



### Active IR Imaging

The Sigma Series PTZ delivers long range day/night surveillance. Its powerful 25-1500mm motorized zoom lens can detect intruders at distances of up to 15km. The high-output, continuous-wave laser provides recognition for up to 5km. Ascendent's Sigma Series delivers unparalleled video surveillance and situation assessment for perimeter protection and border defense.

### Industry Leading Performance

Ascendent's Active IR module combines laser diode technology, quality precision optics and sophisticated electronics. This creates long range active IR illumination greatly exceeding both the performance and distance of traditional IR LED illumination. The ASCLIR3000M-810 (IR Laser) synchronizes IR intensity and area illumination with motorized zoom optics for flawless active IR performance. This eliminates overexposure, washout and hotspots for unparalleled performance.

### Laser Infrared vs. Thermal Imaging

The Sigma Series offers significant advantages over thermal imaging by producing images with up to 500% higher resolution. Active IR also has the ability to illuminate through windows and other optically pure substances at night for both recognition and identification making it ideal for military installations, homeland defense, airports and critical infrastructure scenarios.

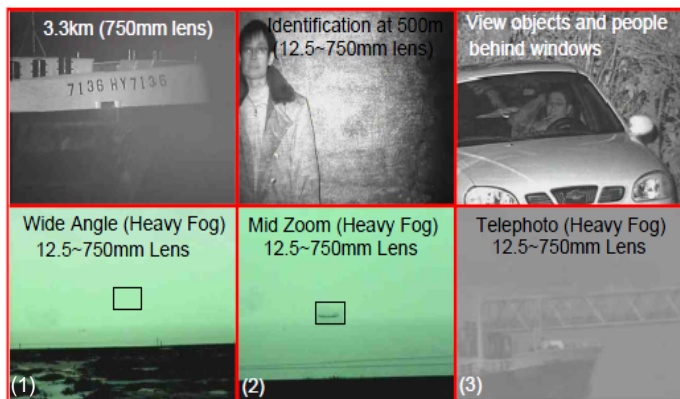
### Longevity and Reliability

The sigma Series are comprised of high quality precision engineered components for unparalleled performance and reliability. The heavy duty PT driver implements brushless motor technology for endless 360 panning and tilting in increments as low as .01 degree. All these components are integrated into a rugged IP 66 extruded aluminum or IP68 stainless steel, explosion proof housing for installation in the most hazardous environments and the harshest climates world-wide.



### Features (Depending on Model)

- Turnkey extreme Long Range 24/7 surveillance system
- True Day night performance
- Simultaneous variable laser beam control synchronized with optical zoom to provide maximum illumination at any focal length (syncs with motorized zoom lens)
- 4500m 14,765 ft) of Night Vision Distance
- Vari-Focal Laser Illuminator (VFLI)
- 25-1500mm optical zoom lens
- 1/2" infrared high sensitivity color to black camera
- 540TVL Color / 600TVL B/W
- Double optical filter switch
- Photosensitive automatic control
- High precision light axis adjustment
- 40kg rated heavy duty outdoor pan-tilt
- 0°~10°/s step-less operation .005° accuracy
- Rotate 360° horizontal
- Lens zoom & focus
- High strength aluminum alloy
- High impact resistant
- IP66/IP67 protection grade housing D.O.M.
- -40°C ~ +60°C Operating Temperature
- Optional 40-2200mm zoom lens





## **Pan-Tilt Resolver**

The heavy-duty PTZ driver is designed for extreme performance in the most demanding applications. It implements brush-less motor technology for endless 360° panning and micro step technology for precise .005° pan and tilt positioning. Advanced features – such as preset and auto cruise, will complement just about any existing equipment by means of Pelco D and Pelco P protocols

## **Radar Integration: “Slew to Cue” (Optional)**

A superbly effective and strategic solution uses radars in tandem with pan and tilt imagers (visible CCD and thermal) and software technology to automate many of the critical challenges that the security force faces. This allows trained personnel to react in real-time and relay critical information to tactical responders. This solution automatically detects and tracks moving objects and positions the camera to focus on the object. If the tracked object moves into a blind spot or out of a camera’s view, it will be picked up automatically by another camera and tracking will continue seamlessly.

