

Motherson announces the collaborations with two startups to add solutions to their smart surface portfolio, including a seamless and buttonless touchpad as well as a high-resolution touch sensor.

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The interior of the vehicle is changing for the better as the need for seamless and stylish solutions expands. The Motherson Group, a global Tier-1 automotive supplier, has a strong focus in smart surface solutions and enhancing the user experience. Motherson is announcing two separate collaborations with startups whose technology is expected to add valued solutions to the group's smart surface portfolio. One collaboration is with Sensel, a company with a focus in interactive touch technologies. The second collaboration is with Dycotec Materials, a UK based advanced materials startup who is developing and manufacturing transparent and non-transparent conductive, insulator and barrier layer inks and coatings. Motherson met both companies through Program 10 of Startup Autobahn Powered by Plug and Play.

Motherson and Sensel have been working together on a seamlessly integrated touchpad underneath a premium leather. The solution is both aesthetically pleasing in design and unique in the intuitive operation of the touchpad. "It is a pleasure working with Sensel", says Thomas A. Nugraha, Senior Engineer at Motherson, "we are amazed by the compact design of Sensel's solution which provides not only touch but also haptic feedback for intuitive user interaction". Although the activities are ongoing, the parties are hopeful that a working prototype will demonstrate the seamless buttonless touchpad that can be integrated as HMI components within the group's smart surface solution offering.

"Sensel's complete solution combines proprietary touch sensors, force sensors, and powerful haptics. Its technology works under flat or curved surfaces made from a wide-range of materials, including leather or wood, making it an ideal fit for automotive consoles. "With this proof of concept, Motherson beautifully illustrates how smart surface solutions like our Haptic Touchpad will someday benefit drivers," says Sensel CEO and Co-founder Ilya Rosenberg. "It's clear that Motherson understands where the future of automotive HMI is headed. It was extremely rewarding to work with such a forward-looking team."

In addition, Motherson and Dycotec are developing a highly transmissive, while maintaining high conductivity, high-resolution transparent touch sensor which can be combined with backlighting. The transparent capacitive touch sensor will offer a unique interaction between the user and smart surface. Thomas A. Nugraha explained that "This solution provides cutting-edge touch technology that when combined with translucent surface and dynamic backlighting, provides new interactivity between user and smart surfaces.

To support the development, Dycotec Materials have provided a range of screen printable products including silver, silver nanowire transparent, transparent overcoat and carbon pastes to build the multilayer capacitive touch screen sensors. Dr. Ian Clark, Commercial Director stated "We are delighted to be working with Motherson and extending our broad range of developments in the automotive

sector. Our extensive product range of printed electronics materials enables us to provide all the required material sets needed for this innovative device.”

“Motherson sees the importance of working with startups on innovative topics, and we believe that solutions, such as the ones coming from these two collaborations, will enhance the consumer experience and ultimately bring value to our customers” explained Timo Schwarz, Chief Technology Officer at Motherson Innovations.

The buttonless touchpad and high-resolution touch sensor will be presented for the first time at the Start-up Autobahn EXPO 10 on the 22nd of July in 2021.

About Motherson

Motherson operates as a full system solutions provider for its customers. The product portfolio includes electrical distribution systems, fully assembled vehicle interior and exterior modules, automotive rear vision systems, moulded plastic parts and assemblies, injection moulding tools, moulded and extruded rubber components, lighting systems, electronics, precision metals and modules, Industrial IT solutions and services and new innovative technologies such as wireless power etc. The group has expanded its presence to support customers in new segments including health and medical, aerospace and logistics. The diversified range of technologies and capabilities allows Motherson to support a wide spectrum of sectors, with automotive as the main industry served.

For more information please visit www.motherson.com.

About Sensel

Ilya Rosenberg and Aaron Zarraga founded Sensel to bring the next generation of touch, force, and haptics technologies to computing. Having grown to ~50 team members, thousands of customers, and several large-scale enterprise clients, Sensel is enabling exciting new experiences for touchpads, displays, mobile devices, automotive interfaces, and other products that involve human interaction. Sensel’s first product, the Morph, won “Best in Show” at the SXSW 2017 Interactive Innovation Awards, was named the “Best MIDI Controller” at NAMM 2019 by MusicRadar, and has shipped to thousands of customers worldwide. The first commercially available product to incorporate Sensel’s technology, Lenovo’s ultrathin ThinkPad X1 Titanium Yoga, began shipping in January 2021.

About Dycotec

Dycotec Materials Ltd is an advanced materials company developing and manufacturing electrically and thermally conductive, insulator, dielectric and overcoat inks and films for a broad range of applications including aerospace, automotive, semiconductor, medical, IoT and wearables. Dr Richard Dixon, Dr Kerry Yu and Dr Aaron Chan originally founded the company in September 2015. From humble beginnings, initially operating from Dr Dixon’s garage and based on their firm belief of undertaking cutting edge materials development and continuous investment in R&D for long term growth, the company has expanded rapidly. It now operates from its headquarters, a 21,000 ft² facility in the picturesque town of Calne in Wiltshire, UK where it develops, manufactures and sells over 50 products globally.