# VP190-B-N Series

# Superior Thermal Security Cameras

**Infinova**®
**The Integrator's Manufacturer**



- **Innovative Features**
  Unique signal processing algorithms provide enhanced contrast for Video Analytics and Infinova's innovative Fire Detection Algorithm

- **High Image Quality**
  High Resolution, small pixel pitch

- **Advanced Optics**
  Continuous Zoom, Dual Field of View, Thermal Imaging Autofocus

- **Versatility**
  Wide variety of fixed and optics configurations

- **Easy Installation**
  Pelco D protocol, common industry mounting options, serial or IP communication

- **Outdoor Design**
  Outdoor designed to withstand the harshest environmental conditions, rated IP66

The VP190-B-N camera is a broad portfolio of high performance outdoor rated thermal cameras for 24/7 perimeter surveillance, observation, and monitoring of critical infrastructure and sensitive sites.

The VP190-B-N camera is available as a fixed camera system and offers a variety of optics including dual field of view zoom lenses and continuous zoom lenses.

The VP190-B-N camera also features the option for either standard 30Hz video frequency or optional 9Hz frequency; the 9Hz video option allows for simple and easy export.

The VP190-B-N camera is ruggedly designed to withstand the harshest weather and environmental conditions, including rain, direct sunlight, high humidity, dust, heat, and cold.

The VP190-B-N camera is widely used in Port Security, Airport Perimeters, Nuclear Power Plants, Border Surveillance, Critical Infrastructure, and Oil and Gas facilities.

# Technical specifications

## Power Requirements

| | |
|---|---|
| Power Input | 12-32VDC |
| Power Consumption | <4W (Typical); 48W (Max.) |

## Environmental Parameters

| | |
|---|---|
| Operating Temperature | -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

| | |
|---|---|
| Weight | 25μ:<br>5351 g (45/135mm Dual FOV Motorized);<br>5751 g (15~100mm Continuous Zoom Motorized);<br><br>17μ:<br>5511 g (45/135mm Dual FOV Motorized);<br>5911 g (15~100mm Continuous Zoom Motorized); |
| Dimensions (W×D×H) | 9.53"×8.07"×12.91" (205mm×328mm×242mm) |

## Thermal Camera

| | |
|---|---|
| Image Type | Uncooled Microbolometer |
| Video Output | RS-170/CCIR, 1.0V p-p, 75ohm |
| Video Compression | MJPEG/H.264 |

| | |
|---|---|
| Spectral Band | 7.5-14μ |
| Pixel Size / Resolution | 17μ / 640×480 NTSC / PAL;<br>25μ / 320×240 NTSC (384 x 288 PAL) |
| NETD | 17μ 640 x 480: <50° mK NTSC/PAL<br>25μ 320 x 240: <50° mK NTSC<br>25μ 384 x 288: <50° mK PAL |
| Video Frequency | 30Hz or 9Hz (Easy Export) |
| Lens Options: Athermalized (Focus Free) | 17μ (NTSC/PAL):<br>14.3°/ 4.6° (45/135mm Dual FOV Motorized)<br>42.2°- 6.2° (15~100mm Continuous Zoom Motorized)<br><br>25μ (NTSC):<br>10.4°/ 3.4° (45/135mm Dual FOV Motorized)<br>30.8°- 4.6° (15~100mm Continuous Zoom Motorized)<br><br>25μ (PAL):<br>12.6°/ 4.1° (45/135mm Dual FOV Motorized)<br>37.1°- 5.5° (15~100mm Continuous Zoom Motorized) |

