Pioneering “Leading-edge IoT”, with eSOL’s Original OS Platform
<table>
<thead>
<tr>
<th>Name</th>
<th>eSOL Co., Ltd.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foundation</td>
<td>May 1975</td>
</tr>
<tr>
<td>Representative</td>
<td>President Katsutoshi Hasegawa</td>
</tr>
<tr>
<td>Business</td>
<td>R&amp;D, manufacturing and sale of software and hardware that are applicable to computers and computer peripherals. Undertaking development of software and hardware that are applicable to computers and computer peripherals and dispatching engineers. Consulting service.</td>
</tr>
<tr>
<td>Paid-in capital</td>
<td>1,041 million yen</td>
</tr>
<tr>
<td>Employees</td>
<td>484 employees as of December 31, 2020 on the consolidated basis</td>
</tr>
</tbody>
</table>
| Group Companies    | eSOL TRINITY Co., Ltd (Consolidated subsidiary) est. Mar. 2015  
AUBASS CO., LTD. (Equity method affiliate) est. Apr. 2016  
eSOL Europe S.A.S. (Consolidated subsidiary) est. Mar. 2018 |
History

eSOL has been achieving sustainable growth in fast-moving software industry.

1975
- Established ERG Co., Ltd.

1984
- Started selling Original Platforms

1990

2001
- Changed the company name to eSOL Co., Ltd.

2013
- Katsutoshi Hasegawa, appointed as President

2014
- Developed environmental data management system for agriculture, “eSOL AGRInk” series, and started IoT business

2015
- Established a subsidiary, eSOL TRINITY Co., Ltd.

2016
- Established joint venture, AUBASS CO., LTD

2018
- Listed on Tokyo Stock Exchange Mothers
- Established subsidiary, eSOL Europe S.A.S. in France

2019
- Shift to the First Section of the Tokyo Stock Exchange

(Sales : JPY: mil.)
**Business Overview**

### Embedded Software Business
- Development and sale of RTOS (real-time operating system)
- Undertaking engineering service for embedded software
- Consultancy related to the development of embedded software
- Sale of tools for the development of embedded software
- Education to engineers developing embedded software

### Sensing Solution Business

#### Logistics related business
- Automotive printer for issuing dedicated slips
- Ordinary temperature handy terminal
- Development and sale of environmental resistant handy terminal and sales-support software

#### Sensor network business
- Proposal of sensor network system
What is Embedded Software?

Except for so called “Computer” such as PC, servers and supercomputers, embedded software is installed in familiar equipment like vehicles and controlling such electronic devices. Today, many devices are being computerized, and that brings about the growing market for embedded software.

So called “Computer”

Used for emails, word processors, data storing, and data processing

Embedded Software

Used for controlling electronic devices with embedded software. Equipped in almost everything around us.

Embedded in various equipment
Very few companies can develop leading-edge platform in the world.

Highly value-added business with a high barrier to enter.

Very few companies have Original OS.

Area where eSOL has a big advantage and provides products and services.
Established well-balanced revenue structure with highly profitable “Embedded Software Products” and stable “Engineering Services”

**Embedded Software Products**

- Development/sale of RTOS (real-time operating system)
  - Customer → eSOL
    - 1) Sale of development license
    - 2) Sale of royalty
    - 3) Sale of maintenance license

- Development/sale of Development Support Tools
  - Customer → eSOL
    - 1) Sale of development license
    - 2) Sale of maintenance license

**Engineering Services**

- Customer → eSOL
  - 1) Engineering service
  - 2) Consultancy
  - 3) Education to engineers

Excellent earnings without depending on the number of engineers

Sales by Category

- About 20% Embedded Software Products
- About 80% Engineering Service

Profitability

eSOL’s primary source of revenue

Dependency on the number of engineers
Embedded software business is stock business. Periodical repurchase demand continues for platforms.

Periodical repurchase demand comes from various customers across industries.
eSOL has expanded its business through successful synergy between Embedded Software Products and Engineering Services. Developing leading-edge products in the industry’s standardization activities.