## **Intuitive and User-friendly**

Although the Sigma series is an extremely sophisticated imaging equipment, it is operated by an intuitive user-friendly interface with multiple control options - such as touch screen and mouse. The Sigma cameras can also be controlled by a 3-axis joystick and can be operated by any individual without prior training.

## **Remote Connectivity (Optional)**

View all your cameras instantly and remotely, and control them through the internet in real time from anywhere in the world using ARMS (Ascendent Remote Management Software) with your laptop, iPhone or Android device. Because internet is often limited to low bandwidth satellites, Ascendent’s DVRs and IP cameras can record at one resolution, stream at another, and have integrated VBR and CBR to manage the amount of data and bandwidth that is used by each camera individually to ensure smooth operation on any network. Using the Trifusion platform, you can record, view and even operate up to 64 vessels simultaneously from one NVR allowing you to manage your whole fleet from one central location over the internet.

## **Rugged Robust**

The Sigma series is comprised of military grade precision engineered components and are manufactured using unique processes to offer absolute performance. All these components are integrated into rugged IP 67 Nema 4X enclosures constructed out of marine grade components to withstand the most brutal assaults and extreme climates (-40°C~60°C) for 24/7 operation in mission critical applications.

## **Gyro Stabilized (Optional)**

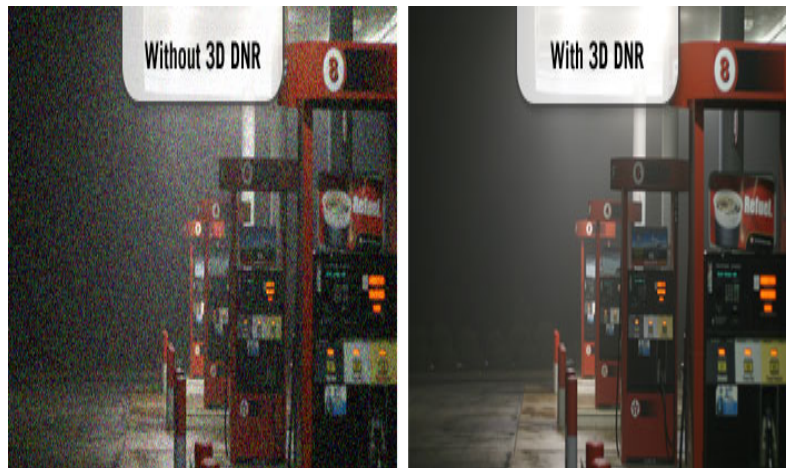
The Sigma series can be equipped with state-of-the-art gyro gimbal platform that keeps the cameras and sensors firmly stabilized, giving you clear images without degradation of the image typically caused by rough seas, strong wind, and swaying, thus making it ideal for marine, military and mobile applications.



