

# OpenSG Overview

Hightech solution, Consulting and SI Service based on Microsoft .NET Technology For Automation

2021.04



## **Company Profile**

## **OpenSG Corporation**

Younglae Chung **CEO** 

23, Jan, 2007 **Date of Establishment** 

> KRW ₩100,000,000 Capital

**Business Areas** Manufacturing automation solution development/supply,

Microsoft new technology consulting/education

**Number of Employees** 60

KRW 6.5 billion '20 Sales

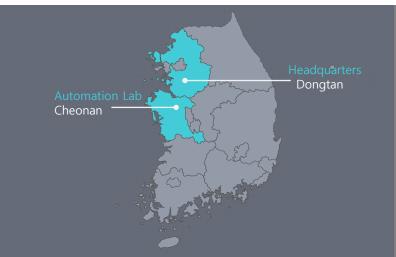
Website http://www.opensg.net

## **Headquarters**

1201Ho, M Tower, 51-9, Dongtancheomdansaneop 1-ro, Hwaseong-si, Gyeonggi-do, 18469, Korea

#### **Automation Lab**

406Ho, 10 Baekseokgongdan 1-ro, Seobuk-gu, Cheonan-si, Chungcheongnam-do, 31094, Korea **T.** +82-41-566-2612 **F.** +82-41-566-2613



## History

2020 Relocate Headquarters to Dongtan

2017 Rename to OpenSG Corp.

Establish OpenSG R&D Center in Seoul

2010 Relocate Headquarters to Asan

2009 Certified Venture Corporation by KOTEC

2007 Register Software Business by Software Association

Register Microsoft Gold Partner

Establish OpenSG.net Corp.

## Certificate

2019 Selection of exemplary taxpayer \_ Mayor of Asan

Award of Business Partner \_ SK

2018 Award of the best business Chungnam Technopark Association

2017 Certificate of Business Partner \_ SK

2015 | Contribution of EES UI Performance Improvement Task \_ Samsung

Appreciation Plaque[Industry-University Collaboration] \_ Hoseo University





















**Gold Application Development** 

(주)오픈에스지

MPN Partner ID: 1932640

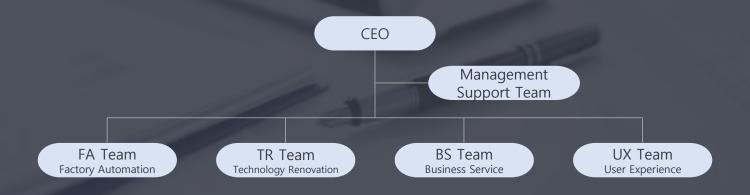
귀사는 마이크로소프트의 제품과 기술력을 공급하는 업체 중 탁월한 비즈니스 솔루션 개발 및 전문 기술력과 고객에 대한 사업 추진력이 입증되었기에 Microsoft Partner 로 인증합니다.



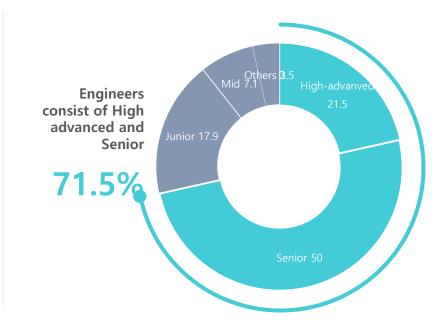
# **Company and Personnel Status**

Experts with sufficient experience and enhanced skills

Group of professional software engineers to provide the best technical service to customers







## **Business Areas**



Provision of customized Smart Factory Solutions based on Technology and Experience of OpenSG

**Monitoring Solution** 

**AIMS®** 

**Equipment Control Solution** 

IDX Controller®

SCS®

**ACS®** 



Provides personalized User Interface and ensures fast performance and reliability

**App Framework** 

Smart-Wox®

**CCF®** 

Map Designer®

Microsoft Technology
Consulting and SI

System Construction and Education Services based on Microsoft New Technology

.NET Technology Consulting
SI related Manufacturing
MES/Automation
.NET Technology
Education/Technical Support

# **Major Achievements**

# **Control/Collection/Analysis**

2020	SK Hynix M16 Production information System SK Hynix Non Fab Space Planning Rorze Systems A2 Index Standardization Program Samsung Electronics STAR 5.0 SK siltron MCC
2019	SK Hynix Cloud Application Platform development SK Hynix User-focused Engineer Workplace Samsung STAR 4.0 Samsung OCS 4.0 Patch Automation System development
2018	Samsung TPSS-BEST Efficiency Improvement Samsung Automatic Return OCS UI development Samsung Production linked Return Simulator development Samsung i-TTTM Function Enhancement development Samsung STAR System Standardization and Optimization Samsung ACS Function Efficiency
2017	AMHS Layout Automation of Design Verification Samsung Electronics: Semi. MCS/OCS Management Tool SK Hynix smartMCC Equipment Operational Condition Optimization- Analysis SK Hynix FDC long-term Data Analysis Mars Prime Equipment Data Utilization System Standardization
2016	Samsung Display : Hightech eMAS System Samsung Electronics: Logistics Automation(MCS, OCS) System Samsung Display : Cell Repair Reverse Stage CIM System
2015	Samsung Electronics: OHT Control & Monitoring System Samsung Electronics: MCS Test Automation System Samsung Display : Conveyor CIM System
2014	Samsung Display: Stocker Control System Samsung Electronics: Self driving AGV Control System Samsung Suzhou LCD: Robot & Automation Portal
2013	Samsung Suzhou LCD: Sensor EDA Samsung Display: Robot & Automation Portal Samsung Suzhou LCD: Indexer Control System
2012	Samsung Display: Sensor EDA System

