

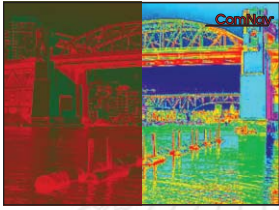
# ComNav<sup>®</sup>



## V5 Thermal Night Vision & Low Light Camera Systems

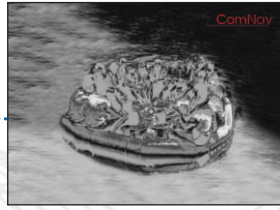
### Gyro Stabilized Crystal Clear Vision

- Crisp thermal images in Black Hot, White Hot, Rainbow, Iron
- Uncooled thermal detector
- Unbeatable 30Hz frame rate with unmatched sensitivity of <50 mK
- Available in 9Hz
- ComNav image enhancement provides superior high resolution in absolute darkness, light fog, smog or low light environments
- Easy touch digital zoom x 4 Thermal Camera
- 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 +/-90° 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
- Scene Selection Modes: Auto, Day, Night
- 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 certified and RoHS compliant
- 2 year warranty



#### 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:

|                                    |                                              |
|------------------------------------|----------------------------------------------|
| <b>Focal Plane Array Detector:</b> | Uncooled Vanadium Oxide (VOx) Microbolometer |
| <b>Pixel:</b>                      | 640 X 480                                    |
| <b>Field of View:</b>              | 20.6°(H) x 15.5°                             |
| <b>Electronic Zoom:</b>            | 1 - 4 x                                      |
| <b>Thermal Sensitivity:</b>        | <50 mK @ f/1.0 @ 25°C                        |
| <b>Spectral Range:</b>             | 8 – 14 µm                                    |
| <b>Focus Range:</b>                | 0.5 - infinity                               |
| <b>Detection Range:</b>            | Human 1 Km    Vessel 4 Km                    |

### LOW LIGHT CAMERA:

|                              |                           |
|------------------------------|---------------------------|
| <b>Detector Type:</b>        | ¼" HAD CCD                |
| <b>Lines of Resolution:</b>  | 752 (H) x 582 (V)         |
| <b>Minimum Illumination:</b> | 0.01 LUX / F1.4           |
| <b>Field of Pan View:</b>    | 57.8° (@1x), 1.7° (@36 x) |
| <b>Optical Zoom:</b>         | 36 x (maximum zoom 432 x) |
| <b>Digital Zoom:</b>         | 12 x (maximum zoom 432 x) |

### SPECIFICATIONS:

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

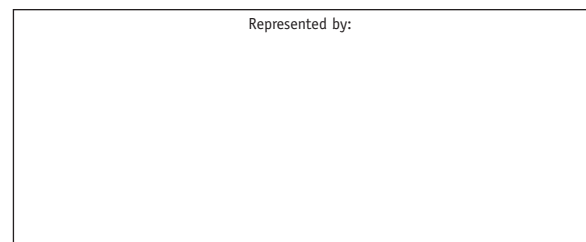
- Multiple Thermal Display Modes
- Multi-protocol decoder: PELCO-P/D, RS422
- Power-off memory function and programmable home position
- On Screen Display password protection
- Auto internal heater for cold temperatures
- Extra remote station capability
- Accurate on screen heading information via NMEA0183/NMEA2000 interface to vessels compass
- Radar tracking and target tracking (optional)

#### MAXIMUM RANGE:

|                         |       |
|-------------------------|-------|
| <b>Human Detection:</b> | 1059m |
| <b>Recognition:</b>     | 400m  |
| <b>Identification:</b>  | 212m  |

|                           |        |
|---------------------------|--------|
| <b>Vehicle Detection:</b> | 13471m |
| <b>Recognition:</b>       | 5051m  |
| <b>Identification:</b>    | 2694m  |

Represented by:



# ComNav®



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