



IATF 16949 ISO 9001 ISO 14001



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- Battery Division
- ICT Division

OVERVIEW

SP SYSTEMS is doing our best for customer satisfaction base on the SP spirit – Smart Progression, Smart Performance, Smart Profession



Name SP SYSTEMS CO., LTD.

CEO Sim Sang-kyoon, Sim Hyo-joon

Major product Smart Factory, Gantry Robot, Automotive and 2nd Battery parts

Employees 382 (2024)

Sales \$ 52 million (2024 Est.)

Established 1988. 05. 01

Address Robotics Division (Headquarter)

123, Eogokgongdan-ro, Yangsan-si, Gyeongsangnam-do, Korea
TEL: 055-371-5600 FAX: 055-371-5606

2nd Factory

59, Sanmakgongdanbuk 11-gil, Yangsan-si

Battery Division

261, Jayumuyeok 6-gil, Masanhoewon-gu, Changwon-si

Seoul Sales Center

23, Hyoryeong-ro 55-gil, Seocho-gu, Seoul

Customer

HYUNDAI/KIA MOTORS, HYUNDAI WIA, GMK, SAMSUNG HEAVEY INDUSTRIES, SAMSUNG E&A, SAMSUNG C&T, SEBANG BATTERY etc.

HISTORY

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1988-2000

1988.05

Established In Busan, Korea

1988.06

Technical partnership
With CIMCORP

1997.08

Established R&D
Center in Busan

1999.09

Partnership with ABB

2000.11

Acquired ISO 9001

2001-2009

2001.01

Certified as
a Venture Company

2001.12

Constructed Yangsan Factory

2002.08

Designated as a technology
– innovative SME (Innobiz)

2009.03

Localized
the Linear Guide System

2010-2014

2010.05

Certified CE
(Linear Module)

2010.05

Designated as a KOTRA–
guaranteed brand company

2013.05

Acquired KCS

2014.12

Established a local subsidiary
in China (SP Qindao)

2015.11

Established
Yangsan 2 Factory

2015-2019

2017.01

Opened Seoul Office

2017.02

Entry into
2nd Battery business

2018.01

- Designated as Excellent
Employment Company
- 'Partner of the Year' by
Hyundai Motor Company

2019.08

Listed on KOSDAQ

2020-

2020.01

- Designated as 'Global
Small Giant Company'
- Create agency agreement
with 'Doosan Robotics'

2020.05

Designated as 'Global
Small Giant Company'

2021.05

Acquired the majority shares
of 'MICUBE SOLUTION'

2021.12

Designated as
Innovative Company 1000

2023.08

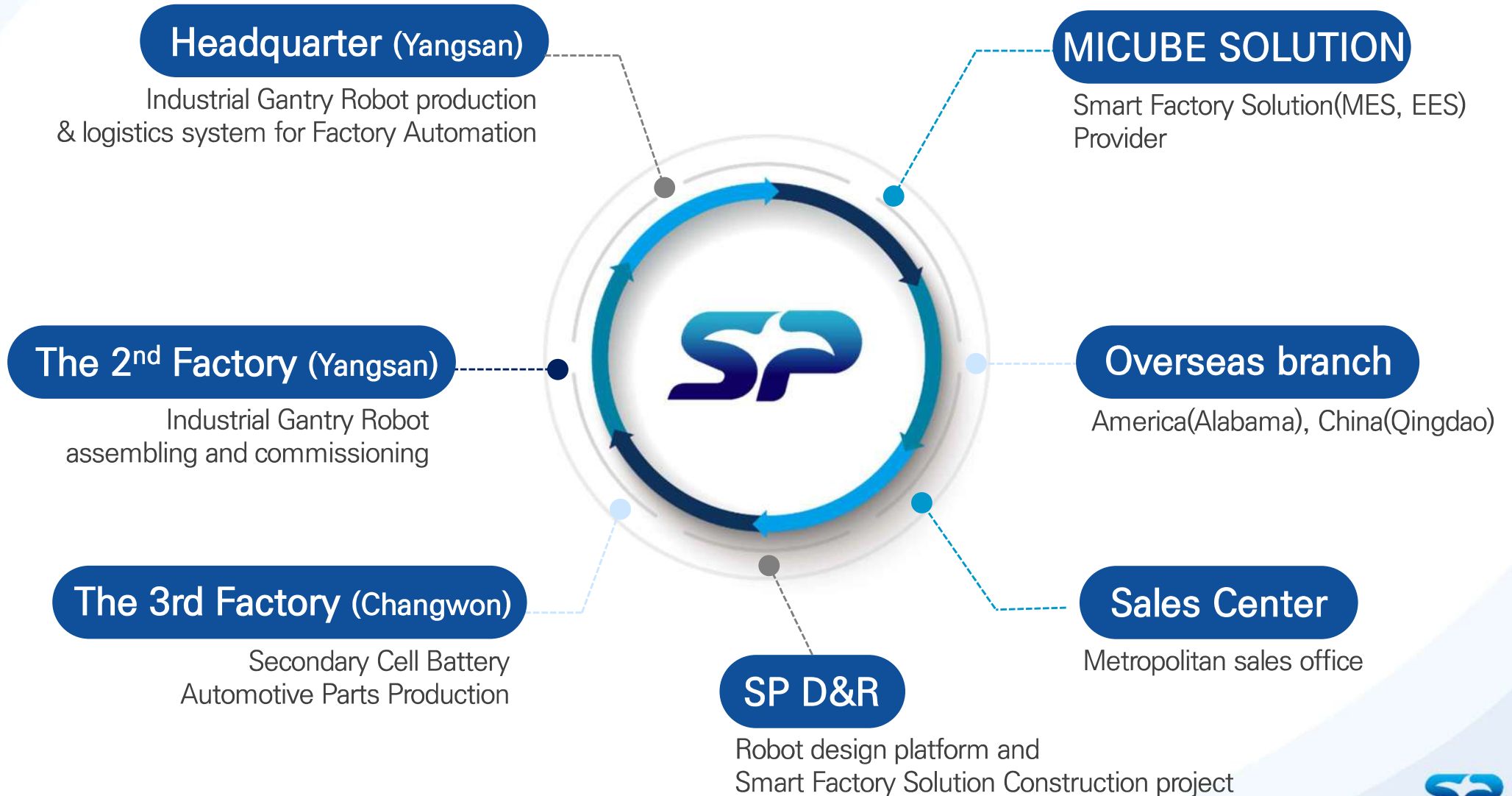
Listed on KOSDAQ
(MICUBE SOLUTION)

2024.04

Designated as 'Global
Small Giant Company 1,000+'

