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# CITY PARK WEB

## PARKING GUIDANCE SYSTEM

### Control and Management System for guiding drivers to vacant parking spaces on WEB platform

The parking control and management system allows citizens, and in particular drivers, to immediately read on VMS the free spaces available in different car parks, located in an area or in a specific zone of the city.

The control system consists of a Central Remote Data on WEB platform, which convey all the information of available places, provided by the local control stations and it has the function to send the number of available spaces to the info signs located in town via TCP / IP. The control equipment of each local parking receives the signal of vehicular traffic (input / output) from the directional detectors (magnetic sensors) and shall update the relevant local variable message signs via cable or radio.

The LCD panel of each unit of local control displays, by means of a specific algorithm, the number of total spaces, occupied and vacant. Operators can change the number of spaces occupied / available by a special multifunction keypad. Each Parking is provided with one or more variable message signs with "LED" technology that show the status of the parking lot "Free / Full" and the number of vacant spaces by 3-digit display.

The connection between the Central Remote Data and the parking lots is made by GPRS / Ethernet transmission.

### System Architecture

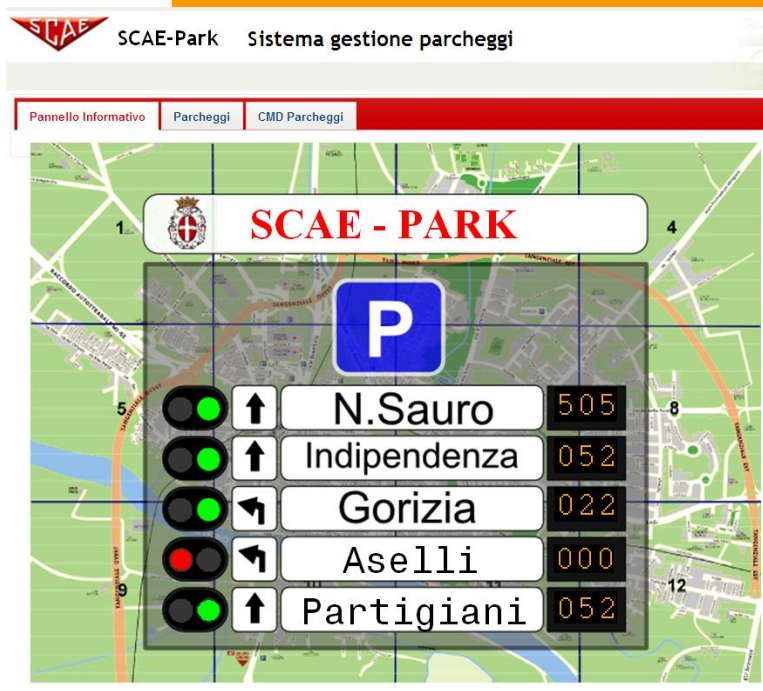
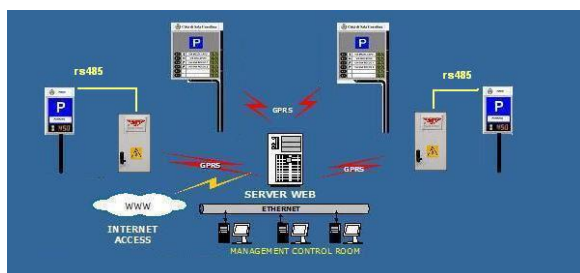
The Parking Control and Management System consists of the following stations: local control stations; Central supervision Station.

The local control stations, formed by an industrial PC with customized software, are able to perform all control activities, viewing, editing, storage etc. requests, in stand-alone operation. Local stations are connected to a central supervision system from which you can perform different operations.

The central station can show data of local stations and, if allowed by login and password, interact with the same (change parameters, increase or decrease available spaces, total volume, occupied, etc. read or download historical data etc.).

The link between local stations and central station is realized via APN or VPN communication and it allows access via GPRS / Ethernet. The communication network towards peripheric stations is managed by modules (Front End) that have the function of making the system transparent to the different type of supported media, such as:

- GPRS - UMTS
- Ethernet
- Fibre optics
- Wireless IP network



INFO SIGN

## LOCAL CONTROL STATIONS

### Construction features

Formed by a floor standing cabinet in thermoplastic fiberglass loaded material, IP55 protection degree, with mounted inside:

- 19" Euro standard rack complete of
  - Industrial PC card
  - Power supply
  - Loop vehicle directional detector
- Control Panel with LCD display with 80 characters (mounted on service door with passkey)
- GPRS Modem
- Network board TCP-IP
- Circuit breakers and sectioning switches
- Surge Filters
- UPS group to guarantee the counting system operation even in case of temporary absence of the mains voltage

### Functional characteristics

The control unit manages the flow of vehicles and communicate to the sign displays the number of vacant places in the parking lot and Free / Occupied status.

