PARKING GUIDANCE SYSTEM

RMC-PGS-PSO

The Parking Guidance Solution is Real-time parking availability information system that saves time and the hassles of identifying a vacant slot in a parking level! It is common knowledge and experience that to locate a slot in a parking level is difficult even with the information that there are slots available for parking.

This is where the Ravel Parking Guidance Solution comes to the rescue of the driver. The solution comprises of Ultrasonic Sensors that read utilization of each parking space and provide the inputs on the status to the Bay Indicators that light up GREEN indicating availability of spaces and could either turn to RED or simply switch-off thereby communicating that the slot is occupied. This system has been proved to be highly efficient with a very high level of accuracy in its detection.

This Ravel Parking Guidance System (RMC-PGS) is an open data solution that provides 24/7 information about the availability of a parking space adding immense value not just to the parker, but also to the establishment offering the parking facility and in the process creating an environment that is less polluted and more safe for all.

Ravel PGS-the working principle

- The RMC- USS Ultrasonic Sensor & RMC-PBI Bay Indicators are installed on top of each Parking Bay which Detects and indicates the availability parking Space.
- RMC-PDC Data Collector Picks the information from the Ultrasonic sensors,
- The RMC-PCC Central controller completes the data processing and then sends the processed parking space data to every LED Bay Indicator to display the information of available parking space.
- The Bay Indicator indicates the available parking space and the direction to the first available space.
- Integrated Software shows the real time parking space information
- RMC-MDU Master Display Unit installed near entrance shows the total parking space information inside the Entire Facility

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SYSTEM ADVANTAGE

> Value adds to a customer service provider by offering parkers with real-time parking information, space availability and the exact location where there is a parking space available.

> Reduce Ramp & Road congestion and carbon emissions created by vehicles circulating looking for available parking.

> Effective lowering down of manpower costs otherwise required managing and guiding parkers in the absence of the Ravel Parking Guidance Solution.

> In the event of the solution being implemented as part of a smart city program the Ravel Parking Guidance Solution enables and empowers an area, a business district a large locality or a even a city to optimize public parking spaces by offering real time space availability to parkers via signages and mobile applications.

ISO 9001:2015

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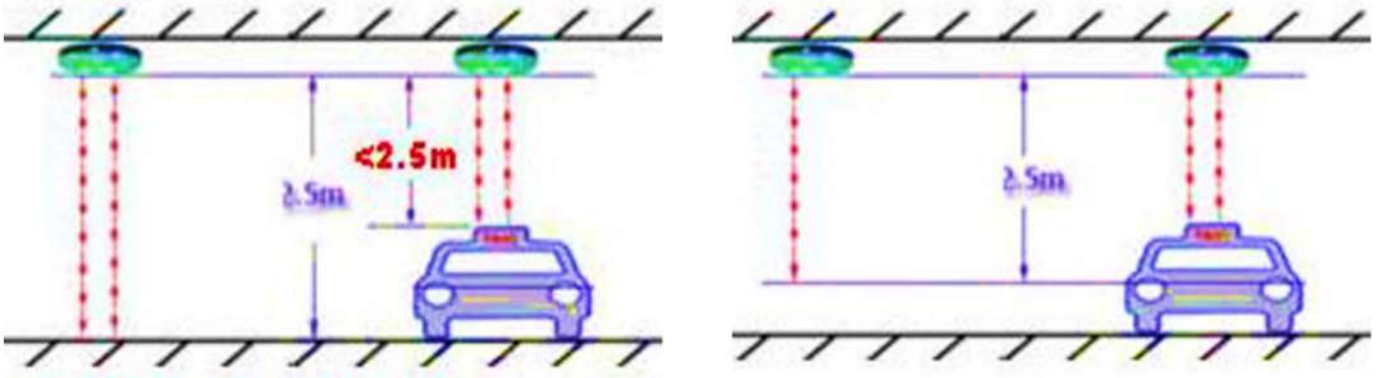

