

**DATA SHEET**

Video Surveillance Division

Security Camera



*Laboratory quality optics*

*Battle ready package*

***NITOR-LR*** Series

Patronus Laboratories Corporation  
Corporate Headquarters: San Luis Obispo, CA 93405  
[www.PatronusLabs.com](http://www.PatronusLabs.com)



## Features

- ✦ **Thermal Detection Distance**  
Thermal camera detects humans out to 4800m and vehicles out to 15,300m in all lighting conditions. Optical camera detects humans out to 656 meters in daytime lighting.
- ✦ **No blind spots**  
Continuous 360° Pan Rotation and 180° tilt provides unhindered directional tasking.
- ✦ **Weather Resistant**  
IP66 compliant weather resistant design facilitates installation in the most remote security applications, under the harshest environmental conditions.
- ✦ **Triple Voltage - Low Wattage Draw**  
Three available voltage options, 12VDC, 24VDC and 24VAC, and substantially lower wattage draw than other cameras, the NITOR is uniquely positioned to accommodate off-grid solar or generator powered remote applications.
- ✦ **Energy efficient**  
Un-cooled radiant heat focal plane array allows the lowest possible power consumption.
- ✦ **Tough Construction**  
Designed to be vehicle mountable, the NITOR-LR boasts a heavy duty aluminum housing, scratch resistant mineral glass lens, and industrial grade motor assembly.
- ✦ **Unparalleled Imagery**  
Utilizing a 36x Optical and 12x Digital high resolution imager coupled with a mechanical infrared cut filter, and a Thermal Imager, the NITOR-LR generates unparalleled optical clarity in all lighting conditions
- ✦ **Standardized housing**  
The NITOR-LR Thermal/Optical Hammerhead vandal resistant housing is the first camera made which can be supplied with 36x optical camera and a 25-100mm or 30-150mm or 36-180mm thermal imager in either CIF (320x240) or 4CIF (640x480) resolution.

Part of the "Hammerhead" Family of High Performance Cameras.



PRODUCT IDENTIFICATION CHART		
Division	Category	
Access Control	Camera, Board	IR Illuminator
Computer Components	Camera Bullet	JoyStick
Fixed Platform	Camera, Dome	Lens, Board
Housings/Mnts/Enclosures	Camera, Mini	Lens, C/CS Mount
Mobile Platform	Cam, Professional	Recorder, Embedded
Power Gen./Storage	Camera, Specialty	Recorder, Mobile
Tools/Equipment	Cam, Speed dome	Recorder, Network
Video Surveillance	Decoder	Recorder, PC-Based
Wire/Cables/Connectors	Encoder	Software
Wireless Equipment	Encoder/Recorder	

# NITOR-LR Series

...From Patronus Labs



25-100mm Continuous-Zoom Thermal



30-150mm Continuous-Zoom Thermal



36-180mm Continuous-Zoom Thermal

## Overview

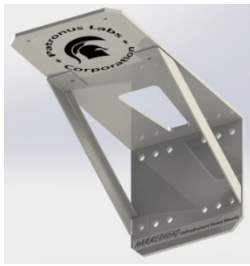
Patronus Labs offers an exclusive combination thermal / optical camera solution. The **NITOR-LR** Thermal camera enables passive infrared personnel monitoring day and night out to 4800 meters and vehicle detection out to 15,300 meters. The thermal imager displays in white hot, black hot or the color spectrum with high contrast to easily identify targets within the field of view. The Sony optical camera provides 36x optical and 12x digital zoom for long range day and night operations. The optical camera provides excellent low light capabilities only needing limited light for night operations.



