

## Video Surveillance Application



Powerful, multi GPU embedded video display decoders from BlueBox reduce complex configurations for multiple machines driving video displays.

Tailored surveillance appliances provide resistant enclosure for physical durability, thermal optimization and reduced power consumption.

- Education
- Government
- Construction
- Control Rooms
- Transport Hubs
- Emergency Services
- Hospitality & Leisure



Appliance hardware is sourced from long life industrial grade embedded Intel and NVIDIA components.

BlueBox appliances are capable of servicing between one and sixteen UHD video outputs per device over DisplayPort, HDMI or VGA.

Cost effectively build any sized video arrangement combining two or more appliances.



**Reliable**

Designed and tested for 24/7 operation, the embedded decoding series from BlueBox provides users with the ultimate integrated video display appliance.

Hardware sourced from long-life industrial-grade, non gaming, Intel and NVIDIA components. Compact aluminium enclosure allows thermal optimization for demanding operation.

**Professional**

4U, 2U and 1U form factors for rack mount physical footprint. Nano format allows rear of monitor VESA mounting.

Display outputs support standard VESA 480p through to 2160p Ultra High Definition. Internal hot plug emulation allows output heads to remain active whilst powering cycling display monitors.

Active output re-drivers permit longer cable lengths up to 20 meters using DisplayPort between appliance and displays.

**Affordable**

Professional 2U display controllers typically operate at 120W, Nano <15W, this is considered a much-reduced power consumption compared against existing solutions.

GPUs are selected from VMS accelerated inspection for cost Vs performance gains.

Long life professional grade embedded components also contribute to the total lower cost of ownership.



**Powerful**

Latest technologies from Intel and NVIDIA action capabilities across both processor (CPU) and graphics (GPU). A multi GPU acceleration model provides optimum appliance cost Vs performance results.

Panoramic fisheye camera dewarping is performed on the GPU with no performance resources undertaken by the CPU.

Common surveillance video formats are decoded and displayed on the GPU including H265, H264, MPEG2, MJPEG, VC-1, and VP8. CPU resources are undertaken when accelerated methods are either exhausted or unsupported.

**Transparent**

Install user choice of accelerated VMS platform onto the device or alternatively use the provided optional BlueBox application software.

Appliance output heads are combined to generate a single desktop canvas. No restrictions exist on video placement, resolution, frame rate, transport or encode format across the desktop.

Scale a single decoded video window across all display heads.

Select DisplayPort 1.2, HDMI 2.0 or VGA for video output. Additional connectivity for video display environments include 1 & 10 Gigabit Ethernet port(s) with USB ports.

**Integrated**

The BlueBox Video display series presents users with a remote web client portal for appliance setup, configuration and operation.

Remote portal setup duties include; Credentials input for VMS integrations, Network Setup, Display Arrangement and Power Options.

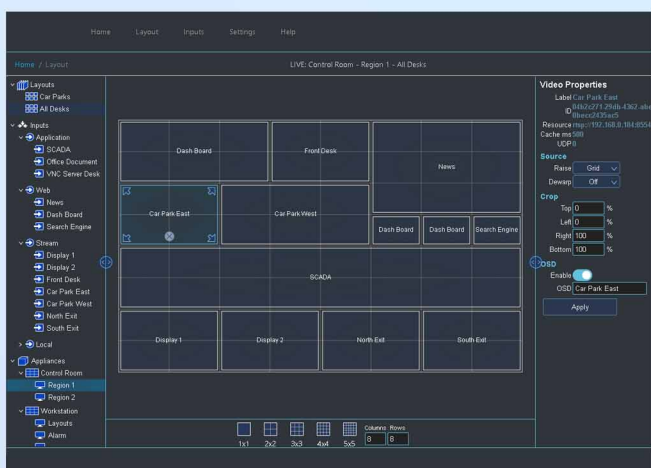
Optional high and low level interfaces extends simple window management commands for open integration.

See the NVision data sheet for full software application feature list.

**Deliverable**

Experienced service personnel aid complex control room solutions for installation. Ask our team for impartial free advice and consultation.