## Communication

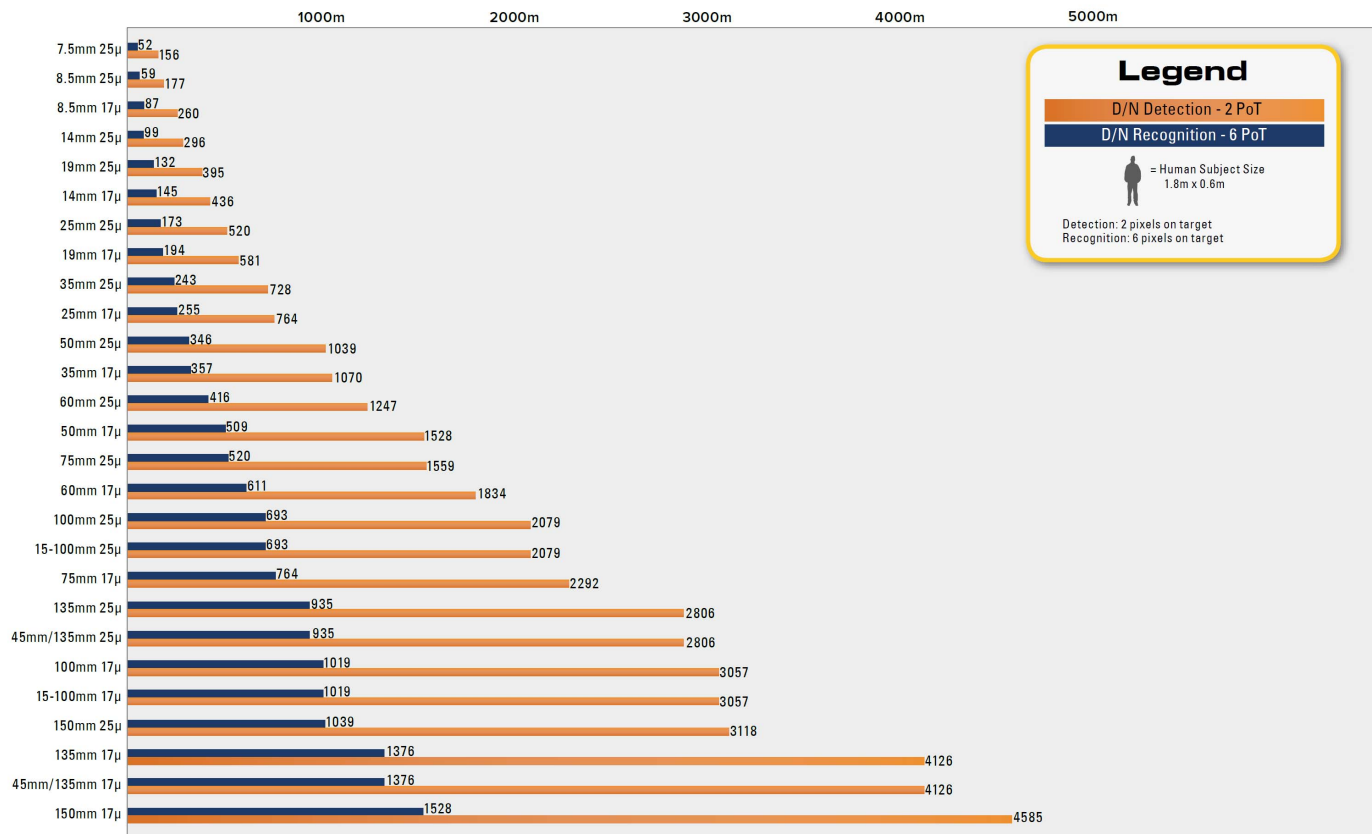| | |
|---|---|
| Control connections | RS-422/RS485 4 wires |
| Control Protocols | Pelco D |
| Remote Operation | IP |

