

Specialty “Made in Japan” Manufacturing



Japan E.M.Solutions Co., Ltd.

Head Office : 35, Saho, Kato, Hyogo Prefecture Tel. : +81-795-42-5611(Switchboard)

Japan E.M.Solutions Co., Ltd.

We are growing with our customers thanks to our specialized
“Made in Japan” manufacturing methods.

Our company got its start with Fujitsu's establishment of Fujitsu Peripherals Limited in 1984. Since then, we have maintained both an R&D and manufacturing division, giving us a unique standing within Fujitsu group. We also handle requests for ODM/EMS work from numerous customers outside the group. The foundation of our business is rooted in the development and manufacturing of DFX products, and the fusion of humans and machines, which is the optimal manufacturing capabilities and is based on developing various automated machinery in-house. We produce millions of PDAs per year, and have produced display equipment etc. since our establishment. Our business philosophy is to provide optimal manufacturing solutions while taking into account user-friendly designs that will always meet the customer's needs.

In order to respond to a changing era in which technological innovation is quickly advancing, we will utilize our in-house automated production, and visualize and analyze various accumulated information and experiences and technological capabilities of skilled engineers. Moreover, we take advantage of our know-how to achieve a more practical smart factory. Our high-quality Japanese manufacturing comes from many years of experience in R&D and production. This gives us a significant advantage. We provide all of these benefits to the customer. We hope to grow alongside the customer by further refining our “Made in Japan” manufacturing methods to meet their specific needs.

President and Representative Director

Hideaki Takahashi



The future of Japanese manufacturing is in JEMS.

We pay careful attention to detail. In order to create even better products, we constantly work to refine our technologies. We believe that advancing Japanese manufacturing is the key to producing the value needed for the next generation. We specialize in "Made in Japan" manufacturing. Our name, Japan EM Solutions (JEMS), is expressive of our foundation principles of taking the customer's perspective into account and working to provide a one stop solution by offering everything from engineering and manufacturing right here in Japan. Pursuing high quality, high performance, and affordability, we are forging a future for customer businesses.



[History]

- 1994 Fujitsu Peripherals Limited (FPE) is established as a wholly owned subsidiary of Fujitsu Ltd.
 - R&D division begins operations (at Fujitsu's Akashi Plant)
- 1985 First building of main factory completes, operations begin
 - Production of CRT displays begins
- 1986 Production of PCBA (printed circuit board) boards begins
- 1987 Printer (laser, impact) production begins
- 1989 Second building of main factory completes
- 1993 LCD display production begins
- 2000 Keihin Development Center opens
 - (contracted development of mobile information terminals begins) 2007
- Production of PDAs begins
- 2008 Repair services for PDAs begin
- 2010 Production of tablet computers begins
- 2014 Company merges with Fujitsu Mobile Phone Products

2018

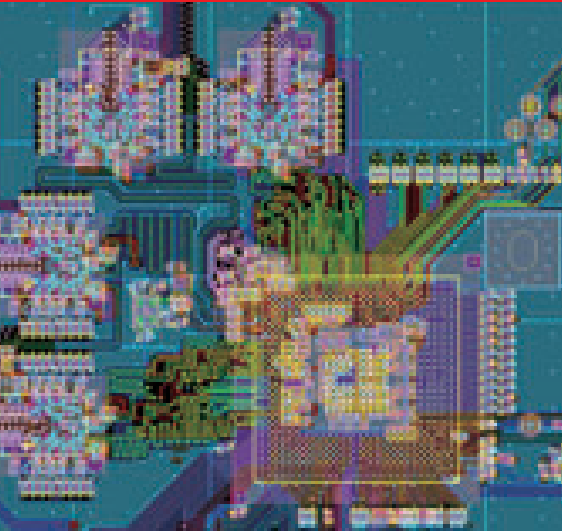
- January JEMS Holdings Co., Ltd. is established
- February Japan E.M. Solutions Co., Ltd. (JEMS) is established
- March FPE's ubiquitous products business broken off; given to JEMS.
 - Capital participation by FAP Holdings Inc. (FAP-HD)
 - (FPE moved its head office to Akashi City)
- April Operations at JEMS begin

2019

- April FAP-HD (Current company name REINOWA Holdings Inc.) acquired 100% of JEMS shares

