

Leading PCB firm prioritizes sustainability



"We aim to join our forces with business and technology partners to create a sustainable society."

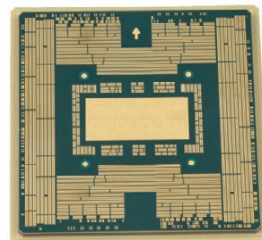
Seiji Miyoshi, President, FICT Ltd. (August 2023 Interview)

Established in 1967 as the PCB business unit of Fujitsu, FICT is today an independent company that lives by the same founding philosophy to provide and develop state-of-the-art PCB solutions for global customers.

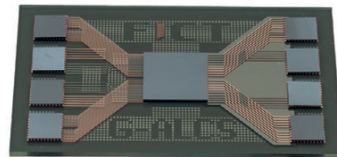
In 2001, the company invented the Organic Flip-Chip BGA Substrate (FC-BGA), a new technology that has now become a global standard in the semiconductor pack-

FICT is positioning itself to be a true key player in the global market in testing probe cards.

age substrate world. "Applying the same technology to our probe card process solutions to reduce waste-water treatment and electricity consumption as much as possible," says Mr. Miyoshi. "As the realm of high-speed communication pushes the boundaries, signal transmissions now soar beyond 100 GHz. However, the conventional through-hole



Probe Card (ST Board)



Multilayer Glass Substrate Prototype (G-ALCS Technology)

stub introduces a disruptive interference within this wavelength. In contrast, by using our conductive paste, our any-layer IVH (Interstitial Via Hole) with a one-time lamination approach stands as a stubless solution, facilitating uninterrupted high-speed transmission."

Given the prevalent trend of pursuing a finer wiring pitch, transitioning toward glass substrates

is now becoming increasingly crucial. Through its F-ALCS technology evolution, known as G-ALCS, the company is now focusing on evolving toward laminated glass technology. "Going forward, we aim to join our forces with business and technology partners and customers to create a sustainable society with our advanced technologies," outlines Mr. Miyoshi.



Cross Section of our 76 layers PCB made with our F-ALCS Technology

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Insights from a visionary in manufacturing: unveiling trends and challenges

Exploring the multifaceted nature of Japan's manufacturing, Miyatsu possesses expertise from intricate semiconductor technologies to engineering advanced machinery.



"Embracing this mindset allows us to discover niches, leading to opportunities for corporate growth."

Chiharu Miyata, Chairman & CEO, Miyatsu Co., Ltd.

Japanese firm Miyatsu understands the relationship between hardware and software is key in system development. Primarily an equipment manufacturer in the semiconductor and infrastructure fields, Miyatsu recognizes that solely focusing on manufacturing can mean losing focus on understanding and fulfilling its customers' businesses and needs. Therefore, the company, founded in 1969, is actively engaged in the ICT business to react to the specific necessities of its customers. As company president Chiharu Miyata explains: "By supporting our clients with this approach, they trust us to provide the necessary equipment for their manufacturing processes."

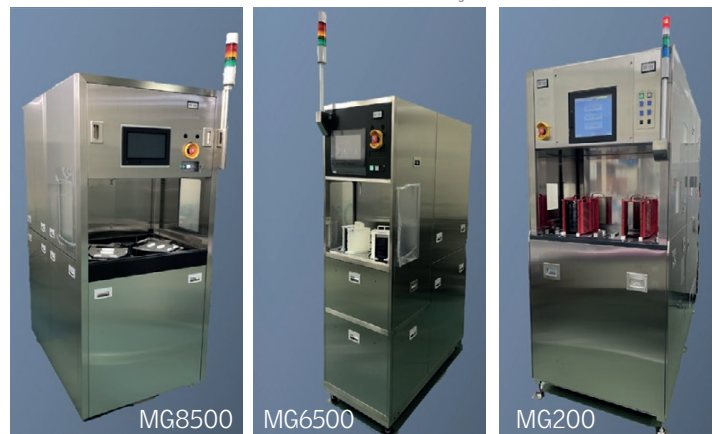
One of Miyatsu's key products is its MG200 (Single wafer process type: Strip and Light Etching) device. This product provides a key part in semiconductor manufacturing: removing impurities or organic matter from the wafer. Noted for its

safety and user-friendly nature, the product is the latest in the MG Series which has formed the cornerstone of Miyatsu's business for over 20 years. Looking forward, the company understands that Japanese advancements in stacking technology are set to become highly valuable as semiconductors increase in their layers.