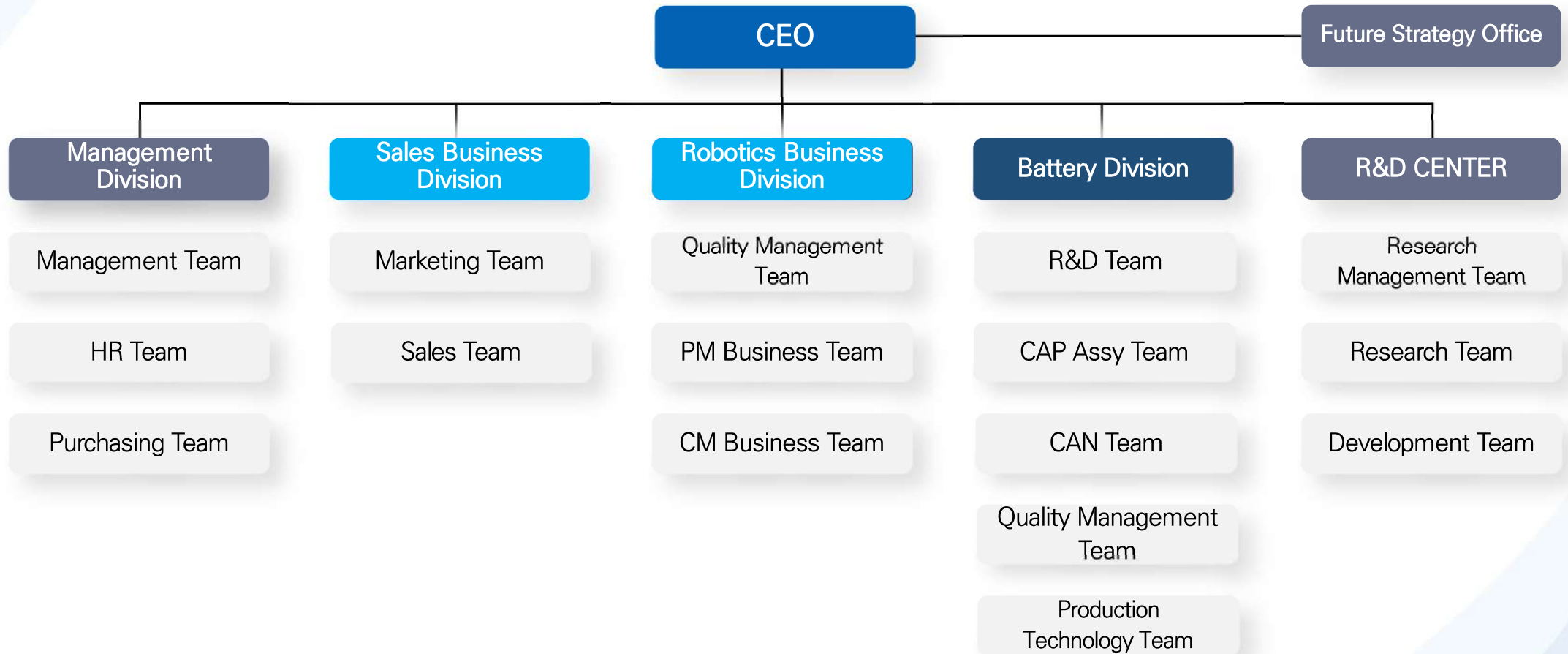
STATUS OF AFFILIATES

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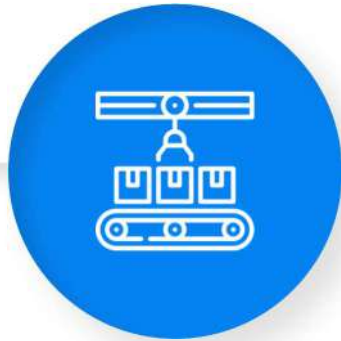
ORGANIZATION

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BUSINESS AREA

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TRANSFER AUTOMATION SYSTEM

Part Manufacturing automation
Product transfer automation

Turn-key supply know-how of Transfer automation system with over 30 years

Internalized the core robot products to build a Transfer automation system














MANUFACTURING AUTOMATION SYSTEM

Building an automation system in core processes that relied on manual work.
It improves quality and productivity and contributes to the prevention of safety accidents.

Customized APPLICATION
for various industry
(Construction, Shipbuilding, Defense,
2nd Battery, etc.)






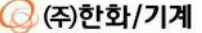

MAJOR PERFORMANCE

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CUSTOMER	CLASSIFY	PROJECT NAME	BUSINESS AREA	QTY	PERIOD
 HYUNDAI	▪ Engine part	• 5C Line – Gantry automation system	Transfer Automation System (Parts Manufacturing Automation)	84 Line	1994~2023
	▪ Mission part	• Transmission Line – Gantry automation system		23 Line	1996~2022
	▪ Engine part	• 5C Line – Gantry automation system		37 Line	2002~2023
	▪ Mission part	• Transmission Line – Gantry automation system		5 Line	2010~2022
	▪ Engine part	• 5C Line – Gantry automation system		18 Line	2008~2022
	▪ Mission part	• Transmission Line – Gantry automation system		3 Line	2019~2023
	▪ Mission part	• Transmission Line – Gantry automation system		4 Line	2012~2023
	▪ Engine part	• 5C Line – Gantry automation system		1 Line	2023
	▪ Mission part	• Reducer case Line – Gantry automation system		7 Line	2019~2023
	▪ Mission part	• Transmission Line – Gantry automation system		2 Line	2019~2022
	▪ Mission part	• Transmission Line – Gantry automation system		3 Line	2019~2022
	▪ Engine part	• Piston Line – Gantry automation system		1 Line	2019~2021
	▪ Mission part	• Transmission Line – Gantry automation system		3 Line	2022~2023
	▪ Construction	• Welding automation Line – Gantry automation system	Manufacturing Automation System	1 Line	2019~2021
	▪ Shipbuilding	• Automation system for welding rear plates of shipbuilding (TEST BENCH)	Manufacturing Automation System	1 Line	2019~2021
	▪ Construction	• Pre-casting Gantry automation system	Manufacturing Automation System	1 Line	2020~2021