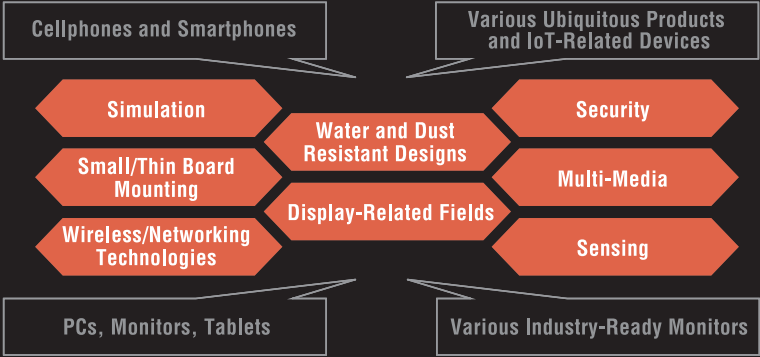
Our proven reliability is opening up JEMS field of business.

JEMS expansive field of business is based on our accumulated know-how and technology. We are involved in everything from fields such as mobile devices, healthcare, and amusement products, to automobiles and machinery, which help people to satisfy themselves. We are even involved in specialized technical fields related to ships, medicine, and finance. Our “Made-in-Japan” reliability has made us highly respected among a wide range of customers.



We work to offer the best solution through our manufacturing and R&D assets.

We use a wide range of technologies built up over many years working in development and manufacturing. In addition, we have acquired highly efficient manufacturing know-how from providing products for a wide range of fields. Using our technologies and know-how as an asset, we strive to offer the best solutions to our customers. We are working to further grow business while delivering products that exceed expectations.



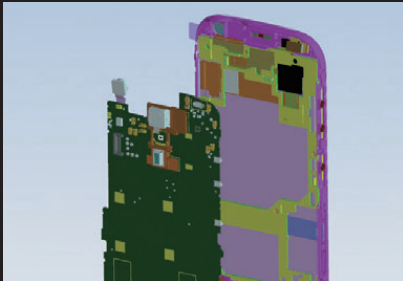
JEMS solely exists to provide manufacturing capabilities for its customers.

JEMS manufacturing capabilities have developed entirely through a focus on being "Made in Japan." As an independent EMS and ODM company, we give everything we can to the customer. We provide precision support for your various needs, using an integrated domestic system encompassing development, design and production to support your requests, whether they be for production only, or include design as well. We provide the high added value of being "Made in Japan," supporting the business success of our customers.



We quickly realize the customer's ideas with efficient design and quick R&D turnaround.

Our strength comes from experience, know-how, and refined technical capabilities built from precision manufacturing and in-house equipment development. We quickly realize the customer's ideas using digital mockups and other cutting-edge technologies. We go through multiple prototypes and reduce development time by using advanced analytics and simulation technologies for testing. We provide efficient design services.



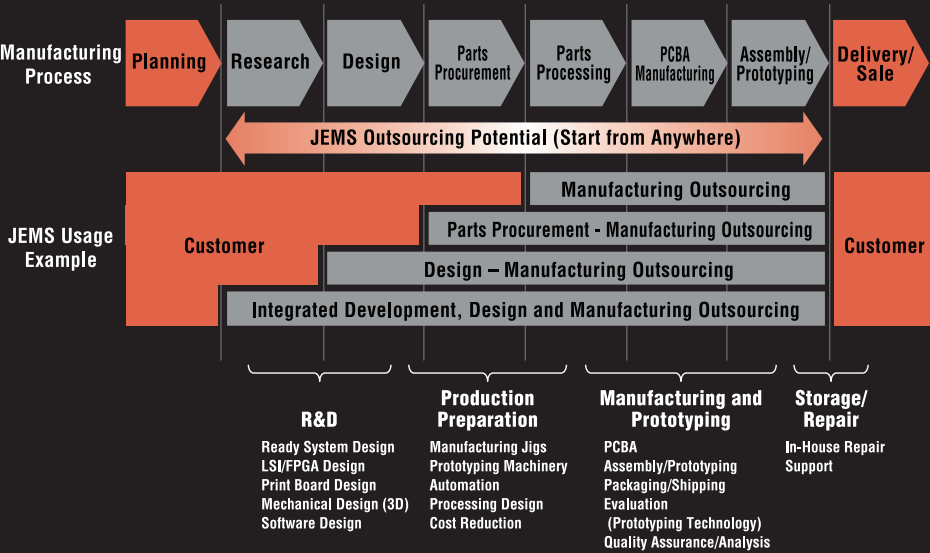
JEMS serves as a base for your manufacturing needs, offering quick delivery, low prices, and high quality.

