The Night Navigator™ HSC is a High-Definition marinized Night Vision camera system, certified for the HSC code and Wheelmark by the Lloyds Register classification society, following the requirements of the IMO in Resolution MSC.94(72). It is designed for night navigation at high speed on High Speed Craft carrying passengers or crew. The Night Navigator HSC is a critical equipment for safe navigation at high speed, providing visibility of potential obstacles in the navigation path, withstanding their temperature difference with the water. It is the HSC code certified night vision camera system of choice on HSC worldwide.

**APPLICATIONS**
- High Speed Passenger Vessel
- High Speed Offshore Supply vessel

**BENEFITS**
- **Rugged, marined, low maintenance design**
- **Intensifies available light on a scene** where the human eye cannot distinguish any elements, to provide a clear understanding of surroundings while navigating at sea at high speed.
- **Provides a clear, highly detailed image**, in HD, even when the object has the same temperature as its surroundings (log in the water, kayak in the water, ...)
- **Protected from excessive light exposure** through its ultra-fast auto-gating mechanism
- **Integrates on-screen display (OSD)** of lubber line, trim position, preset position, heading and more.
- **Performs self-diagnostics**, evaluating internal communications and various components, including controller IP address, software versions, internal temperature, humidity level and the pan and tilt parameters.
- **Configured as single payload** with no junction boxes or interface modules simplifies installations and retro-fits, while reducing maintenance.
- **Designed to withstand marine environmental conditions** and proven by over 10 years and hundreds of successful operating installations worldwide.

**IMO DETECTION REQUIREMENT FOR ISO 16273 – IMO RESOLUTION MSC.94(72)**
The Night Navigator HSC detects standard IMO target beyond the required 600 meters.

HSC code IMO target definition:
Black metal target, 50% immersed in the water, in the water at least 24 hours before test at night
Target size 1.5m (L) x 1.5m (I) x 1m (H)
SYSTEM FEATURES

GATED IMAGE-INTENSIFIED HD NIGHT VISION
- Sensor Type: 4G
- HD & SD Formats: 1080p30 (2 million px)
- Pixels: 1,310,720
- Spectral Response: 450 - 950 nm
- Luminous Sensitivity: 0.15 MicroLux
- Field of view: 20°
- Focus Control: Via controller
- Window Coating: Anti-reflective & hydrophobic

PLATFORM SPECIFICATIONS
- Dimensions: 16.6cm (Height) x 34.8cm (Width) 6.53” x 13.70”
- Weight: ±5kg (11 lbs)
- Pan Range: ±20° from heading
- Tilt range: ±9°
- Voltage: 24VDC (nominal)

VIDEO DISPLAY AND SIGNAL
- Standard Size: 13.3” TFT Liquid Crystal Display module
- Features: LED backlight technology
- Viewable Angle: 70° (H) 60° (V) (typical)
- Power Consumption: Operating: 20W (typical) - 30W (maximum)
- On-Screen Information Display: Lubber line, preset position, heading, range lines
- Format: DVI or HD-SDI

The Hatteland Series X display range is a flexible monitor solution designed and type approved for the professional maritime segment, where reliability and long-life time are key pre-requisites for the industry

TOUCHSCREEN CONTROLLER
- Standard Size: 8.0” TFT Liquid Crystal Display module
- Features: LED backlight technology
- Power Consumption: Operating: 20W (typical) - 30W (maximum)

The touch screen is based on Projected Capacitive Technology (PC Touch), which includes full multi touch support.

Dimmable for Night Operation

OPTION FOR HONG KONG NAVIGATION
- Hong Kong Requirement: 23° Field of View
  - Secondary controller 20/10/10/20 button module
  - Secondary monitor

ENVIRONMENTAL
- Ingress Protection Mark: IP67
- Standards: MIL SPEC connectors
- Operational temperature: -20°C to +50°C

HSC code - Type approval certification
- ISO 16273:2003: Night vision equipment for high-speed craft Operational and performance requirements, methods of testing and required test results
- IEC 60945 (2002): Maritime navigation and radio communication equipment and systems - General requirements Methods of testing and required test results
- IEC 62288 Ed. 1.0: Maritime navigation and radio communication equipment and systems - Presentation of navigation-related information on shipborne navigational displays - General requirements, methods of testing and required test results
- MSC.94 (72) Performance Standards for Night Vision Equipment for High-Speed Craft
- MSC.191 (79) Performance Standards for the Presentation of Navigation-Related Information on Shipborne Navigational Displays