Components of the Ravel Parking Guidance Solution
The Ravel Ultrasonic Sensor-RMC-USS

- The Transmitter Sends ultrasound which travels at 340m/s,
- When the sound wave reaches an object, it will be reflected and received by Receiver.
- Sensor calculates the distance of the Reflected object as follows:
- The Transmitter Sends an ultrasound which travels at 340m/s,
- When the sound wave reaches an object, it will be reflected and captured by the Receiver.
- Sensor calculates the distance of the Reflected object as follows:
- Sound Speed X Travel Time ÷ 2 and judges if there is a car present or not.

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PARKING GUIDANCE SYSTEM

RMC-PGS-PSO

Dimension	13cm (D) X 6cm (H)	Weight	0.15kg
Color	Front: Frosted White Back: Black	Housing	ABS
Working Voltage	DC24V	Peak Current	30mA
Frequency	40KHz	Sensitivity	>-75dB
Communication Mode	RS485	Transmission Distance	<1000m
Detection Angle	<300	Detection Distance	0.5-4m
Working Temperature	-25~700C	Error	±0.2m

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The Parking Bay Indicator-RMC-PBI

The Ravel Parking Bay Indicator in an array of LED lights set in a particular pattern to offer optimum visibility.

The Luminous flux of these indicators is as follows:

Green is 8054mlm - Indicates Slot Availability

Blue - Indicates Slot Availability for Handicap Persons

Red is 1690mlm - Indicates Occupied Slot

Dimension	13cm (D) **X** 6cm (H)	Weight	0.15kg
Color	Front: Frosted White	Housing	ABS
	Back: Black		
	R/B: 5R/10B		

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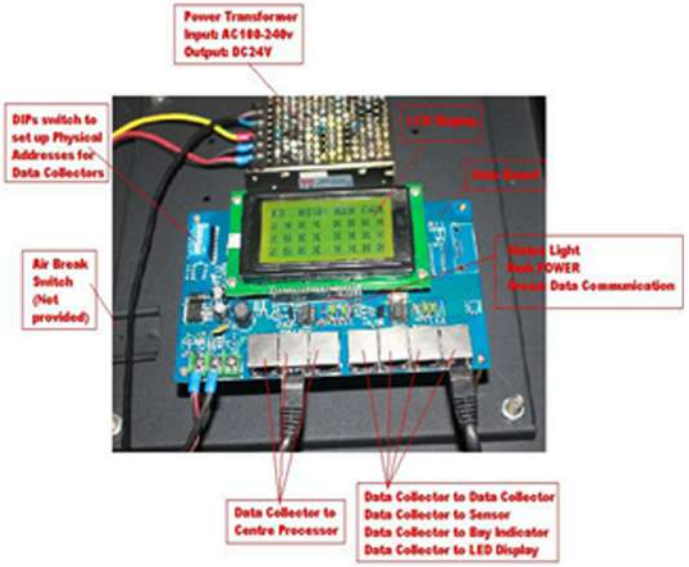
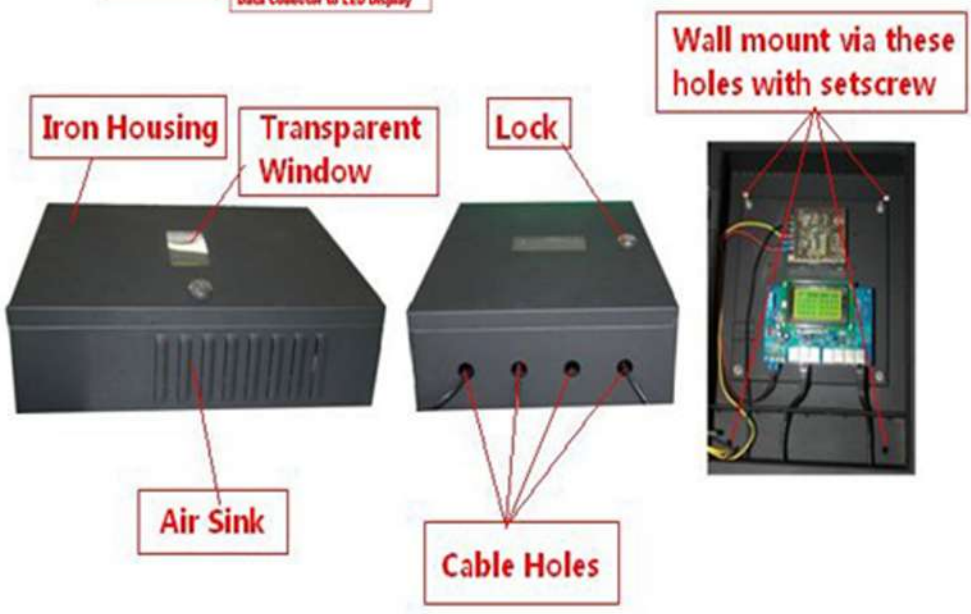
The Data Collector-RMC-PDC

