StarScan™

Part of the Northstar™ Simulation Display Solution

Automatic Laser Alignment Scanner

For Northstar systems where screen-embedded sensors are impractical, soft-screens, collimated theaters, or for display upgrades, StarScan is the ideal solution for precision automatic image alignment.

A true 3D solution for a 3D problem, StarScan provides detailed measurement of display system geometry using high precision gimbal pointing, and laser rangefinding. StarScan measures both the exact 3D screen geometry and the projected image geometry, resulting in the industry's most accurate warp and blend — down to 1 arc minute.

StarScan devices can be mounted virtually anywhere in the display system and can automatically align itself using reference points on the screen, enabling repeatable, high accuracy performance, even from off-center locations.

Key Features

- Screen measurement and 3D mapping
- 3D image mapping with absolute precision
- Absolute geometric accuracy 1 – 5 arc min
- Off axis alignment head positioning
- Screen installation support
- Display channel setup support
- Easy and cost-effective retrofit of auto-alignment to existing installations
- Minimum Stationary Dimensions:
  15.5cm x 20.5cm x 21.5cm / 6.1" x 8.00" x 8.45"
- Max height: 25.4cm / 10"
- Weight: 3.63Kg / 8 lbs

About 3D perception

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

Main Offices

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Specifications

GEOMETRIC ACCURACY
StarScan options 1 arc min to 5 arc min
RANGE OF OPERATION
Azimuth 340 degrees (optional 360 degrees)
Elevation -25 to +70 degrees (optional -45 to +90 degrees)
LIGHT LEVEL SUPPORT
Sensitivity .001 to 15 fL
ALIGNMENT HEAD
Position – Off axis viewing support
Orientation - Horizontal and vertical
GUI CONTROLL
nControl – Display system management software

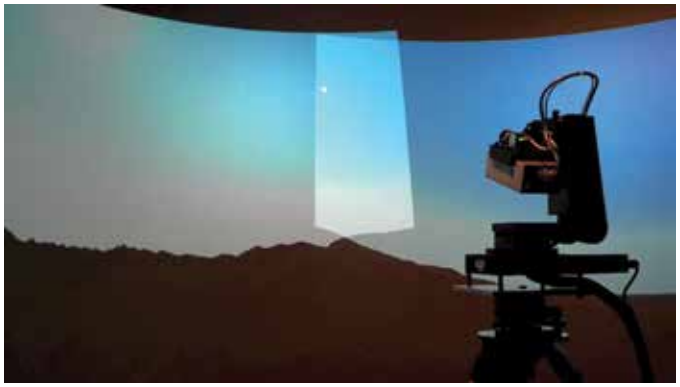
nControl™

Display System Management Software

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
- Automate maintenance procedure

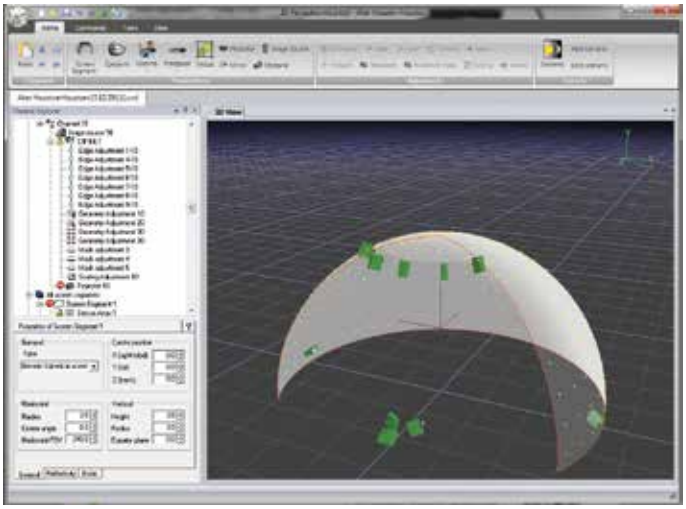


Screen Measurement / 3D Mapping

A complete screen surface map is derived in system using the gimbal mounted rangefinder. This map is used in geometric projection software to calculate the location for every alignment point on the real display surface. This surface map can also be used for display system acceptance testing to ensure compliance with design specifications.

Screen Integration Support

The integrated rangefinder can be used to accurately locate a screen to specified coordinates to ensure proper setup.



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