VP190-CA Series
Thermal Camera Systems

Infinova®
The Integrator's Manufacturer

- **Major Components**
  - Thermal Camera - Long Wave Infrared imaging camera
  - Thermal Camera Lens - fixed single field of view athermalized lens
  - Pan/Tilt Positioner - High accuracy pan/tilt unit
  - Pedestal Extension - Pedestal Mount Extension Adaptor
  - Payload Cable - Connects camera to Pan/Tilt unit
  - Control Cable - Connects system to external power, video, communications

- **Applications**
  - Port Security
  - Airport Perimeters
  - Nuclear Power Plants
  - Border Surveillance
  - Critical Infrastructure
  - Oil and Gas Facilities

Infinova VP190-CA series cameras are a broad portfolio of high performance outdoor rated thermal cameras for 24/7 perimeter surveillance, observation, and monitoring of critical infrastructure and sensitive sites.

This camera is mounted on a Pan/Tilt Positioner and offers fixed single field of view athermalized lens. All its models also feature the option for either standard 30Hz video frequency or optional 9Hz frequency; and the 9Hz video option allows for simple and easy export.

Available in 17µ 640 x 480 cameras, VP190-CA series camera brings unique value to customers in areas of high risk of fire. Facilities with flammable materials, transportation tunnels, combustible storage areas, and perimeter sites located near flammable forest and bush are all sensitive to fire danger. VP190-CA series camera can be used for both safety and security at these unique site locations.

The VP190-CA series cameras are ruggedly designed to withstand the harshest weather and environmental conditions, including rain, direct sunlight, high humidity, dust, heat, and cold.

Technical specifications

Power Requirements		
Power Input	12-32 VDC	
Power Supply	Power Over Ethernet 802.3af (for IP only)	
Power Consumption	**Typical**	**Max.**
Fixed Athermalized	<4w	12w
Environmental		
Operating Temperature	For analog camera: -40°F to +140°F (-40°C to +60°C); For IP camera: -27°F to +131°F (-33°C to +55°C)	
Storage Temperature	-40°F to +160°F (-40°C to +71°C)	
Humidity	+40°C, 93% RH	
Environmental Rating	IP66	
Mechanical Parameters		
Dimensions (W×D×H)	5.32"×7.95"×6.65" (135mm×202mm×169mm)	
Weight	8.5mm: 2.39kg; 14mm: 2.99kg; 19mm: 2.37kg; 35mm: 2.50kg; 60mm: 2.57kg	
Thermal Camera		
Imager Type	Uncooled Microbolometer	
Spectral Band	7.5-14μ	
Pixel Size / Resolution	17μ / 640 x 480 NTSC / PAL	
NETD	<50° mK NTSC/PAL	
Video Frequency	30Hz or 9Hz (Easy Export)	
Lens Options		
Fixed Field of View Athermalized	8.5mm, 14mm, 19mm, 35mm, 60mm	
	Field adjustable focus to fit the application	
Horizontal Field of View (HFOV)	8.5mm: 73.3°; 14mm: 44.5°; 19mm: 33.2°; 35mm: 17.8°; 60mm: 10.4°	
Communication		
Control Connections	RS-422/RS485, 4 wires	
Control Protocol	Pelco D	
Remote Operation	Serial, IP (optional)	
Pan/Tilt Unit		
Pan Range / Speed	360° continuous / 0-100° per second	
Tilt Range / Speed	-90° to +90° / 0-50° per second	
Backlash	<0.2°	
Number of Presets	64	
Fire Detection Camera		
Fetures		
2 Detection Algorithms	Flame Detection	
	High Fire Risk Area Detection	
3 Alarm Types	Alarm Video Overlay	
	Alarm via Serial Communication	
	Dry Contact Closure Outputs	
Detection Specifications	Up to 5 simultaneous fires detected	
	x/y Fire Coordinates transmitted	
Control Features	Enable/Disable Detection (Risk Area & Flame)	
	Set Alarm Temperature Threshold (Risk Area)	
	Set up to Five Regions of Non Interest (Risk Area)	
Pan / Tilt Positioner Specifications		
Pan Range	360° Continuous	
Tilt Range	-90° to +90°	
Pan Speed	-100°/sec	
Tilt Speed	0-50°/sec	
Backlash	<0.2°	
Number of presets	64	
Speed Variability	On-the-fly speed changes	
Others		
Video Format	RS-170/CCIR, 1.0V p-p, 75ohm; MJPEG or H.264 (IP only)	
Certifications and Approvals		
Product Certifications	CE, FCC, IP66	

