

# Automated Storage & Retrieval System

iAmech is a professional designer and planner for AS/RS system. Our system can optimize your working flow in warehouse and handle your various loads from light boxes to heavy pallets. We are dedicated to offering the best and customized solution for not only present issues but also future challenges in your warehouse.

## Features of System

### + Optimize your floor to ceiling space utilization

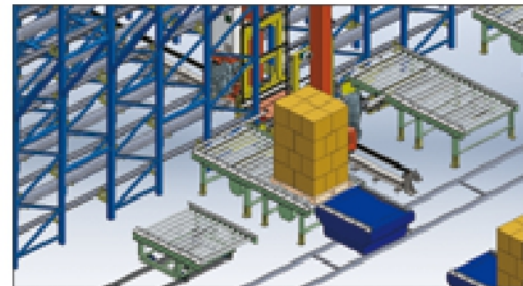
AS/RS offer you high density storage in a compact footprint and vastly improve your warehouse space both vertical and horizontal utilization.

### + Computerized your warehouse management

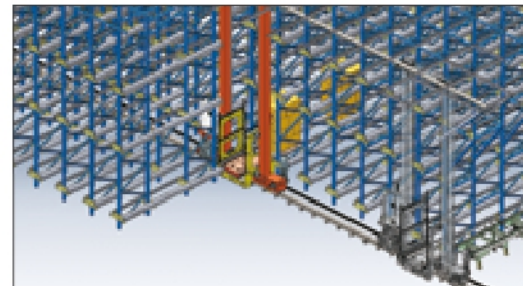
With iAmech's self-developed and customized software system, you can get accurate and real-time management information including data management, inventory management and tracking to meet changing business needs.

### + Achieve high performance and efficiency

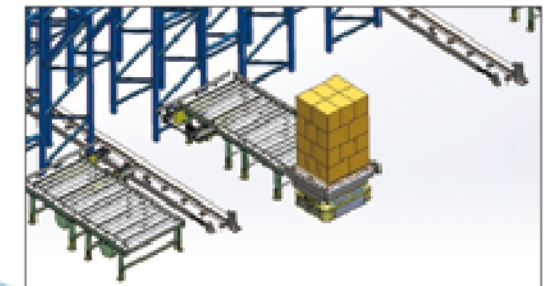
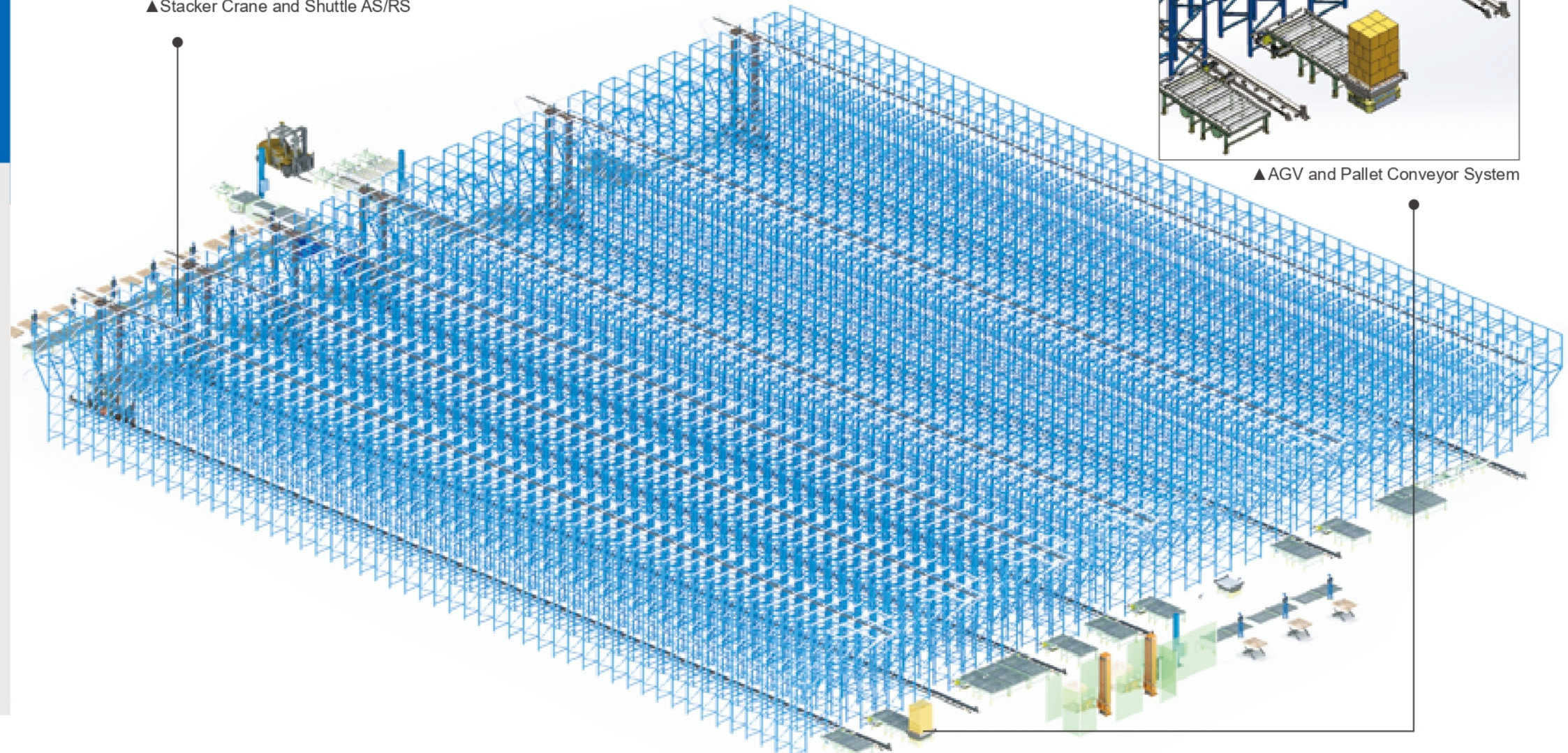
AS/RS is operated by computer-controlled system. It can deliver the required item directly to works via the "goods to person" concept which dramatically reduce working time and increase working efficiency.



