

NORTHSTAR

nBox™



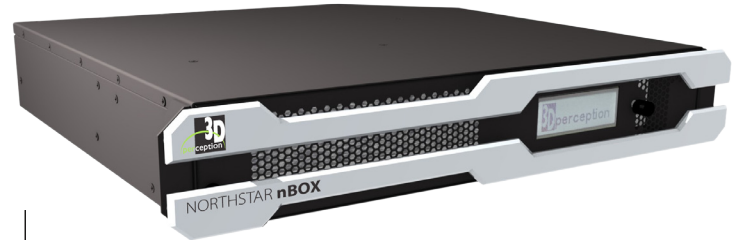
Dec 2012

4th Generation Display Processor for Immersive Applications

The Northstar nBox is a high performance multi-projector warp and blend display processor, offering an advanced set of processing, maintenance, and control features available in a single unit. Designed for flexibility, ease of use and reliability, this real-time, rack-mountable hardware processor is fully configurable, and capable of processing resolutions up to WQXGA (2560 x 1600).

nBox offers configuration of the DVI-I inputs and DVI-I outputs with different resolution options. With nControl user interface software included, users are enabled to perform all the image adjustments necessary to create a seamless, high-quality image across a flat or curved projected display.

With projector control through signal cable (DDC) or LAN, nBox provides unique features such as Scenario Management for gradient transition from dusk to dawn, and non-linear automatic color correction via Northstar's ChromaSync sensors embedded in Aurora smart screens.



Key Features

- All in one image processor for seamless curved screens
- Up to 6 channels per unit. Units can be stacked for any number of display channels
- Real-time hardware
- Up to WQXGA 2560 x 1600 resolution
- Fully configurable
- Non-linear image warping and edge blending
- 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



3D perception's Northstar™

Northstar™ is 3D perception's turn-key simulation display solution, and is the fusion of nBox™ display processors, 3DP Certified Projectors™ and auto-alignment technologies via sensor-instrumented Aurora™ smart screens or StarScan™ precision 3D scanners.

SUPPORTED DISPLAY OUTPUTS AND INPUTS

Configurable number outputs and inputs
Supports 4K projectors

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 color correction
Signal analysis module
Support from 24 - 120Hz

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* RGsB, 3-wire (sync on green)
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*

SYSTEM AND MAINTAINABILITY

Embedded PC 64 bit processor Power PC™
Realtime 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

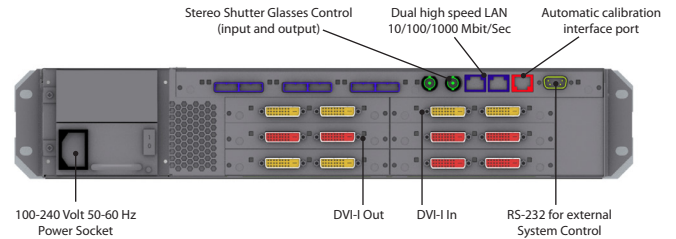
6 independent slots for input and output boards
High speed LAN 10/100/1000 MBits/Sec
Stereo shutter glasses control
RS232 port for external system control
Automatic calibration interface port
100-240 Volt, 50-60 Hz power socket #1
100-240 Volt, 50-60 Hz power socket #2
Additional diagnostic LAN port

INTERFACES (OTHER)

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

* Requires adaptor

Note: Specifications may be changed without notice



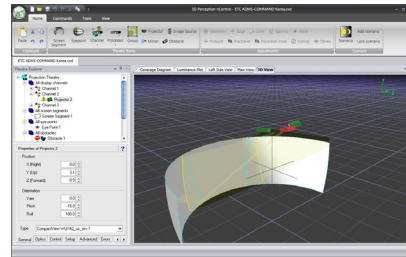
nControl™

Display System Management Software

nControl is an intuitive, user-friendly graphical interface for installation, user control, and maintenance for nBox and Northstar displays. 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 eyepoints, accounts for different obstructions
- Scenario Management
- Automatic alignment procedures



About 3D perception

3D perception provides immersive visual display solutions and technologies for high fidelity simulation and visualization applications.



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