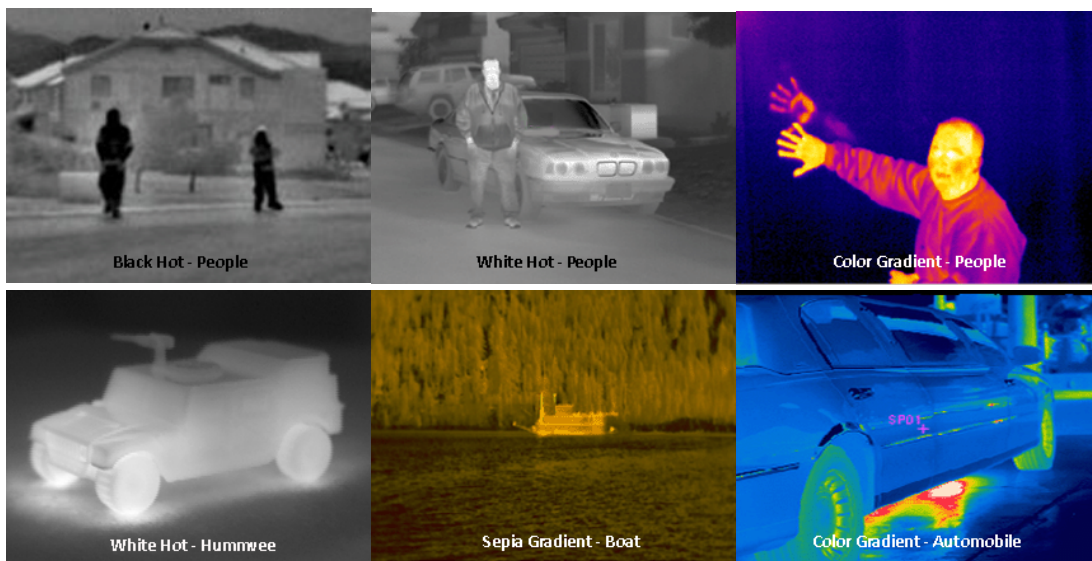
## Camera Configurations

VSCS1164	36x Optical/12x Digital Zoom 3.4-122.4mm, CIF(320x240) Resolution Thermal Camera with 25-100mm Lens, Single Video Output
VSCS1165	36x Optical/12x Digital Zoom 3.4-122.4mm, CIF(320x240) Resolution Thermal Camera with 25-100mm Lens, Dual Video Output
VSCS1166	36x Optical/12x Digital Zoom 3.4-122.4mm, 4CIF(640x480) Resolution Thermal Camera with 25-100mm Lens, Single Video Output
VSCS1167	36x Optical/12x Digital Zoom 3.4-122.4mm, 4CIF(640x480) Resolution Thermal Camera with 25-100mm Lens, Dual Video Output
VSCS0708	36x Optical/12x Digital Zoom 3.4-122.4mm, CIF(320x240) Resolution Thermal Camera with 30-150mm Lens, Single Video Output
VSCS0713	36x Optical/12x Digital Zoom 3.4-122.4mm, CIF(320x240) Resolution Thermal Camera with 30-150mm Lens, Dual Video Output
VSCS0714	36x Optical/12x Digital Zoom 3.4-122.4mm, 4CIF(640x480) Resolution Thermal Camera with 30-150mm Lens, Single Video Output
VSCS0715	36x Optical/12x Digital Zoom 3.4-122.4mm, 4CIF(640x480) Resolution Thermal Camera with 30-150mm Lens, Dual Video Output
VSCS0716	36x Optical/12x Digital Zoom 3.4-122.4mm, CIF(320x240) Resolution Thermal Camera with 36-180mm Lens, Single Video Output
VSCS0717	36x Optical/12x Digital Zoom 3.4-122.4mm, CIF(320x240) Resolution Thermal Camera with 36-180mm Lens, Dual Video Output
VSCS0709	36x Optical/12x Digital Zoom 3.4-122.4mm, 4CIF(640x480) Resolution Thermal Camera with 36-180mm Lens, Single Video Output
VSCS0718	36x Optical/12x Digital Zoom 3.4-122.4mm, 4CIF(640x480) Resolution Thermal Camera with 36-180mm Lens, Dual Video Output

## Options

PGAC0697	12VDC power input adaptor
HMBM0726	Infrastructure Heavy Mount
	
Ordering Options to be Specified with Each Camera	
Image format	NTSC or PAL
Protocol	RS485/Pelco D or RS-422/Extended Pelco D
Input Power	24VAC or 24VDC or 12VDC via power adaptor PGAC0697
Application	Fixed Mount or Vehicle Mount

