

Combined expertise at embedded world 2025: DATA MODUL, LEONHARD KURZ and PolyIC present the next generation of display integration

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The demands placed on modern operating and display concepts are constantly growing. Especially in the automotive, consumer electronics and home appliances sectors, solutions are required that harmonise intuitive interaction, high-quality appearance and technological efficiency. Displays should be seamlessly integrated into elegant surfaces, while at the same time offering maximum legibility and an outstanding user experience.

Munich-based full-service display provider DATA MODUL, thin-film specialist LEONHARD KURZ and KURZ subsidiary PolyIC, a leading provider of advanced touch sensor technology, are meeting these challenges with an innovative Hidden Til Lit display solution, which will be presented at embedded world 2025. Using a demonstrator, the companies will show an optimised form of display integration: a large display that blends completely into the surrounding decor and only becomes visible when activated.

A perfect balance of aesthetics and function

A key unique selling point of the display concept is its ability to fully integrate into the surface design when deactivated and blend in with the surroundings. Whether wood, stone or metal look – the entire structure remains homogeneous throughout, as neither display contours nor technical controls are visible and the surface remains untouched in its original aesthetics. This seamless integration is made possible by KURZ's high-precision thin-film technologies. Various KURZ processes can be used in the production and finishing of the hidden display, depending on individual requirements.

In addition to the visual fusion, the haptics also play a central role: the high-quality decorative layers create an authentic material feel that preserves the tactile quality of the surface while also ensuring that the display blends harmoniously into the surface.

The advanced solution combines the Hidden Til Lit feature with modern touch sensor technology, opening up new possibilities for innovative and aesthetic HMI concepts. The interface only appears when activated and offers a precise, responsive touch experience. The result is an elegant combination of minimalist design and intuitive operability – ideal for applications that focus on aesthetics and user-friendliness. PolyIC contributes its expertise here: The KURZ subsidiary offers versatile sensor solutions that can be flexibly integrated into the system.

The display unit itself benefits from DATA MODUL's many years of experience in the field of high-performance display technologies. The high brightness and exceptional contrast of the displays used ensure that content is displayed clearly and crisply, even in strong sunlight or in environments with difficult lighting conditions. The basis for this is the HDR (High Dynamic Range) imaging process of the 17.3-inch TFT display, which impresses with outstanding contrast and brilliant colour reproduction.

New possibilities for design and interaction

Hidden Til Lit technology opens up a wide range of application scenarios, particularly in areas where the combination of elegance and functionality is of central importance. In the automotive industry, new design approaches are emerging for vehicle interiors, as displays are increasingly seen as an integral part of high-quality surfaces. The technology can also be used specifically in the household appliance industry to integrate control panels harmoniously into modern appliance fronts, which only appear as interactive surfaces when they are actually being used.

'Thanks to the close collaboration with PolyIC and DATA MODUL, we were able to realise a solution that combines design freedom with technical excellence. Our competences complement each other

perfectly and help to ensure that all components of the hidden display are perfectly matched,' explains Gerhard Scheuing, Product Manager Automotive and Senior Expert Touch Sensor Systems at PolyIC.

'Integration into the surface is successful thanks to full bonding and the high contrast, which is characterised by very low light emission in black image areas and very high emission in bright areas. This results in a brilliant contrast ratio in the active state. When deactivated, the display is almost invisible,' explains Andreas Huber, Head of Products - Displays at DATA MODUL.

Live experience at embedded world 2025

embedded world 2025 offers visitors of the exhibition the opportunity to experience the new generation of display integration live for the first time. At the exhibition booths of PolyIC (booth 1-270) and DATA MODUL (booth 1-368), they can see the versatile design options as well as the optical and functional quality for themselves.

Further information can be found at www.data-modul.com

About DATA MODUL

As a passionate enabler, DATA MODUL AG does everything in its power to turn customers' visions into reality. With a comprehensive understanding of hardware, software and services as a harmonious unit, the focus is on developing customised display solutions that precisely meet the specific needs and objectives of the customer. The outstanding core competence of DATA MODUL AG lies in customising, whereby the company not only provides products, but rather tailor-made solutions with a clear market focus. With over 50 years of experience, DATA MODUL AG represents financial stability, innovative strength and international growth. Its presence at more than 20 locations worldwide and a total area of around 40,000 square metres for production, logistics and administration enables the company to respond flexibly to global challenges.

About the company KURZ:

LEONHARD KURZ is one of the world's leading specialists in the field of thin-film technology and has a global presence with over 5,500 employees at more than 30 locations. KURZ develops and produces decorative and functional coatings for the printing, packaging and plastics industries, for banknotes and ID documents as well as for the automotive, electronics and medical technology sectors, among others. The comprehensive product portfolio ranges from decorative and smart surface finishes to design consulting and security concepts for product and brand protection. Together with its subsidiaries, KURZ offers solutions for digital finishing, cold transfer, hot stamping, suitable printing and embossing machines as well as embossing tools. KURZ also develops its own recycling programmes, is a participant in the UN Global Compact and has received several awards from EcoVadis for its sustainability activities.

www.plastic-decoration.com

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