Voyager II

FLIR

Video camera frame-grab

Black Hot thermal image

Cruise with FLIR

Imagine how much more time you could spend on the water if darkness and poor visibility didn't matter. The Voyager II multi-sensor, gyro-stabilized thermal imager lets you see floating debris, outcroppings of land, channel markers, and other boats in total darkness and other times of reduced visibility, so you can navigate with confidence day and night. Don't be afraid of the dark – cruise with Voyager II.

Voyager II sets itself apart with features unique in the maritime imaging industry:

- Voyager II has best-in-class image quality and range performance. Its four-sensor performance comes from a long-range thermal imager to detect and identify distant vessels, a wide-angle thermal imager for effortless nighttime navigation and situational awareness, and a two-in-one daylight/lowlight camera for color imaging from dusk till dawn.
- Industry leading gyro-stabilization automatically corrects the camera's pointing angles to compensate for vessel movement in rough seas; steady imagery is critical when using long-range camera systems like Voyager II.
- Optional Radar Tracking and Remote Internet Access capabilities.
- User-friendly Joystick Control Unit allows easy and direct access to all major system functions.
- Exclusive Accu-Point feature includes a user-defined 'Home' position to return the camera to pre-selected pointing angle at the touch of a button, and on-screen graphics that give precise feedback of where the camera is pointing, so you always know where you are looking.
- Automatic window defrosting for clear imaging in harsh conditions.
- 2-year warranty – no one stands behind their products like FLIR.

Navigation

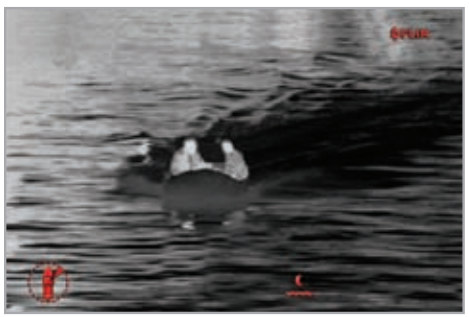
Thermal imaging cameras make navigation safer, taking the guesswork out of cruising day and night. Voyager II makes crystal-clear images regardless of lighting conditions, allowing you to see and avoid virtually any natural or man-made obstacle – floating debris, outcroppings of land, bridge abutments, and other vessels – day and night. Voyager II keeps everyone on board safe, protecting you and your boat from things that go 'bump' in the night.

Search and Rescue

When someone falls overboard, retrieving them from the water in a timely manner can make the difference between life and death. The Voyager II uses the same cutting-edge FLIR technology currently fielded with the Coast Guards, police agencies, and military forces around the world use for search and rescue.

It's Easy to Use

Voyager II includes features that make it easier to use than any other pan/tilt thermal imager on the market. Gyro-stabilization, multi-sensor imaging, on-screen symbology, and an ergonomic Joystick Control Unit all make the Voyager II a breeze to use.



Best Image

FLIR knows that the maritime environment is an ever-changing one, so Voyager II comes with eye-saving color palettes and four Auto-Gain Control (AGC) presets that give you the best thermal images possible in daytime running, nighttime running, man overboard situations, and nighttime docking conditions. Voyager II's exclusive Foveal picture-in-picture display overlays the image from the long-range thermal camera on the wide-angle image for longer detection ranges with consistent situational awareness.


FLIR
NAUTICOMP

Voyager II: inside and out

Voyager II has two best-in-class infrared cameras that deliver clear, sharp thermal video in total darkness, a daylight/lowlight TV camera for additional video coverage, and a precision Joystick Control Unit (JCU) for easy system control. With Voyager II, darkness doesn't matter.

Versatile, high-sensitivity lowlight camera lets you clearly see harbor entrances and other vessels in the half-light of dawn and dusk.

Powerful, long-range daylight color TV camera with 26x optical zoom, and 312x digital zoom, allows you to on identify other boats and monitor activity onshore.

Optional Radar Tracking feature allows operators to use the Voyager II to identify and track radar targets, enhancing operator safety and situational awareness.

Optional internet remote control of Voyager II lets you operate your camera from any location with an internet connection, so you can check on your boat without being on board.

