NORTHSTAR nBox™

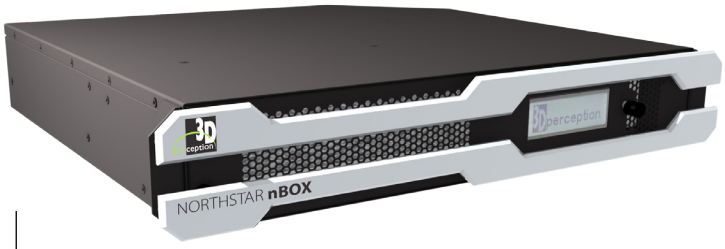
Dec 2012

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).

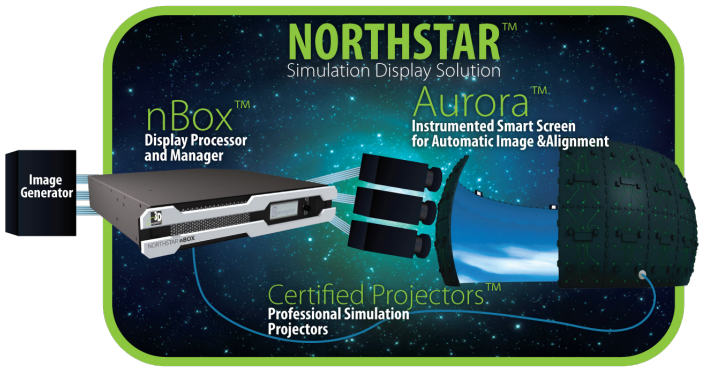
nBox offers configuration of the DVI-I inputs and DVI-I outputs with different resolution options. With nControl user interface software included, users are enabled to perform all the image adjustments necessary to create a seamless, high-quality image across a flat or curved projected display.

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

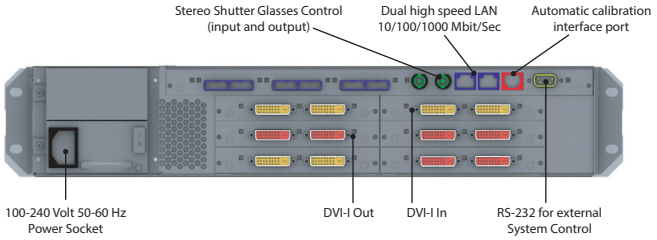


3D perception's Northstar™

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.

SPECIFICATIONS

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 patter 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 independant 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

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