▲ RGV and Pallet Conveyor System



▲ Stacker Crane and Shuttle AS/RS



▲ AGV and Pallet Conveyor System

## Case study

**Challenge:** Use traditional pallet racks and manual forklifts to store and retrieve goods

**iAmech's solution:** A fully automated solution

With stacker crane and shuttle AS/RS and automatic guided vehicle (AGV), our client truly achieves more efficiently storing, retrieving and managing on pallets handling and dramatically increasing throughput times for outbound orders. iAmech help our client to have greater working efficiency and accuracy with less dependent on human labor.

### What iAmech do

- ✓ Stacker Crane and Shuttle AS/RS
- ✓ Dimension Measurement System
- ✓ Pallet Conveyor System
- ✓ Automatic Guided Vehicle (AGV)
- ✓ Rail Guided Vehicle (RGV)

### What iAmech achieve

- ✓ Handle 1440 pallets per day
- ✓ Induct/output 180 pallets per hour
- ✓ 6,189 pallet storage positions

Pallet Type

## Pallet Shuttle AS/RS

Pallet shuttle AS/RS has shuttles move on rails inside the storage channels which eliminates the need for forklift trucks to enter the channels. It can not only considerably reduce operating times, but can also works either as First in, First out (FIFO) or as Last in, First out (LIFO).

Pallet Shuttle AS/RS	
Load capacity	1000 kg/pallet
Shuttle travel speed (Unloaded)	65 m/min
Shuttle travel speed (Loaded)	40 m/min



Pallet Type

## Very Narrow Aisle AS/RS

By making the aisles as small as possible and using specialized narrow aisle crane run on ground guided rail, Very narrow aisle AS/RS (VNA) can help you optimize both vertical and horizontal storage capacity and efficiently retrieve pallets in high intensity operations.

Very Narrow Aisle AS/RS	
Load capacity	1000 kg/pallet
Crane lifting speed	30 m/min
Crane travel speed	100 m/min



Pallet Type

## Stacker Crane and Shuttle AS/RS & RGV Satellite and Shuttle AS/RS

Stacker crane and shuttle AS/RS is operated with rail-guarded stacker cranes which carry the shuttle with it. When the stacker crane moves to assigned point, it transports the shuttle to store or retrieve pallet.

In RGV satellite and shuttle AS/RS, each level of racking has RGV carry with shuttle. It can store and retrieve pallet more efficiently than stacker crane and shuttle AS/RS.



Stacker Crane and Shuttle AS/RS	
Load capacity	1500 kg/pallet
Crane lifting speed (Unloaded)	40 m/min
Crane lifting speed (Loaded)	20 m/min
Crane travel speed	150 m/min
Shuttle travel speed (Unloaded)	65 m/min
Shuttle travel speed (Loaded)	40 m/min

RGV Satellite and Shuttle AS/RS	
Load capacity	1500 kg/pallet
Lifting speed	60 m/min
RGV travel speed (Unloaded)	160 m/min
RGV travel speed (Loaded)	100 m/min
Shuttle travel speed (Unloaded)	65 m/min
Shuttle travel speed (Loaded)	40 m/min

Box Type

## Box Shuttle AS/RS

In box shuttle AS/RS, high-speed shuttles run individually in each row of racks on rails. With high-density box storage and high-speed operation, box shuttle AS/RS can considerably make the box storage and retrieval performance faster, more efficient and accurate.