We support a variety of manufacturing needs, from prototyping to mass production. Delivery time is shortened through prototyping and evaluation that takes advantage of a wide range of equipment and quality engineering. Our in-house procurement routes also allow us to source various parts quicker and at lower cost. Of course, we also ensure thorough confidentiality. We will continue to serve as a base for customer manufacturing.

Our refined in-house production system and tools result in the best manufacturing services.

Accelerating technical innovation requires a constant evolution of production technologies and manufacturing lines. We develop the majority of the various tools and systems required for manufacturing in house. Starting with support for a range of small lot products, we can offer flexible customization, which includes making various improvements and design alterations. This helps keep costs low and cuts down on labor.

An integrated domestic system that provides one-stop solutions with the high added value of being "Made in Japan."



We combine in-house technologies, experience, and knowledge to offer one-stop solutions.

JEMS offers one-stop solutions made possible through our many years of accumulated experience and technologies. In addition, we are now working to improve our production line by taking advantage of data analysis. Moreover, our comprehensive pricing supports customers by including aftercare service and more.

Corporate Vice President
Tomoaki Fukuda



A repair system created with an emphasis on total cost and being "Made in Japan."



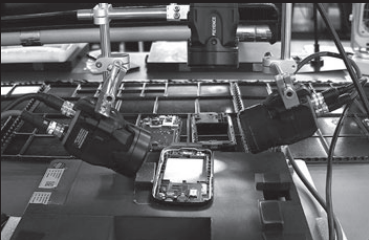
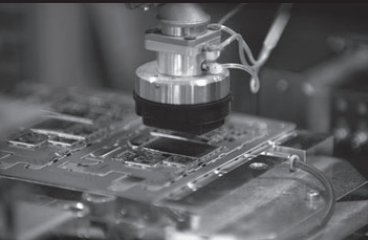
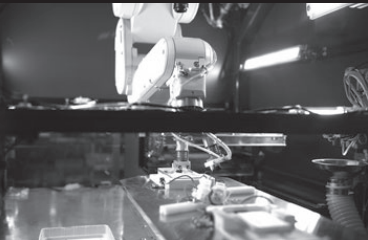
Whether handling small-lot or mass production, automating our manufacturing process allows us to maintain quality while ensuring costs that are competitive with the rest of the world. This initiative started in 2008. In addition to our manufacturing capabilities, one of JEMS's strengths is our ability to automate the entire manufacturing process in house. It all started with a project by our engineers to automate development of screws for Docomo's Raku-Raku cellphone.

Using our experience and know-how to make advancements to automated machinery, becoming the destination for one-stop solutions.

In fact, while we thought screws would be simple, the project proved to be a difficult struggle. The simple process of screwing down the cover in a fixed position did not go according to planned, with resistance from the cover and variations across parts. We were able to resolve these issues by developing a camera-based system. With this case as an example, we have employed our experience and know-how to achieve automated production lines, whether requiring us to modify detailed movements of a robotic arm, or come up with various wireless prototyping processing programs. We offer integrated one-stop solutions, using your provided specifications to handle everything from design, production, inspection, shipping, and even repair.



Corporate Senior Vice President
Mitsuhiro Goto



A repair system created with an emphasis on total cost and being "Made in Japan."

Through automation, we have established a complete traceability system by using a variety of data from each process. In particular, our past history repairing mobile phones has allowed us to achieve a low-cost, high-speed system. We use in-house devices to remove malfunctioning parts, regardless of their size, without damaging the board. This eliminates wasteful spending on new board replacements, and the pricing structure, which includes support, ensures a Japanese standard of quality with total cost.



