



PARKING GUIDANCE and MONITORING

OYIS is a parking guidance and monitoring system for indoor parking lots to aid drivers in quickly finding best place.

BENEFITS

- ▶ Reduced time in search for free parking lots --> Less noise + less air pollution + less gas consumption
- ▶ Prevention of long queues within the parking area through using all available spaces --> No stress + More time for shopping
- ▶ Optimization of parking spaces and levels through guidance
- ▶ Elimination of additional personnel for traffic control
- ▶ Real time monitoring of entire parking area on PC
- ▶ Stand alone operation without PC
- ▶ Integration into existing building automation systems possible via PC

HIGHLIGHTS

- ▶ Ultrasonic sensors for reliable space detection
- ▶ Diffuse two-color space indicators for superior visibility up to 100 meters
- ▶ Large two-color arrows for perfect guidance
- ▶ Easy installation on standard cable trays with minimal modification and wiring



SPACE DETECTION

Ultrasonic transceivers are used for space and object detection between 0.5 and 5 meters distance.

- ▶ Operating Frequency : 40.0 ± 1.0 kHz
- ▶ Directivity in X : 115 ± 15°
- ▶ Directivity in Y : 65 ± 10°
- ▶ Mean Time Between Failure : 50,000 hours



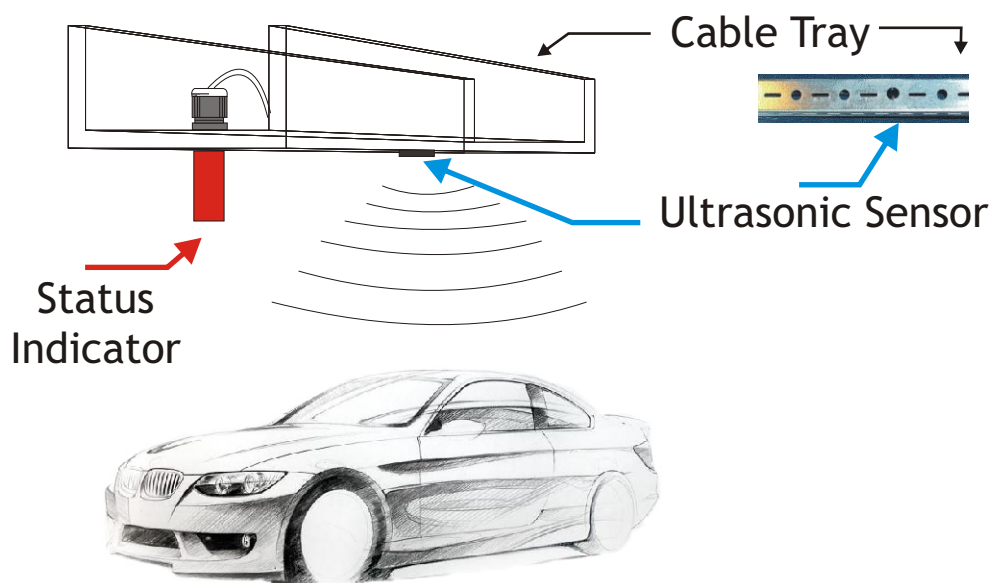
SPACE INDICATION

Two-Color diffuse space status indicators provide 360° visibility from 100 meters distance

- ▶ RED : Space in Use
- ▶ GREEN : Space Free
- ▶ FLASHING RED : Reserved
- ▶ NO LIGHT : Error (No Reflection)