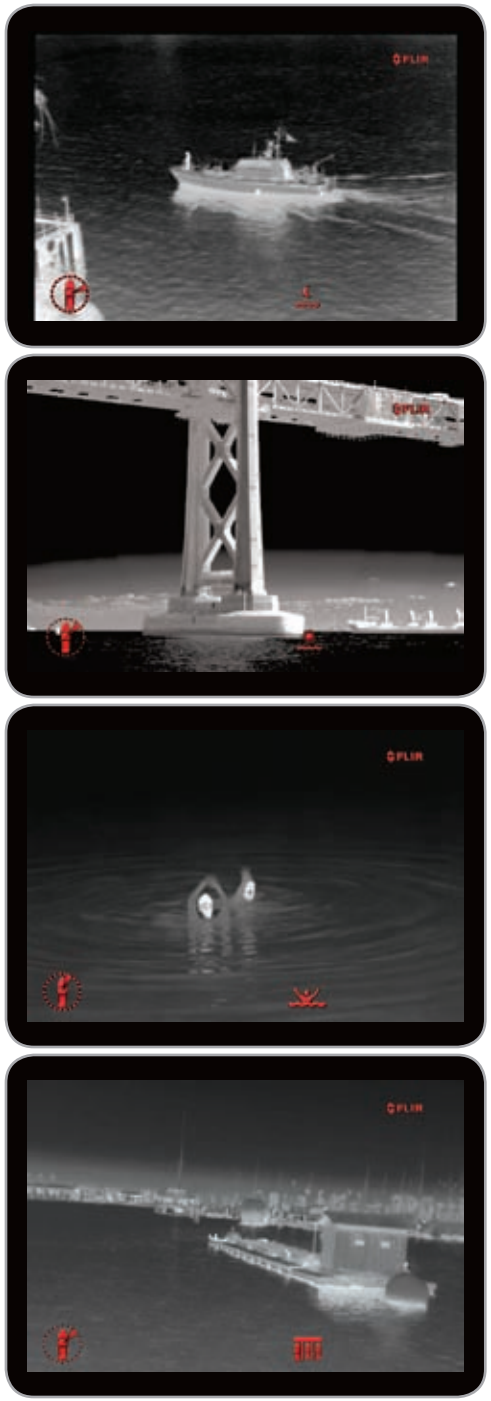
Wide-angle thermal camera is perfect for general navigation, letting you see approaching boats or hazards on either side of your vessel; zoom seamlessly between wide-angle and long-range cameras.

With a 140mm long-range thermal camera, Voyager II is the only commercial maritime camera to give you thermal zoom, the best image quality in the industry, and the longest thermal lens on the market.

Voyager II's active gyro-stabilization provides steady imagery, even in rough seas; this is critical to get the most out of long-range camera systems like Voyager II.

Easy to operate: if you can watch TV, you can use a Voyager II.


On-Screen Icons
Azimuth
Elevation
Point
Stabilization off
Home
Night Running
Night Docking
Day Running
Man Overboard
red hot
fusion
rainbow
SETUP
DIM
NIGHT
STAB
VIS/IR
POINT
SCENE
FLIR
HOME
AF
IN
OUT
FOCUS
ZOOM



Voyager II's Joystick Control Unit (JCU)

The Voyager II is easy to use, with a JCU that give you instant access to all of the system's vital functions.

On/Off – Turns the camera video and the JCU camera controls on and off.

Joystick – Allows the operator to control where the Voyager II is looking. Move the Joystick to the left or right to rotate the camera in the corresponding direction. Tilt it forward and back to tilt the camera up and down.

Dim – Controls the brightness of the JCU panel.

Night – The NIGHT control toggles the IR imagery between the default black-and-white setting, and the black-and-red display setting. The black-and-red display is not as bright, making it easier to watch at night. Fusion and rainbow modes are also available.

VIS/IR – Press this button to switch between IR and TV cameras and back, as desired.

Scene – Cycles through Night Running, Day Running, Man Overboard, or Night Docking gain settings to optimize the brightness and contrast of the image.

AF – Commands the IR imager's telephoto lens to Auto Focus.

Focus – Allows the operator to manually focus the IR imager's telephoto zoom lens.

Zoom – Zoom the active sensor in or out by twisting the knob on top of the Joystick left or right.

Home – Automatically returns the camera to the user programmed position, making it easier to navigate safely in total darkness.

Point – Deactivates the system's azimuth stabilization, locking the system's pointing angle to the boat's heading, making it easier to steer the vessel using the Voyager II's imagery.

Stab – Turns stabilization On and Off; default position is On.

Setup – Displays the Voyager II's Setup menus.

What is thermal imaging?

Call it “infrared energy,” call it “thermal energy,” call it “heat.” It’s really all the same.