Ordering Information

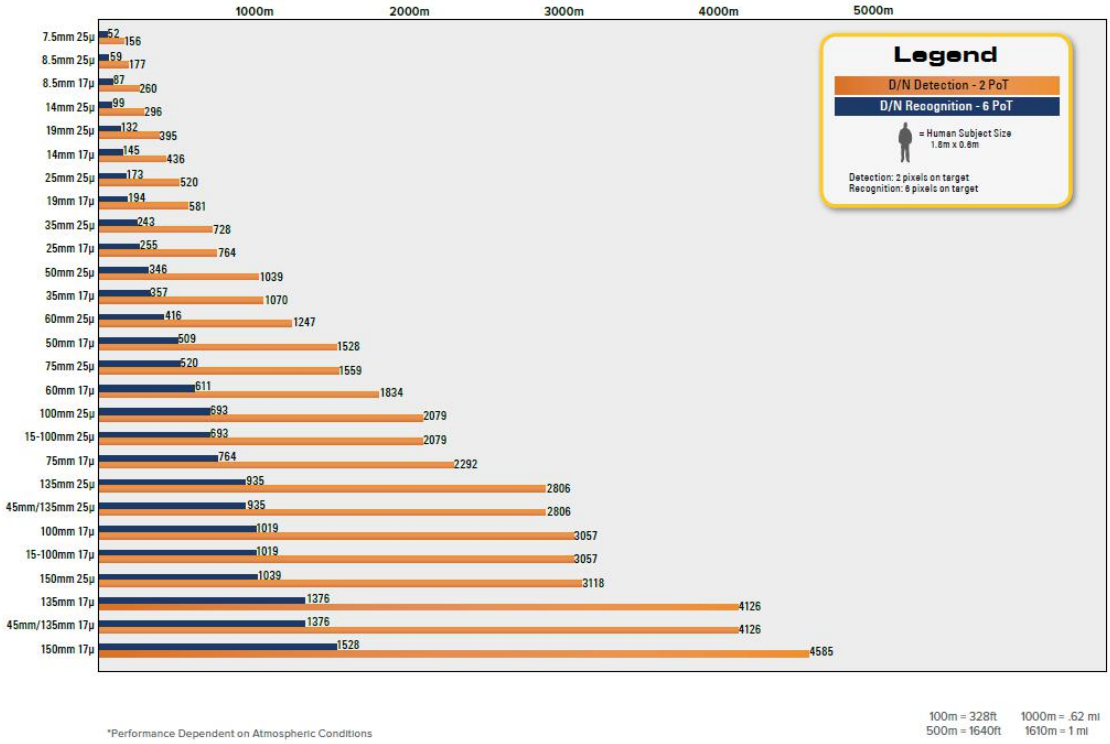
For Analog Cameras:

VP190-CA8A17V-0A030	8.5mm f/1.2, Athermalized, Fixed Focus, 17µ, 640x480, NTSC/PAL
VP190-CA14A17V-0A030	14mm f/1.2, Athermalized, Fixed Focus, 17µ, 640x480, NTSC/PAL
VP190-CA19A17V-0A030	19mm f/1.2, Athermalized, Fixed Focus, 17µ, 640x480, NTSC/PAL
VP190-CA35A17V-0A030	35mm f/1.2, Athermalized, Fixed Focus, 17µ, 640x480, NTSC/PAL
VP190-CA60A17V-0A030	60mm f/1.2, Athermalized, Fixed Focus, 17µ, 640x480, NTSC/PAL

For IP Cameras:

VP190-CA8A17V-0N030	8.5mm f/1.2, Athermalized, Fixed Focus, 17µ, 640x480, NTSC/PAL
VP190-CA14A17V-0N030	14mm f/1.2, Athermalized, Fixed Focus, 17µ, 640x480, NTSC/PAL
VP190-CA19A17V-0N030	19mm f/1.2, Athermalized, Fixed Focus, 17µ, 640x480, NTSC/PAL
VP190-CA35A17V-0N030	35mm f/1.2, Athermalized, Fixed Focus, 17µ, 640x480, NTSC/PAL
VP190-CA60A17V-0N030	60mm f/1.2, Athermalized, Fixed Focus, 17µ, 640x480, NTSC/PAL