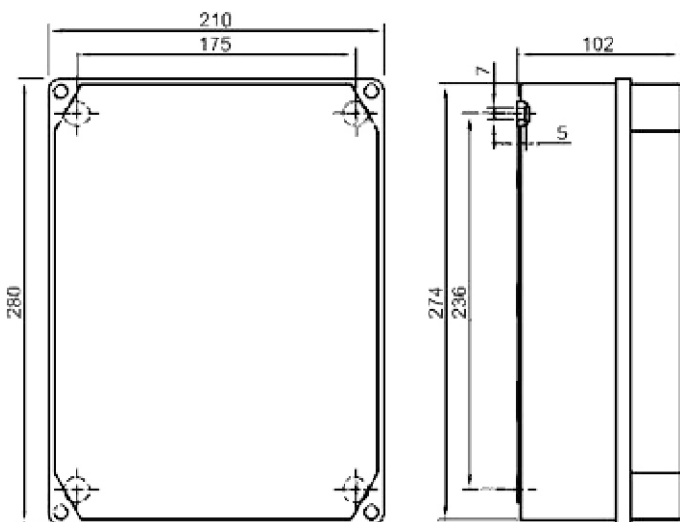
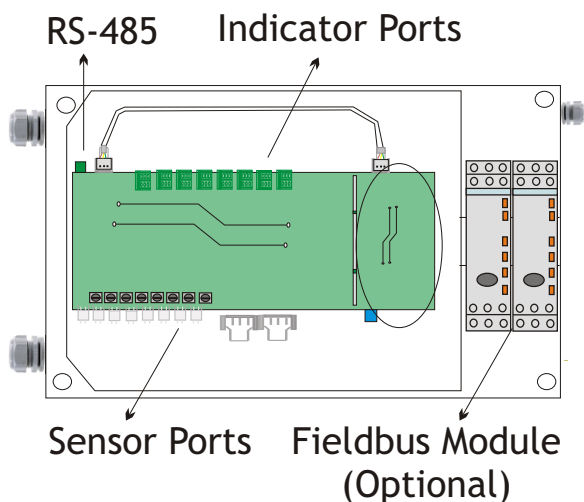
TYPICAL SENSOR & INDICATOR INSTALLATION



FIELD CONTROLLERS

Sensors and indicators are connected to the field controllers.

- ▶ IP67 protected
- ▶ 24Vdc or 220Vac supply option
- ▶ Low power consumption (2.5W)
- ▶ 8 spaces can be controlled by 1 Field box
- ▶ 63 field boxes can share one common RS-485 line
- ▶ Isolated RS-485 port guarantees superior noise immunity
- ▶ Screwless connection terminals



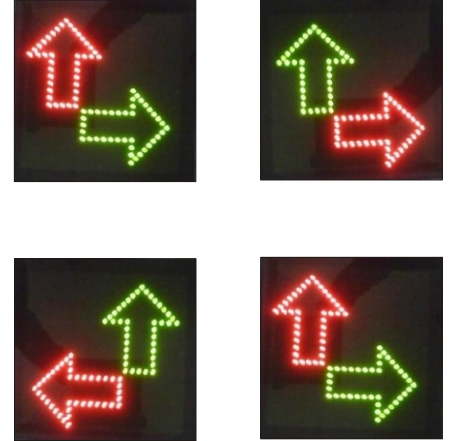


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GUIDANCE SIGNS

Drivers are guided to the empty parking lots through 4 arrow signs integrated in a 320mmx320mmx10mm polycarbonate housing. Depending on the state of parking lots available

RED or **GREEN** AHEAD or RIGHT or LEFT will be displayed.



SPACE COUNTERS

Space counters inform drivers about available parking lots at the entry of the building and individual levels.

Display size, color and configuration can vary according to customer's needs.



