

Intelligent Parking – Parking Guidance System

Intelligent Parking is a parking guidance system with the main objective of timeously advising motorists of available parking in multiple parking zones and allowing them to make decisions on where to park long before they reach critical intersections. Intelligent Parking then effectively guides the motorist to these open bays with minimum effort in as short as possible time. Intelligent Parking also gives the client an effective tool to monitor and run their entire parking facility effectively and efficiently.

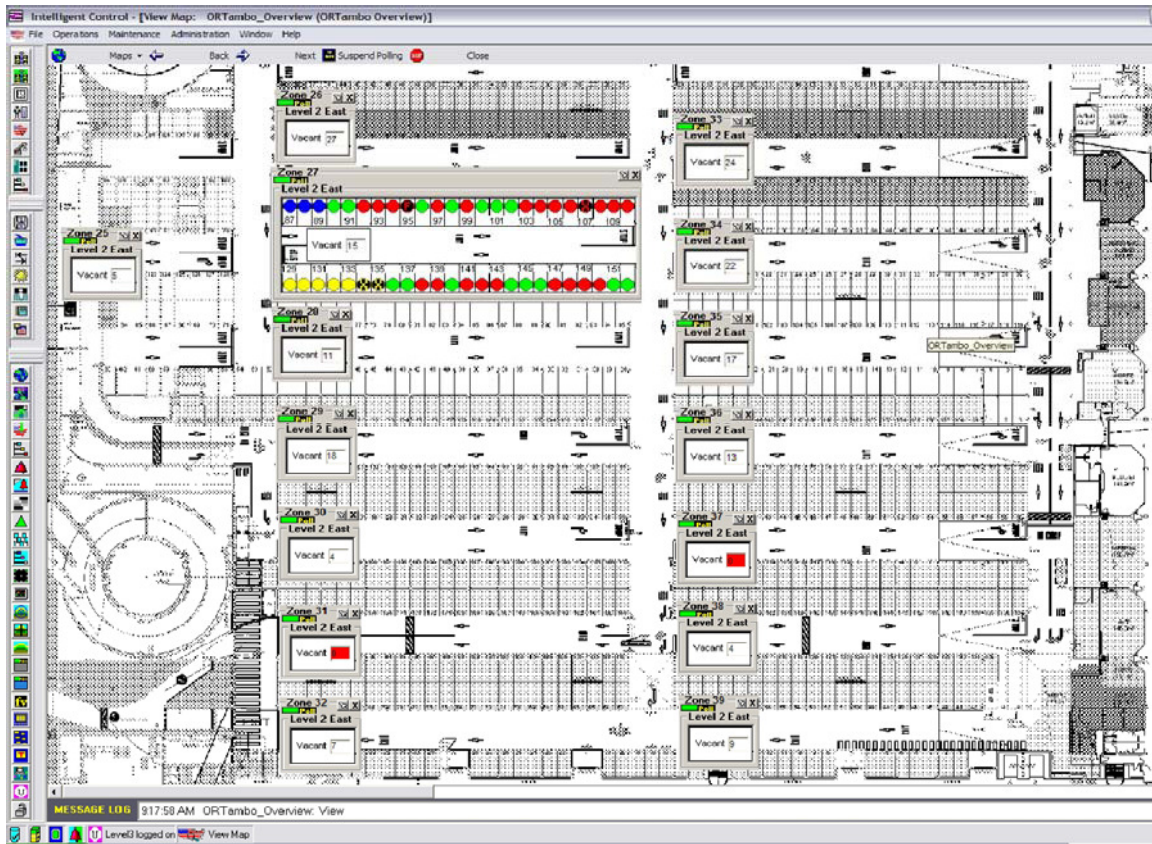
Benefits of Implementing Intelligent Parking

- 1 Less congestion due to fewer vehicles driving around looking for parking.
- 2 Reduction in time and fuel spent by road user searching for parking.
- 3 Less queues as motorists will go to parking areas with the most available bays.
- 4 Better flow of traffic through the area.
- 5 Intelligent Parking results in higher revenues and profitability for parking facilities.

Intelligent Parking can run in three modes.

- Integrated to an existing Parking Management System
- Stand Alone System with Loops
- Connected to SATT's BEC 106a Bay Count Sensor.

Intelligent Parking User Interface



Intelligent Parking Central

Intelligent Parking Central is a Windows based software platform which can run as a stand alone system or in a client/ server architecture. Intelligent Parking has a GIS based user interface which allows you to select views of different parking areas and in the case of multi-story Parkades allows you to drill down to the different levels of these

Each view gives you an instant real time overview of the operational status of that specific parking zone with regards to:

- Number of Open Bays
- Number of Occupied Bays
- Number of Reserved Bays
- Number of Disabled Bays
- Reserved Bays occupied past their reserved time
- Vehicles Parked in excess of XXX Days
- Faulty sensors

The User interface gives instant health status of all connected devices such as Zone controllers, Sensors and Variable Message Signs. All connected devices can be configured and controlled from this user interface.

Intelligent Parking has multiple user levels with password access and records a full Audit trail for all logged on operators. Intelligent Parking has full report writing facilities.

System Reports

These reports reflect the status and health of the system over time, and include the following reports as standard:

- Communication Statistics Summary by Date By Device (this key performance indicator indicates the overall health of the communication system)
- Communications Statistics By Date By Device
- Operator Activity by Date (an operator audit trail report)
- Current Operators
- Offline History By Device By Date
- Sensor Errors By Device By Date

Parking Reports

These reports reflect the current and historical parking activity. Current reports can be viewed and printed for violation enforcement. Historical reports can be used for trend analysis.

