

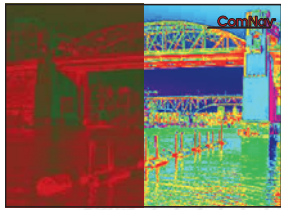
ComNav®



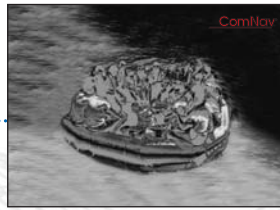
V5 Thermal Night Vision & Low Light Camera Systems

Gyro Stabilized Crystal Clear Vision

- Crisp thermal images in Black Hot, White Hot, Rainbow, Iron
- TEC Cooled Thermal detector
- Unbeatable 60Hz frame rate with unmatched sensitivity of <math><40\text{ mK}</math>
- Available in 9Hz
- ComNav image enhancement provides superior high resolution in absolute darkness, light fog, smog or low light environments
- Easy touch 4x electronic zoom in 0.1 step increments
- Rugged construction exceeds military standards to operate in challenging navigation environments, lightweight aluminum design with mono-crystalline germanium tempered glass weatherproof to IP67
- 360 degrees continuous pan and $\pm 90^\circ$ tilt provides seamless view coverage
- Low-Lux, high resolution integrated camera with 36x optical zoom coupled with 12x digital zoom, giving sharp magnification of up to 432x
- LowLight window with built-in heater for auto defrost in freezing environments
- Wide angle and narrow angle thermal imagers available
- Scene Selection Modes: Auto, Day, Night
- Flexible mounting gimbal sphere up or down
- Watch thermal and low light video simultaneously on single or multiple displays
- Home position and auto scan sweeps can be easily programmed. Camera system can be parked and protected when not in use
- LCD and keypad backlighting adjustable for night applications
- Optional up to four station remote joystick control units and up to four cameras in multiple configurations
- Compass data input with on screen heading display
- IP Network Control interface capability
- NMEA0183 and NMEA2000 compatible
- CE, FCC certified and RoHS compliance



Easy Navigation – Various Colors
Assists by enhanced visual capability in darkest environments, allows for increased manoeuvring when twilight docking; long range distance awareness in low light conditions;



Man Overboard Rescue
Can assist with faster response times in man overboard search and rescue applications;



Security
Helps to identify and track vessels or objects on perimeter security; collision avoidance; vessel and crew protection;



Situational Awareness
Anti-piracy security tool; allows for comprehensive multi-zone monitoring, long range viewing and greater night vision; iceberg detection; fire detection;

Thermal Imaging Performance:

Focal Plane Array Detector:	Uncooled Vanadium Oxide (VOx) Microbolometer	
Pixel:	640 X 480	
Field of View:	20° (H)	8.6° (H)
Lens:	35mm	50mm
Electronic Zoom:	1 - 4 x	
Thermal Sensitivity:	<40 mK @ f/1.0 @ 25°C	
Spectral Range:	8 - 14 μm	
Focus:	Fixed	
Detection Range:	2.3Km	3.4Km

Low Light Camera:

Detector Type:	1/4" HAD CCD
Lines of Resolution:	752 (H) x 582 (V)
Minimum Illumination:	0.01 LUX / F1.4
Field of Pan View:	57.8° (@1x), 1.7° (@36 x)
Optical Zoom:	36 x (maximum zoom 432 x)
Digital Zoom:	12 x (maximum zoom 432 x)

Specifications:

Stabilization:	Gyro compensated optimized for high speed vessels
Operating Voltage:	10 to 30 VDC
Power Consumption:	10 W standby 25 W nominal 50 W max with heaters operating
Operating Temperature:	-25°C to +55°C
Storage Temperature:	-40°C to +85°C
Waterproof:	Sealed to IP67 standards; marine cables & corrosion resistant connectors
Wind Resistance:	100 Knots
Encapsulation:	Sand & dust proof Salt mist & humidity
Shock Resistance:	15 g vertical; 9 g horizontal
Additional built-in features:	Auto window de-icing & defrost, Lightning & surge protection
Compliance	CE, FCC, RoHS

JOYSTICK KEYPAD



OPTIONAL DECODER UNIT



OPTIONAL EXTRA STATIONS



V5 THERMAL & LOW LIGHT CAMERA



OPTIONAL LCD

Dimensions:

Camera: 23.4cm/9.21 inches in diameter
39.7cm/15.6 inches in height
Joystick Keypad:
16cm (6.1 inches) x 12cm (4.5 inches)
Weight: camera: 10 kg



Additional Features:

- LED backlit 12", 15" and 19" sunlight LCD display options
- Multi-function joystick control keypad remote
- Multiple Thermal Display Modes
- Multi-protocol decoder: PELCO-P/D, RS422
- Power-off memory function and programmable home position
- Auto scan function; preset positioning tour
- On Screen Display password protection
- Park Mode camera protection when not in use
- Auto internal heater for cold temperatures
- Joystick controller can be surface or flush mounted
- Auto or fixed focus lens options
- Extra remote station capability
- Accurate on screen heading information via NMEA0183/NMEA2000 interface to vessels compass

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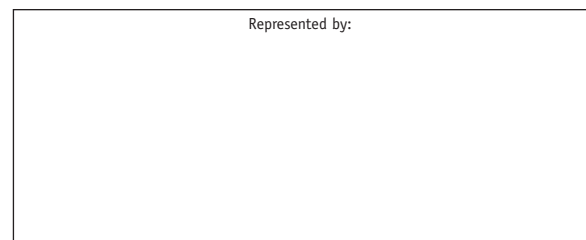
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Specifications subject to change without notice