## Standards & Certifications

IP66, CE, FCC

# Ordering information

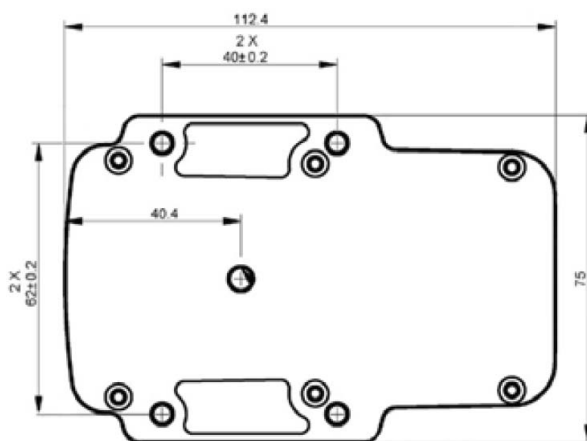| | |
|---|---|
| VP190-BE135D25Q-0N020 | IP thermal camera, 25μ, NTSC/PAL, 45/135mm f/1.1 / f/1.6 Dual Field of View Motorized lens |
| VP190-BE135D17V-0N020 | IP thermal camera, 17μ, NTSC/PAL, 45/135mm f/1.1 / f/1.6 Dual Field of View Motorized lens |
| VP190-BE100Z25Q-0N020 | IP thermal camera, 25μ, NTSC/PAL, 15-100mm f/1.1 - f/1.4 Continuous Zoom Motorized lens |
| VP190-BE100Z17V-0N020 | IP thermal camera, 17μ, NTSC/PAL, 15-100mm f/1.1 - f/1.4 Continuous Zoom Motorized lens |

## Thermal camera performance

**Legend**
- D/N Detection - 2 PoT (orange)
- D/N Recognition - 6 PoT (blue)
- = Human Subject Size 1.8m x 0.6m
- Detection: 2 pixels on target
- Recognition: 6 pixels on target

| Lens | D/N Recognition - 6 PoT | D/N Detection - 2 PoT |
|---|---|---|
| 7.5mm 25μ | 52 | 156 |
| 8.5mm 25μ | 59 | 177 |
| 8.5mm 17μ | 87 | 260 |
| 14mm 25μ | 99 | 296 |
| 19mm 25μ | 132 | 395 |
| 14mm 17μ | 145 | 436 |
| 25mm 25μ | 173 | 520 |
| 19mm 17μ | 194 | 581 |
| 35mm 25μ | 243 | 728 |
| 25mm 17μ | 255 | 764 |
| 50mm 25μ | 346 | 1039 |
| 35mm 17μ | 357 | 1070 |
| 60mm 25μ | 416 | 1247 |
| 50mm 17μ | 509 | 1528 |
| 75mm 25μ | 520 | 1559 |
| 60mm 17μ | 611 | 1834 |
| 100mm 25μ | 693 | 2079 |
| 15-100mm 25μ | 693 | 2079 |
| 75mm 17μ | 764 | 2292 |
| 135mm 25μ | 935 | 2806 |
| 45mm/135mm 25μ | 935 | 2806 |
| 100mm 17μ | 1019 | 3057 |
| 15-100mm 17μ | 1019 | 3057 |
| 150mm 25μ | 1039 | 3118 |
| 135mm 17μ | 1376 | 4126 |
| 45mm/135mm 17μ | 1376 | 4126 |
| 150mm 17μ | 1528 | 4585 |

Axis: 1000m, 2000m, 3000m, 4000m, 5000m

*Performance Dependent on Atmospheric Conditions

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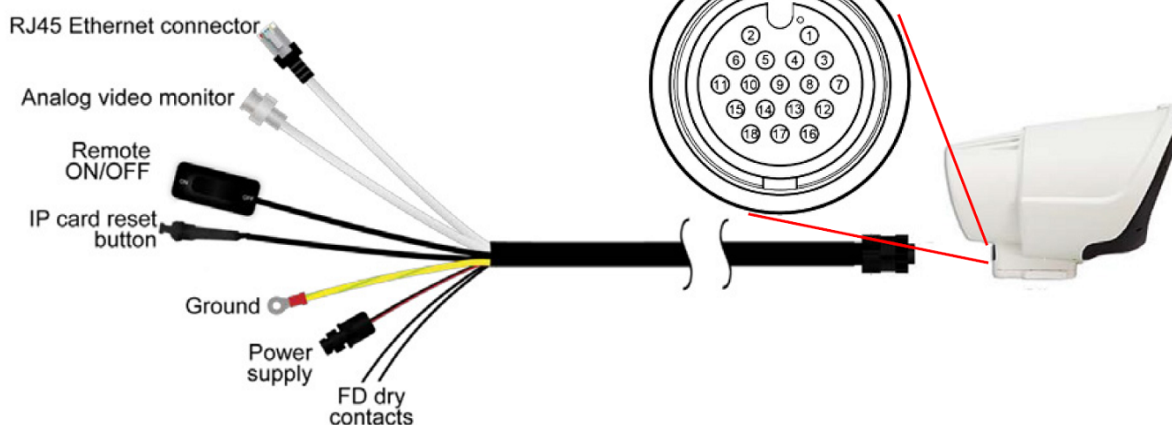500m = 1640ft  1610m = 1 mi