MAJOR PERFORMANCE

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CUSTOMER	CLASSIFY	PROJECT NAME	BUSINESS AREA	QTY	PERIOD
	▪ 2 nd Battery	• Vertical Transfer Automation System	Transfer Automation System	3 Line	2022~2023
	▪ 2 nd Battery	• 46CAN Rivet Assembly Automation System	Manufacturing Automation System	4 Line	2022~2023
	▪ Food	• Robot Automation System	Manufacturing Automation System	1 Line	2023
	▪ 2 nd Battery	• Vertical Transfer System	Transfer Automation System	2 Line	2021~2022
	▪ 2 nd Battery	• Pallet Dispenser & Lapping Automation System	Transfer Automation System	1 Line	2021~2022
	▪ 2 nd Battery	• Palletizing Gantry Automation System	Transfer Automation System	2 Line	2021~2023
	▪ Defense	• K310 elastic fixture Automation System	Manufacturing Automation System	1 Line	2020~2021
	▪ Defense	• 20mm Automation of supply and discharge of warhead painting process products	Manufacturing Automation System	1 Line	2020~2021
	▪ Defense	• 30/35mm cartridge ultrasound meter automation	Manufacturing Automation System	1 Line	2020~2021
	▪ Tire	• Autoloader for Warehouse Tire Transfer (Nexen Tire)	Transfer Automation System	2 Line	2006~2022
	▪ Food	• Gantry Transfer Automation System for Warehouse	Transfer Automation System	1 Line	2022
	▪ Solar power	• Gantry Transfer Automation System for Warehouse	Transfer Automation System	2 Line	2023
	▪ Display	• PDP transfer machine System	Transfer Automation System	1 Line	1998~2009
	▪ Display	• Module Line Robot	Transfer Automation System	1 Line	1998~2009
	▪ Display	• PDP Diverter Conveyor	Transfer Automation System	1 Line	1998~2009
	▪ Display	• PDP cell and module process Robot	Transfer Automation System	1 Line	1998~2009

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CUSTOMER	CLASSIFY	PROJECT NAME	BUSINESS AREA	QTY	PERIOD
	▪ Trim part	• Track Motion	Transfer Automation System	4 Line	2015~2016
	▪ Engine part	• Crank Line – Gantry automation System	Transfer Automation System	1 Line	2019
	▪ Heat Treatment	• Gantry automation System	Transfer Automation System	6 Line	2010~2015
	▪ Aviation	• Track Motion TMS-F1	Manufacturing Automation System	4 Line	2017~2022
	▪ 2 nd Battery	• Gantry Automation System	Transfer Automation System	1 Line	2022~2023
	▪ Construction	• Robot Automation System	Manufacturing Automation System	1 Line	2023
	▪ Construction	• Gantry Automation System	Manufacturing Automation System	2 Line	2023
	▪ Heavy industry	• Robot Automation System	Manufacturing Automation System	1 Line	2023
	▪ 2 nd Battery	• Battery Parts Conveyor Automation System	Transfer Automation System	1 Line	2023
	▪ Tool part	• Palletizing Gantry Automation System for Warehouse	Transfer Automation System	1 Line	2023
	▪ Construction	• Welding Automation System	Manufacturing Automation System	1 Line	2023

MAJOR APPLICATION

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Transfer Automation System

P J T Name	Parts Manufacturing Automation System
Explanation	<ul style="list-style-type: none"> Automotive parts manufacturing automation system It supplies the automation system of automobile powertrain parts for internal combustion engines and the processing line of electric vehicle parts to Turn-key Base Build a large-scale mass production line automation system
Industry	Automotive(Engine, Electric) Industry
Customer	H/KMC Group, KONEC, Myunghwa, etc.
APPLICATION PRODUCT	Gantry Robot, Track motion, Manufacturing Automation system
V I D E O	

Various parts manufacturing automation



Carrier



Case



TM Case



Reducing Case



Valve Body



HDEP



EOP Cover



BSA



D ACTIVE
Cover



Cylinder Block



Cylinder Head



Crank Shaft



Cam Shaft



Connecting rod



Piston



Bearing



Clutch Housing



Gear




Battery Case

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Transfer Automation System


P J T Name	Tire Palletizing Automation System
Explanation	<ul style="list-style-type: none"> Input/Output management Gantry Automation System for completed Tires - Volume : 4,600 EA/unit (based on 90% operating efficiency) - Input area(4units) : Storage volume 255 stack, classification by model and palletizing - Output area(2units) : Storage volume 216 stack, classification by model and de-palletizing Increase tire load and handling volume by applying high-strength column design technology and high-speed transport technology
Industry	Tire Industry
Customer	Hanhwa Corporation/Momentum
APPLICATION PRODUCT	3-Axis Gantry Robot (CL-Type)
V I D E O	

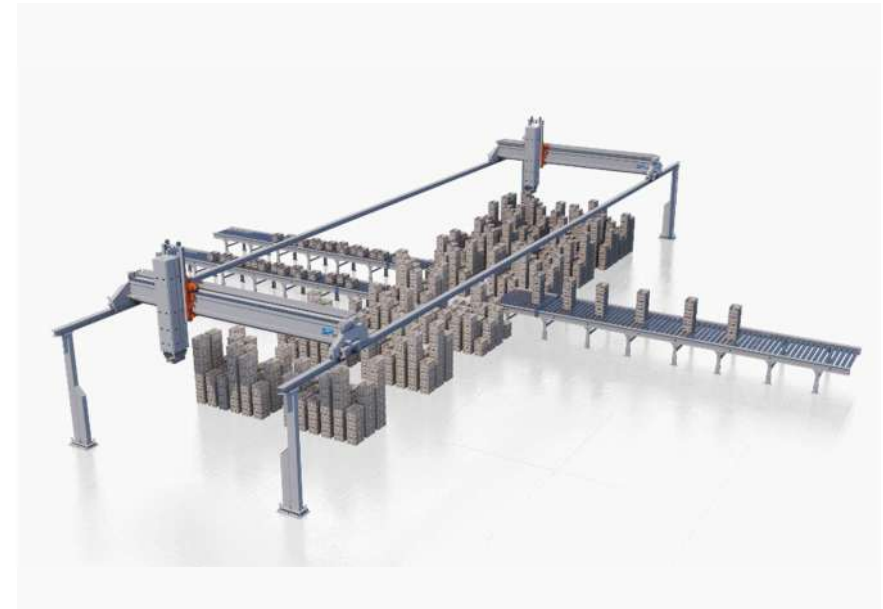


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Transfer Automation System


P J T Name	Tote Box Automatic Warehouse System for food storage
Explanation	<ul style="list-style-type: none"> Gantry automation system for Tote Box storage and input/output management - Volume : 1,350 Box/Hr (based on 75% operating efficiency) - A Zone(2units) : storage volume 7,500 Box, load up to maximum 8 Tote Box - • B Zone(2units) : storage volume 7,500 Box, load up to maximum 8 Tote Box Expand Box storage and processing volume by using multi picker that can transfer multiple Tote Box
Industry	Food Industry
Customer	Hanhwa Corporation/Momentum
APPLICATION PRODUCT	3-Axis Gantry Robot (CL-Type)
V I D E O	



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Transfer Automation System


P J T Name	Steel Box Automatic Warehouse System
Explanation	<ul style="list-style-type: none">• Increase warehouse space efficiency by stacking.• Steel Boxes in two tiersCapable of stably transporting medium to heavy loads such as bolts and various parts.• Enables flexible material transfer when connected to logistics systems such as conveyors.
Industry	—
Customer	JINHAP
APPLICATION PRODUCT	3-Axis Gantry Robot (CL-Type)
V I D E O	