### Ultra high sensitivity Day/Night Camera with ABF (Auto Back Focus) for 24 hours a day surveillance

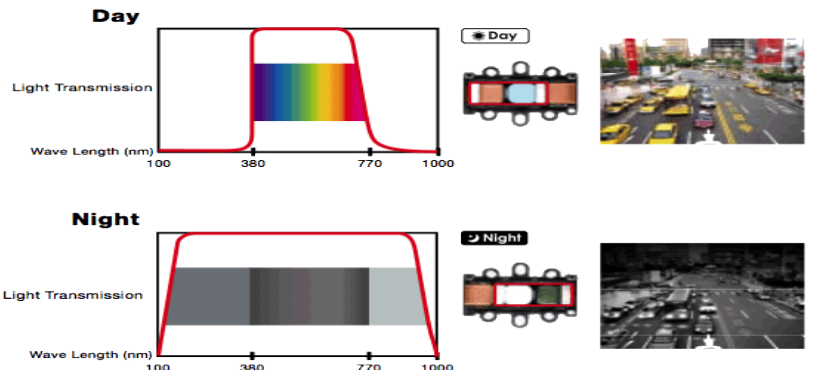
#### Key Features

- 1/2 inch CCD delivers high sensitivity high quality picture.
- High resolution: 540 TV lines typical / 520 TV lines minimum (Color HIGH mode), 480 TV lines minimum (Color NORMAL mode), 570 TV lines minimum (B/W mode)
- Ultra high sensitivity with Day/Night function: 0.009 lux (Color), 0.00008 lux (B/W) at F1.8. IR cut filter switches on and off, and ABF (Auto Back Focus) re-adjusts back focus upon color/BW switching to ensure picture quality of both color and B/W.
- ABF (Auto Back Focus) allows easy installation and stable focus in both color and B/W modes.
- Adaptive Digital Noise Reduction: 2D-DNR and 3D-DNR integration ensures reduced noise in various conditions.
- Peak mode enables appropriate light control to represent sharp bright object.
- BLC (Back Light Compensation): Preset/Manual (Mask 8 x 6) with Peak mode and level control
- Electronic sensitivity enhancement: Auto (Up to 32x) / Manual (Up to 128x)
- Electronic shutter from 1/100 (NTSC), 1/120 (PAL) to 1/10,000 sec.
- Video Motion Detector with Sensitivity 256 steps, Mask 8 x 6 areas
- Scene Change Detection alarms when lens is covered, spray painted, removed or defocused.
- Day/Night input and alarm output terminals
- Auto image stabilizer for applications where vibration or wind is a concern.
- Function command: Various functions such as shutter speed, sensitivity enhancement level can be controlled precisely by function number with Panasonic controller.
- Internal / Line-lock / Gen-Lock (VBS/VS) / Multiplexed Vertical Drive (VD2) synchronization
- Over the coaxial cable or RS-485 data communication (CLR model)
- 16 alphanumeric camera title display
- Multi language setup menu: English, French, Italian, Spanish, German, Russian



#### IR-cut Filter Removable

An ICR (IR-cut Filter Removable) is a mechanical shutter design. It is placed between the lens and the image sensor and is controlled by a motor or an electromagnet. When the ICR is switched on, it will block infrared light and allow only visible light to pass through. When the ICR is switched off, infrared light will be allowed and images will turn into black-and-white mode, which is more sensitive to infrared light.



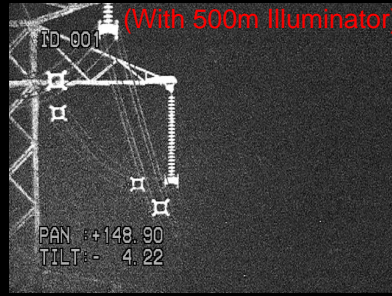


(With 3km Illuminator)

3.3km (750mm lens)



Illuminates through windows



(With 500m Illuminator)

1.2 km with laser illuminator



1.2km without laser illuminator

Depending on Model & Configuration

Optical	
Lens	12.5-750mm with 2x doubler 25-1500mm (Optional 20-3000mm with 2x)
Zoom	60x (optional 150X)
Camera	1/2 IR optimized fog penetrating camera 540TVL/600TVL (1/3 600/700TVL)
Minimum Illumination	• Ultra high sensitivity with Day/Night function: 0.009 lux (Color), 0.00008
Shutter Speed	1/100,000s
Active IR	
Distance	100m-3.5km clean IR illumination
Angle	.2-18° (syncs with Zoom lens)
Type	continuous laser IR diode (syncs with Zoom Lens)
Communications & Presets	
Presets	Up to 62 presets accurate to less than 0.1° (micro step technology)
Preset tours	6 Preset tours
Home Position	Yes (preset 1 or tour)
Communication	RS485 / RS422
Control Protocol	Pelco P / D extended protocols others available
Mechanical	
Drive Unit	Integral pan/tilt brushless motor drive micro step, pan and tilt
Pan angle and speed	360° continuous pan   Variable speed: up to 15°
Tilt angle and speed	15°   Variable speed: 1.2° to 3° per second
Speed Control	Closed loop electronics
Preset Accuracy	Better than 0.1°
Proportional P/T to Zoom position	Yes: Automatic adjust speed with zoom in for accurate pan tilt zoom
Physical	
Construction	Rugged, weatherized treated alluimium
Viewing Window	5mm thick tempered flat glass
Window Wiper	Wiper, Washer, Sunshield (optional)
Standard Colors	Silver, white, Black
Dimensions (Height X Diameter)	Depends on Configuration
Weight	Apox 38kg
Environmental	
Operational Temp.	-45°C to +55°C   -58°F to 131°F temperature controlled heater & blower)
Environmental	IP66, NEMA 4X Outdoor Weather Rating
Electrical	
Input Voltage	18VAC--24VAC/18VDC24VDC (CE, ROHS, FCC)
Power Consumption	

Customizations are available ask your Ascendent sales representative

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