

INTRODUCTION

# **Company Profile**

건솔루션(주)

**Gunn Solution Co.,LTD.** 

TEL +82 1899-7487

FAX +82 505-380-7449

Smart Factory System

**Engineering & Consulting Company** 

## **AGENDA**



## **Overview**

- 1.1 Introduction
- 1.2 History
- 1.3 Certification, Patents& Award
- 1.4 Business Area
- 1.5 FACON R&D Center

## **Define Smart Mafg. Innovation**

- 2.1 Define Smart Mafg. Innovation
- 2.2 Gx-MES

## **Career & Key customer**

- 3.1 Project Career
- 3.2 Key customer

## **Overview**Intorduction



## Global standard technology for smart factory through the alliance.

Gun Solution is a company with OT and IT technology convergence with various companies

It is a leader in building smart factories.

We applied gun solution technology to international standard technology

It is reborn as a representative of exporting Korean smart manufacturing innovation solutions. Company Name 건솔루션㈜

**Gunn Solution Co.,LTD.** 

Address [Head / R&D center]

6 F 28, Iljik-ro 94beon-gil, Manan-gu, Anyang-si,

Gyeonggi-do, 13901 Korea

[Daegu Office]

329, Seongseo-ro, Dalseo-gu, Daegu 42703 Korea

[Changwon Office]

36, Yongdong-ro 83beonan-gil, Uichang-gu, Changwon-si, Gyeongsangnam-do 51139 Korea

[INDIA branch]

Flat No.3, Manohar Apartment, Survey No.5/3, Erandwane,

Pune411004,INDIA

Business Area Service/software development and supply

Wholesale and retail / Machine parts, machine

tools, measuring instruments, Trade

**Contact** TEL +82 1899-7487

FAX +82 505-380-7449

**Employees** 93

**Establishment** 2011.07.01

**Overview** 

History

History

## 2023

### Smart Manufacturing Innovation

Establishment of 7 smart factory construction projects in 2023 [Q-InTech, TTS, Ilsun System, FineDNC, KAEngineering, etc.]

#### R&D Business

Digital Innovation Mid-sized Enterprise Development Project in 2023

Development of CNC system technology for smart

manufacturingequipment (4th year)

#### Robot Business

3 manufacturing robot leading distribution demonstration projects/ 5 manufacturing robot plus businesses in 2023 [Dongwon Parts Co., Ltd., Dong-A Precision Ind., Bizn Mold, SPG]

#### Major Project

Smart factory in INZI CONTROLS Hungary kft (Factory 3)

NEXPLUS SK s.r.o Smart Factory

NEX VINA CO., LTD. Builds Smart Factory

Education and Training Equipment in Cheongju Campus, Korea Polytechnic University

Construction of Chungnam Techno Park Processing Smartization Demonstration

#### Education Business

ESG support project for youth-friendly enterprises will be carried out in 2023 [KHRC]

Development of AI convergence talents in the field of intelligent robots by 2023 [MTIE]

2023 Industry-Specified Short-Term Job Competency Certification Course Matchup

Project Progress [Ministry of Education]

#### Certification/ MOU

Selection of promising small and medium-sized enterprises in Gyeonggi-do in 2023 MOU Agreement for South Incheon Campus of Korea Polytechnic University

History

#### **Overview**

History

## 2022

#### Smart Manufacturing Innovation

Establishment of 7 smart factory construction projects in 2023 [Q-InTech, TTS, Ilsun System, FineDNC, KAEngineering, etc.]

#### Education Business

ESG support project for youth-friendly enterprises [KHRC] / Al convergence talents in the intelligent robot [MTIE]
Industry-Specified Short-Term Job Competency Certification
Course Matchup Project Progress [ME]

#### Robot Business

4 manufacturing robot leading distribution demonstration projects
2 manufacturing robot plus businesses
[Ray Mold Co., Ltd., GNB Co., Seoyeon Top Metal Co., Ltd., Konec
Co., Ltd., Cheongsan Kapling Co., Ltd.]