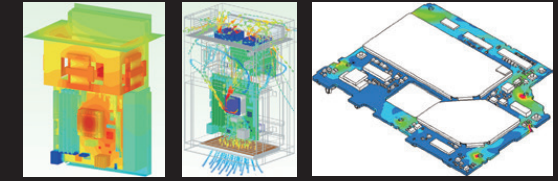
JEMS is on the frontier of technology, creating standards for the future.

Our technical capabilities are ensured through our "Made in Japan" manufacturing method. The foundation of these capabilities lies in development of ubiquitous products such as displays and smartphones, which constantly demand technological innovation. By working to independently improve each of our technologies, we are making progress in developing advanced simulation technologies, precision mounting, and highly specialized technologies including water and dust-resistant designs. It is the base of manufacturing products with high quality.



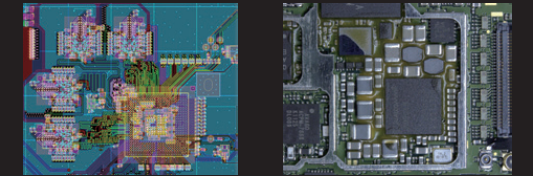
Simulation technologies that improve quality and reduce delivery times.

In addition to product functionality, we believe it is important to consider on-the-ground use and accidents when manufacturing. As such, we use simulation technology equipped with structural and heat analysis programs to provide precision quality in the design stage, analyzing durability, heat, and more. With improved quality and a shorter prototyping process, we are working to advance high quality, low cost manufacturing.



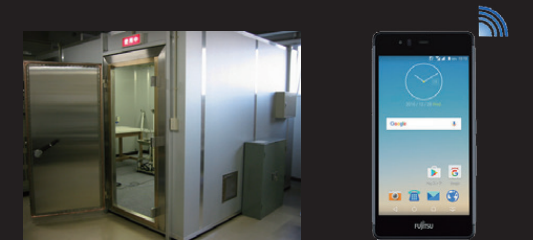
Small, thin board mounting technologies based on optimal circuit pattern design.

Products such as mobile devices are becoming thinner and more advanced, and electronic components are getting smaller and smaller. Not only do we mount these extremely small components, we start by optimizing for noise and heat, believing this to be an important part of circuit design. These technologies are used in wearable devices, which take advantage of even smaller components and board designs.



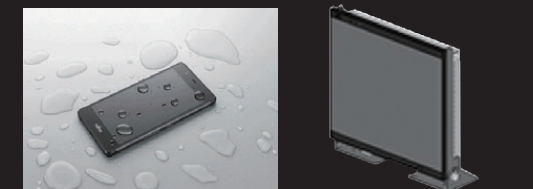
EMC and wireless technologies that fully take advantage of LTE, wireless LAN, and Bluetooth capabilities.

Following advancements in IoT and wireless speeds, wireless technologies are becoming more and more important. During the design stage, we conduct a thorough analysis of the source and route of noise, designing the optimal EMC circuit for each product to reduce noise. In addition, we are able to improve both manufacturing efficiency and performance through product designs that integrate both high frequency circuit and antenna design. Going forward, we will work to provide support for new and emerging wireless technologies.



Water resistant, dust resistant, and salt resistant coating technologies offer advanced support for specialized products.

Through our development of mobile devices and ship monitors, we have acquired optimal design know-how for specialized applications such as rubber compression and sealing. We are further refining our capabilities, developing unique waterproof and dustproof technologies, along with coating technologies to protect from salt damage. In addition, we are advancing sensing and security technologies, providing manufacturing support for a diverse range of applications and a wide variety of fields.



Customer ideas and user feedback serve as a foundation for our manufacturing.

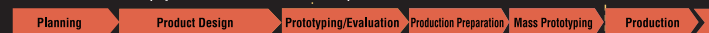
Moving forward, it is essential that our manufacturing maintains total quality. This includes not only technical capability, but product performance, cost, delivery time, and the satisfaction of the customer and user. This is the “Japan Quality” that we provide. We work to understand the nuances of user feedback, customer needs, and cutting-edge technologies, working to provide manufacturing capabilities only possible by being “Made in Japan.”



