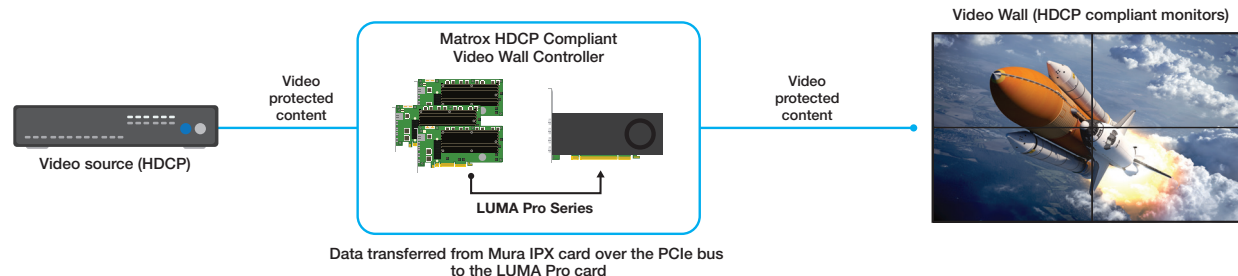Transportation

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.
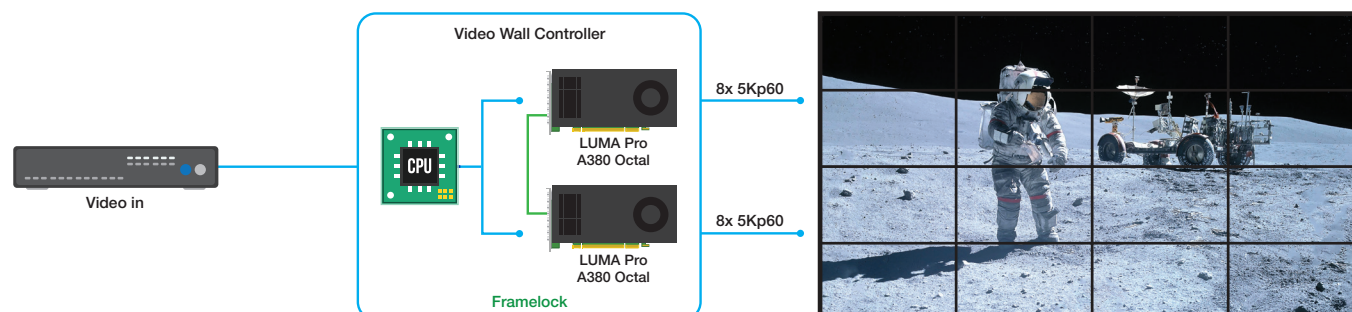
Stretched Desktop

Bezel Management

Independent Desktop

Pivot Mode

Clone Mode

EDID Management

Edge Overlap

Workflows

IP-based video wall

H.264/AVC

H.265/HEVC

LAN

H.264/AVC

MuraControl for Windows

Video Wall Controller PC

LUMA Pro Series
Mura NetAPI

Video Wall

HDCP workflow

Video source (HDCP)

Matrox HDCP Compliant
Video Wall Controller

Video
protected
content

LUMA Pro Series

Video
protected
content

Video Wall (HDCP compliant monitors)

Data transferred from Mura IPX card over the PCIe bus
to the LUMA Pro card

2 boards video wall

Video in

Video Wall Controller

CPU

LUMA Pro
A380 Octal

LUMA Pro
A380 Octal

Framelock

8x 5Kp60

8x 5Kp60

Technical specifications

Product	LUMA Pro A310 Quad	LUMA Pro A380 Quad	LUMA Pro A380 Octal
Part number	LUMA-A310FP	LUMA-A380P	LUMA-A380P8
Bus type	PCIe 4.0 x16 (x8 electrical)	PCIe 4.0 x16 (x8 electrical)	PCIe 4.0 x16
Number of video outputs	4	4	8
Video output connectors	4x Mini DisplayPort (secure)	4x DisplayPort	8x Mini DisplayPort (secure)
DisplayPort specification	2.0 UHBR10	2.0 UHBR10	2.0 UHBR10
Maximum number of cards in a system	4	4	2

Performance

Maximum resolution	2x 8K60/5K120 or 4x 5K60 HDR 12b	2x 8K60/5K120 or 4x 5K60 HDR 12b	4x 8K60/5K120 or 8x 5K60 HDR 12b
Bit depth and color space	• Up to 36 bpp (Bits per Pixel) • YCbCR 4:4:4 • YCbCR 4:2:0 • RGB		
Memory	4GB GDDR6	6GB GDDR6	12GB GDDR6
GPU	Intel® Arc™ A310E	Intel® Arc™ A380E	2x Intel® Arc™ A380E
Multi-stream audio	High-definition audio streams on four digital ports simultaneously		

Additional features

DisplayPort features	VESA DSC 1.1, and Adaptive Sync		
HDCP compliance	2.3	2.3	2.3
Board-to-board framelock	Max of 4 cards	Max of 4 cards	Max of 2 cards
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		

Hardware

Form factor	Low Profile Single Slot	Standard Height Single Slot	Standard Height Single Slot
Dimensions	Length: 16.76 cm (6.6") Height: 6.86 cm (2.7")	Length: 25.38 cm (9.99") Height: 12.68 cm (4.99")	Length: 26.45 cm (10.41") Height: 12.68 cm (4.99")
Bracket	Standard Height (Mounted) Low Profile (in the box)	Standard Height	Standard Height

Environmental & Power consumption

Cooling	Active		
Power consumption	50W	75W	130W
Operating temperature	0 to 45 ºC (32 to 113 °F)		
Regulatory compliance	FCC (US) Class A, CE (European Union) Class A, RCM (Australia/New Zealand) Class A, KC (Korea) Class A, ICES-3 (Canada) Class A, UKCA (United Kingdom) Class A		
Environmental compliance	EU RoHS, China RoHS, REACH		
Warranty[1]	3 years		

Software & API

Matrox PowerDesk for Windows	✓	✓	✓
Mura Developer tools	✓	✓	✓
Operating systems	Windows 10 64-bit & LTSC (ver 2021 and up) / Windows 11 64-bit		
System requirements[2]	Single available PCIe 3.0 (or newer) x8 slot Intel Core Processor from 10th Gen to 14th Gen, Intel Xeon W-2400 and W-3400 processor for workstations Resizable BAR (reBAR) or Smart Access Memory (SAM)		

Accessories (sold separately)

Mini DisplayPort to DisplayPort adapter	CAB-MDP-DPF	—	CAB-MDP-DPF[3]
Secure cable solution	SK-SLNB-4F	—	—

1. Extended two-year warranty available.
2. Please refer to the Luma Pro system validation guide for more information.
3. Eight CAB-MDP-DPF adapters are included with the LUMA Pro A380 Octal card.

matrox® video