AUTOSAR is a worldwide partnership established in 2003, which aims to standardize the basic specifications of software of the automotive industry. It consists of more than 200 membership-companies/organizations including automotive companies and component manufacturers.

IEEE is the global institute of electrical and electronic engineering, having its HQ in the United States and established in 1963. eSOL is serving as the chairperson of SHIM working group which is the sectional committee of computer.
# Examples of Fields Where Embedded Software is Used

Our Embedded Software has been used across industries. Moreover, the market and its importance are growing year by year together with widespread IoT technology.

<table>
<thead>
<tr>
<th>Automotive devices</th>
<th>Aerospace</th>
<th>Consumer/OA devices</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Automotive devices" /></td>
<td><img src="image2.png" alt="Aerospace" /></td>
<td><img src="image3.png" alt="Consumer/OA devices" /></td>
</tr>
</tbody>
</table>

- Automotive devices
- Aerospace
- Consumer/OA devices
- Industrial equipment
- Audio equipment
- Physics and chemistry devices
- Research, academic use, and many others

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Products of Sensing Solution Business

We conduct planning, guidance on manufacturing, and sale of hardware based on our software development expertise.

**Logistics related business**

- Automotive printer for issuing designated slips
- POS handy terminal system
- Dedicated terminal holder for forklift

**Environmental resistant technology with years of experiences**

- Transformer

**Sensor network business**

- Farm management system, disaster prevention system etc.
eSOL promotes work-life-balance as one of the company's strategy and, to be more specific, supports male employees in taking child-care leave easily. Recently, Work Life Balance Co. and Forbes JAPAN have jointly issued the special article, “All male employees should take child-care leave.” The article covers our president as the representative who encourages the child-care leave. We would be appreciated if you could refer to the below.

https://forbesjapan.com/articles/detail/31248

Fair Degree of Employees’ Satisfaction

eSOL has implemented “Reform of Working Practice” since 2012 much earlier than other industries, which has provided engineers with strong motivations.

Awareness survey of engineers (5 out of 5)

<table>
<thead>
<tr>
<th>Job satisfaction</th>
<th>Work environment</th>
<th>Intention to long service</th>
<th>Growth recognition</th>
<th>Empathy with spirit</th>
<th>WL satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.5</td>
<td>4.0</td>
<td>3.5</td>
<td>3.5</td>
<td>3.0</td>
<td>3.0</td>
</tr>
</tbody>
</table>


Are you satisfied with working in eSOL?
(July 2020 inquiry)

- Satisfied 68%
- Quite satisfied 27%
- Not satisfied 5%

Engineers' comments
- I joined eSOL wishing to develop unique OS.
- I feel myself motivated as my skill improves day by day.

The fruits of “Reform of Working Practice”

Sales (left. Yen ¥00 mil.)
Averaged non-statutory overtime hours/month (right)


For the past 9 years, non-statutory overtime hours have been decreasing, while sales have grown twofold.

Average length of service 10.4 years (+1.3 years from 2012)
Annual leave consumption 64.2% (-6.0 pt from 2012)

Topics
eSOL promotes work-life-balance as one of the company’s strategy and, to be more specific, supports male employees in taking child-care leave easily. Recently, Work Life Balance Co. and Forbes JAPAN have jointly issued the special article, “All male employees should take child-care leave.” The article covers our president as the representative who encourages the child-care leave. We would be appreciated if you could refer to the below.

https://forbesjapan.com/articles/detail/31248
How Our Business Going On
eSOL has worked as Premium Partner of “AUTOSAR” since 2016—the global development partnership of automotive industry.

**What’s AUTOSAR?**  [https://www.autosar.org/](https://www.autosar.org/)

- A worldwide development partnership of the automotive industry established in July 2003.
- Consists of more than 200 membership-companies/organizations including automotive companies and components manufacturers.
- Aiming to accelerate software development and fulfill security measures through standardizing the basic onboard software specifications.
- AUTOSAR’s specifications have already been introduced into mass-produced vehicles in Europe, also are expanding across other regions including Japan.