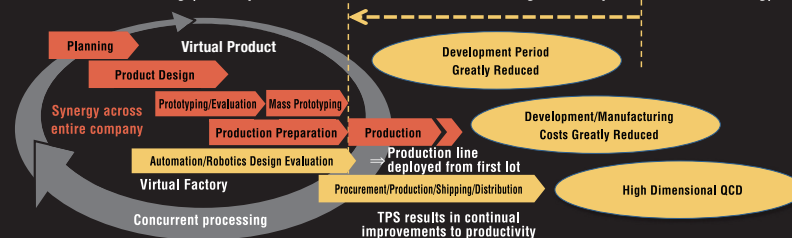
Achieving efficient, low-cost manufacturing by integrating our development, production, and automation systems.

We consider manufacturing efficiency from the initial stage of product development. For example, we design with a special focus on precise details such as arrow connections and connector direction, ensuring a smooth process from prototype to product completion. Moreover, by making considerations for automation in our designs, we develop products to simultaneously work with automated machines. We structure our manufacturing lines to cut down on labor as much as possible.

Conventional Process (Optimized for Series/Case)



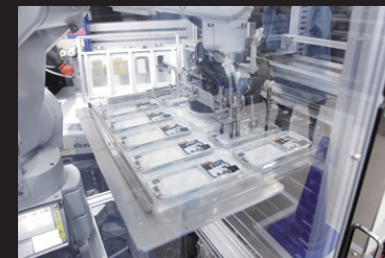
Concurrent Processing (Total optimization - DFM/automation using 3D data prior to manufacturing)



Integrated manufacturing achieved through concurrent product development, automated machine development, and manufacturing.

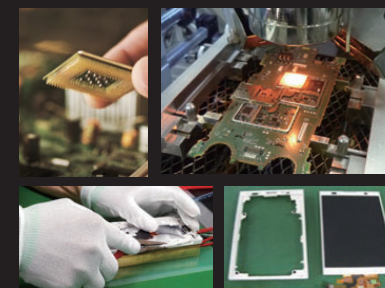
High quality manufacturing specialized in parts procurement and cutting-edge technologies.

High quality manufacturing starts with the procurement of components. We manage items and information across the whole plant in real time, from the inspection of arriving components to the shipment of products, to ensure a high degree of traceability. Moreover, in addition to automation in the manufacturing and prototyping process, we are working to improve product quality by introducing advanced inspection and evaluation using AI.



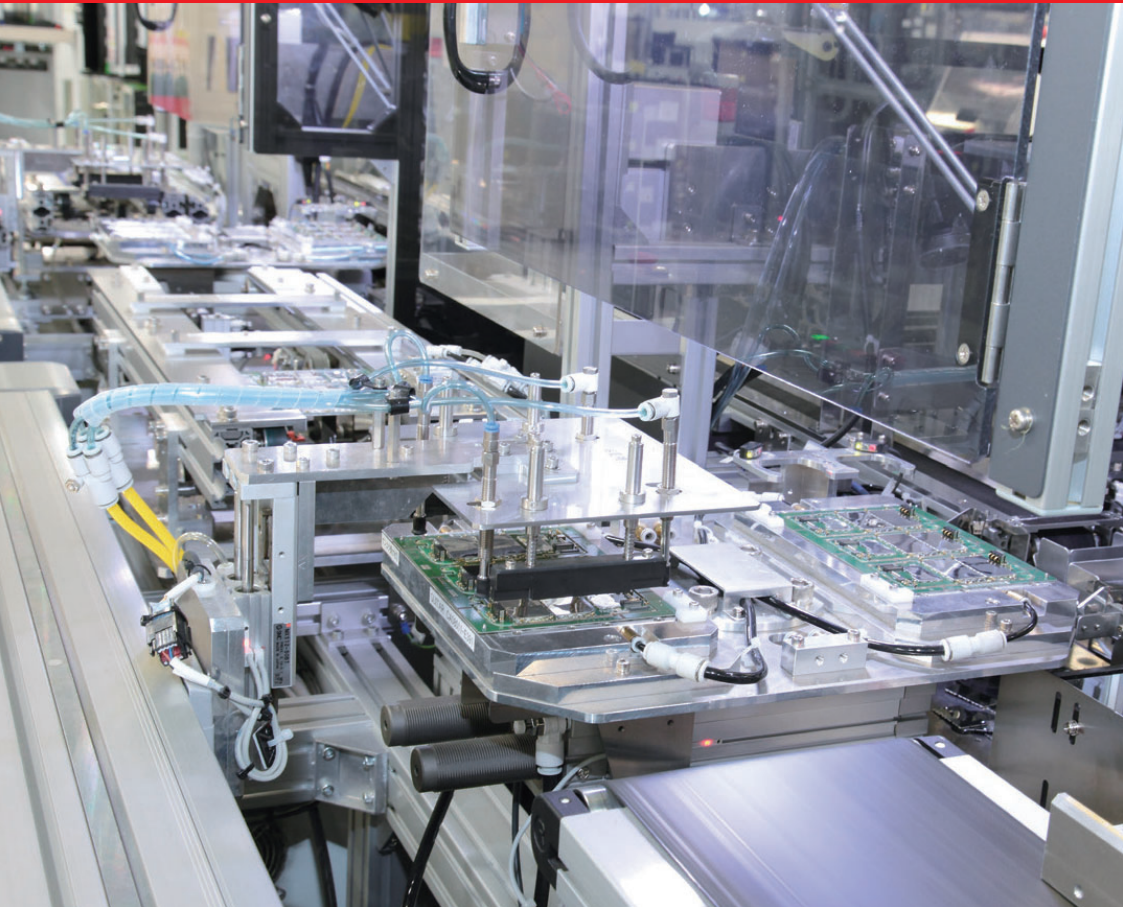
Fully replete, technically capable repair support system that protects the customer's personal information.