Mr. Miyata, who himself spent time living in the United States, is always open to collaborating with like-minded international partners, and highlights Asia, Europe and the U.S. as particularly important regions. Miyatsu has experience in the international market, developing software and providing client services from its base in Vietnam, and is looking to increase its international network as its business continues to grow.



<https://en.miyatsu.com/index.html>



"HHV CUPLA" fuel coupling for high pressure hydrogen

Nitto Kohki advanced know-how further contributing to hydrogen fuel and LiB industries

With its pioneering technology, Nitto Kohki is eyeing an increased presence in LiB manufacturing and couplings for hydrogen fuels as the shift to the next-generation of vehicles continues to take place.

With stricter environmental regulation coming into place in countries across the globe, the demand for electric and hydrogen vehicles will continue to increase. This trend is presenting major business opportunities for Nitto Kohki, a Japanese firm that manufactures couplings for vehicles, hydrogen fuel stations and lithium-ion batteries (LiBs), as well as labor and energy-saving technology, machinery and tools.



"delvo" electric screwdriver for automatic screw fastening

In Japan, the company has developed its couplings for hydrogen vehicles together with Toyota, and has also managed to capture market share with couplings for refueling stations by teaming up with a leading Japanese dispenser manufacturer.

"We will be expanding our product lineup and bolstering sales activities besides fuel cell vehicles, such as transportation equipment and ships," adds Akinobu Ogata. "Nitto Kohki's hydrogen-related products

satisfy Japanese safety standards, which are the most stringent in the world. Fuel cells are expected to find more uses outside the passenger vehicle sector, for example in forklifts, ships, drones, and freight cars, and ensuring safety performance will be crucial."

With growing production of LiBs for electric vehicles (EVs), Nitto Kohki is well positioned to meet increasing demand for couplings used in the transportation of liquid electrolyte solution material used in LiBs, as well as in EV production lines.

"This increased need for batteries is leading to an increase in our own business as our products are a crucial part of the battery-making process," says the Nitto Kohki president. An increase in EV production, particularly in China, has led to sales expansion for couplings used on EV battery production lines, contributing to the record sales level.



Pneumatic tool series for automatic machines "BELTON"

"We see many avenues for increasing our sales activities for this

battery production. In this way, you could say Nitto Kohki has an advantage having a foot in both the EV and hydrogen vehicle markets. We have great potential in both directions."



"COMPACT ZEROSPILL CUPLA" for coolant piping quick connect coupling

Opportunities are also arising for the Japanese firm in the field of automation, and energy and labor-saving technologies, with a highlight product in the pipeline being a new pump that dramatically reduces the amount of electricity required for suction conveyor systems by limiting discharge pressure and flow. Offering energy savings, easy installation, quiet operation, and cleanliness, this new pump makes it possible to significantly reduce power usage. "A prototype has already been manufactured and is undergoing safety tests," Mr. Ogata reveals. "Our aim is to launch the product early next year and customers are waiting with high anticipation. Only so much information can be disclosed about products currently under development, but products contributing to



"Nitto Kohki has an advantage having a foot in both the EV and hydrogen vehicle markets. We have great potential in both directions."

Akinobu Ogata, President & CEO, Nitto Kohki Co., Ltd.

automation and labor saving remain priority development targets."

Testament to the company's commitment to innovation and product development is its new factory set to open in Fukushima. Designed by renowned architect Kengo Kuma (best known for designing the Tokyo Olympic Stadium), the new Fukushima plant will incorporate the latest cutting-edge technology, along with automation, AI, and other labor-saving technologies. "At this plant, we can raise the standard of the products we make to the next level," the president proudly declares.

Meanwhile, outside Japan, Mr. Ogata reveals that Nitto Kohki's basic strategy is "to increase brand recognition and to collaborate with influential partners in target markets. As well as actively participating in hydrogen-related trade shows overseas, we are exploring partnerships with companies of good standing."



www.nitto-kohki.co.jp/e