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Transfer Automation System

P J T Name	2nd Battery Module Line Automation System (Cleanroom Environment)
Explanation	<ul style="list-style-type: none">• Automate loading and palletizing of 2nd battery module assembly lines• Building a 5-axis gantry robot system that combines standard or linear robots• Apply drive part dust collection filter Suppression of particle generation (patent ownership)
Industry	2nd Battery
Customer	SFA
APPLICATION PRODUCT	3-Axis Gantry Robot (CL-Type)
V I D E O	

Cleanroom Gantry Robot Strengths

Minimize Drive Parts Exposure & Dust, Noise

Apply Negative Pressure Exhaust Line for Contaminant discharge: Keep Clean Air on Site

Can use in Various Work Environment


Heavy Duty Cushioning without additional devices



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Transfer Automation System

P J T Name	5G-based Shuttle Automatic Warehouse System (AS/RS)
Explanation	<ul style="list-style-type: none">• 1,000Cell size, Mini Shuttle 4units, Input/Output line Automation system• Real-time shuttle control by applying 5G high-speed network• Interworking with integrated warehouse logistics control system• Equipped with shared function that can be shared with multiple users.• Real-time stock management through image transmission at the time of Input/Output time
Industry	Logistics Automation
Customer	Companies in Gyeongnam Robot Land
APPLICATION PRODUCT	Shuttle, Lift, Conveyor and Diverter, WCS Solution
V I D E O	



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Manufacturing Automation System

P J T Name	Pre-cast De-shuttering / Shuttering System
Explanation	<ul style="list-style-type: none"> Concrete Panel Manufacturing(Pre-cast) Automation System Fully automated manual work for workers ex)Shuttering, De-shuttering, Working with rebar
Industry	Construction
Customer	Sampyo P&C
APPLICATION PRODUCT	3-Axis Gantry Robot (CL-Type)
V I D E O	

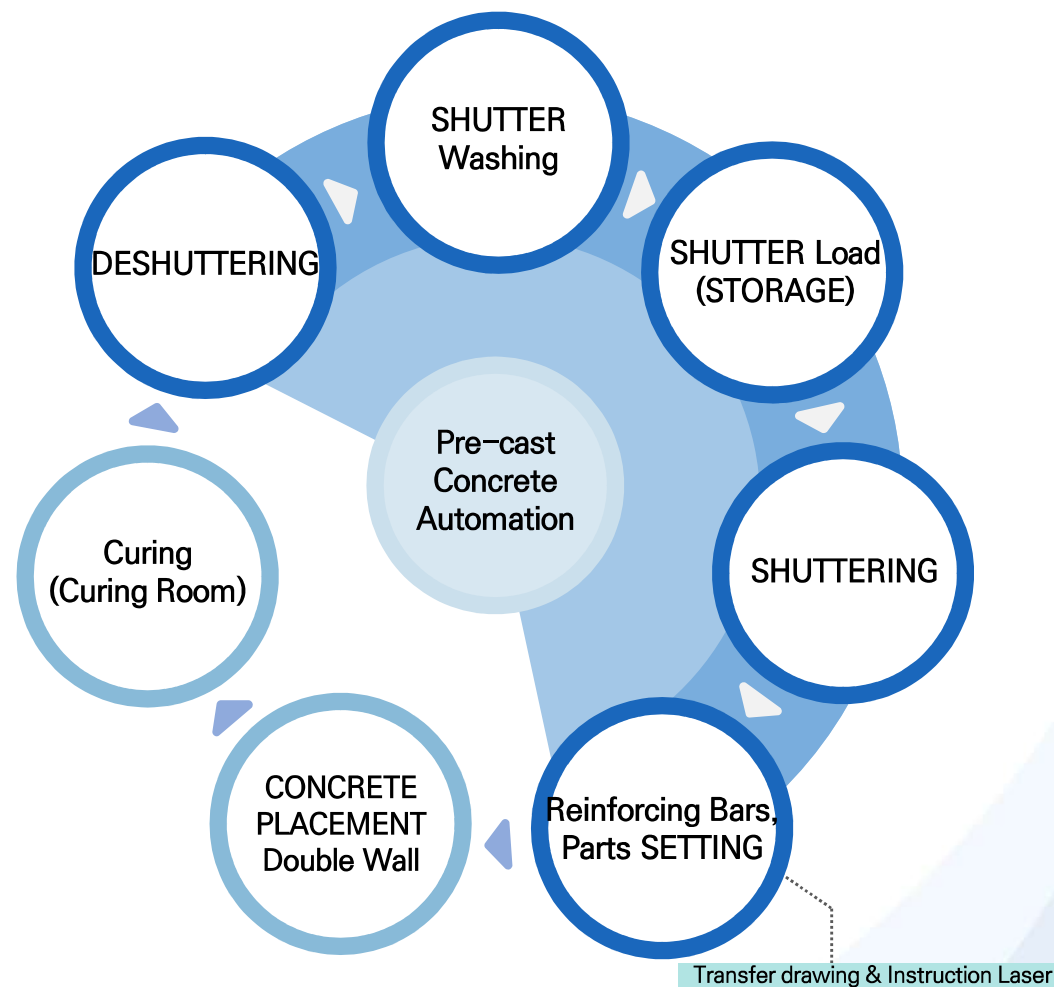


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Industry	Construction
Customer	Sampyo P&C
APPLICATION PRODUCT	3-Axis Gantry Robot (CL-Type)
V I D E O	



By applying automation to concrete shuttering & deshuttering, which was previously performed manually, more fast and easy to work

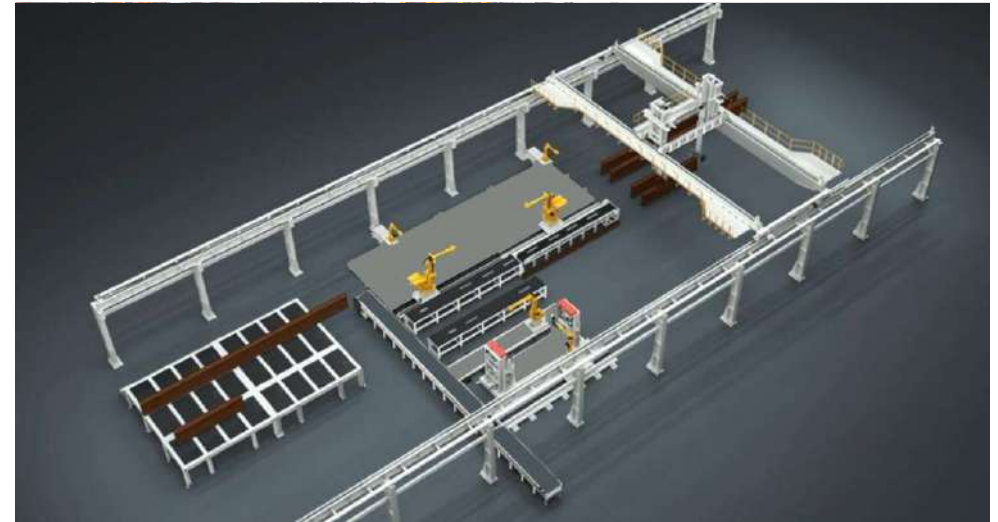
In addition, It is to possible to automatic instruction for LASER trough drawing transfer system