## Camera mounting information



112.4
2 X 40±0.2
40.4
2 X 62±0.2
75

# Wiring assignment

**Communication**

| Connector Pin # | Signal name | Description | Input/Output |
|---|---|---|---|
| 2 | LAN_TX+ | TCP/IP Transmit High | Output |
| 6 | LAN_TX- | TCP/IP Transmit Low | Output |
| 11 | LAN_RX+ | TCP/IP Receive High | Input |
| 15 | LAN_RX- | TCP/IP Receive Low | Input |
| 10 | SPARE | Spare wire | - |
| 18 | PIC_TX | Factory Settings and Technician Use only (RS232) | Input |
| 17 | PIC_RX | | |
| 16 | Reset IP | Resets the embedded IP encoder | - |

**Power, Video, Fire Detection**

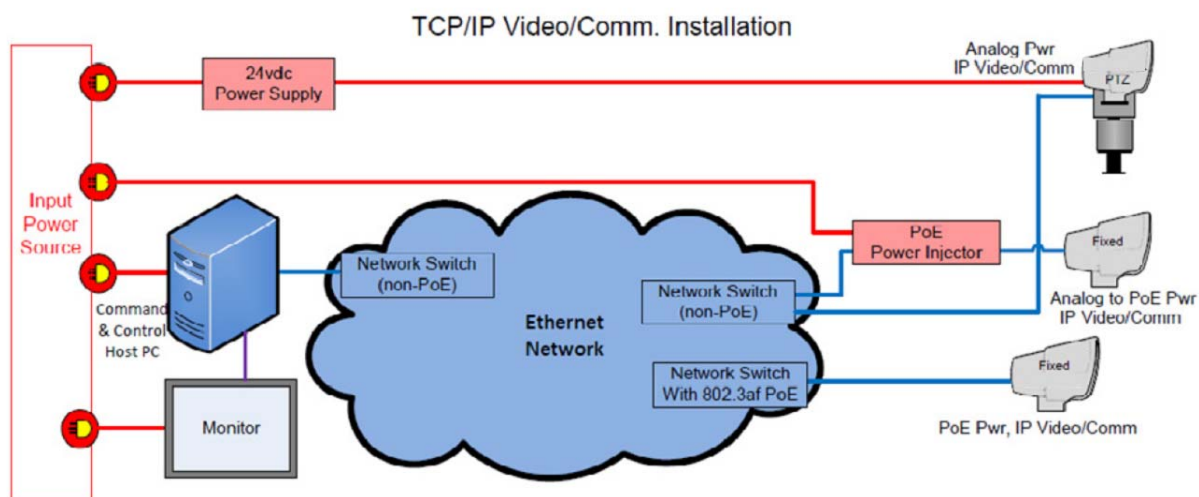| Connector Pin # | Signal name | Description | Input/Output |
|---|---|---|---|
| 8 | PWR_IN_RTN* | Power Supply Return | Input |
| 9 | PWR_IN* | Power Supply In | Input |
| 7 | GND | Chassis Ground | - |
| 13 | REMOTE_PWR | Remote Pwr ON/OFF | Input |
| 1 | VIDEO | Analog Video Signal | Output |
| 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 | 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

# System installation dimensions



328mm
(12.9")

473mm
(18.6")

415mm
(16.4")

# Typical system design



TCP/IP Video/Comm. Installation

# System drawings