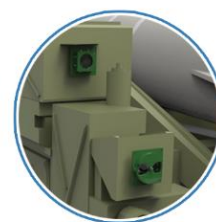# HP-SADAS300 Security Driving Assistance System

Introduction and Specifications

Introduction

In order to meet the combat needs of the army in modern war, improve the rapid mobility of special vehicles under special battlefield conditions, and ensure the smooth completion of combat tasks, visible light imaging technology, multi field of view splicing technology and ultrasonic radar detection technology are used for HP-SADAS300 intelligent safety assistant driving system. The system can assist the driver to identify the environmental obstacles on the road and give the driver safety tips in time under the complex conditions of night lighting, smoke, mist. It is of great significance to improve the mobility and driving safety of special vehicles in a specific combat environment.

HP-SADAS300 auxiliary driving system has perfect functions, advanced performance, simple operation, stability and reliability. It can adapt to bad weather such as high and low temperature, damp and hot, sand and dust, salt fog and plateau. At the same time, it adopts on-board seismic design, which can ensure stable operation under various road conditions, and can effectively meet the all-weather auxiliary driving needs of special vehicles in the field in day, night and bad weather.

Structure

HP-SADAS300 driving system is composed of front view components (one infrared camera module spliced with three cameras), rear view components (two rear view infrared cameras, two reversing radars and one radar control box), side view components (one left and right infrared cameras respectively), integrated display and control components (one display and control unit and one main box) and cables. The system adopts modular design, and each subsystem can be combined to facilitate users. Of which:

The front view component is a horizontal field of view splicing fusion module of three infrared cameras, with an ultra-wide field of view of 120 °, which is convenient for the driver to expand the observation field of view and enhance the sense of safety.

The rear-view component is composed of two wide-angle infrared cameras, two reversing radars and radar control box, which can provide the driver with dual safety warning prompts of image and sound during reversing.

The side view component is composed of wide-angle infrared cameras on the left and right sides, which can provide the driver with road condition monitoring on both sides of the vehicle during driving.

The integrated display and control assembly is composed of display and control unit and main box. The display unit adopts 12.3 ″ ultra-wide HD LCD for display, and various operation keys and buzzer alarm modules are integrated on the display and control unit; The mainframe box mainly integrates video coding storage, playback, circuit control, power management and other modules.

Cables include signal wires and power cables between equipment. The connectors of each cable adopt error proof design, and the plug and correspond only.

Features

- Modular, standardized and universal design is adopted, with rich and flexible functional configuration, high reliability and easy fault location and maintenance;

- The field of view splicing and fusion technology is adopted, with ultra-wide driving field of vision and realistic driving experience, which improves the driving safety of the vehicle to the greatest extent;

- Low illumination CCD imaging and high brightness infrared LED lighting are adopted to meet the needs of auxiliary driving under day, night and all-weather conditions;

- The combination of perimeter camera, ultrasonic radar, video and Audio Dual monitoring and early warning can provide omni-directional three-dimensional driving protection for drivers;

- Multiple display modes are adopted, which can be automatically switched with the driving state of the vehicle, or can be manually selected and set to meet the diversified monitoring needs of the driver;

- Adopt shock absorption and impact resistance design to meet the seismic requirements of on-board equipment under various adverse road conditions;

- It adopts military quality design, which can work stably in a wide temperature range and low pressure. At the same time, it has the abilities of waterproof, moisture-proof, wind and sand proof, salt fog proof and solar radiation proof, and has strong environmental adaptability.

Specifications

Model	HP-SADAS300
Front-View	1. Camera: low illumination CMOS 2. Detection distance: (2*10-3lux environment) the detection distance without auxiliary light source is ≥ 30m, and under the illumination of auxiliary light source, the detection distance is ≥ 80m 3. Field angle: 120 ° ± 5 ° (H) × 34° ±5° （V） 4. Resolution: ≥ 720 (H) × 576（V） 5. Auxiliary light source: infrared lamp, controllable 6. Overall dimension: ≤ 240mm × 180mm × 105mm
Back-View	1. Camera type: low illumination CMOS 2. Detection distance: (2*10-3lux environment) the detection distance without auxiliary light source is ≥ 20m, and under the illumination of auxiliary light source, the detection distance is ≥ 40m 3. Field angle: 78 ° ± 5 ° (H) × 57° ±5° （V） 4. Resolution: ≥ 720 (H) × 576（V） 5. Auxiliary light source: infrared lamp, controllable 6. Radar probe: 40KHz ultrasonic ranging sensor 7. Radar detection range: 0.1M ~ 5m 8. Radar detection accuracy: 0.1M 9. Overall dimension: rear view image ≤ 160mm × 160mm × 100mm；Radar control box ≤ 135mm × 75mm × 30mm
Side-View	1. Camera type: low illumination CMOS 2. Detection distance: (2*10-3lux environment)the detection distance without auxiliary light source is ≥ 10m, and under the illumination of auxiliary light source, the detection distance is ≥ 20m 3. Field angle: 75 ° ± 5 ° (H) × 55° ±5° （V） 4. Resolution: ≥ 720 (H) × 576（V） 5. Auxiliary light source: infrared lamp, controllable 6. Overall dimension: rear view image ≤ 100mm × 100mm × 110mm 7. Adjusting support: telescopic turnover, expansion amount 0 ~ 200mm, turnover angle ≥ 90 °
Screen	1. Display size: 12.3 inches 2. Resolution: 1920 × seven hundred and twenty 3. Installation method: hanging, reversible, unilateral turnover not less than 90 ° 4. System keys: including front view (splicing), front look around, rear view, rear look around, video output, channel selection, lighting, power supply, etc
Server Box	1. Video storage: continuous storage time ≮ 48H 2. Storage medium: vehicle mounted hard disk video recorder 3. Installation position: under the driver, outside the cab 4. System video export and playback
General	1. Power：DC 9V～36V 2. Consumption：≤100W 3. Working Temp：-40℃～+65℃

	4. Shaking: GJB367A-2001
	5. Humidity： GJB367A-2001
	6. Protection：IP66, water proof
	7. MTBF:≥3000h
	8. MTTR:≤0.5h

Application

Front Panorama (3 cameras)

Front Normal view （left/middle/light)

Back Normal View （Left/Back/Right)

Back View