This information (along with other possible diagnostic information) is also reported to the control center.

The unit also saves the file of following data:

- the number of vehicles entering within the time period
- number of vehicles exiting within the time period
- number of vehicles at the end of the time period

### Monitoring

- N° of vacant spaces
- N° of vacant spaces xxxx
- N° of occupied spaces xxxx
- dd/mm/yy hh:mm:ss

### Anomalies

- detector anomalies
- communication anomalies

### Diagnostics

- Communication tests between signs and equipment

### Supervision station

The control system is based on a WEB SERVER that runs a software application that allows monitoring / control of the parking lots.

The web platform, which is based on the Control Center Parking, consists of the following basic modules:

- Operator interface for remote management of the parking system
- Archiving and analysis of statistical data

However the system is expandable and structured so as to allow the build up of a real system and to extend it easily both as structure and as number of controlled parking, even using different types of communication networks.

The "user friendly", system, includes the following features:

- Easy access WEB based
- MMI simple and easily customizable
- High level of integration with many resources
- easy to understand
- Control software

In addition, the software has a graphical interface that allows to:

- View the status of the signs
- View the occupancy status of the parking
- Configure the local stations of parking control
- View the operating status of all system components
- Activate diagnostics operations
- Collecting and Archiving statistics data
- Convert files with statistical data in text or graphic format.

## LOCAL VARIABLE MESSAGE SIGNS

Panel PARK140C.03.01.SE.485 realized in single and double sided, with indication of one parking area; panel with one row of numbers with 3 Digit h 140mm, indicating vacant spaces and Vacant/Full by red / green display.

The casing of the full panel is made of a frame in aluminum (alloy 6060) realized with special profile assembled by welding, treated with epoxy powders for outside use.

The front / rear sides are made of polycarbonate with a thickness of 6 mm in order to ensure an adequate flatness. The areas for displaying fixed messages are decorated with stickers (adequate for use) from inside so as to allow cleaning of the panels on the outside without damaging them. The area dedicated to the message is transparent and the LEDs are protected against sunlight incidence through suitable aluminum finned grids. The housing is closed by a rear door equipped with suitable gaskets through triangular key locks. The fixing is provided on the pole by stainless steel bolts, on the lower horizontal side.

Pole is treated with paint iron color, complete with templates and anchor bolts.

### General Specifications

- Housing made of extruded aluminum welded, treated with gray epoxy powder.
- Front methacrylate 6mm backdecorated
- Backlight using fluorescent lamps with automatic switch on
- Display modules with amber led:
- Lines 1-3 Digit 140 mm for displaying vacant spaces (999) + SE red and green
- Automatic brightness adjusting
- Serial input RS485 (our standard protocol)
- Power supply: 230Vac / 100VA
- Dimensions in mm L 850 H 1120 p 150
- Protection degree IP54
- Pole for side or centered mounting, H 250 cm from the lower side of the sign

## CARTELLI REMOTI RIEPILOGATIVI A MESSAGGIO VARIABILE

### General Technical Specifications:

6 numerical lines 3 DIGIT (999), with indication of the vacant spaces and traffic lights R / G D.80 mm for each parking area  
Display modules with LED amber:  
Automatic brightness adjustment  
RS232 serial input our standard protocol  
Power supply 230VCA +/- 10%

### Backlit Static area with automati switch on:

Material: transparent polycarbonate 4 mm  
Internal graphics: with self-adhesive film PVC

LED back lighting fields: P, arrow, status, nomenclature

Dimensions in mm: L 2400 H 2300 p150 excl. City Plate

Power supply: 230Vac +/- 10% - 300W max

Weight in Kg .: 110 excluding pole / brackets

Case in extruded aluminum treated with epoxy for outdoor use

Degree of protection IP54

Opening on backside by means of service doors vertically hinged with security triangular keys

Front side in aluminium and polycarbonate.

### Radio receiver

Radio receiver 500mW RMO500 Slave, complete with power supply and in-built antenna.



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