DHI-HWS800A

Speed Measuring System

System Overview

The speed measuring system adopts a fully embedded system with functions such as vehicle speed measurement, image capture, video surveillance, and automatic recognition of number plate, lane, and large and small vehicles.

Compared with traditional radar system that separates industrial PC and IP camera, the integrated system, combining the company's technical advantages in intelligent traffic field, offers users with stable performance, powerful functions, and ease of installation.

Functions

Integrated and compact design, easy to install and maintain

- Integrates intelligent HD camera, control unit, LCD display, touch screen, power supply, speed measurement radar, and dedicated picture storage device, compact and attractive.
- Either portable or fixed, thanks to the integrated design.

Built-in large-capacity HDD for storing pictures and videos

The device can upload pictures to the central server for storage, backup, and viewing in real time, and supports 24-hour video recording or video footage of traffic violations for forensic evidence.

Capturing HD pictures for forensic evidence

- 9 MP high-definition CMOS camera helps capture pictures of traffic violations. Information such as vehicle speed, capture time, capture location can be displayed on the pictures.
- With the watermark function, any tampering with the picture can be detected.
- Monitors real-time conditions through LCD display or the web page of the device.
- Man-machine interaction interfaces facilitate user operations.

High-performance radar helps quickly and accurately measure vehicle speed. The speed measurement range is adjustable between 5km/h and 350km/h.

- Multi-lane speed measurement.
- Speed measurement of ultra-low speed vehicles.
- Supports local HDD storage and ANR (automatic network replenishment). It overwrites pictures automatically when memory is insufficient.
- Supports recognizing large, medium-sized, and small vehicles.
- Supports traffic flow statistics by minute.
- Detection of traffic violations such as overspeed, underspeed, running a red light, and more.
- Records vehicles with traffic violations, and links the captured picture to video.
- Data transmission, remote access and system maintenance are realized through Ethernet, 3G/4G and other technologies. You can also check the device operating temperature, operating status of major components, and more.
- NTP/GPS/BeiDou time synchronization; synchronization interval is adjustable; supports synchronizing with PC time.

Multiple networking methods

Connects to network by using wired network and 3G/4G, reducing the requirements on installation locations.

Ultra-low power consumption (solar power is supported)

The average power consumption of the device in screen saver mode (heating plate does not run in this mode) is less than 20W. External solar power system can be connected to supply power for the Radar.

GPS/BeiDou positioning

GPS/BeiDou positioning and time synchronization.

Multi-target tracking and recognition

Recognizes and tracks maximum 10 targets within 3 m–100 m (9.84 ft–328.08 ft).

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It is applicable to highways, city roads, and other scenarios that require speed measurement and traffic violations capture.

Technical Specification

Basic	
Snapshot Resolution	9 MP, 4096 × 2160 pixels
Video Resolution	2 MP, 1600 × 1200 pixels
Image Sensor	1" GS CMOS
Transmission Mode	TCP/IP, FTP
Image Compression	JPEG
Video Format	Standard H.264 high profile 5.0
Video Frame Rate	1 fps–16.6 fps
Lane Coverage	1–4 lane(s)
Speed Measurement Range	5 km/h–350 km/h
Speed Measurement Accuracy	Simulated Speed Measurement Error Range: ±2km/h
	On-site Speed Measurement Error Range: Vehicle speed <100 km/h: ±2km/h Vehicle speed ≥100 km/h: ±2%
Overspeed Capture Rate	≥90%
Small and Large Vehicles Recognition Rate	≥90%
Lane Recognition Rate	≥90%
Number of Snapshots	1, 2, or 3 snapshot(s)
Storage Capacity	500 GB (standard), 2.5-inch HDD
Radar Frequency	24.00 GHz–24.25 GHz
Radar Beam Angle	Horizontal: ±6° (–3db), vertical: ±5° (–3db)
Port	
Data Ports	1 RS-232 port, 1 100M Ethernet port, 1 USB2.0 port, 1 SATA port
Lithium Battery Port	1 port of 14.8V 13.4AH lithium battery
Power Input Port	1 19V DC power input port
Power Output Port	1 12V DC power output port, with maximum power of 5W
Flash Sync Port	2 (digital quantity)
LED Strobe Sync Port	1
Lens Mount	C mount
Capture Mode	
Passing Vehicle Capture	Yes, 1 or 2 snapshot(s) can be taken
Overspeed Capture	Yes, 1, 2, or 3 snapshot(s) can be taken
Underspeed Capture	Yes, 1, 2, or 3 snapshot(s) can be taken
Capture Running a Red Light	Yes, 1, 2, or 3 snapshot(s) can be taken
Capture Triggering Mode	
Triggered by Radar	Yes