Maintenance and repair is also an important job for us. To satisfy the customer and protect personal information, we possess advanced technical capabilities that can support a range of equipment and devices. In addition, it is crucial that we stock a variety of components. First, we format the data, then replicate repair conditions and thoroughly work to determine the cause. We then perform a reliable repair and issue a report.



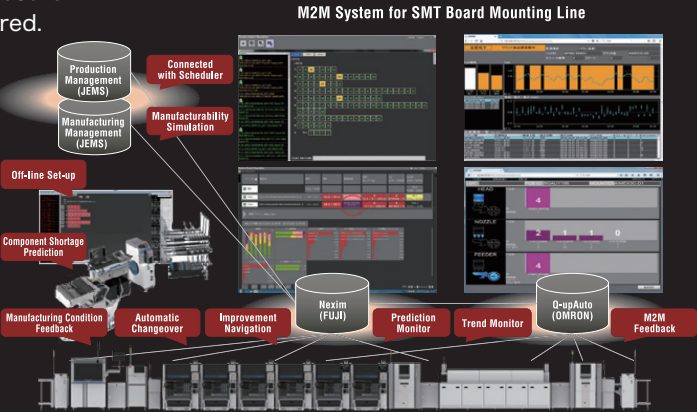
Working to innovate the manufacturing process by achieving high quality and cost competitiveness.

Our manufacturing process has the added value of being "Made in Japan" without losing its price competitiveness to cheap overseas labor. To do this, we have taken initiative to develop automation technologies in-house. Starting with the development of machines that can automate parts, we have found success automating virtually all of our production line, integrating with a range of robots, image recognition technologies, and information systems. By creating an automated line integrated with human labor, and taking mass production time into account, we are able to ensure high productivity and significantly reduce manufacturing costs.



A flexible board mounting line supporting a wide variety of board types, from thin to multi-layered.

Board mounting needs vary, from thin boards to multi-layered boards. In order to support these diverse needs, we use cutting edge devices such as electrical component mounting robots, and X-ray inspection machinery. In addition, we are continually working with other equipment manufacturers to introduce the latest M2M systems on JEMS' site. Moving forward, we will be able to provide even more flexible support for smaller, thinner boards, and a wide variety of other demands, including development of our automated machinery in-house for secondary assembly.

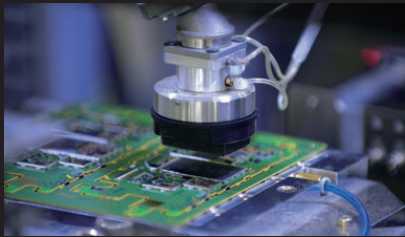


Partner Companies: Fuji Co., Ltd. and Omron Corporation



Tools developed in-house ensure stable manufacturing.