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Manufacturing Automation System

P J T Name	Welding Automation System
Explanation	<ul style="list-style-type: none">• According to H-Beam's length, Gantry Robot carry the H-beam on their positioner• Two robots supply subsidiary materials to the H-Beam• Gantry Robot unloads the welded H-Beam
Industry	Shipbuilding
Customer	Hyundai Robotics
APPLICATION PRODUCT	3-Axis Gantry(CL TYPE), Track Motion(TMS-F)



System Design



H-BEAM Transfer Automation



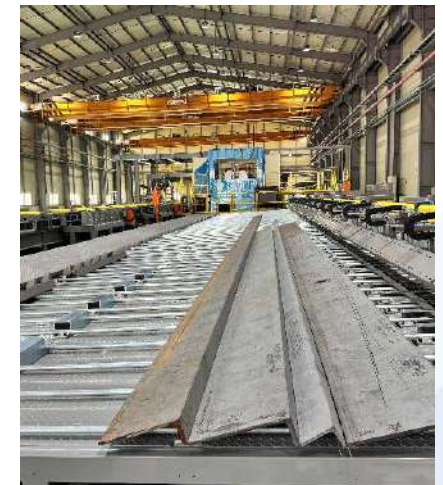
Welding Robot Transfer Automation

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Manufacturing Automation System

P J T Name	Automated Robot System for Profile Cutting
Explanation	<ul style="list-style-type: none">Establishing a logistics automation system for the profile cutting process
Industry	Shipbuilding
Customer	Samsung Heavy Industries
APPLICATION PRODUCT	3-Axis Gantry(CL TYPE), Automation (Conveyor)

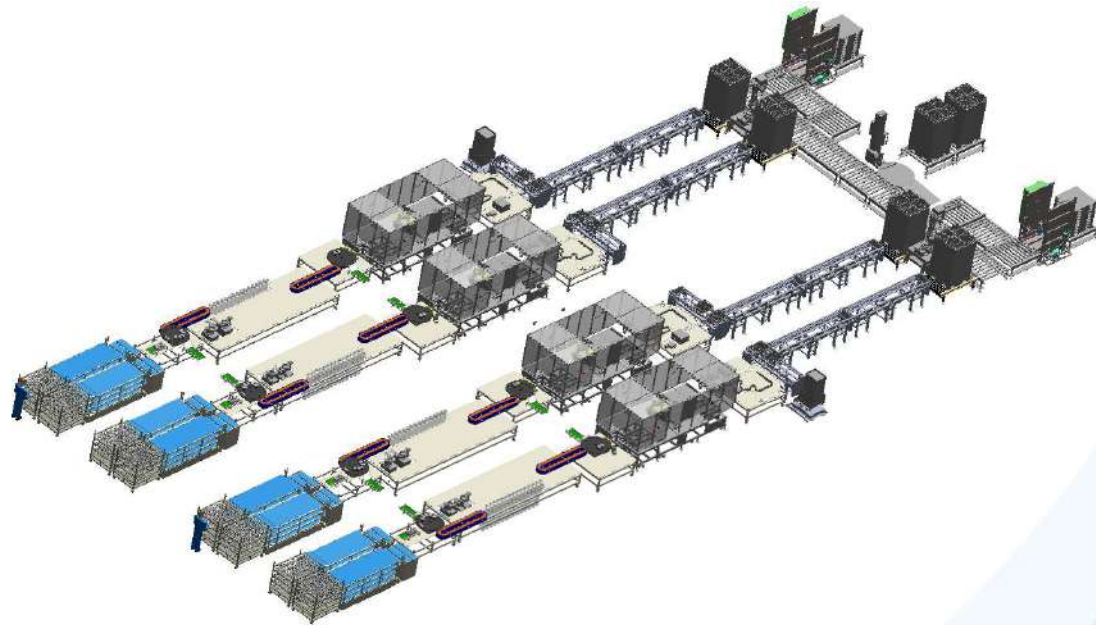


MAJOR APPLICATION

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Process Logistics Automation System

P J T Name	Cylindrical 2nd Battery Can(4680) Rivet Assembly Line Automation System
Explanation	<ul style="list-style-type: none">• Constructed entire Automation System on the cylindrical 2nd Battery can(4680) rivet and gasket assembly Process.• Constructed all automation system from putting material to inspection that is the key process, riveting, palletizing and packaging.• Securing Mass Production and quality management system through automation
Industry	2nd Battery
Customer	Dongwon Systems
APPLICATION PRODUCT	Machine vision, Deep learning, AI, Self-driving robots, etc.

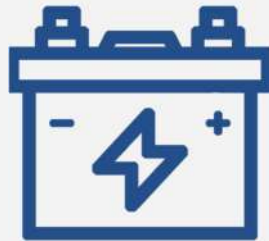


PRODUCT INFORMATION

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ROBOTICS DIVISION



BATTERY DIVISION



ICT DIVISION

ROBOTICS DIVISION

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Standard Linear Module: Medium Duty



1 Axis Linear Module



2 Axis Linear Module



3 Axis Linear Module

	30	60	150	200	300	400
UL-1						
UL-2						
UL-3						

	30	60	150	200	300
TL-E					
TL-1					
TL-2					
TL-3					

	30	60	150	200	300
CL-1					
CL-2					
CL-3					

ROBOTICS DIVISION

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Standard Linear Module: Heavy Duty



