

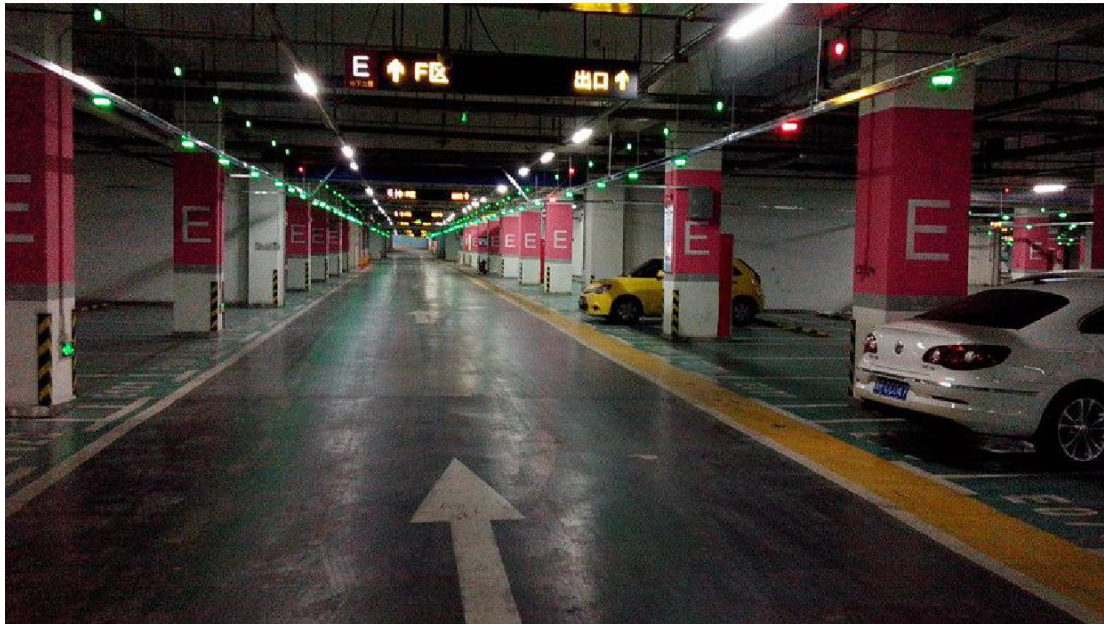
Ultrasonic 2 in 1 Sensor Parking Guidance System Program

Introductions:

The parking Guidance Information System (PGIS) based on the computer and MCU as the core of the intelligent parking lot parking guidance system.

Parking Guidance System mainly uses for guiding, easing traffic and offering real time parking information for motorist. Many cities suffer from lack of parking or have a large amount of traffic in search of a parking space, no matter in Airport, Office building, Shopping mall, Factory, Government unit or Business Avenue, etc.

In order to make everything simple and convenient, COMA is one of the best parking guidance information system(PGIS) supplier in China set up a professional team to work complete solution for parking garage management.



Working Principle

>1. Parking Lot Detector (PLD) constantly detects the presence of a vehicle using Ultrasonic wave, if any vehicle is parking on the space, PLD will send command to LED indicator which in the sensor and the indicator will turn **RED**, otherwise the indicator will show **GREEN** color. (Parking lot detector and work independently)

>2. Meanwhile the PLD will immediately transmit its status to Region Controller Module (RCM) that collect and forward the information to Section Controller Module (SCM), which will process those data and send to Guidance Controller Module (GCM), at last GCM send relevant command to RCM or Parking Guidance Display Screen (PGD).

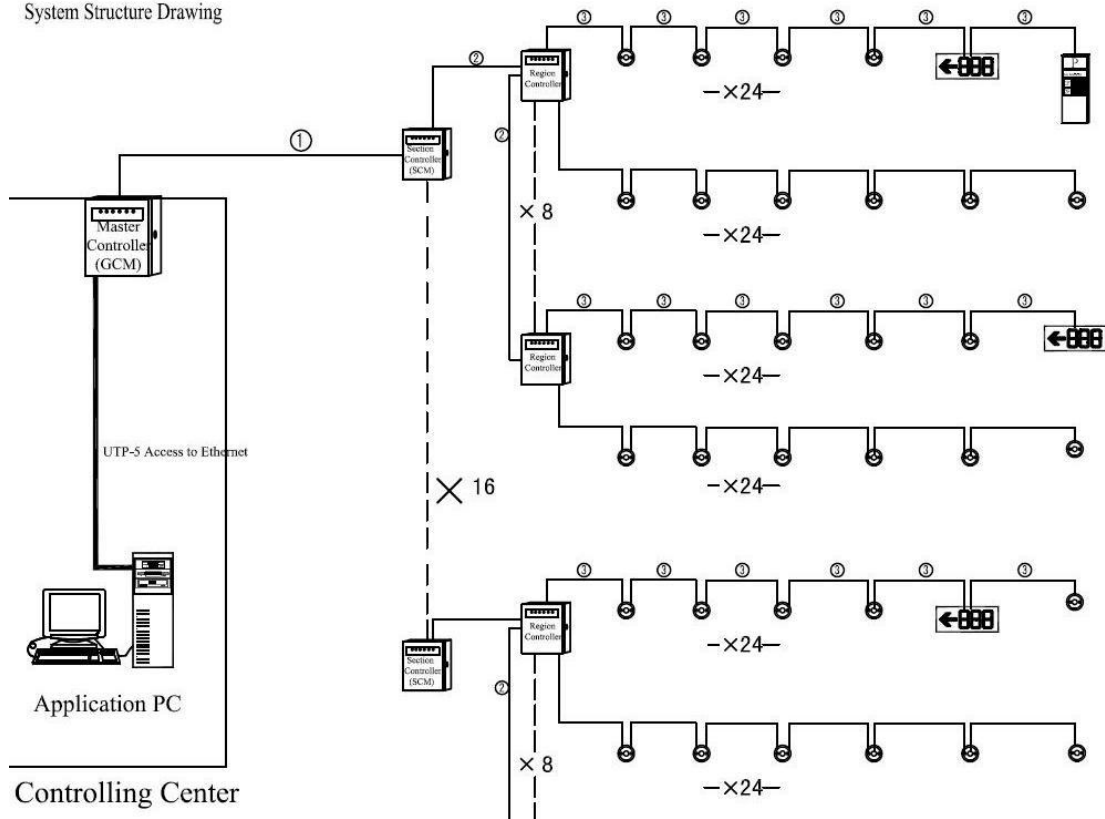
>3. To make the parking spaces information updating in time to afford over parking, install vehicle Flow detecting system at the entry lane and exit lane.