MASTER CONTROLLER

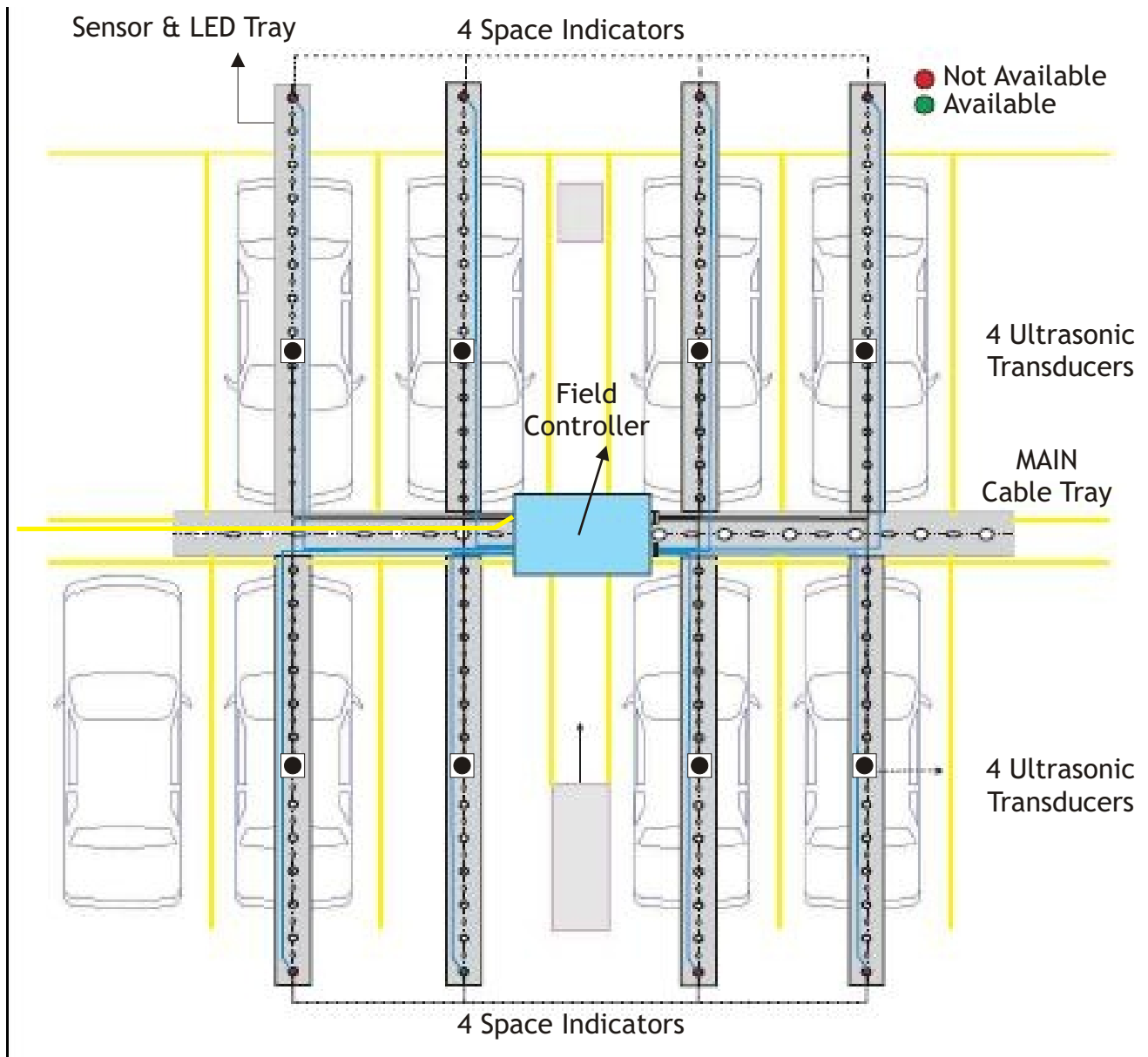
Master controller orchestrates entire data traffic between PC and submasters.

SUBMASTERS

Submasters act as arbiters between field controllers and the master controller.

SAMPLE CABLE TRAY INSTALLATION

Top view of sensors and space indicators installed on trays is shown below for clarity (superimposed on the architectural drawing). A total of 8 sensors and 8 indicators are connected to a single field controller box. Cable lengths for sensors are allowed up to 12m; for indicators up to 20m.