Track Motion F Series

	450	1300	1500	2300	3600
TMS-F1					
TMS-F2					
TMS-F3					



Track Motion O Series

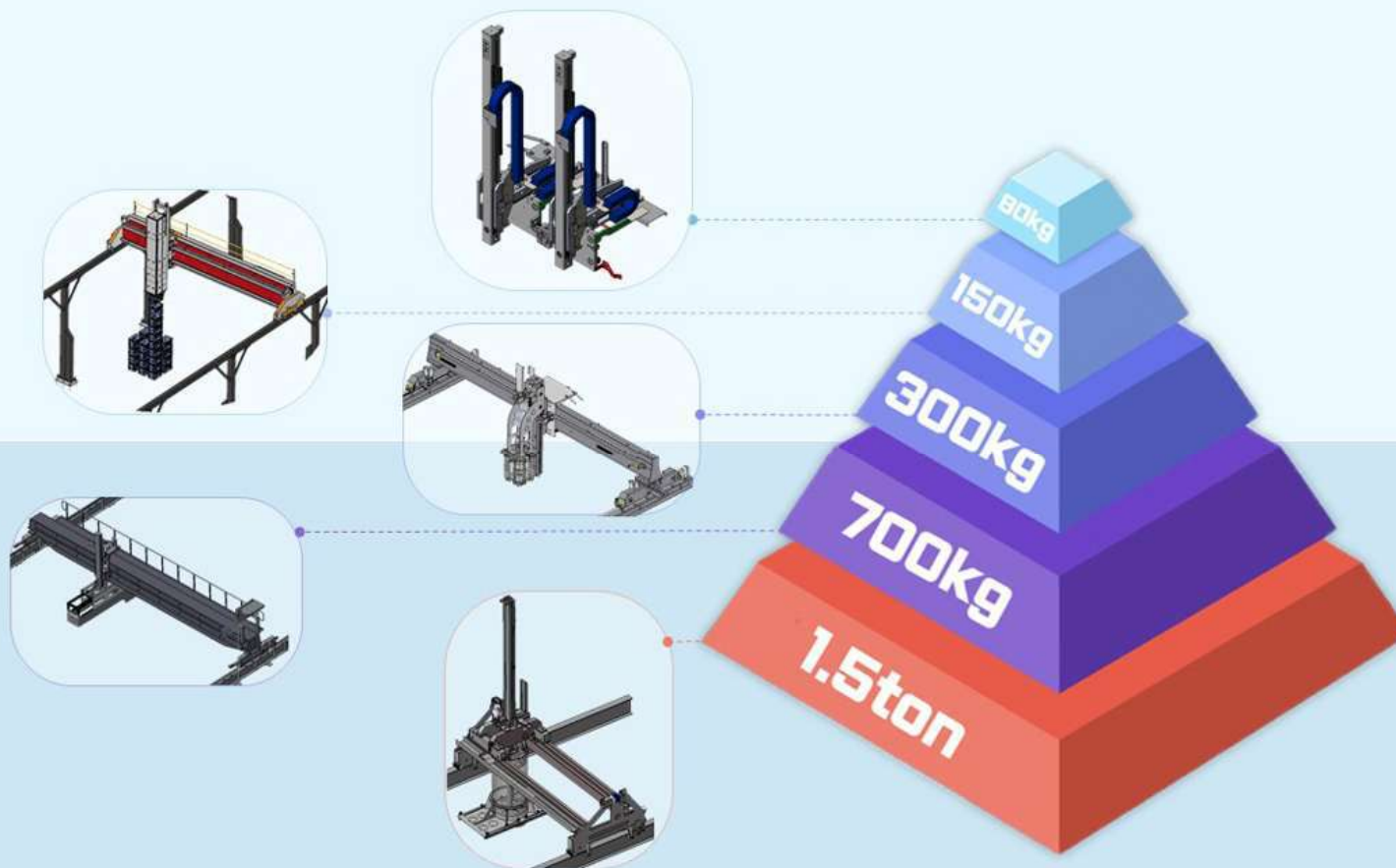
	180	620	790	1000	1800
TMS-O1					
TMS-O2					
TMS-O3					

ROBOTICS DIVISION

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Specializing order made type Linear Module