In order to provide efficient, consistent manufacturing that eliminates waste, we developed our own automated machines, jigs, and prototyping machinery to handle assembly and prototyping. As such, we are able to ensure high quality, stable manufacturing without relying on workers, which prevents variability and human error.



Driven to achieve optimal manufacturing, JEMS is always working to improve.

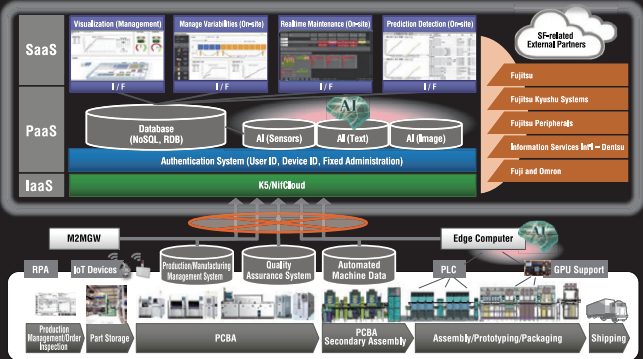
Automating virtually the entire manufacturing process provides us with a massive amount of data on each process. We constantly use and analyze this big data in order to optimize our factory system. This includes allowing us to visualize not only our production and manufacturing management systems, but see predictions and managerial indices. We are becoming a creative smart factory. As an independent ODM and EMS company, JEMS is working towards the future of manufacturing.



Incorporating new technologies to become a cutting-edge smart factory.

We are incorporating new technologies such as AI and IoT with our existing automation technologies, R&D production systems, and various information systems. We are building a cutting-edge smart factory that can provide the latest solutions, aiming for even further efficiency, shorter delivery times, higher quality, and increased cost competitiveness.

Integrating new technologies such as AI and IoT to improve automation and manufacturing.

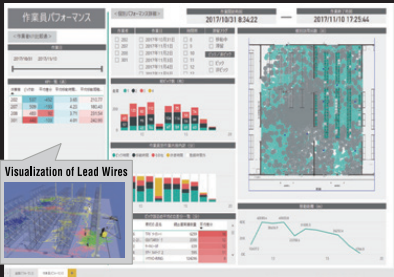


Visualizing the Factory (Engineering IoT)



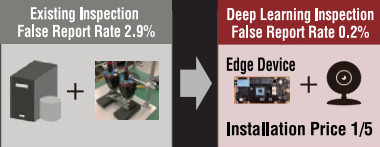
Partner Companies: Fujitsu Kyushu Systems Limited

IoT Sensors Used in Distribution Warehouse (Positioning and Vitals)



Partner Companies: Fujitsu Co., Ltd. (SMAVIA)

AI Inspection



Example: Evaluation of Component Mounting



Partner Companies: Fujitsu Peripherals Limited

[Company Overview]

Company Name	Japan E.M. Solutions Co., Ltd. (Abbreviated JEMS)		
Address	Head Office: 35, Saho, Kato, Hyogo Prefecture		
	Tel.: +81-795-42-5611(Switchboard)		
President	President and Representative Director: Hideaki Takahashi		
Established	January 16, 2018		
Business Operations	Development, Manufacturing and Repair of PDAs		
	Development, Manufacturing, and Retention of Displays Design, Manufacturing, and Repair Services for Ubiquitous Products and PCBAs		
Capital	1,652,500,000 Yen (As of April 1, 2022)		
Accounting Date	March 31		
Employees	382 (As of April 1, 2022)		
Executives	President and Representative Director	Hideaki Takahashi	
	Audit & Supervisory Board Member	Tomoyuki Kawamura (Part-time)	
	President	Hideaki Takahashi	
	Corporate Senior Vice President	Hideto Takeuchi	
	Corporate Senior Vice President	Susumu Nikawa	
	Corporate Senior Vice President	Mitsuhiro Goto	
	Corporate Vice President	Tomoaki Fukuda	
Certification	ISO14001	Registration number	EMS 775774
		Applicable locations	Head office
		Certification Body	BSI Group Japan K.K.
	ISO9001	Registration number	JQA-QMA15884
		Applicable locations	Head office, Ono warehouse
Certification Body		Japan Quality Assurance Organization	

[Concept]

Taking the customer's perspective into account, we work to provide a one-stop solution by offering everything from engineering and manufacturing right here in Japan.