Special Function	
License Plate Recognition	≥90% during daytime, and ≥80% at night
Lane Recognition	Yes
HDD Storage	Yes
PAL/NTSC Format Switch	Yes
Multi-target Tracking and Recognition	Recognizes more than 3 vehicles at distance of 5 m–80 m (16.40 ft–262.47 ft)
Positioning	GPS/BeiDou positioning
License Plate Cutout	Yes
Composite Image	Yes, 1, 2, or 3 snapshot(s) can be composited, and composition method can be selected
Image Wireless Transmission	4G
Auto Registration	Yes
Automatic Network Replenishment (ANR)	Yes
Time Synchronization	Local/GPS/NTP
Speed Overlay	Overlays vehicle speed to the front or rear side of a vehicle in the video image
Video Storage	Records and stores videos of traffic violations by periods
Storage Space	Supports setting picture and video storage quota to ensure enough storage space of pictures
ICR Switch	Day/night ICR switch
Remote Control	Remote control through the web interface or the client
OSD Overlay	Supports overlaying date, time, location, plate number, plate color, model, vehicle speed, speed limit, radar direction, violation code, device No., anti-counterfeit code, and more
Watermark	Watermark verification on the web interface
Image Tampering Prevention	Yes. Watermark is available for pictures and videos
Operating Environment	
Operating Voltage	19V DC; power adapter supports 90V AC to 264V AC, 50 Hz–60 Hz
Average Power Consumption	<25 W (in screen saver mode)
Operating Temperature	Lithium battery included: –20 °C to +60 °C (–4 °F to +140 °F)
	Lithium battery excluded: –40 °C to +70 °C (–40 °F to +158 °F)
Relative Humidity	20%RH–90%RH (no condensation)
Dimensions	224.6 mm × 244.0 mm × 289.0 mm (8.84'' × 9.61'' × 11.38'') (L × W × H)
Weight	9.0 kg (19.84 lb)

Ordering Information

Type	Model	Description
Speed Measuring System	DHI-HWS800A	Speed Measuring System
Lens	DH-PFL25-K10M	10 MP 1'' 25mm lens
Illuminator	DHI-ITALF-300AD-IR	DHI-ITALF-300AD-IR IR Flashing Light (select one of the two)
	DHI-ITALF-300AD	DHI-ITALF-300AD White Flashing Lght (select one of the two)
Cabinet (fixed)	DHI-BXH01M2	Vandal-proof Cabinet Components
Bracket (fixed)	PFA162	Illuminator Bracket
Bracket (mobile)	Benro A-2570T	Tripod for Speed Measuring System
	Benro A-214	Tripod for Flashing Light

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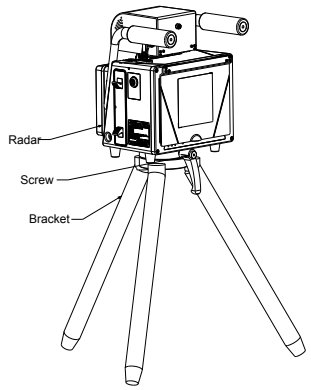

Dimensions (mm[inch])