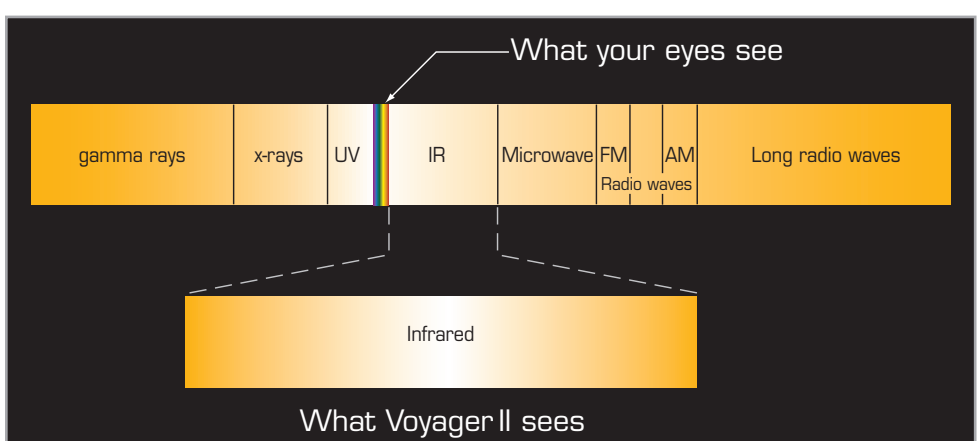
Infrared imagers like Voyager II make pictures from heat, not light; detecting and displaying the tiny differences in heat energy that are around us all the time. Day and night, in good weather and bad, everything gives off infrared energy. What’s more, the hotter something is the more thermal energy it gives off. Voyager II takes this energy in and makes pictures that look like black and white TV video.

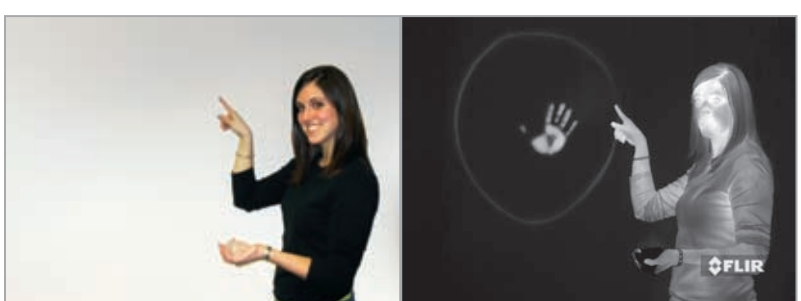
Infra-*what*?

Infrared energy is part of a continuum of radiation called the electromagnetic (EM) spectrum. The EM spectrum includes gamma rays, X-rays, ultraviolet, visible light, infrared, microwaves, and radio waves. The only part of the EM spectrum that we can see is the very small band called “visible light.”

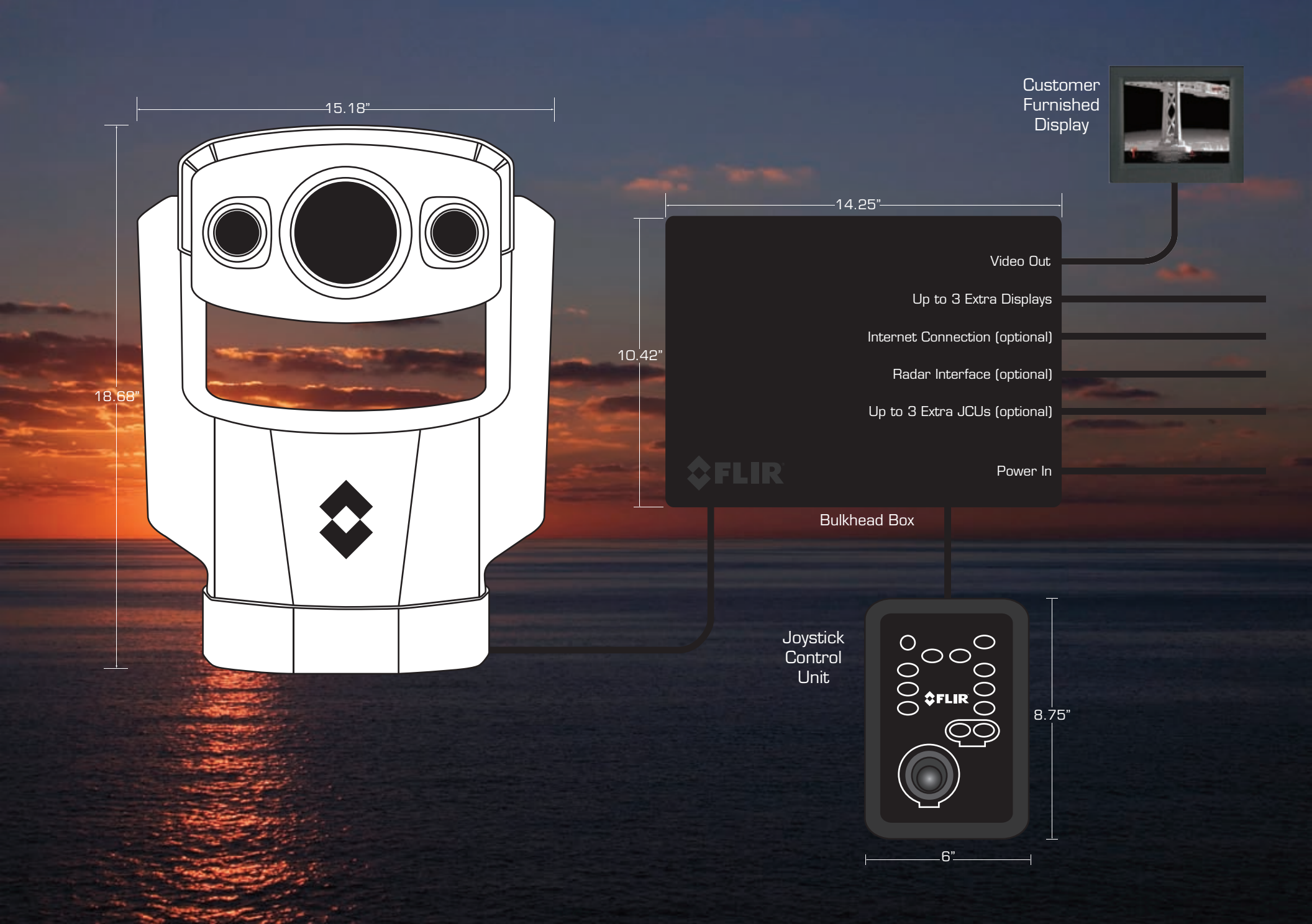
When visible light bounces off something, our eyes sense it, our brains interpret it, and we experience that as sight. Household cameras and camcorders work the same way: they detect reflected visible light, and their electronics create pictures we can see. Thermal imagers, on the other hand, see infrared energy that is given off by everything around us, and create images from this emitted energy.

