Tdriver400

Intelligent ADAS Infrared Night Vision System for Vehicle Navigation

Tdriver400 is an intelligent ADAS infrared night vision system for vehicle navigation. It sees through the total darkness, thick smoke, dense fog, heavy rain and snow, reveals unexpected obstacles, highlights sudden events, improves visibility of road signs, navigates on unknown roads and overcomes blindness caused by oncoming headlights, thus dramatically lowers the risks of driving and enhances the safety of lives, properties and profits.

Featured razor-sharp live real-time imaging combined with an extremely wide viewing range ad incredible durability in diverse harsh environments.

Instant installation on any vehicles and best price-performance in the industry, **Tdriver400** is absolutely the perfect choice of a driving assistant vision systems.

Highlighting the non-luminous heating object

The night vision system can automatically recognize and highlights non-luminous heating object such as pedestrians, cyclists, vehicles and animal under all weather conditions. It can help the driver observe the object that can't be seen clearly when the headlight is turned on.

Longer detection distance

The far infrared night vision system can detect 300m under good visible condition. While the detectable distance, under bad weather (rain, fog, haze, dust, etc.), will shorten accordingly.

The irradiation distance of asymmetric beam is about 90m beside the opposite road. The irradiation distance is about 150m alongside the road. Even if the high beam is turned on, the irradiation distance is only 200m, which is shorter than the effective detectable distance of night vision system.

Besides, the pre-alarm function for the potential danger can gain precious time to warn driver to avoid accidents.
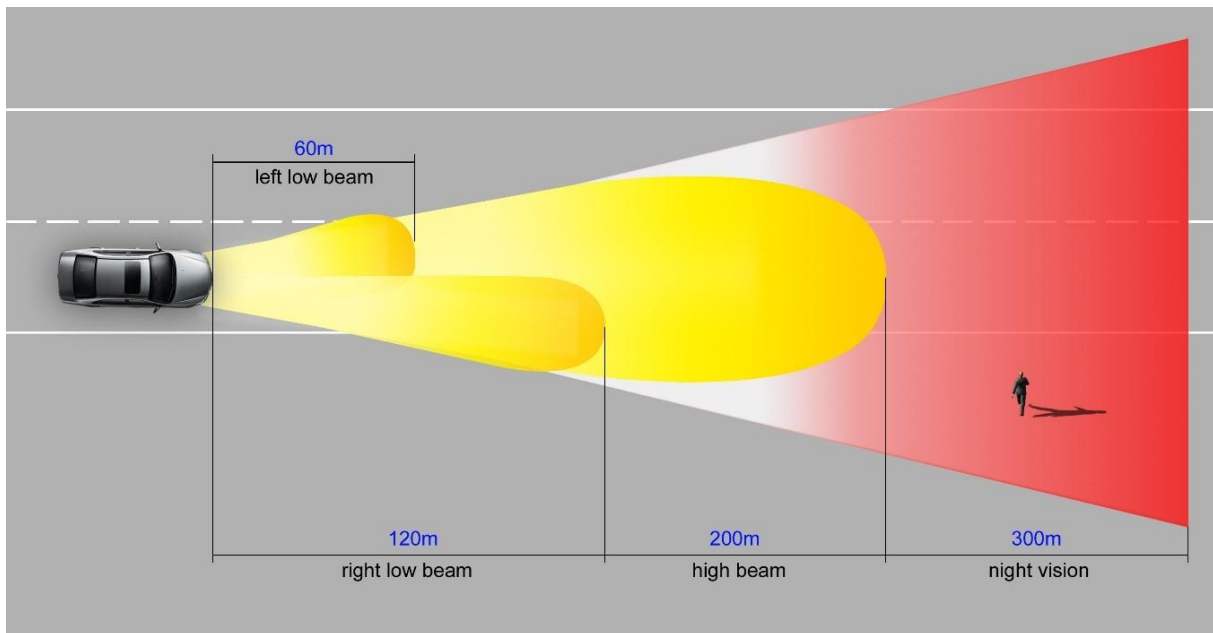
Anti-glare function