**NVision - Appliance Web Portal**



**Remote:**

- Network Setup
- Display Arrangement
- Performance Metrics
- Integrations, Inputs, Layouts

Application		Functional	
	Cross platform client web interface		Region, grid & desktop alignment for Item(s) or Layout(s)
	Windows application client interface		Layout template creation online or offline
	Auto discovery of Appliances		Layout sequencing / playlists
	Sync Layouts & Inputs across multiple Appliances		Fisheye video lens correction (dewarping)
	Built in touch panel control interface		Alarm script management
	GPU video acceleration		Raise window Items to defined Regions or desktop
	Windows 10 desktop canvas		Control multiple networked appliances within a single interface
	Redundancy server design		<b>Video, Image &amp; Capture</b>
	Simultaneous operator client connections		Video & audio capture via PCIe card
	EDID and force output display mode		Video capture via USB dongle & Web cameras
	Windows platform group policy for performance, power, and updates		Video network - HTTP, HLS, RTP, RTSP, Multicast, IPTV etc.
	<b>Management</b>		Remote video & image upload to Appliance
	User rights management		Common image file formats
	Remote web portal login		Video cropping of the source
	HTTP alarm trigger interface		On Screen Display (OSD) Text
	Extensive SDK APIs - HTTP, TCP, C# & C++		On Screen Display (OSD) window Item borders
	Window item border control		Aspect ratio or stretch to window Item
	Remote setup of display resolutions & network settings		<b>Executable Control</b>
	<b>Configure</b>		Appliance resource dashboard
	Manually add input sources		Web browser & web dashboards
	Major VMS input integrations		VNC remote desktop
	ONVIF profile S auto discovery		DirectX 9, 10, 11, 12 & OpenGL
	Capture input auto discovery		SCADA, Office, PDF etc

	Nano4K	IPIO 6	IPIO 8	IPIO 12	IPIO 16	AV
Max Displays	x2 FHD x1 UHD	x6 FHD x6 UHD	x8 FHD x8 UHD	x12 FHD x12 UHD	x16 FHD x16 UHD	x96 FHD x24 UHD
GPU CODECS	H264+H265+ MPEG1/2+ VC-1+VP8/9+MJPEG		H264+H265+ MPEG1/2+ VC-1+VP8/9			H264
CPU CODECS	<a href="http://www.ffmpeg.org/general.html#Video-Codecs">http://www.ffmpeg.org/general.html#Video-Codecs</a>					
Capture RGB / YUV	<a href="https://ffmpeg.org/ffmpeg-devices.html#dshow">https://ffmpeg.org/ffmpeg-devices.html#dshow</a>					HDMI-DVI-SDI-DisplayPort-Component-Composite- VGA
Operation						
Disk	mSATA SSD	2.5" SSD 128GB RAID Configured - Hot Swappable - Lockable				
Memory	4GB (1x4GB) DDR4	16GB (2x8GB) DDR4			32GB (4x8GB) DDR4	
Platform	Windows 10 Pro 64 Bit					
Connectivity						
Network	1 x 1Gb NIC	1 x 1Gb NIC + 1 x 10Gb NIC			2 x 1Gb NIC	
USB	2 x USB 2.0 + 4 x USB 3.0	2 x USB 3.1 + 1 x USB 3.1 (A & C)	2 x USB 2.0 + 3 x USB 3.2			USB 2.0 + USB 3.1
Display	HDMI 2.0 VGA	DisplayPort 1.2 Active to HDMI 2.0				
Physical						
Form Factor	VESA Mount Wall Mount	1U Rack Mount	2U Rack Mount			4U Rack Mount
Size (DxWxH)mm	129 x 129 x 40	489.1 x 482 x 42.8	715.5 x 482 x 86.8			500 x 482 x 175
Max. Weight	1.3Kg	8.75Kg	29.0 Kg			25.0Kg
Operating Temperature	0°C to 40°C 32°F to 104°F					
Operating Relative Humidity (non-condensing)	0% to 95%					
Power						
Input	12V 5A DC	Hot Swappable RPSU Dual Redundant				
Consumption	60W Max	550W Max	1600W Max			800W Max
Warranty						
Standard	3-Years					
Extended	5-Years					