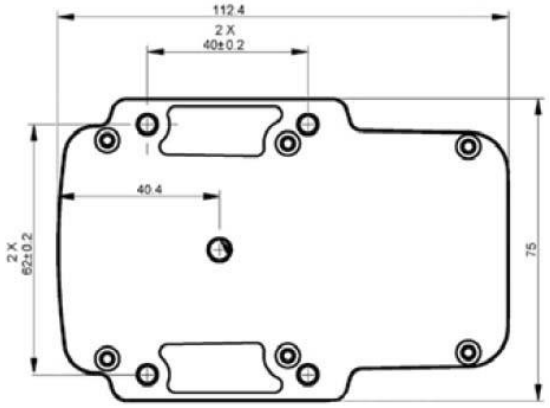
Thermal Camera Performance



*Performance Dependent on Atmospheric Conditions

100m = 328ft 1000m = .62 mi
500m = 1640ft 1610m = 1 mi

Camera Mounting Information



(Unit: mm)

Wiring Assignment

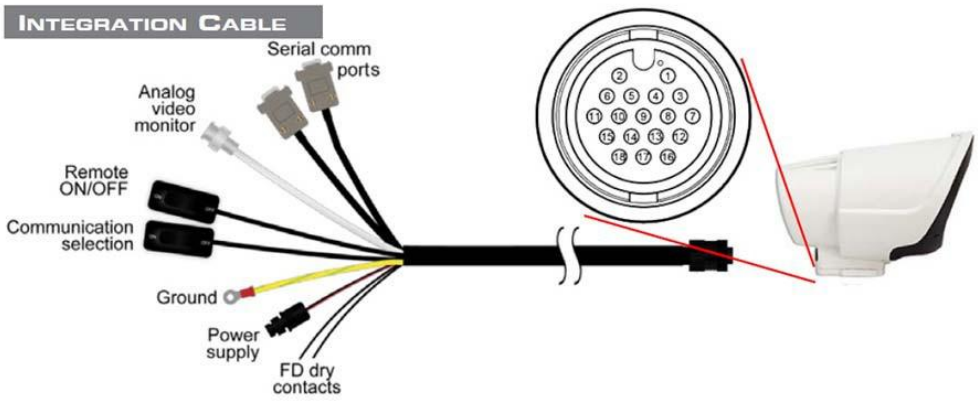
For Analog Cameras:

Communication

Connector Pin #	Signal name	Description	Input/ Output
2	COMM_TX+	RS422/RS485 Transmit High	Output
6	COMM_TX-	RS422/RS485 Transmit Low RS232 Transmit	Output
11	COMM_RX+	RS422 Receive High RS232 Receive	Input
15	COMM_RX-	RS422/RS485 Receive Low	Input
10	COMM_SEL	RS422/232 Comm. Select	Input
18	PIC_TX	Factory Settings and Technician Use only (RS232)	Input
17	PIC_RX		
14	COMM_GND	Communication Ground	-

Power, Video, Fire Detection

Connector Pin #	Signal name	Description	Input/ Output
8	PWR_IN_RTN*	Power Supply Return	Input
9	PWR_IN*	Power Supply In	Input
7	GND	Chassis Ground	-
13	REMOTE_PWR	Remote Pwr ON/OFF	Input
1	VIDEO	Analog Video Signal	Output
3	VIDEO_RTN	Analog Video Signal RTN	Output
4	FD_ALERT	Fire Detection Alert (Dry Contact)	Output
5	FD_ALERT	High Risk of Fire Alert (Dry Contact)	Output
12	SPARE	Spare wire	-
16	SPARE	Spare wire	-



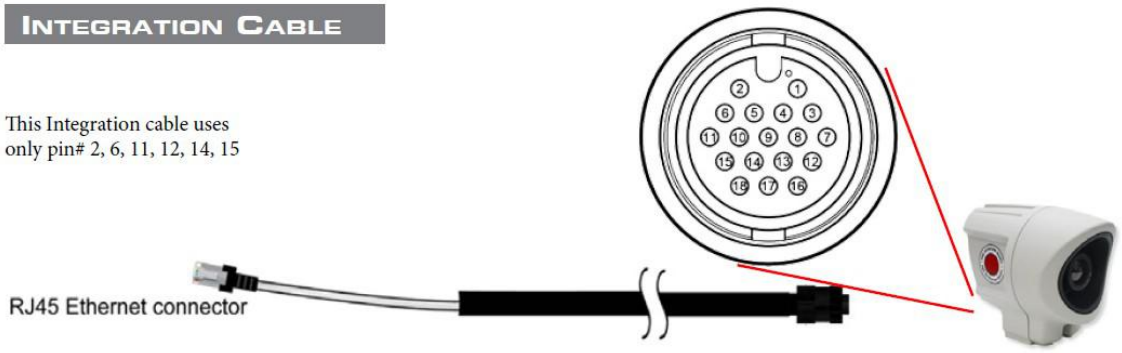
For IP Cameras:

Communication

Connector Pin #	Signal name	Description	Input/ Output
2	LAN_TX+	RS422/RS485 Transmit High	Output
6	LAN_TX-	RS422/RS485 Transmit Low RS232 Transmit	Output
11	LAN_RX+	RS422 Receive High RS232 Receive	Input
15	LAN_RX-	RS422/RS485 Receive Low	Input

Power

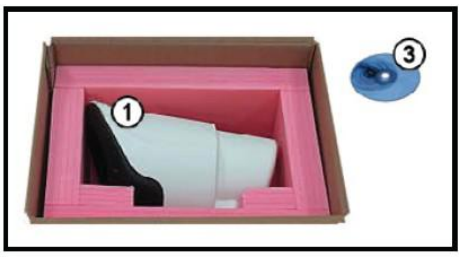
Connector Pin #	Signal name	Description	Input/ Output
12	LAN_PWR_IN	PoE Power 48 VDC IN	Input
14	LAN_PWR_RTN	PoE Power 48 VDC IN	Input



Shipping Contents

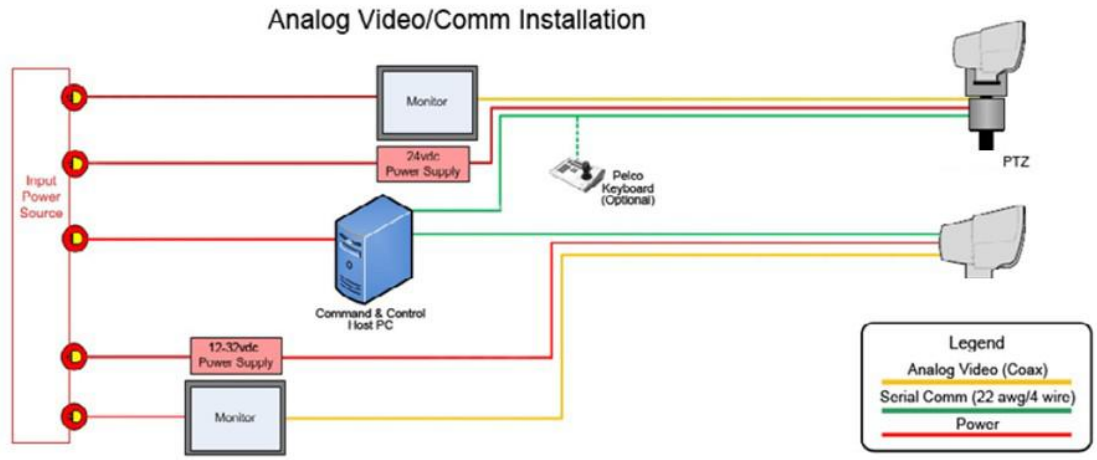
Standard Order includes:

1) Thermal camera & pan/tilt positioner
2) Cable Mating Connector (not shown)
3) Software & Documentation CD
   a) User Manual
   b) Test & Configuration Software

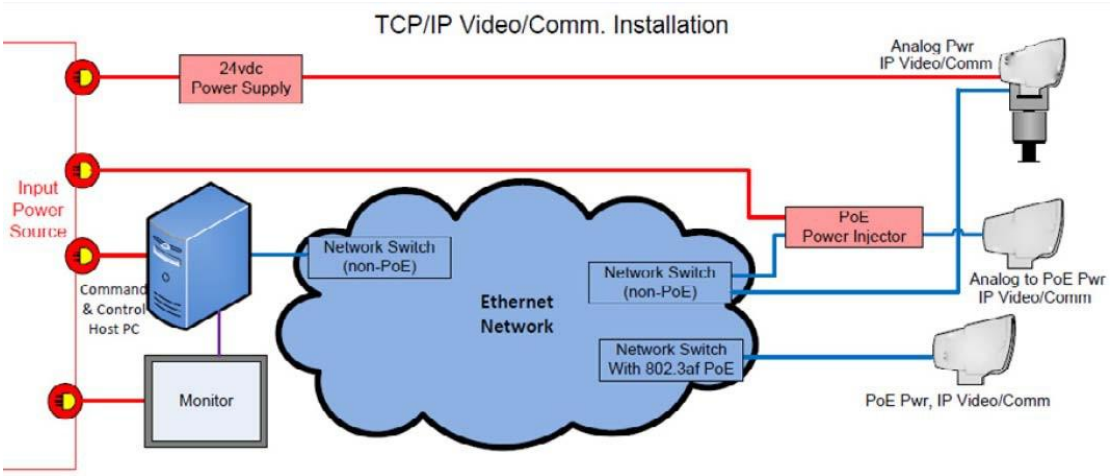


Typical System Design

For Analog Cameras:



For IP Cameras:



System Installation Dimensions

System Drawings