> Manages sensors and LED Signages by group,

> It checks sensor information repeatedly and transmits data to Centre Processor for final processing;

> It also serves as the bridge to transfer information from Centre Processor to LED Displays.





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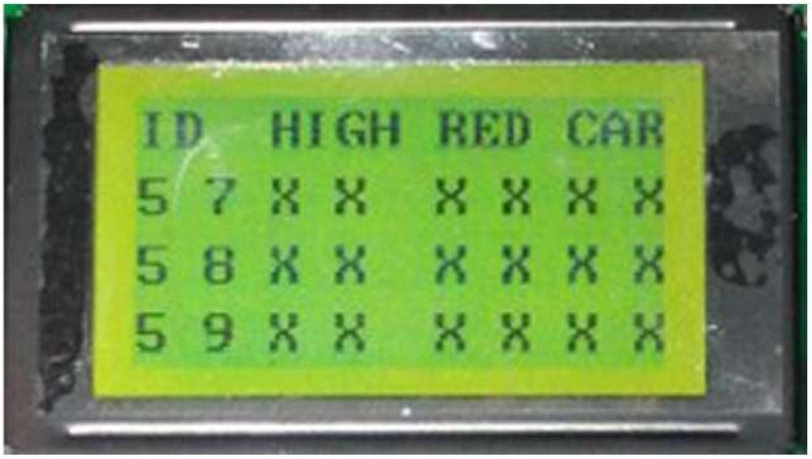
PARKING GUIDANCE SYSTEM

RMC-PGS-PSO

Dimension	43cm*34cm*12cm	Weight	8.75kg
Color	Frosted Black	Housing	Iron
Working Voltage	DC24V	Peak Current	45mA
Communication Mode	RS485	Frequency	4800Mps
Transmission Distance	1000m	Working Temperature	-25~700C



> ID : Physical address

> HIGH : Detection distance (Meter)

> RED : Detection mode

> CAR : Occupancy status

> XX : No data

(Note: Faulty Sensor, Not connected or improperly configured)

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The Central Controller-RMC-PCC

> The Ravel Central Controller is the Master Processor & is the core of PGS system.

> It deals with the analysis of data, and provides feedback of the information to the Management Software database and thereafter releases information to be shown on the LED displays to realize the guidance function.

> Note: A Central Controller or Processor manages up to 60 Data Collectors!