2011 Samsung Display: Equipment Event Verification System

# Monitoring

2020	IMS(FAB/MOD Monitoring System Improvement)
2019	SK Hynix Wuxi WT Standards environment SK Hynix Chongqing SSD line
2018	SDV AIMS Monitoring System
2017	SK Hynix FAB Automation Identical Environmental Condition Phase-II SK Hynix CMS Fab Safety Monitoring System SK Hynix FAB Real-time Emergency Detection System
2016	SK Hynix P&T FMS
2015	SK Hynix WT Monitoring System Samsung Display: SSL integrated monitoring Acceleration- development
2014	Samsung Display Control Acceleration System Samsung Display Module line Monitoring System
2013	Samsung Tianjin LED: AIMS integrated Monitoring System Samsung Heavy Industry: Ocean wind power generator Monitoring System Samsung Suzhou LCD: Integrated Monitoring System
2012	Samsung Electronics TP Center: AIMS integrated Monitoring System Samsung Display: Integrated Monitoring System Samsung Electronics: FC Inline Equipment Monitoring System
2011	Samsung Electronics TP Center: AIMS Samsung Display: Alarm Monitoring System
2010	Samsung Display: Automation Monitoring System Samsung Heavy Industry: Wind power generator Monitoring System
2009	Samsung Display: UV fluorescence automation Monitoring System
2008	Visual Monitoring Toolkit Development

# **Major Achievements**

SI	
2020	SK Hynix Infra MA SK Hynix smartATLAS
2019	SK Hynix FSM System Samsung semiconductor CTTTM SK Hynix Integrated R&D Production Automation Operation Samsung MCTS FrameWork Standards
2018	Samsung Memory Test Process Overseas Site Production Control Framework SK Hynix P&T Smart Factory Pilot Samsung Tool Drawing Design Verification System Development Samsung MCS Patch Automation System Development SK Hynix P&T Reporting System Advancement SK Hynix FSM System
2017	SK Hynix Renovation of based Biz.Process System SK Hynix Manufacture Visibility Assurance and Decision- Support System Ph2(PT) Samsung Electronics TP Center Upward of quality System(YMS) Samsung Electronics TLM System Development SK Hynix M14 Equipment PM Automatic Computerization-Spread
2016	Samsung Electronics TTTM System Samsung Electronics EES RMS UI Development Samsung Electronics EES FDC, APC UI Development Samsung Heavy Industries Remote Maintenance System Steco eMonitoring System
2015	Yonsei Medical Center u-Severance 3.0 Samsung Electronics EES UI 2.0 Renovation Samsung Electronics TP Center: QM System
2014	Samsung Electronics ME/LSI integrated TPSS Samsung Electronics EES UI Renovation Samsung Electronics Xian, China: QM(Quality Management System) Samsung Electronics TP Center: MOS(Machine Operating System) Samsung TP Center: Production/standard information system
2013	Samsung Electronics TP Center: IOC 2.0 for TP Center Samsung Electronics TP Center: EES Samsung Electronics TP Center: QM System Samsung TP Center: TP Tool improvement for Verification/Management

## Consulting

2017	SESS Manufacture Workplace upward leveling
2016	Samsung Display: Module Manufacture Innovation Competition(Suzhou, China SSM) - Exhibition of Automation Solution
2014	Samsung Electronics: Smart-Wox® Framework
2013	Samsung Electronics TP Center: Smart-Workplace Framework
2010	Samsung Electronics: Injection molding standard web platform
2008	Bistel Inc.: Fab Automation Framework Consulting

## **Main Product**

#### **Monitoring**



AIMS®
Integrated
Monitoring Solution

#### **Equipment Control**



IDX Controller®
INDEXER Control
System



Stocker Control
System



ACS®

AGV Control

System

## **Data Acquisition**



**OpenEDA®**Realtime EQ/Sensor
Data Acquisition System

### **App Framework**



Smart-Wox®

Microsoft .NET

WPF & WCF based
General Application
Development &
Managing Framework



CCF®
CIM Control
Framework



Map Designer®

Map design

Solution for OHT

and AGV

#### Mobile



Open vTalk®

Mobile Walkie-talkie

Solution

#### Comm Driver



**OpenHSMS**® SECS/GEM Driver

## **Product Descriptions**

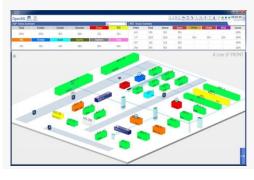
## Monitoring



### **AIMS®**

# Integrated Monitoring Solution for Facilities and logistics Equipment

- · Plug-in format layout
- Easy Visual Components
- Integrated monitoring for per-user needs
- Verified monitoring engine of performance
- Extend various systems of open architecture
- Multiple Protocol Responses of various Equipment



