



# SEMI – AUTOMATED PARKING

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# More Parking. Less Space.

Utron's semi-automated parking solutions offer efficient use of space by optimizing parking layouts. Perfect for developments with limited land, our systems improve property value and operational efficiency.

With over 35 years of expertise, Utron provides innovative, safe, and seamless parking solutions, tailored to improve both user experience and project functionality.

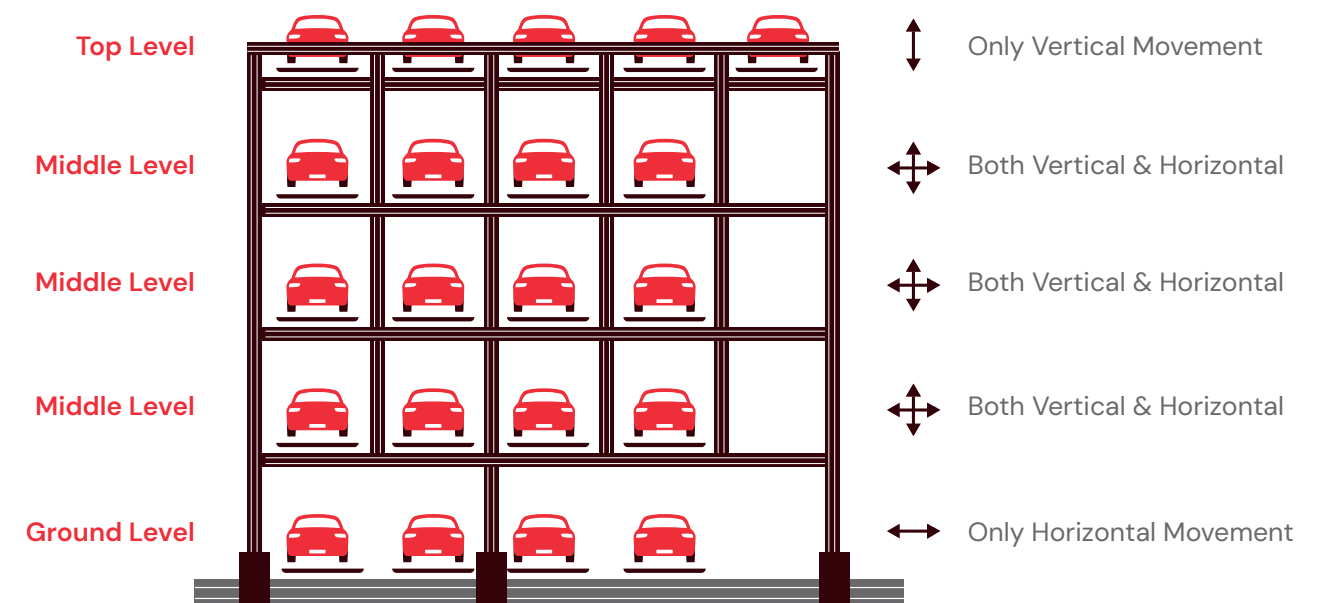


## What is Semi-Automated Parking?

Semi-automated parking systems are advanced mechanical solutions that simplify parking by combining automation with minimal human interaction. These efficient systems use lifts, sensors, and mechanical components to transport vehicles, allowing cars to be parked and retrieved quickly and efficiently.

### Developments Ideal for Semi-Automated Parking:

- + High-density urban areas
- + Commercial office spaces and multi-family residential complexes
- + Projects with height or space constraints, with or without pits
- + Both new constructions and retrofits





# Benefits

1

## Maximize Cost Efficiency

- Reduce parking footprint by 30% while keeping the same capacity
- Lower maintenance and development costs than traditional parking
- Free up space for revenue-generating units

2

## Construction Efficiency

- Shorten construction timeline
- Stand-alone structure with minimal building connections
- Assigned spaces prevent unauthorized access

3

## Safety and Security

- Controlled vehicle movement reduces accidents
- Secure parking prevents theft and damage
- Ideal for both new builds and retrofits

4

## Space Optimization

- Maximize site space utilization
- Flexible design for creative uses
- Integrate parking as a building amenity

5

## Service

- 24/7 monitoring and support
- Quick dispatch of on-site technicians
- Minimize downtime with rapid response

6

## Sustainability Benefits

- Reduce construction waste and materials
- Lower HVAC and power consumption
- Cut vehicle emissions and fuel consumption

# Puzzle Modules

## Overview

### Regular Puzzle Module

Efficiently stacks vehicles using horizontal and vertical movements. Ideal for maximizing parking capacity without requiring underground pits.