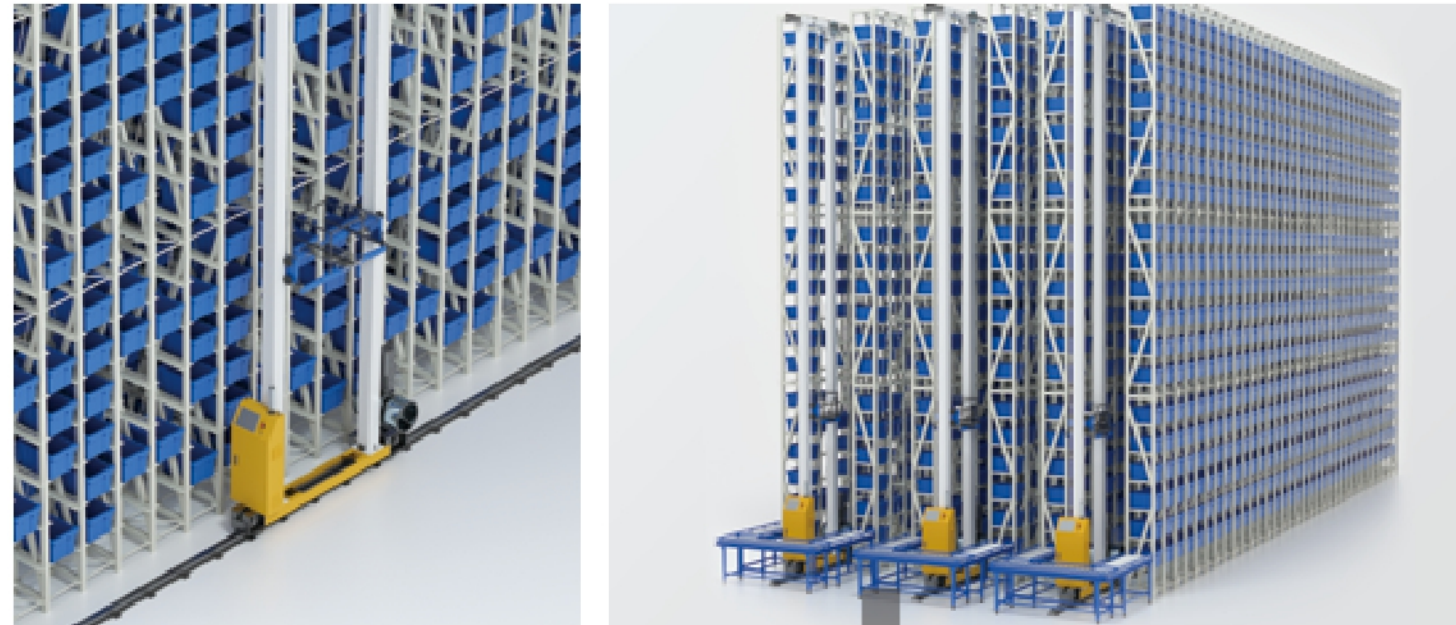


Box Shuttle AS/RS	
Load capacity	30~50 kg/box
Logistics boxes dimension	L600 x W400 x H300 mm
Lifting speed	160 m/min
Shuttle travel speed	200 m/min

Box Type

## Miniload AS/RS

The Miniload AS/RS system is adapted to the handle lightweight loads like boxes. It operates with crane in each aisle of racks and support single-deep or double-deep storage to boost the performance of transfer operations to give you high efficiency.



Miniload AS/RS	
Load capacity	30~50 kg/box
Crane lifting speed (Unloaded)	80 m/min
Crane lifting speed (Loaded)	50 m/min
Crane travel speed	200 m/min
Depth of racking	Single box, dual boxes

Box Type

## Horizontal Carousel AS/RS

Horizontal carousel AS/RS follows "Goods to person" principle which horizontally rotates a series of shelves and bins to bring the required items to the workers. It can not only store your goods but can be utilized as picking device.



Horizontal Carousel AS/RS	
Load capacity	600 kg/shelf
Speed	25 m/min
System length	10000~46000 mm
System width	1630 mm
System height	2600~4000 mm