## **Equipment Control**



### **IDX Controller®**

# INDEXER Control Logistics Equipment Integrated System

- Standardized Unified UI Configuration
- Cope with IO Module various of INDEXER product
- HSMS Driver comply with standardization SECS
- Support of communication protocol betweens INDEXER and Equipment
- Support of various Robot Control
- · Support of various Log Format



## **Equipment Control**



## SCS®

#### Stocker Control Remote UI System

- Various SCS Responses(Shuttle, STK, Mask)
- Remote control and monitoring via the Remote UI
- HSMS Driver comply with standardization SECS
- Organized active of Layout by XML configuration
- SCS Optimization through configuration



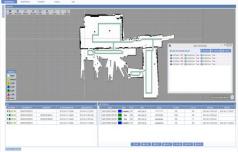
## **Equipment Control**



**ACS**®

#### A.G.V Control System

- AGV Concurrent Control and Monitoring
- Change and transmission of Real-time routing path
- Support of settings and parameter change Reload



## **Product Descriptions**

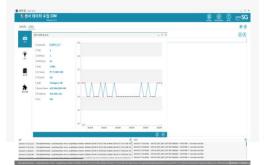
## **Data Acquisition**



## **OpenEDA**®

# Real-time Sensor Data Acquisition and FDC Report

- Collection of various Sensor Data
- · Monitoring of Field-bus status
- Independent Data Collection and FDC Reporting
- EDA Manager for Management and Monitoring of your entire system
- Support of settings and parameter change Reload



## **App Framework**



### **Smart-Wox®**

# Development/Operation Standard Application

- Provision of personalized user interface
- Integrated Delivery of comprehensive information and contents
- Integrated login environment in conjunction with Single Sign On (SSO)
- Verified monitoring engine of performance
- Extend various systems of open architecture
- Multiple Protocol Responses of various Equipment



## **App Framework**



## **CCF**®

# CIM Communication Framework between HOST and EQ

- HSMS Driver comply with standardization SECS
- Flexible Layout Extension
- · CIM Optimization with Configuration
- · Extension of Data Integration Module
- CIM Monitoring

## **App Framework**

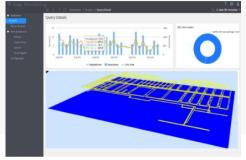


# Map Designer®

#### Solution to design production site

- Design of various production sites and Equipment layouts
- · Import CAD file to base design file
- Define communication formats for each Equipment
- Function of Equipment CSV, CAD Export





## **Product Descriptions**

### Mobile



# Open vTalk®

#### Mobile Walkie-talkie Solution

- Voice wireless Function provided using smart phone without additional cost of network deployment
- Real-time messages of 1:1 and 1:N
- Support of Functions Text-to-Speech(TTS)
- Device behavior control (vibration, sound) by message type received
- Chat List Information History Management
- · Monitoring and Legacy System



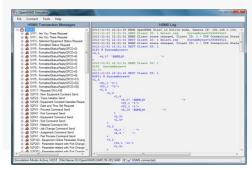
## **Comm Driver**

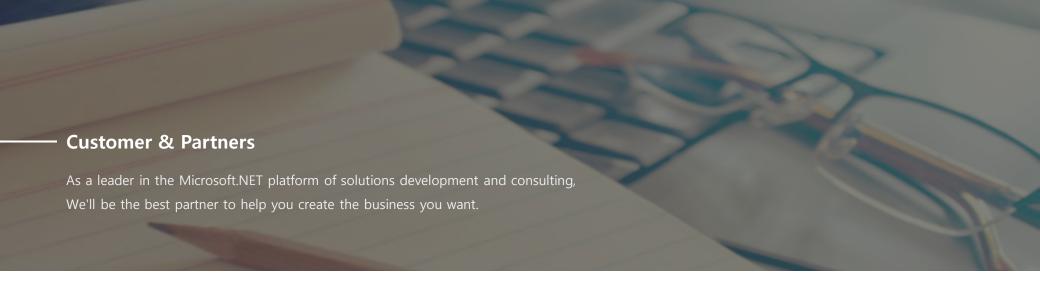


# ${\bf OpenHSMS} \\ {\mathbb R}$

# SECS/GEM Communication Driver between host and Equipment

- SECS/GEM Driver based on Microsoft .NET
- Various operation Log such as Binary, SECS-II etc.
- Compliant with SEMI communication standards
- · Optimized User Needs
- · Cooperative Support





## **Major Customers**







**SAMSUNG DISPLAY** 



## **Major Partners**





**SAMSUNG SDS** 