**Outline of AUTOSAR hierarchy**

- Top level Partners
  - From Japan
    - Core Partners: 1 company
    - Strategic Partners: 1 company

- Premium Partners
  - Only Core and Premium Partners can design AUTOSAR’s specification.
  - As Premium Partner, eSOL designs specification.

- Associate Partners
  - Most Japanese companies refer to AUTOSAR’s specification as Associate Partners.

**Reduction of development cost by AUTOSAR**

Approx. 30% of development cost is expected to be reduced by AUTOSAR

Development man-hour

1980

Present

*source: Citi Research

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Embedded Software Business: Press Release

Press Release

2021年1月26日

イーソル株式会社

富士ゼロックスが複合機およびプリンターの新機種3製品に
イーソルのリアルタイムOSを採用

富士ゼロックス株式会社（本店：京都市中京区、代表取締役社長：岩田和久、以下「富士ゼロックス」）は、富士ゼロックス3製品に、イーソルソフ

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Press Release

2020年11月1日

イーソル株式会社

京都マイクロコンピュータ株式会社

株式会社エスエヌアイテクス

NEDO委託事業「サキュアオープンアーキテクチャ向けコンパイラ
パックエンドおよび対応ランタイム環境の設計・開発」に
共同研究開発を実施

伊藤 学

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Our efforts achieve business continuity through protecting safety/life of employees and safety of machine and equipment in advance; and protect safety of local people.

Risk management that supports business continuity

Contribution to local society as key corporation

Disaster preventive system can:
Solar Cubicle

Cubic type solar electricity storage equipment

**Product features**

- Solar Cubicle can supply electricity with machine and tools at the time of power cut. Accordingly, the status of site is checked at once.
- Solar power generation eliminates the needs for gasoline and other fuels.
- Its structure is designed to store supplies at the time of an emergency.
- Prepares AC outlets as an emergency power box
- SOS transmission in an emergency (optional, to be featured)

**Installation**

- Easy to install. Can use just after the installation.
- Easy to transport. Can install temporarily.
- Skilled work is not required

**Locations to be used**

- Municipal disaster evacuation sites
- Emergency power supply at construction sites
- Schools, hospitals and factories
- Mountain trails, agricultural land and farms
- Rivers, debris dams, etc.

An example of using AGRInk Sensor with Solar Cubicle

[Diagram of AGRInk Sensor with Solar Cubicle usage]

- Handset for installation in mountains
- Base set for installation in mountains
- Data receiver

*Communication method: LPWA*

**Monitoring with special application in smart phones**
A society where an information network was built alone by machine, equipment or a tool.

The past

Information Society

The present

IoT Society

A society where data from each category evolves out of collection, accumulation, analysis, and integration in cloud.

Real World

Cloud

● Big data processing technology
● Big amounts, high-speed, high quality…..

Through IoT, we collect information in real time, reproduce the information, and simulate the future.

Benefit
● Facility maintenance
● Reduce risks
● Cost reduction
● Quality improvement
● Shorten periods of time
● Good after-the-sale service

● Build platform which also can be used in cloud.
● Produce OS to make industries active and solve social issues.

Goal

(Create new values)
eSOL Spirit

Mission
We contribute to society by creating markets with our innovative technologies

Vision
We are a world-class technology company active around the globe

Core Spirit
We live in "Challenge with passion"

Value
efficiency
Speed and Safety
Ownership
Link
Notes on this material

Any statements contained in this document that are not historical facts are forward-looking statements based on publicly available information at the time of issuing this document, and therefore, will not guarantee such as the result of operation in the future.

All forward-looking statements are subject to various risks and uncertainties that could cause actual results to differ materially from expectations.

Uncertainties above include but not limited to factors for economical condition in Japan or overseas and trend in the related industries.

eSOL undertakes no obligation to publicly update or revise any forward-looking statements.

Information other than eSOL group contained in this documents is publicly known, and also, eSOL undertakes no obligation to guarantee its accuracy or adequacy.

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