



## REDUNDANT

### Machinery and Equipment Make Robotic Parking Systems Extremely Reliable

Any piece of machinery or electronics made by man will fail at some point. Just look at cars, appliances and computers to name a few. The only way to successfully overcome this inherent failure is the strict application of TRUE redundancy throughout an entire system. This is not just simply installing two motors on a single machine; it also means providing two of the same machines as well as redundancy of components in a single machine.

Robotic Parking Systems provide true redundancy with multiple elements controlling the same process to provide alternatives in case of failure. No single machine or component failure will ever result in the system being inoperable.

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## REDUNDANT MACHINES AND COMPONENTS

The Robotic Parking System uses only off-the-shelf, high-quality electrical and mechanical components with L10 lifetimes of 40,000 hours or above. As part of its strategic partnership with Robotic Parking Systems, General Electric supplies all motors, electronics and automation controls for the automated garage.

Every machine has built-in redundant components. In addition, at least two of each type of machine is installed in the automated parking facility. Both of the machines can perform the same tasks at the same time. Therefore, if one machine needs maintenance or repair, there is always a backup machine to keep the cars moving into and out of the garage.



## FAULT TOLERANT SERVERS GUARANTEE CONTINUOUS AVAILABILITY

Robotic Parking Systems use ultra high-end, redundant, fault tolerant Stratus servers (fT 99.999% worldwide uptime) guaranteeing continuous availability. More on these servers is in the [June 2011 issue of ParkSmart](#).

## AUTOMATION SOFTWARE

GE's Cimplicity® automation software powers the Robotic Parking System. This software controls the machinery, lifts, motors, sensors and other automation components used to transport the vehicles in the parking garage.

Cimplicity is used worldwide in processes where thousands of movements are performed on a 24/7 basis such as in automobile assembly lines at GM

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## MANUFACTURING AND INSTALLING A ROBOTIC PARKING SYSTEM – PART 1

With Robotic Parking Systems' high-speed automated parking garages, developers can use 50% of the land area for the same amount of parking.

Minimizing the impact of parking creates more space for design and development that can be used for additional revenue, green space or other uses that benefit the project. Not only can Robotic Parking Systems park the same number of cars in half the space as compared to conventional garages, but these car parks offer more security, less emissions and greater convenience for users.

We work closely with architects and developers to maximize site development. The result – creative parking solutions that fit the available space in any project.

Follow us on this multi-part series through the process of manufacturing and installing a Robotic Parking System. [Click here for Manufacturing and Installing a Robotic Parking System - Part 2.](#)



and Ford as well as in seaports around the world for container handling.

## SOPHISTICATED DIAGNOSTICS AND REMOTE ACCESS

All Robotic Parking Systems include a patented full diagnostic suite and high level warning system.



The software records every rotation of any wheel, bearing, gearbox and motor. All moving parts are monitored, and operators see every movement and car location on displays in real time. Supervisors can be alerted, and any needed maintenance is immediately reported online to the service department.

The diagnostic system provides up to five different alarm messaging classifications. These early warning indicators and alarms recognize and report conditions before a problem occurs. Messages are sent to the computer system on site and can also be automatically forwarded to technicians' beepers or cell phones.

These early warnings ensure proactive maintenance and a high level of uptime. Real-time remote access allows off site trouble shooting by operators or the manufacturer, if needed.

## EMERGENCY POWER GENERATOR

Every system includes a back-up emergency power generator with automatic transfer so that service can continue in the case of a power outage.

These elements add up to increased redundancy and reliability resulting in owner's of Robotic Parking Systems enjoying uptime that is unprecedented in our industry's history.



**ROBOTIC PARKING SYSTEMS, INC.**

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## CONTACT US

Call us today for more information on how Robotic Parking Systems can help you create space for design, green space, or more revenue.

## ROBOTIC PARKING SYSTEMS

***THE BIGGEST IDEAS IN  
AUTOMATED PARKING***

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