- Current Parking Utilization By Zone
- Parking Utilization Summary By Zone By Date
- Parking Utilization Detail By Zone By Date
- Current Overstay Violations By Zone
- Overstay Violation By Zone By Date
- Current Reservations By Zone
- Current Reservation Overstay Violation By Zone

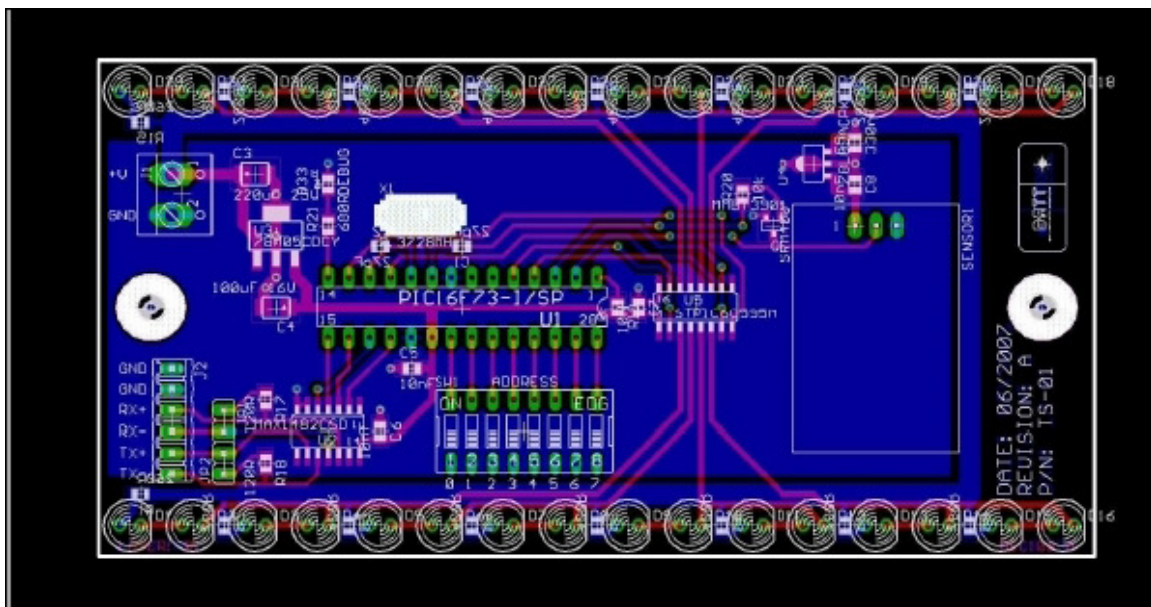
Intelligent Parking has an interface to multiple NTCIP conformant signs such as

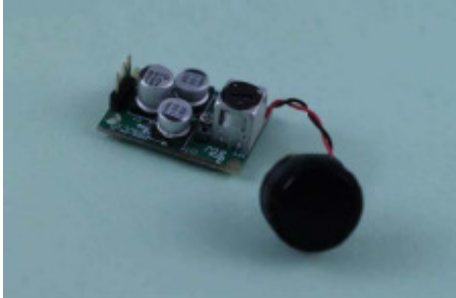
- 1 Variable Message Signs.
- 2 Parking Guidance Signs.
- 3 Bay Count Signs.

This allows real-time parking and guidance information to be displayed to the motorist.



BEC 106A





The SATT BEC 106A is an Ultrasonic Sensor for use with Intelligent Parking Central to monitor and indicate the status of individual Parking Bays in undercover Parkades. The BEC 106 A is mounted to the roof of the Parkade above the bay in a clear polycarbonate box.

The BEC 106A is mounted centrally above a parking bay and uses Ultrasonic technology to determine whether that specific bay is occupied or not.

BEC 106 A runs off a RS485 bus. Up to 60 sensors Multidrop off an IDI 1301 controller, forming a parking zone.

Each BEC 106 A is individually addressed through a dipswitch using binary. Each unit is hot swappable and completely interchangeable with other units.

The detection range on the unit can be set from 1 to 8 meters. This is done via a jumper and dipswitch setting. The unit can also be set up directly using our distance set utility and a laptop for fine tuning. The BEC 106 A has two rows of LED's running down opposite sides of the Sensor. There are 4 Green, 4 Red, 4 Yellow and 4 Blue LED's running down each side for a total of 32 LED's. These LED's indicators are clearly visible to motorists.

The LED Status is as follows:

Green: Vacant

Red: Occupied

Yellow: Reserved

Blue: Disabled or other.

The Red and Green status can run independently off the controller and central as well as switch directly from the Ultrasonic sensor. The central system can override these states to force it into a "Reserved," "Yellow," or "Disabled" state.

The sensor has two alternate states which are user settable:

- 1 Reserved bay over stay – Flashing Yellow.
- 2 Cars parked for more than a preset period eg. 30 Days – Flashing Red.

Intelligent Parking Additional Features

- 1 Designed and built on Microsoft's DCOM (Data Component Object Model) for easy integration with other platforms.
- 2 Intelligent Parking can be integrated to SMS and WEB services.
- 3 Communications between devices and central can be done via several different modes. Optic Fiber, Ethernet CAT 5 cable, Ethernet over wireless, RS485 and RS232 cable are amongst the most popular.