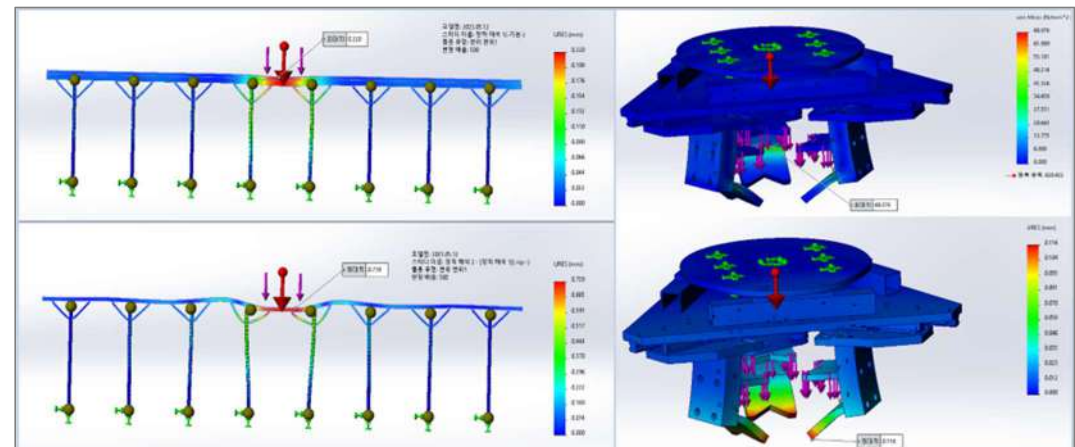
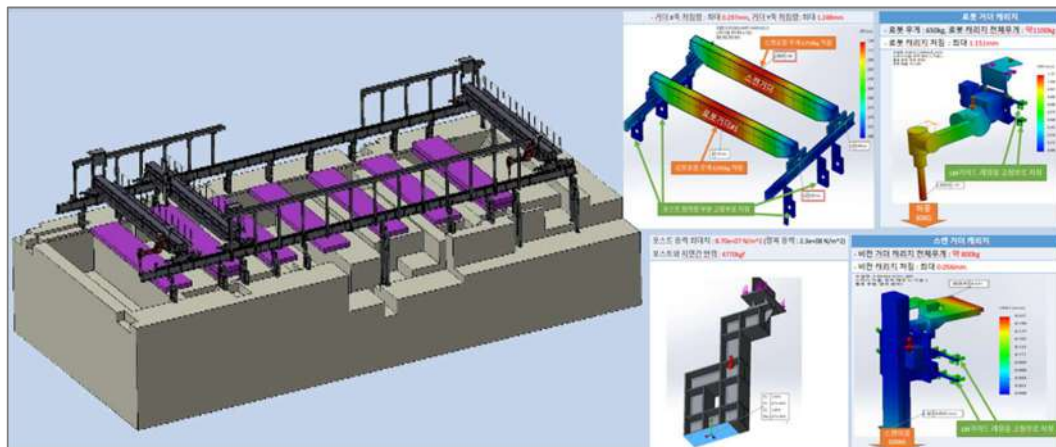
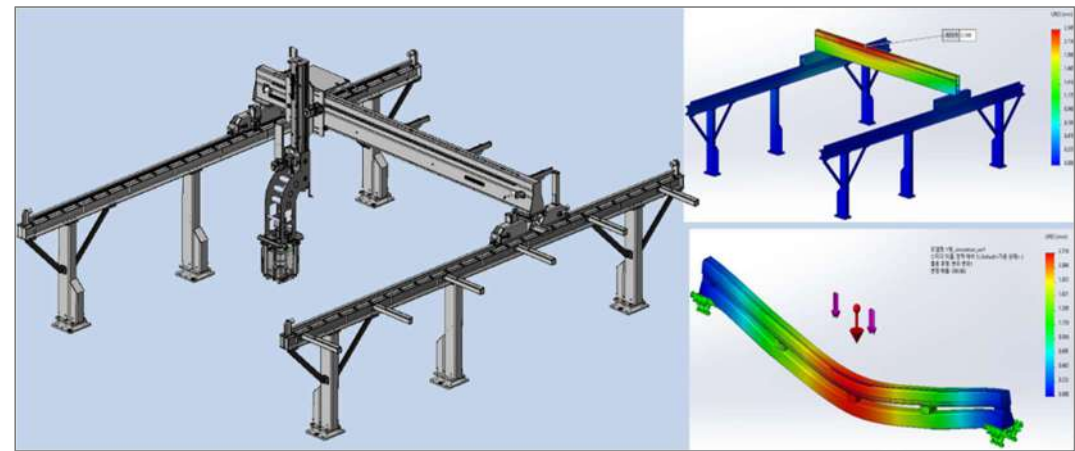
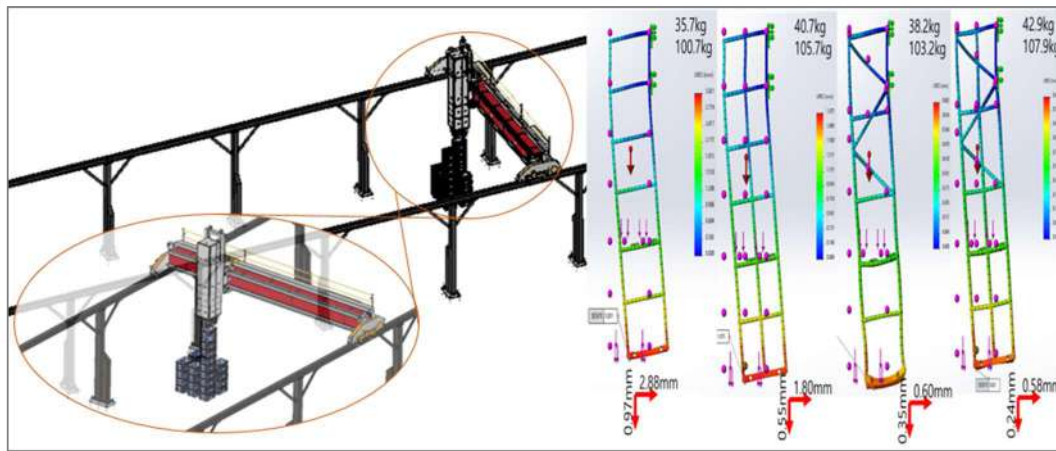
Expand the LINE-UP of GANTRY ROBOT by payload



ROBOTICS DIVISION

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Spherical Linear Module Design Verification (Structural and Stiffness analysis)



ROBOTICS DIVISION

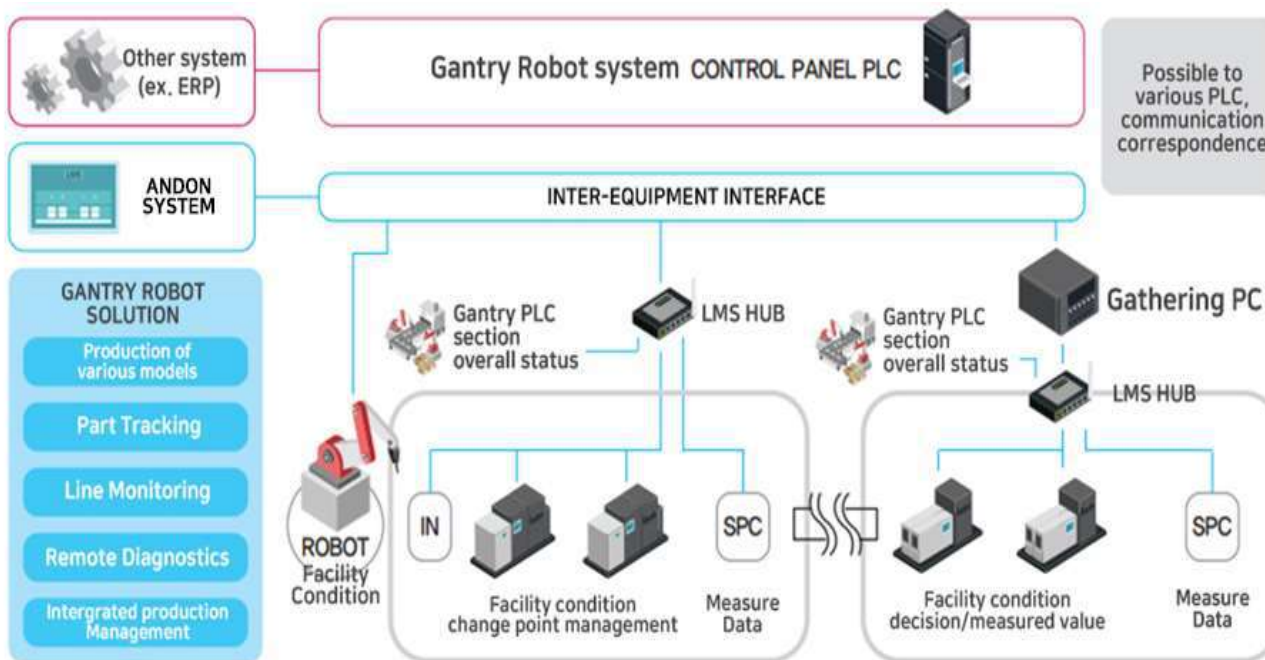
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Smart Factory Solution

Using unique smart factory platform that able to remote maintenance,

Improve factory Quality (quality, productivity) through unique IoT Server that can save, analyze and share various equipment and sensor data in real time.