### Puzzle with a Pit

Stores cars below the parking level, perfect for buildings with height limitations. Adds 2 to 20 extra parking spaces, depending on the width and pit level.



### Tandem Puzzle

Park two cars in a row within the same lane, with automatic movement of front-row cars to allow easy access to the second row. Ideal for maximizing space in narrow sites.



### Width Options:

Widths range from 17'-3" (2 lanes wide) to 87'-0" (10 lanes wide).

### Levels Above Ground:

Parking levels can go up to 5 stories above ground, with each additional level adding more spaces.

### Levels Below Ground:

Options include no pit, a single pit, or a double pit, with each pit level adding 2 to 10 additional parking spaces, depending on the width.

## Parking Capacity by Module Size

Minimum height and number of parking spaces for different configurations:

Width		17'-3"	25'-8"	34'-10"	43'-3"	51'-8"	60'-8"	69'-2"	76'-8"	87'-0"	
		2W	3W	4W	5W	6W	7W	8W	9W	10W	
Height	30'-5"	5A	6	11	16	21	26	31	36	41	46
	24'-6"	4A	5	9	13	17	21	25	29	33	37
	18'-7"	3A	4	7	10	13	16	19	22	25	28
	12'-8"	2A	3	5	7	9	11	13	15	17	19
	-8'-0"	1B (Pit)	+2	+3	+4	+5	+6	+7	+8	+9	+10
	-15'-0"	2B (Pit)	+4	+6	+8	+10	+12	+14	+16	+18	+20

\* Heights and widths are customizable based on expected car sizes and building considerations.

## Safety

Our systems incorporate advanced safety features for a secure parking experience:

- + Limit Switches: Ensure the pallet is correctly positioned
- + Over-Length Detection: Stops system if elements exceed platform length
- + Safety Locking Mechanism: Integrated braking system securely locks the platform
- + Pallet Anti-Fall Safety System: Provides extra protection
- + Visual and Audible Alarms: Alerts users during gate operations
- + Safety Gates: Ensures controlled access and perimeter security
- + Gate Curtain Sensor: Stops gate movement if an obstruction is detected



## Fire Protection

The puzzle modules are designed to integrate with the building's fire protection system. In the event of an emergency, the system automatically halts operations to ensure safety and compliance with fire protocols.

## UPS

A UPS (Uninterruptible Power Supply) provides backup power during outages, ensuring the parking system remains fully operational even when the main power source is disrupted.

# Technical Information

Electrical	
Single disconnect required per module	
UT-Link reduces wiring complexity	Localized I/O control for motors and sensors
Power Feed	3PH 208V 60Hz, 40Amps
Mechanical	
Traverse Motor	0.4kW
Lift Motor	3.7kW
Maximal Vehicle Weight	5,300 lbs
Traverse Speed	24.5 ft/min
Lift Speed	15 ft/min
Control	
Main Controller	Unitronics Unistream, cloud-ready
User Interface	Utron outdoor touch kiosk 10", cloud-ready
Environmental Conditions	
Temperature	14 °F to 100 °F
Relative Humidity	Up to 75%
Maximum Noise	62 dBA

# Utron's Unique Features

## ▶ Stand-Alone Structure Installation

Requires minimal support from the building, simplifying installation.

## ▶ Highly Modular Design

Adapts to any space – indoors or outdoors, with or without pits – accommodating up to 5 levels with minimal building connections.

## ▶ Remote Administration – User Management

Manage user access and permissions remotely, improving system control.

## ▶ UPS

Power backup during outages – A backup system keeps the parking operational during electrical outages.



## ▶ Utron's Ownership of Source Code

Enables full customization and flexibility for adding unique system features.

## ▶ Queue Display

Our kiosk's queue display allows users to see their position in line in real-time.

## ▶ Individual Door for Each Parking Lane

Ensures only authorized vehicles access specific lanes, enhancing security.

## ▶ Abandoned Transaction Quick Release

Allows users to swiftly close out abandoned parking transactions left incomplete, freeing the system for the next customer without delays.

