

nBox 4K™

Part of the Northstar™ Simulation Display Solution



4K Display Processor for Immersive Displays

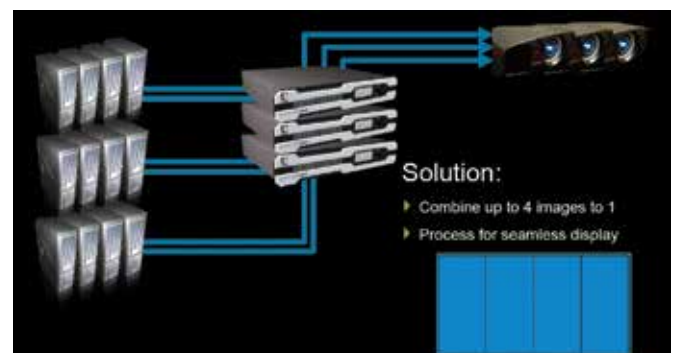
nBox 4K is a all-in-one multi-channel display processor for seamless immersive display systems. It warps, blends and color corrects demanding 4K content and correctly displays imagery across flat, cylindrical, conical, and spherical screens. nBox 4K supports both front and rear projection needs and meets a wide range of requirements for ultra high resolution display processing.

The nBox 4k can drive any 4K projector supporting quad HD or 2 x 2048 by 2160 (portrait mode). Included with every nBox 4K system is nControl — an intuitive, user-friendly graphical software interface for system control and maintenance. nBox 4K can be connected to 3D perception's Aurora instrumented smart screens, which enable automatic calibration. Aurora's sensor-at-the-surface technology results in the production of the most accurate multi-channel image in the industry. In concert with nControl and Aurora, nBox 4K automatically performs geometry correction, edge blending, color balancing, and gamma correction. With a push of a button, it automates maintenance procedures and will realign and tune the system's image in seconds.



Key Features

- Supports 4K projectors requiring Quad HD or 2 x 2048 by 2160 (portrait mode)
- Units can be stacked for any number of display channels
- Non-linear image warping and edge blending
- 42 bit color processing (14 bits per channel)
- Image Scaling
- Hotspot compensation
- Black level enhancement
- Non-linear color correction
- Advanced built-in test pattern generator
- Hot swappable cards
- Redundant power supply option
- Diagnostic features
- Intelligent EDID
- Projector Control through signal cable or LAN
- Zero frame latency
- Scenario management
- Supports framerates from 24Hz to 120Hz
- Stereo shutter glass control
- Weight: 13.5 Kg fully configured
- Power consumption: 250W
- Dimension: 19" 2U form factor, 44 cm x 9 cm x 44 cm



Main Offices

Europe
Nye Vaka's vei 12
1395 Hvalstad, Norway
+47 66 98 70 70

United States
12605 Challenger Parkway, Suite 170
Orlando, Florida 32826
+1 321-235-7999

info@3d-perception.com
www.3d-perception.com

SUPPORTED DISPLAY OUTPUTS AND INPUTS

Configurable number of outputs and inputs 6 slots available

ADVANCED DISPLAY PROCESSING WITH nCONTROL

Projector control
 Image warping curved screen
 Image blending curved screen (multi-sided)
 Masking (multi-sided)
 Hotspot compensator
 Black level enhancement
 Internal test pattern generator
 Stereo control
 WarpSync automatic geometry correction
 ChromaSync automatic colour correction
 14 bit color processing (14 bits per channel)
 Signal Analysis Module

RESOLUTIONS

Multiple resolution support
 Up to HD 1920 x 1080 (dual input and output boards)
 Up to WUXGA 1920 x 1200 (single input and output boards)
 Up to WQXGA 2560 x 1600 (single input and output boards)

INPUT FORMATS

DVI - I single link inputs
 Supports: VGA* Progressive only
 Supports: HDMI* Progressive only, HDCP not supported
 Supports: RGB Video* RGBHV progressive only, 5-wire
 Supports: RGB Video* RGBS, 4-wire (composite sync)
 Supports: RGB Video* RGBsB, 3-wire (sync on green)
 Supports frame rates from 24 – 120Hz
 DVI dual link inputs for resolutions QXGA and above

INPUT PROCESSING

Analog to digital conversion
 Sync conversion Composite sync, sync on green
 Frame rate conversion

OUTPUT FORMATS

DVI - I single link outputs
 Supports: VGA*
 Supports: HDMI*
 Supports: RGB Video*
 Supports frame rates 24 - 120Hz
 DVI-D dual link output for resolutions QXGA and above

SYSTEM AND MAINTAINABILITY

Embedded PC 64 bit processor Power PC™
 Real-time embedded operating system
 Configurable I/O
 Stackable for large system installations
 Optical DVI extender output power
 Redundant power supply option
 Redundant fans
 Hot swap I/O boards
 Power supply modules
 Fans

I/O PORTS

6 Independent slots for input and output boards
 High-speed LAN 10/100/1000 MBits/Sec
 Stereo shutter glasses control
 RS232 Port for external system control
 Automatic calibration interface port
 100-240 Volt, 50-60 Hz power socket #1
 100-240 Volt, 50-60 Hz power socket #2
 Additional diagnostic LAN port

INTERFACES (OTHER)

3rd-party system controller interface On LAN or RS232 I/O ports
 Intelligent EDID

**nControl™****Display System Management Software**

The nControl is an intuitive, user-friendly graphical software interface for installation, user control and maintenance. nControl is responsible for maintaining a consistently pixel-perfect image, and in concert with nBox and Aurora, it automatically performs geometry adjustment, edge blending, color balancing, and gamma correction. With a push of a button, it automates maintenance procedures and will readjust the system's image in seconds.

Key Features

- Centralized interface for integrated control of entire display system
- One-click power up/down and maintenance
- Save/load multiple training configurations – changes eye-points, accounts for different obstructions
- Scenario Management – through IG Interface, transition time of day during live training session
- Control projector shutters for night time training
- Automate procedures which could otherwise take hours

**About 3D perception**

3D perception provides advanced display components and immersive simulation display systems.

**Main Offices**

Europe
 Nye Vakås vei 12
 1395 Hvalstad, Norway
 +47 66 98 70 70

United States
 12605 Challenger Parkway, Suite 170
 Orlando, Florida 32826
 +1 321-235-7999

info@3d-perception.com
www.3d-perception.com