The NV system form the corresponding image by capturing external infrared radiant energy, so when meeting oncoming vehicle, the high beams on the coming vehicle don't have influence to the infrared imaging, efficiently reducing traffic safety problems caused by glare for the driver, enhance the 11 driver safety when meeting oncoming vehicle.
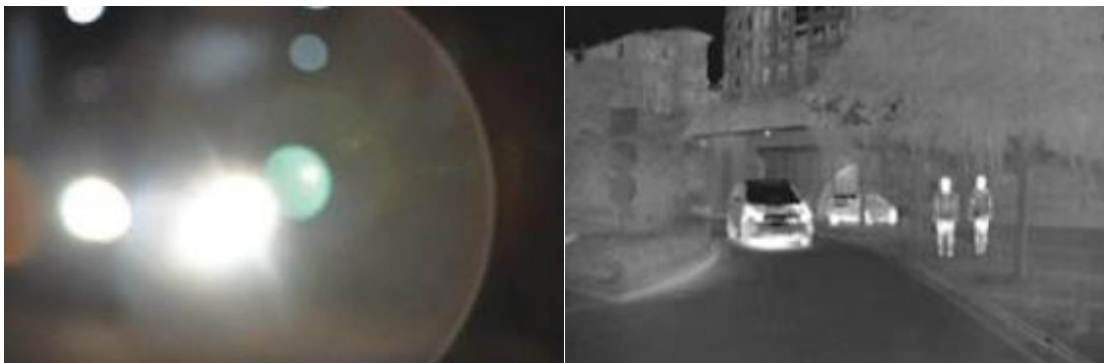
All-Weather Proof

Infrared night vision can adapt to a variety of bad weather (rain, fog, haze, dust, etc.), and not affected by the light, suitable for a variety of time period, which could be used under all kinds of weather conditions.

Pedestrian and Animal Recognition function

PSA Night Vision driving assist system could automatically identify and highlight the pedestrian and animal whose size exceeds 50cm inside the infrared image (Animal Recognition function is developing), also could make alarming to the possible collision hazards .The detection model is not only includes the upright walking routine pedestrians in front of vehicle(until 100 m), but also including some cycling, electric cars and motorcycles specially pedestrian.

PD (Pedestrians Detection)

1) When pedestrians walking in front of the driving vehicle with the distance of 20m to 40m, the pedestrians will be marked with a rectangular box in red; when the pedestrians approaching with dangerous, the PSD NV will eject a red triangle icon on display and blares in three alarming sound to remind driver take immediate action.

2) When pedestrians walking in front of the driving vehicle with the distance of 40m to 90m, the pedestrians will be marked with a rectangular box in yellow, at the meantime, the display will shows a yellow triangle icon to pre-alarm when pedestrians approaching; meanwhile the PSD NV will eject a yellow triangle icon on display and blares in one alarming sound to pre-alarm.

FCW (Front Crash Warning)

When potential front crash may happen, the PSA NV will trigger out yellow alarm and blare one alarm sound with the distance 60m~120m to the front vehicle; it will trigger out red alarm and blare three alarm sound when the distance approaching to 25m~60m.

Specifications:

Detector	
Detector	384×288, 25µm
Spectral range	8~14µm
Optics	
Focus /F#	14.8mm/0.96
Field of View	36°×27°
Image Presentation	
Image frequency	50Hz PAL/ 60Hz NTSC
Output resolution	768×576/720×480
Start-up time	≤6s
Calibration algorithm	Auto shutter calibration (shutter-less algorithm optional)
Image processing algorithm	Auto brightness & contrast / image enhancement
Intelligent alarm algorithm	People recognition (audio & mark alarm)
Electric Interface	
Power input	DC 7~36V
Communication port	RS232 (baud rate 9600) /CAN bus (optional)
Video output	CVBS single-ended/difference
Audio port	Standard audio port
Power Supply	
Regulated voltage	DC7-36V
Regulated current	0.24±0.02A (@12V), 0.6±0.1A (@12V, when heating up the front window)
Power consumption	≤2.8W (@12V), ≤8W (@12V, when heating up the front window)
Environment Compatibility	
Operating temperature range	-40℃~+70℃
Storage temperature range	-45℃~+85℃
Auto heater	If front window temperature is lower than 2℃±2℃, auto heater works; If front window temperature is higher than 7℃±2℃, auto heater stops work;
Salt spray	6500 working hours under Humidity 81%, temperature +25℃, refer to standard IEC60068-2-11Ka
Sand and dust	6 working hours under sand& dust density 10g/m3±3g/m3 , airflow velocity 10m/s, refer to standard GB/T2423.37-2006Lc1.
Shock	Half-sine wave, acceleration 30g, duration 11ms, 5times/direction, 3-axis/3-direction
Vibration	25-500-25Hz, sine scanning frequency 1 oct/min, Z-axis 3g, X, Y-axis 1.5g, 8h/direction
Encapsulation	IP67
Size	83mm×62mm×100.5mm
Weight	≤600g