## ▶ 24/7 Real-Time Remote Fault Monitoring

Instantly detects issues and alerts the 24/7 monitoring team, with constant CCTV oversight and remote troubleshooting capabilities.

## ▶ Parking Position Indicators

Red and green lights guide drivers to the optimal parking position, ensuring accurate vehicle placement every time.



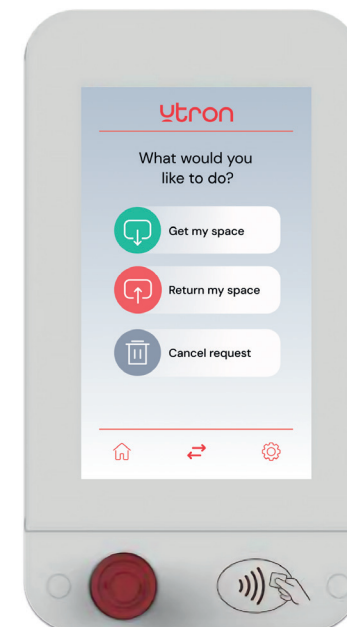
## One Grove | Jersey City, NJ

In downtown Jersey City, Utron implemented a semi-automated puzzle parking system at One Grove, to address the need for more parking in a limited space. By stacking vehicles vertically, the system increased capacity to 73 spaces without expanding the footprint. Using minimal-height steel frames and intuitive kiosks, it delivered a prime experience for residents while maximizing efficiency in this high-demand urban area.



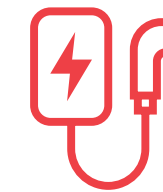
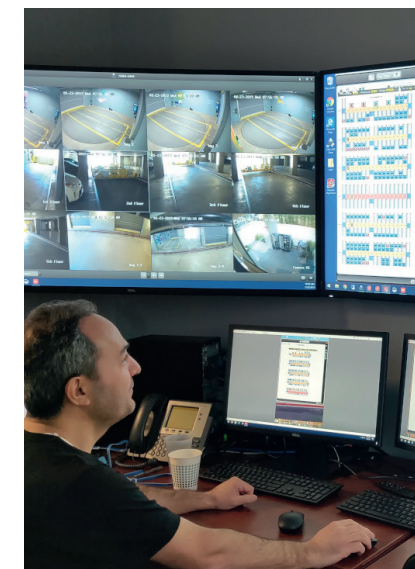
### USER EXPERIENCE

Our systems offer fast, hassle-free parking and retrieval through a smart kiosk or app, with real-time queue updates and safety features for an efficient user experience.



### 24/7 SUPPORT

Utron offers 24/7 monitoring and remote support with automatic fault detection. On-site technicians are promptly dispatched for complex cases, ensuring reliable, round-the-clock service.



### EV CHARGING

Our system offers integrated EV charging on multiple levels, providing convenient and sustainable options for electric vehicles. This feature supports the growing demand for green parking solutions.



# How it Works

## THE PARKING PROCESS



- 1 Entering the Platform**

The user drives their vehicle to the entrance of the semi-automated parking system. Using a touchscreen kiosk, key fob, or mobile app, they request their assigned parking space. Once the system moves the platform to ground level, the safety gate opens, and the user drives the car onto the platform.
- 2 Submit Parking at the Kiosk/App**

After driving onto the platform, the user exits the vehicle, locks it, folds the mirrors, and continues to complete the parking process using the kiosk or mobile app. Once confirmed, the safety gate closes, and the system takes over.
- 3 Vehicle Transfer to Parking Space**

The system automatically moves the platform sideways and vertically, storing the vehicle in its designated parking space. Other platforms shift to accommodate the car's storage, maximizing space efficiency.
- 4 Process Completed**

The parking system is now ready for another vehicle to park or retrieve a stored vehicle.

## THE RETRIEVAL PROCESS

- 1 Car Retrieval Request**

The user requests their vehicle using the touchscreen kiosk, key fob, or mobile app.
- 2 Request Queues at the Kiosk**

The kiosk shows the current vehicle retrieval request and the status of other pending requests in the system.
- 3 Vehicle Retrieved from Storage**

The system automatically moves the platform, bringing the vehicle back to ground level and shifting other platforms as needed.
- 4 Platform is Ready to Collect a New Car**

Once the vehicle reaches ground level, the safety gate opens. The car is ready, and the user can easily drive it out of the parking system.