### Major Project

Smart factory in INZI CONTROLS Hungary kft (Factory 3)
NEXPLUS SK s.r.o Smart Factory

#### R&D Business

[MTI] Digital Innovation Mid-sized Enterprise / CNC system technology for smart manufacturing Machine (3rd year)

[Kyungnam University LINC 3.0 Project Group] Industry-academic joint technology project

#### Certification/ MOU

[Ministry of Employment and Labor]
Selection of Small and Medium-sized Enterprises
MOU Agreement for Seoul Jeongsu Campus of Korea Polytechnic
University/ Family Enterprise Agreement of Gachon University

Certification, Patent and Award

#### Overview

Certification, Patents & Award

## **Certification, Patent and Award**

Gunn Solution Co., Ltd. currently holds 19 certifications and confirmations, 7 trademark registrations and awards, and 8 patents and copyrights.



E



Certification

Patent Copyright Trademark Award

19

8

7

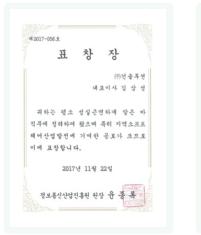






















#### Overview

**Business Area** 

## **Business** Area

Business Area of Gunn Solution Co., Ltd. We are conducting business in various Area under four categories: smart factory, education business, 5-axis solution, and Machine Tending.

## **Smart Factory**

MES (Mfg. Execution system)

POP (Point of Production)

CAP (Monitoring)

EIS (Executive Info)

SPC (Statistical)

WMS (Warehouse) TMS(TOOL)





KIRIA

한국로봇산업진흥원

# 한국폴리텍대학

## **Education**

SmartFactory system Robot(ROS/MTS) Digtal twin **IIOT& Database** Machine running





## **5Axis Machining**

Renishaw H/W

(Probe/ Ballbar/Equator)

OMV+ (기상(機上)측정)

CAD/CAM (Siemens/Autodesk)

AUTODESK.

& API develop

H/W(Zig & vise)







## **Factory Automation**

HAIMER.



**DOOSAN** 

AGV/AMR **Auto Loader** Auto Feeder Clamp TIM

**ROBOT** 



## A company full of passion for manufacturing

Business Big 3 categories

1

IT Solution

MES/ CAP(Monitoring for Facilities)
ERP/ CRM/ QMS/ WMS/ TMS/ SPC/ EIS

2

OT Solution

Inspection (OMV+, Renishaw H/W)
Factory Automation
(Machine Tending, Co-Robot & AMR,
TIM/ FEMS/ D.N.A, CAD/ CAM)

3

Educational project

MOM System Training, Robot
Operation (ROS/MTS)
Digital Twin, IIOT&Database,
Machine Learning

## **FACON R&D Center**

Through various Machine of the FACON R&D Center owned by Gunn Solution Co., Ltd We developed Smart R&D solutions, smart factory system testbed, Renishaw Probe measurement, ROBOT Machine Tending automation system development, MES/POP/CAP/SPC/EIS, AGV, and AMR-linked solutions.

## Machines LIST

FM 200 5AX (DNSolutions)

RoboDrill D14MiA5

SMEX SM400DH

**DMG MORI CMX-50U** 

Mazak VARIAXRX j-500/5X

Hwacheon UH 500 32K

Hwacheon M2 5AX 20K

RoboDrill D14MiB5

**LYNX 200** 

**MAGNIX MAG30T2X2** 

**COORD3 UNIVERSAL** 

Controller: HEIDENHAIN

Controller: FANUC 31i B5

Controller : Mitsubishi M700

Controller: Simens 840D SL

Controller: SMOOTH

Controller: HEIDENHAIN

Controller: FANUC 31i B5

Controller: FANUC 31i B5

Controller: FANUC i-Series

Controller : Brother CNC

Controller: CMM



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Through various Machine of the FACON R&D Center owned by Gunn Solution Co., Ltd We developed Smart R&D solutions, smart factory system testbed, Renishaw Probe measurement, ROBOT Machine Tending automation system development, MES/POP/CAP/SPC/EIS, AGV, and AMR-linked solutions.