SP RAS (SP Remote Access Service)



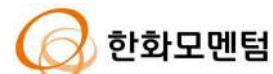
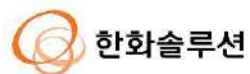
• All Line network system configuration

Goal 목표	Current goal 현재목표	Input 투입	Performance 실적	operating rate 양품가동률	Faulty 불량	Faulty rate 불량률
302	245	205	84	34.0	22	11.0
설비명	실적합계	OK	NG			
OP10 가공	206	205	1			
OP20 가공	206	206	0			
OP30 가공	206	206	0			
CMM	1	0	11			
자동검사기	8	7	1			
단품 LEAK TESTER	89	83	6			
OIL SEAL 조립기	82	82	0			
조립 LEAK TESTER	84	81	3			
S/Piunger 조립기	80	80	0			
Bushing 조립기	84	84	0			
2D 마킹기	84	84	0			
완성검사	102	102	0			

MCC STATUS

CUSTOMERS

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BATTERY DIVISION

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Major Products

CAP ASS'Y



If the pressure in the cell rises above a certain level, it prevents an explosion so that **gas can be discharged to the outside.**

CAN

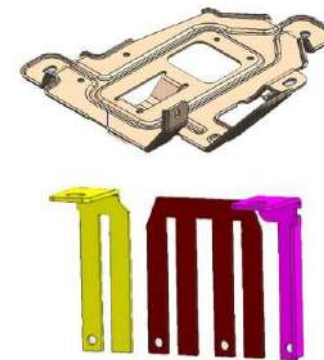


CONTAINER AS 2ND BATTERY CASE for containing the contents of the battery (electrolyte, cathode, cathode, etc.)

Battery Cell (Ass'y)



2nd Battery Press Parts



Automotive Press Parts



[Automotive Lamp components]



[Fog Lamp Ass'y components]

SEBANG
세방리튬배터리

HYUNDAI
MOBIS

NISSAN
POWERING THE WORLD

amul
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SEKONIX

HS
HYOSUNG
HYOSUNG ELECTRIC CO., LTD.

MOTION & CONTROL
NSK

ICT DIVISION

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smart FACTORY

MES(Manufacturing Execution System) solution aiming at information sharing and decision making across overall manufacturing & production activities with common functions and the flexible system structure for adding and changing components easily.

smart UX

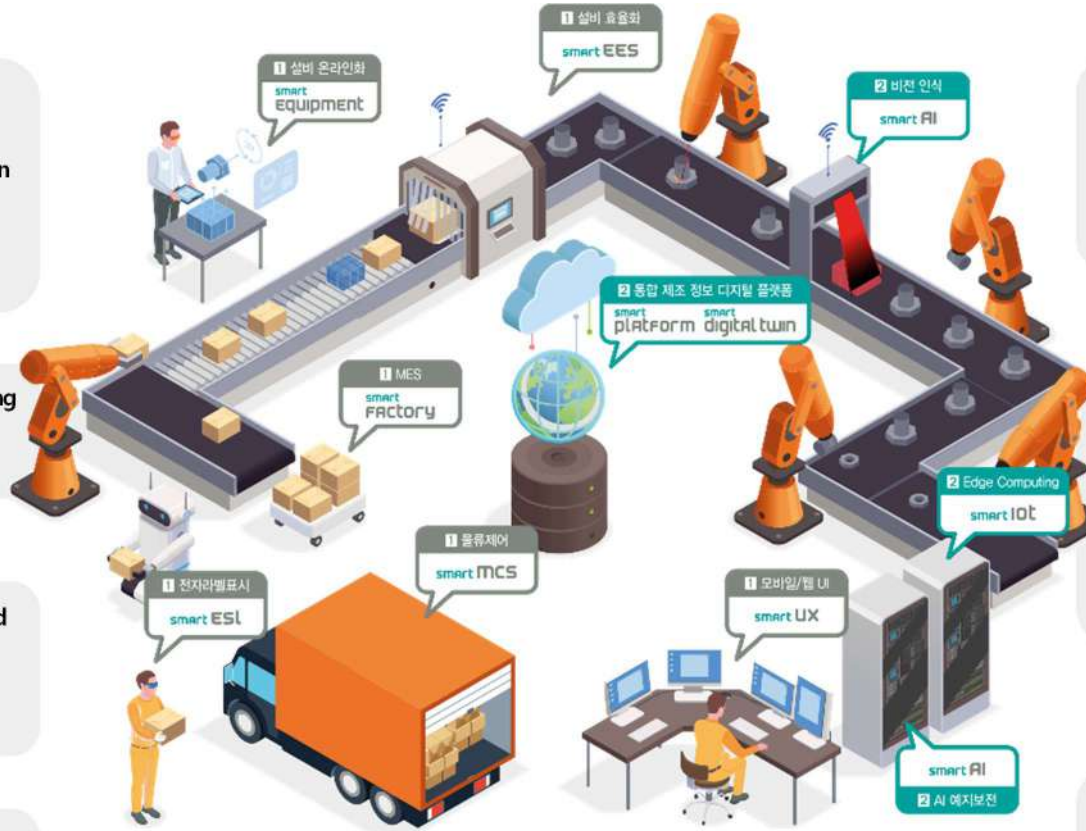
Flexible and easily expandable structure by adapting HTML5 and .NET based UI framework and eliminating dependencies among system modules.

smart Equipment

Integrated on-line server solution that controls and manages equipment and facilities using various interfaces with external systems such as MES and EES(Equipment Engineering System).

smart MCS

Real-time logistics management solution that executes the return and storage of magazine, carrier, and other materials in the automated factory and warehouse.



Smart Factory Solution

Manufacturing Intelligence Solution

smart EES

Aims to maximize OEE(Overall Equipment Efficiency) along with the basic service modules such as RMS, EPT and FDC. Each service is configured as components and can be reloaded during runtime in order to avoid downtime.

RMS : Recipe Management System | EPT : Equipment Performance Tracking | FDC : Fault Detection & Classifications

smart AI

Manufacturing AI Dev/Ops Platform that provides AI-based services for predictive maintenance and manufacturing process & quality intelligence in a variety of industry fields such as electric & electronics, steel, refractories, construction, optics, chemicals and many more.

ESL solution

Internet of Things(IoT) solution that automatically displays manufacturing and warehouse information, previously managed manually in paper form, on e-paper and manages it in real-time through the synchronized system.

COMPANY INFORMATION

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SMART FACTORY

Logistics Ware House Automation System

Tire Palletizing Automation System

Shuttle 5G Fusion Service

Automobile Parts Manufacture Automation

Pre-Cast De-shuttering & Shuttering Automation

Co-robot & Ultrasonic Measuring Automation



COMPANY EXTIVITY

Company Introduce

Exhibition Participation

Smart solution



SPSYSTEMS.CO.KR



[@SPSYSTEMS](https://www.youtube.com/@SPSYSTEMS)



123, Eogokgongdan-ro, Yangsan-si, Gyeongsangnam-do, Republic of Korea
Tel : 055-371-5600 | Fax : 055-371-5606 | Web-site : www.spsystems.co.kr | e-mail : spsales@spsystems.co.kr

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