> ADDR : Data Collector Address

> OK: Data Collector is in order

> XX : Data Collector Communication problem

Dimension	48cm*20cm*8.6cm	Weight	3.7kg
Color	Black	Housing	Mild steel Powder Coated
Working Voltage	DC24V	Peak Current	35mA
Communication Mode	RS485	Frequency	4800Mps
Transmission Distance	1000m	Working Temperature	-25~70 ° C

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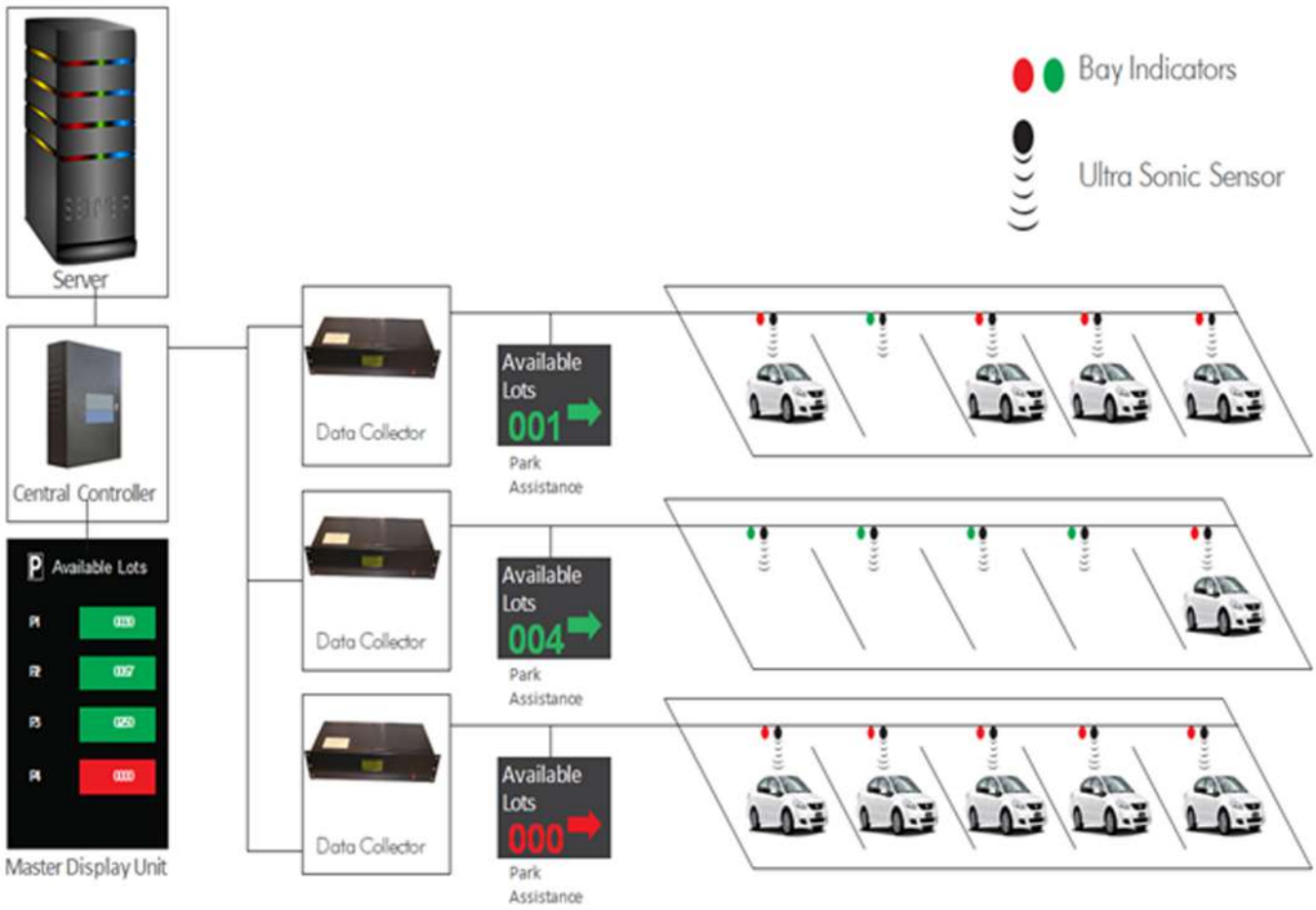
Parking Systems Architecture



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