

# DHI-HWS1800G-CS

## Radar Velometer



### System Overview

Radar Velometer harnesses the power of a 24 GHz radar, deep-learning algorithms, and its high performance AI processor to collect traffic information and metadata, delivering highly accurate information. It can transmit data through the wired network and wireless 4G network, and detects events such as speeding, driving slow and wrong-way driving.

### Functions

#### Violations Capture

The speedometer detects and takes snapshots of violations from up to 6 lanes, detecting as many as 64 targets at the same time.

#### Images and Videos

Supports storing and forwarding images and videos to the platform. You can search for images based on the time, channel, violation type, license plate, vehicle speed, lane, plate color, vehicle color, and more. Images and linked videos can also be downloaded and named, allowing you to customize the name to contain the properties attributed to ANPR and violation detection.

#### Automatic Network Replenishment (ANR)

Data that is generated while the system is offline is uploaded straight to the platform after the network is restored.

#### Manual Upload of Images

Images can be manually uploaded to the platform and FTP server. You can filter them, and configure details, such as their channel, time and image type, prior to the upload.

#### Upload Status

The upload status of images is displayed on both platforms, and the time when the images were uploaded or failed to be uploaded is recorded.

#### Wireless 4G

With its built-in 4G mobile network module, you can register devices

- Built-in AI algorithm that recognizes the multiple features of vehicles.
- Overlays the metadata on videos and images, including the vehicle information and the speed of speeding vehicles.
- Offers live view and history data search for videos and images, and custom filter search for events and license plates.
- Monitors road events all day long, and detects no less than 64 target vehicles at the same time.
- Strong light suppression through the image algorithm, true WDR, advanced 3DNR, and various white balance modes that enable the device to be highly adaptive to a wide selection of scenes.
- Built-in IR illuminator that ensures continuous monitoring whether day or night.



to the platform wirelessly when a 4G card is inserted into the card slot. Data on violations, ANPR and more can also be sent to the platform through the wireless network.

### Scene

It is ideal for use in scenarios that require vehicle related event detection and traffic data collection. Use it on highways, urban expressways, urban roads, intersections and other similar locations.

## Technical Specification

### Basic

Image Sensor	2 × 1" GS-CMOS
Electronic Shutter Speed	Auto/Manual 1/50 s–1/100,000 s
Iris Control	Manual
Image Resolution	2-ch, max. 4096 (H) × 2160 (V) (OSD black background is not calculated in the pixels)
Video Frame Rate	50 fps
Video Bit Rate	H.264: 32 kbps–32,767 kbps H.265: 32 kbps–32,767 kbps MJPEG: 512 kbps–32,767 kbps
Video Compression	H.265;H.264;MJPEG
Image Encoding Format	JPEG
White Balance	Full-automation; High color temperature; Partial auto; Low color temperature; Auto color temperature
Exposure Mode	Auto
Composite Image	Combines up to 3 images into 1 composite image
Speed Measurement Range	–300 km/h to +300 km/h (–984,251.97 ft/h to +984,251.96 ft/h)
Speed Measurement Error	On-site speed measurement error: <100 km/h (<328,083.99 ft/h): -2 km/h to +2 km/h (-6,561.68 ft/h to +6,561.68 ft/h) ≥100 km/h (≥328,083.99 ft/h): ±2%
Radar Frequency	24 GHz–24.25 GHz
Transmit Power	20 dBm (100 mW)
Response Time(Radar)	30 ms
Detection Range(Radar)	18 m–80 m (59.06 ft–262.47 ft)
Bandwidth(Radar)	150 MHz
Detection Angle(Radar)	Horizontal: 48°

### Function

Trigger Mode	Radar Trigger
Storage	HDD (1 TB HDD included)
Anti-deletion	Video recordings and images cannot be directly deleted
Vehicle Search	Search by time, channel, violation type, license plate, speed, and lane
Alarm Event	Storage error alarm, blacklist alarm, and more
Shutter Mode	Holographic double shutters;Single shutter
OSD Overlay	Overlays time, location (channel address), lane (lane number/direction), plate (number and color), vehicle (speed, length, color and type), and violation (name and code). It also overlays vehicle speed on the image of the captured vehicle
Automatic Network Replenishment (ANR)	Platform; FTP
4G	Yes
Auto Registration	Yes
Security	Username and password authorization; MAC address binding; HTTPS encryption; network access control

Positioning	GPS
Image Tampering Prevention	Watermark and verification are available for videos and images
Target Detection	Recognizes and tracks no less than 64 targets

### Intelligence

ANPR	Recognizes different plate colors in the daytime, including red, yellow, black, white, blue, and green
Vehicle Color Recognition	Recognizes different vehicle colors in the daytime, including white, pink, black, red, yellow, grey, blue, green, dark orange, purple, brown, and silver grey
Violations Snapshot	Supports manual capturing; Detects events including ANPR, speeding, driving slow, and wrong-way driving
Traffic Flow Detection	Local vehicle counting
Video Metadata	Recognizes vehicle type, logo, and more

### Port

Power	1 × AC power input (built-in lightning protector)
Network Port	1 × RJ-45 (built-in lightning protector), 100/1000 Mbps Ethernet port

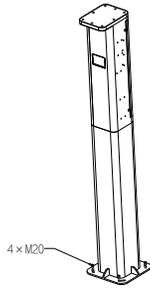
### General

Power Supply	220 V
Power Consumption	<2000 W
Operating Temperature	–40 °C to +65 °C (–40 °F to +149 °F)
Operating Humidity	10%–90% (RH), non-condensing
Product Dimensions	450 mm × 4,100 mm × 600 mm (17.72" × 161.42" × 23.62") (W × H × D)
Net Weight	325 kg (716.5 lb)
Gross Weight	388 kg (855.39 lb)
Installation	Floor-standing

## Ordering Information

Type	Model	Description
Radar Velometer	DHI-HWS1800G-CS	Radar Velometer

Installation



Dimensions (mm [inch])