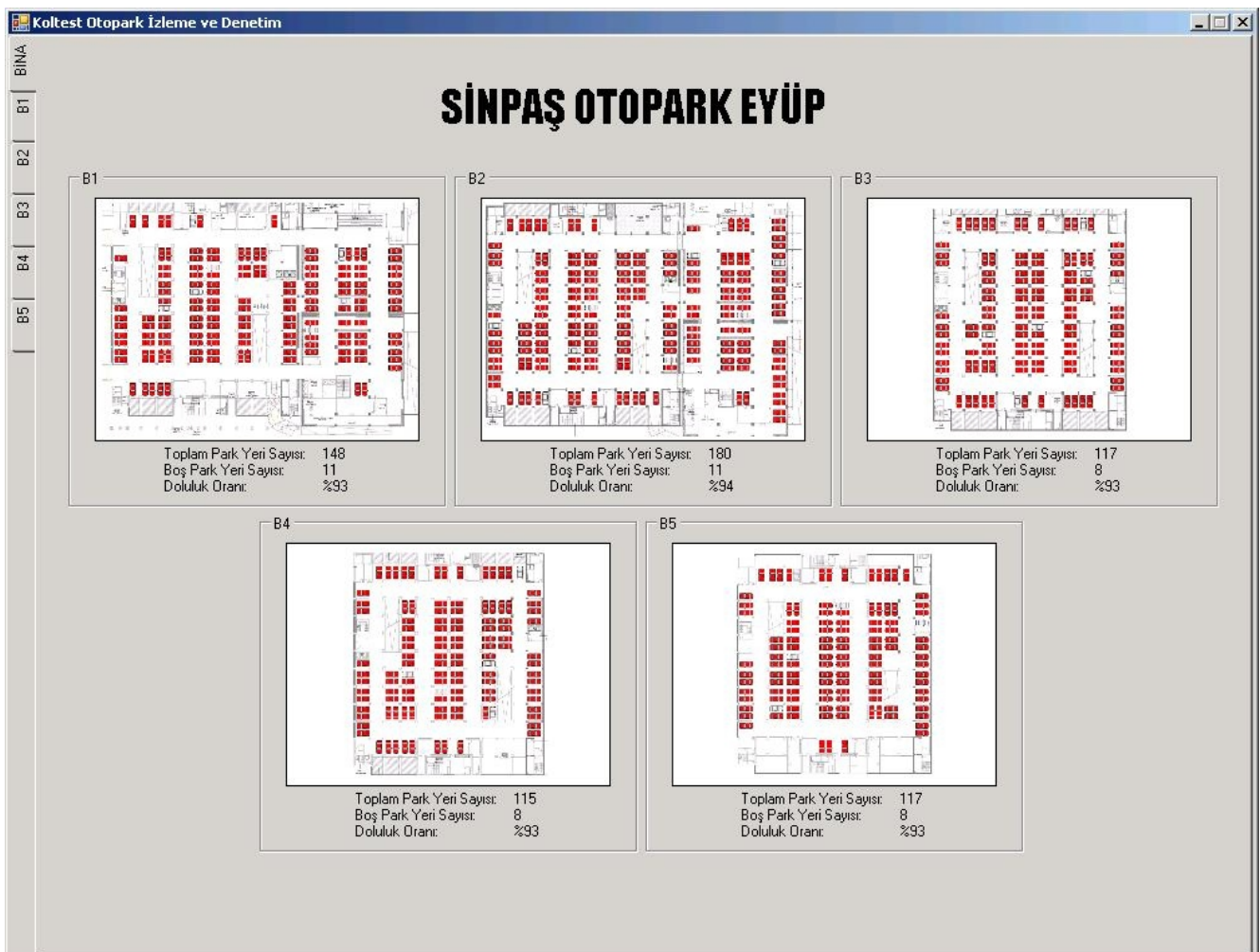


MONITORING SOFTWARE for PC

Below is sample screenshot of real time viewing software.

The animated graphics gives the viewer instant information about the actual state of the entire parking area, such as

- ▶ Sum of Total Spaces
- ▶ Available Spaces
- ▶ Space Utilization in %



MONITORING SOFTWARE for PC (continued)

Simple mouse clicks allow zooming to individual levels.

Reserving parking spaces is also done easily by right clicking and marking as reserved.

The software (also available in english) runs on MS Windows XP and Vista. Required minimum screen resolution is 1280x800.

Below is zoomed screenshot of an individual level.