Because everything generates heat, thermal cameras can see as well at night as they can during the day. Visible-light detectors (like our eyes) are not very useful at night or in poor weather without the help of lights. Voyager II doesn’t have this problem.





Thermal imagers make pictures by detecting and displaying differences in heat. Everything generates thermal energy – even the ice cubes she’s holding in her left hand. The friction from her finger and the heat from her hand left enough heat on the wall to show up clearly to the thermal imager.


15.18”
18.68”
Customer Furnished Display
14.25”
10.42”
Video Out
Up to 3 Extra Displays
Internet Connection (optional)
Radar Interface (optional)
Up to 3 Extra JCUs (optional)
Power In
FLIR
Bulkhead Box
Joystick Control Unit
8.75”
6”

Specs

Voyager II™

System Overview	
Size	15.18”(w) x 18.68”(h); 15.5” x 22” Swept Volume Cylinder
Weight	45 lb
Azimuth Field-of-Regard	360° Continuous
Elevation Field-of-Regard	+/-90°
Slew Rate	Variable, proportional control
Thermal Imaging Performance	
Camera Type	2 Discrete Thermal Cameras
Wide FOV Imager	20° x 15°; 35mm
Narrow FOV Imager	5° x 3.75°; 140mm
Optical Magnification	4X Zoom
Total Magnification	15X Zoom
Daylight/Lowlight Imaging Performance	
Narrow Magnification	26X Zoom
E-Zoom	12X Zoom
Total Magnification	312X Zoom
System Specifications	
Video Output	NTSC or PAL
Power Requirements	24VDC
Power Consumption	<50W nominal; 130W peak, 270W w/heaters
Environmental	
Operating Temp	-20°C to 55°C
Joystick Control Unit	
Dimensions	6.0”(w) x 8.75”(l) x 2.68” (d)
Bulkhead Box	
Dimensions	10.42”(w) x 14.25”(l) x 6.26”(d)
Warranty	2 years

Voyager II Thermal Range Performance with 140mm lens

Man

Small Vessel

Actual range may vary depending on camera set-up, environmental conditions, user experience, and type of monitor or display used.
Voyager II’s specifications are subject to change without notice.

About FLIR Systems

As the largest commercial infrared company in the world, FLIR Systems has fielded more high quality, military-grade maritime imaging systems than anyone on the planet. Our rugged, stabilized imagers are on thousands of civil and maritime platforms – surface and airborne – in the US and around the world. That's more than all other manufacturers combined.

FLIR's powerful, rugged, all-weather thermal imagers allow you to navigate safely and confidently - improving your ability to see obstructions, buoys, and other vessels through total darkness. From the Navigator to the longer-range Voyager II to the battle tested SeaFLIR, FLIR's family of maritime thermal imagers will help you see at night, and keep you safe.

Whether you're heading out early, returning late or cruising around the clock, FLIR has a thermal imager to meet your needs.

For additional technical information, or to see a demonstration of the Voyager II, contact a FLIR representative. Visit www.FLIR.com to watch the Voyager II video, and see how thermal imaging can keep you on the water, night and day. Call us at 1-877-773-3547.

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