## Robots LIST

M1013	Manufacturer : Doosan	Quantity: 6
H2017	Manufacturer : Doosan	Quantity:1
H2515	Manufacturer : Doosan	Quantity:1
M1509	Manufacturer : Doosan	Quantity: 2
Indy7	Manufacturer : Neuromeka	Quantity: 4
RB10-1300	Manufacturer : Rainbow	Quantity: 2
ABB	Manufacturer : ABB	Quantity:1
UR3	Manufacturer : Universal	Quantity:1
YS140	Manufacturer : HDRobotics	Quantity:1
GoCart250	Manufacturer : Yujin	Quantity:1
AGV	Manufacturer : Mostec	Quantity:1



Define Smart Mafg. Innovation

Define Smart Mafg. Innovation

## **Smart Factory System With GUNN Solution**

Through Gun Solution Co., Ltd.'s smart manufacturing innovation solution, the production system of small and medium-sized manufacturing companies It can change to a smart factory operating environment.

If it changes to a smart factory It can effectively improve chronic problems such as short delivery times and defects of existing production systems, low utilization rates and inefficient work arrangements, as well as open new fields of manufacturing technology based on IT, ICT, and IoT technologies.

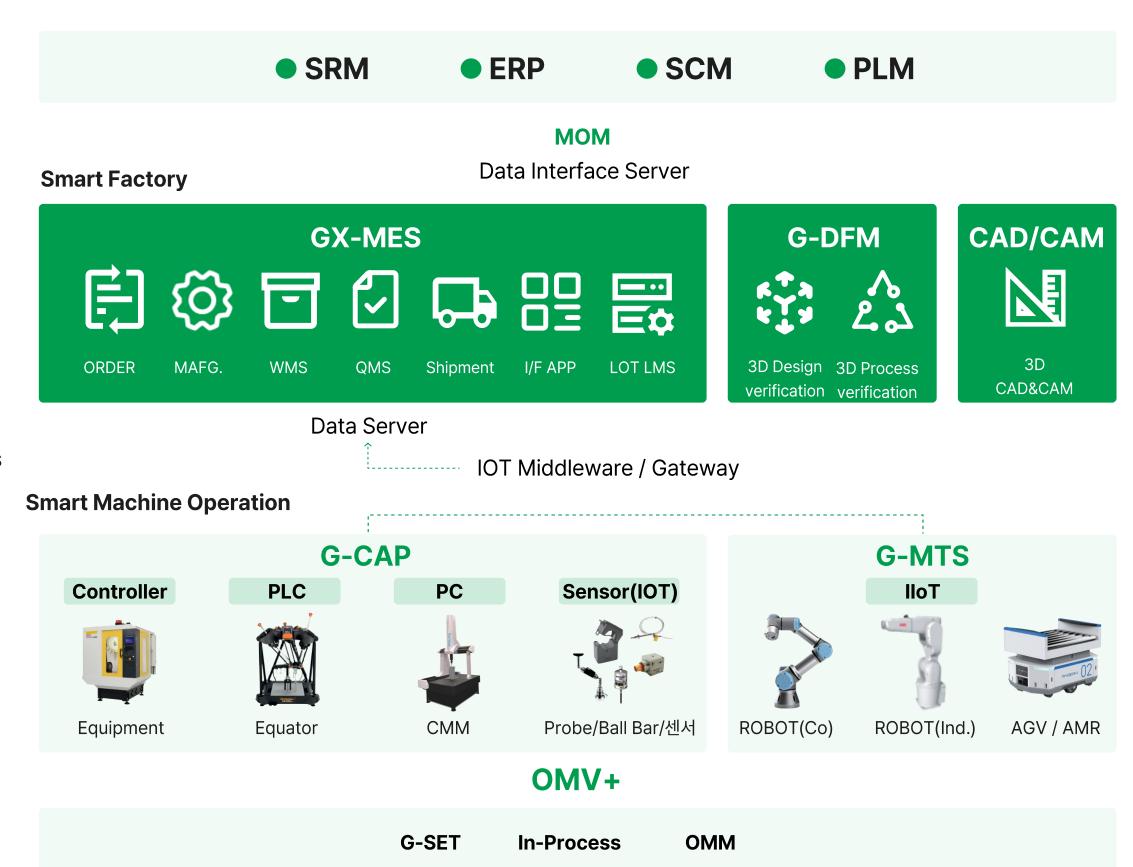


Define Smart Mafg. Innovation

Define Smart Mafg. Innovation

# **Solution of Smart Factory system**

Smart Manufacturing Innovation Solutions
It is the most **efficient and optimized** way to achieve maximum manufacturing competitiveness compared to investment.