## Sample Images - Built-In Configurable Detection Display Formats



## Specifications

NITOR-LR Series Specifications						
Single Video Output	VSCS1164	VSCS1166	VSCS 0708	VSCS0714	VSCS0716	VSCS 0709
Dual Video Output	VSCS1165	VSCS1167	VSCS0713	VSCS0715	VSCS0717	VSCS0718
Dimension	516.5x240x310mm				646x411x330	
Operating temperature	-25C°~+60C°					
Pan Speed	0~22°/s					
Pan Range	360°					
Power Consumption	≤30W (35W Heater On)					
Power Input	24VAC/24VDC/12VDC					
Pre-setting Points	Up to 255					
Protection Level	IP66					
Protocol	Pelco Protocol D (Extended Available)					
PTZ Control	RS485/RS-422					
Repeatability	0.1°					
Relative Humidity	90%					
Salt/Fog Certification	Continuous Spray - 48 hours under PH6.5-7.2					
Storage temperature	-40°C~85°C					
Tilt Speed	0~30°/s					
Tilt Range	-90°~+90°					
Weight	15.5Kg		16.2Kg		25.1Kg	
Vibration Resistance	150m/s 2 11ms					
Optical Camera						
Backlight Compensation	ON/OFF					
Camera Detection	People: 4000 m					
Electronic shutter	1/1~1/10,000s					
Focal length	3.4~122.4mm					
Focus	automatic, one push, manual					
Horizontal Resolution	480TVL					
Image inductor	1/4" IT ExView HAD CCD					
Iris	Automatic/Manual					
Lowest illumination	0.01Lx					
Scanning method	Scanning line-by-line					
Signal-to-noise	≥50db					
Simultaneous system	Internal and External					
Valid pixel	752 (H) 582 (V) 440,000					
Video output	VBS:1.0Vp-p (simultaneous negative), Y/C output					
White balance	Automatic, broad dynamic, inside, outside, single key, manual					
Thermal Camera						
Thermal Imager	320x240 Uncooled Radiant Heat Focal Plane Array	640x480 Uncooled Radiant Heat Focal Plane Array	320x240 Uncooled Radiant Heat Focal Plane Array	640x480 Uncooled Radiant Heat Focal Plane Array	320x240 Uncooled Radiant Heat Focal Plane Array	640x480 Uncooled Radiant Heat Focal Plane Array
Field of View	4.6°x3.7°~18.2°x14.6°	6.2°x5.0°~24.6°x19.8°	3.1°x2.4°~15.2°x12.2°	4.2°x3.3°~20.6°x16.5°	2.5°x2.0°~12.7°x10.2°	3.5°x2.8°~17.2°x13.6°
Focal Length	25~100mm		30-150mm Continuous Zoom		36-180mm Continuous Zoom	
Minimum Distance	10m					
Sensitive Components	Un-cooled infrared focal plane detector					
Thermal Control	Automatic / Manual Control					
Wave Length	8~14μm					

## Thermal Camera DRI Ranges

Thermal Camera (DRI) Detection, Recognition, Identification Ranges										
Typical/Best Conditions (range in meters)										
	Man					Vehicle				
	Tau 2 320					Tau 2 320				
	25mm	35mm	100mm	150mm	180mm	25mm	35mm	100mm	150mm	180mm
<b>Detection</b>	590/650	800/880	2075/2400	3025/3400	3630/4080	1650/1950	2250/2700	5300/7100	7680/8520	9210/10200
<b>Recognition</b>	148/165	200/225	540/600	940/1060	1135/1275	430/500	590/680	1500/1840	2175/2410	2600/2890
<b>Identification</b>	75/85	105/112	270/300	570/640	680/765	215/250	290/340	760/920	1100/1220	1320/1460
	Tau 2 640					Tau 2 640				
<b>Detection</b>	820/930	1140/1280	2450/2950	3570/4010	4280/4810	2200/2800	3000/3850	6000/8800	8700/12750	10440/15300
<b>Recognition</b>	210/230	280/320	650/750	1110/1250	1340/1500	580/710	800/950	1750/2300	2530/3330	3030/3990
<b>Identification</b>	104/116	142/160	330/380	670/750	800/900	290/360	200/295	900/1160	1300/1680	1560/2010

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