>4. Parking Lot Detector, Led Display screen and Vehicle Detector all connect to **Distributed 3-level control system**. Then the system can run offline independently.

>5. The System Management Software can set the whole system, function of this software as below:

- 1). Feedback the real time occupancy situation to the control room.
- 2). Realize such management functions: parking spaces usage statistics, parking spaces number correction, reserve parking spaces and report printing.

System Structure Drawing



Applications:

Mainly for large underground busy parking lots. Like **Government building, Super market, Airport, office building, shopping mall, factory or Business Avenue, Railway station and public parking lots.**





System Components:

1) . Ultrasonic 2 in 1 Parking Lot Detector.

Ultrasonic detection unit install at the front of parking space to monitor presence of vehicle and provides real-time information to PGIS system.

Built in High brightness soft light LED indicator, 2 function in 1 product, Red Color indicates space occupied, Green Color indicates available. Save product cost and construction cost for you.

It is mainly used in indoor parking lot parking status detection. (Outdoor parking lot detector and wireless parking lot detector are also available).

Parking Lot Detector consists of 2 parts: Detector and Pedestal (Free) .



Operation voltage	18-30V,Recommend:24V	
Power consumption	0.5W	
Operating principle	Ultrasonic measuring	
Detecting range	50cm-420cm	
Communication mode	RS485	
Dimension	Φ130*80mm	
Operating temperature	-20 to +50 degree	
Typical Current	Red light: 65mA,	Green light: 56mA
Application	Indoor hoisting	
Mounting	Hoisting	
Uplink	Uplink to Region Controller RCM standard series	

2). Region Controller Module(RCM)

Region Controller Module is the third layer of the Three-Layer network in the Parking Guidance Information System (PGIS), which play an important role in ensuring the system's security, reliability and efficiency. RCM down link Parking Lot Detector, Display screen, Guidance Arrow, etc. It can manage 0-64pcs terminal equipment(0~64pcs detector, 0-16pcs LED display). Cycle detect the status of detectors and transmit related information to SCM.

3). Section Controller Module(SCM)

Section Controller Module is used to collect data of Region Controller and forward the data to Master Controller. SCM is the second layer of the Three-Layer network in the Parking Guidance Information System (PGIS). It can manage **8pcs** Region Controller Module.

4). Guidance Controller Module(GCM)

Guidance Controller Module is installed at central control room, using embedded micro computer. It is the first Layer of the Three-layer network in parking guidance system, GCM can accomplish the whole system equipment controlling, data collecting, handing and issuing. Guidance Master Controller can off-line to run independently. It can manage **16pcs** Section Controller Module.

Data Collector serves as a bridge commenting center processor to Ultrasonic sensors and LED Display. It picks up sensor information and transfers to center processor and also helps to transfer availability information from center processor to LED Display



5). Entry Parking Guidance Display Screen

(You can customized it)

The Parking Guidance Display Screen placed at the main entry of Parking Space to show the drivers the available lots of each floor. And will guide the driver parking timely. By this way, avoid traffic congestion at the parking lot entry and increase turn over rate of parking space. Generally, vertical parking guidance display screen installed at out door. It adopts outdoor highlighting, can also see clearly in the sun.

Entry Parking Guidance Display Screen 's cabinet is waterproof and antirust.



Power supply	AC220V±20% /1A
Communication port	RS485
Power consumption	Each layer is about 20W
Operating temperature	-20~+65 degree
LED dot matrix	16*32, P10 green dot matrix
Communication Rate	9600bps
Character size	55*125mm
Dimension	1700*500*150mm (Max 4 layers display, if larger, the shell needs to be customized)

6). Hoist Parking Guidance Display Screen.

Hoisting Parking Guidance Display Screen Placed at indoor main channel's intersection or corners can give the driver ocular guidance prompt and rapid distribution vehicles, avoid straying occupied parking space and congestion.

Power supply	AC220V±20%
Communication port	RS485
Power consumption	Single direction <20W
Operating temperature	-20~+65 degree
Working humidity	10-90%
LED dot matrix	16*32, green dot matrix
Character size	55*125mm
Dimension	385*230*80mm for 1(or 2 or 3) direction display with light box

Make the use of parking resource maximum efficiency.

7). Management Software

Multi- language graphical application developed based on SQL database software with intuitive UI. Simplified operation & Complete functions.