[CLAIMS]

1. A vehicle position confirmation system of a parking lot using an imaging method, the system comprising:

a camera module installed at a top of the parking lot to photograph a plurality of parking surfaces partitioned in the parking lot; and

an image analysis device for processing an image photographed by the camera module,

wherein the camera module further includes:

an omnidirectional camera for photographing a detection image of all directions; and

a plate number recognition camera for photographing a license plate of a vehicle parked on the plurality of parking surfaces,

wherein the image analysis device further includes a sensing unit for determining whether or not a vehicle is parked on the plurality of parking surfaces using the detection image, and

wherein the omnidirectional camera is an omnidirectional dual camera provided with a first fisheye lens for photographing a first detection image of all directions and a second fisheye lens for photographing a second detection image of all directions.

2. The vehicle position confirmation system of a parking lot using an imaging method system according to claim 1,

wherein the sensing unit determines whether or not a vehicle is parked on the plurality of parking surfaces based on the first detection image and the second detection image.

3. The system vehicle position confirmation system of a parking lot using an imaging method according to claim 2,

wherein the image analysis device further includes:

a position determination unit for measuring, if it is determined by the sensing unit that a vehicle is parked, a first distance between the parked vehicle and the omnidirectional dual camera using the first detection image and the second detection image, and determining a position where the vehicle is parked based on the measured distance; and

a plate number recognition unit for extracting, if it is determined by the sensing unit that a vehicle is parked, information on a license plate of the parked vehicle using an image photographed by the plate number recognition camera.

4. The system vehicle position confirmation system of a parking lot using an imaging method according to claim 3,

wherein a factor related to a difference between the first detection image and the second detection image is used for the measurement of the first distance of the position determination unit.

5. The system vehicle position confirmation system of a parking lot using an imaging method according to claim 2,

wherein the sensing unit further includes:

an area setting unit for setting an area of the plurality of parking surfaces photographed within the first detection image and the second detection image;

a feature extraction unit for extracting a feature vector from each area of the plurality of parking surfaces set by the area setting unit; and

a detection unit for determining whether or not a vehicle is parked in the area of the plurality of parking surfaces using the feature vector.

6. The system vehicle position confirmation system of a parking lot using an imaging method according to claim 2,

wherein the image analysis device further includes a security module provided with a memory for storing the first detection image and the second detection image.

7. The system vehicle position confirmation system of a parking lot using an imaging method according to claim 2,

wherein the omnidirectional dual camera further includes:

a first image sensor associated with the first fisheye lens;

a second image sensor associated with the second fisheye lens; and

a single image processing unit connected to the first image sensor and the second image sensor to process signals transmitted from the first image sensor and the second image sensor,

wherein the image processing unit creates the first

detection image using a signal transmitted from the first image sensor and the second detection image using a signal transmitted from the second image sensor.

8. The system vehicle position confirmation system of a parking lot using an imaging method according to claim 1,

the system further comprising a pole fixedly installed on a ground of the parking lot and installed with the camera module on a top,

wherein the camera module is installed within a predetermined range of height from the ground.

9. The system vehicle position confirmation system of a parking lot using an imaging method according to claim 1,

the system further comprising a full-empty parking indicator for outputting a preset indication related to whether or not a vehicle is parked on the plurality of parking surfaces,

wherein the image analysis device controls output of the full-empty parking indicator according to determination of the sensing unit.

10. A control method of a vehicle position confirmation system including a camera module installed at a top of the parking lot to photograph a plurality of parking surfaces partitioned in the parking lot; and an image analysis device for processing an image photographed by the camera module, the method comprising:

a first step of photographing a first detection image of all directions and a second detection image of all directions using an omnidirectional dual camera;

a second step of determining whether or not a vehicle is parked on the plurality of parking surfaces using the first detection image and the second detection image;

a third step of measuring, if it is determined at the second step that a vehicle is parked, a first distance between the parked vehicle and the omnidirectional dual camera using the first detection image and the second detection image;

a fourth step of determining a position where the vehicle is parked based on the measured distance; and

a fifth step of extracting information on a license plate of the parked vehicle using a license plate of the parked vehicle photographed by a plate number recognition camera,

wherein the camera module is configured of the omnidirectional dual camera and the plate number recognition camera, and

wherein the omnidirectional dual camera is provided with a first fisheye lens for photographing the first detection image and a second fisheye lens for photographing the second detection image.