#### **Gx-MES**

## **Gx-MES Solution**

### **Provides optimized production management packages**

+ Consulting & Customizing

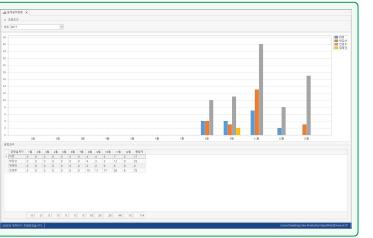
Partmachining (Asembley/ Mass)

Mold& Die(Injection/Stamping)

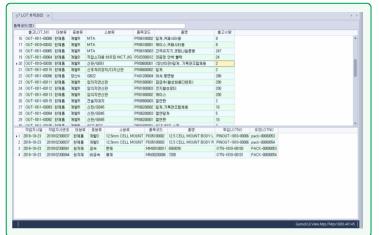
Industry (semiconductors/automobiles/aircraft/manufacturing)

+ Legacy System과의 DB I/F

#### **QMS**



### **LoT LMS**



## Mfg. Planing



### BOM(PL



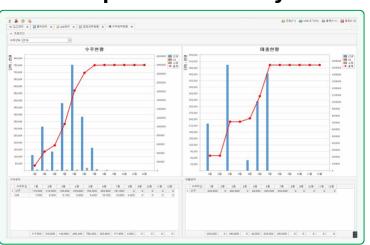
**Point of Production** 



Machine I/F preservation



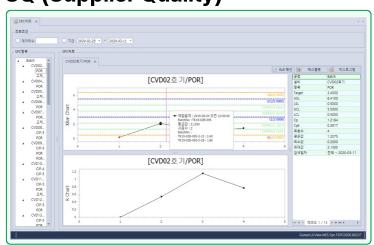
## **Real-time performance tally**



**EIS** 



## SQ (Supplier Quality)



Gx-MES Application effect

Define Smart Mafg. Innovation

## **Effect of application**

**Gx-MES** 

Gx-MES increase work efficiency and enterprise value.

Manufacturing process becomes smarter.



Simulation before production in virtual space

Development of customized products for shorter time periods



Competitive

improvement



Real-time information exchange between

facilities/materials/systems

Various kinds of mass production energy facility efficiency inventory



productivity

improvement



Real-time automatic order to match production status

Cooperation in all areas, including reduction of inventory costs, quality, logistics, etc



Price, Quality

**Improvement** 



75% Reduce

Gx-MES Introduction Reduce job input time by more than 75%



Lead

time

Gx-MES Introduction
Reduce lead time by 27% on average



61% Reduce

Gx-MES Introduction Reduce paperwork by 61%



24% Reduce

WIP Gx-MES Introduction
Average reductions of 24% in WIP



56% Reduce

Gx-MES Introduction 56% reduction in lost documents



18% Reduce

Gx-MES Introduction Average decrease of defective products by more than 18%



45% Reduce

Gx-MES Introduction
Reduce production cycle by 45%







CA Case

Customer & Application Case.

Project Career History of government R&D tasks

## History of government R&D tasks

## **Project Career**

The performance history and major performance of Gunn Solution Co., Ltd.'s government R&D project.

2021~2023 Total 21 cases

## **Major performance of project**

Development of a real-time monitoring system for production of battery parts for eco-friendly cars. Advanced processing quality measurement process for high weight, large size mold parts. Development of In Line Messaging System Using Robot & Vision. All robot-based bin-picking capable of responding to atypical objects in machine-tending (Bin Picking). Process Smartization Solution Technology Development Digital twin that can analyze/utilize small and medium enterprises' precision processing machine big data. 3D monitoring SaaS development and commercialization. Development of Demand-Customized Smart HMI System Technology.

2023



Fostering Digital Transformation Mid-sized Enterprises

For Smart Manufacturing Equipment

**CNC System Technology Development (HMI)** 

2022



중소벤처기업부

**Process Quality Development** 

**Innovative R&D** 



**ICT R&D Innovation Voucher** 

2021



Fostering Global SaaS
Smart Manufacturing R&D

## **Major Customers**

### Part

























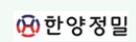


































### Mold& Die



## Mass





















































WONIL SPECIAL FIELD COLUD

DAEBCO





















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Smart Factory System with Gunn Solution Co., Ltd.

Thank You.