

DATA MODUL AG presents highlights at this year's embedded world

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At embedded world in Nuremberg, the Munich-based system provider DATA MODUL AG will be demonstrating its expertise in the areas of display, touch, embedded and system solutions. With the help of practical application examples, visitors to the stand can experience directly at the exhibits how diverse the possible uses can be, even across sectors and markets. The focus is just as much on demand-oriented operability as on smooth system integration.

Kiosk solutions using gesture control

As an interface between man and machine, contactless operation by means of gesture control offers numerous advantages. Based on Microchip's GestIC® technology, DATA MODUL has developed a controller board that combines 2D PCAP functionality with 3D gesture control. In addition, camera-based and IR-based solutions are also available. At the trade fair in Nuremberg, DATA MODUL will show a **32" easyPanel display** as a self-service kiosk with a camera-based solution. In addition to the usual input by touch, the GUI can also be operated touch-free using defined gestures. In this case, software creates a virtual model of the hand movements, the camera module detects the hands in the air and simulates the movements with an on-screen cursor. Individual elements on the screen can be selected by a simple air-push movement - similar to tapping the screen or a hover and hold movement. Gesture control allows hygienic user interaction, offers a new customer experience and is especially suitable in (semi-)public spaces. This means that constant disinfection of the user interface is not necessary. Gestures can be learned quickly and easily and can also be made conveniently accessible to new users through additional assistance. A combination of swipe gestures and real touch is also possible. Fields of application: Information, operating and login terminals. At embedded world, DATA MODUL will be showing an example application for travel ticket sales.

Button deck monitor for gaming applications

The four product areas of DATA MODUL AG: System solutions, displays, touch and embedded are shown collectively in the newly developed button deck monitor, which is ideally suited for integration into gaming machines. Smartphones, for example, can be charged on an inductive field during the game. Thanks to its thickness of 5 mm, the protective glass is particularly resistant to potential external force. By placing a personalised card on the integrated **RFID reader**, users identify themselves directly on the device and can then carry out authorised actions. The PCAP touch technology makes the device particularly easy and intuitive to operate. Through customization of the touch settings - taking into account the respective glass thickness - perfect touch functionality is ensured at all times. The glass on top of the area where the LEDs are attached at the edge of the display is translucent, which achieves uniform illumination of the button deck. The button deck monitor is controlled with DATA MODUL's own eMotion LCD Controller Boards, which are designed for demanding, industrial requirements. In addition, the monitor is equipped with a flexible **LED lighting concept** that can be configured easily using in-house DATA MODUL software. Tailor-made, user-oriented device designs for gaming machines are on offer just as multiple panel formats, glass designs, as well as many additional features such as haptic feedback, knob-on displays, ambient light control (ALC), etc.

A 19.1" stretched panel with a resolution of 1920x360, a contrast ratio of 1200:1 and a viewing angle of 89° will be presented at the trade fair.

Powerful SBC based on the i.MX8M processor series for more modularity

With the new i.MX8MPlus Single Board Computer (SBC), DATA MODUL presents the latest addition to its modular embedded board family. It is particularly powerful and perfectly suited for a wide range of AI applications, among others. Despite the compact form of the board at 140x80mm, a large number of interfaces are already supported on-board, which can be expanded via additional modules according to

customer requirements. For easy scalability, the iMX8MPlus-based single-board computer is available with different quad-core processor variants (e.g. with and without Machine Learning Unit) as well as different memory sizes and an optional WiFi/Bluetooth module. The eDM-SBC-iMX8MPlus is the second board in the product line with a special focus on modular design. In addition to an on-board HDMI and dual-channel LVDS interface, it allows for connecting a second display using a graphics module which is available for many graphics interfaces - such as multiple LCD- panel (dual-channel LVDS / RGB / eDP / MIPI DSI) and monitor interfaces (HDMI / DP / DVI).

The on-board feature connector also enables the use of customized I/O modules for precise integration into the respective application.

The NPU (Neural Processing Unit) with 2.3 TOPS integrated in the processor offers possibilities for application in the field of automatic learning, such as face, speech and gesture recognition. The Dual-Camera ISP (Image Signal Processor) enables pre-processing of videos and camera images without increasing the CPU load. The eDM-SBC-iMX8MPlus is equipped with a voltage input of 12 to 24 volts as standard. In addition to USB3.0 and two Gigabit Ethernet (1x with TSN) interfaces, the new board is equipped with on-board audio, a MIPI-CSI camera interface and CAN and RS485 interfaces. The eDM-SBC-iMX8MPlus is available for commercial applications with a temperature range of 0 °C to 70 °C and for industrial applications with a wider temperature range of -20 °C to +85 °C.

Transparent 55" OLED display for a wide range of applications

Awarded "Display Product of the Year 2022" by the British magazine *Components in Electronics* (CIE), LG's transparent 55-inch OLED display stands for outstanding and innovative products in the electronics industry. DATA MODUL has recognised the great potential and possible applications for OLED displays for various industries. Transparent displays with brilliant OLED technology are particularly eye-catching. Transparency opens up new possibilities in the design of HMI devices and in the presentation of content. OLED is ideal for creating innovative advertising and information displays that can be used effectively in retail, gastronomy, trade fairs or public facilities and many other applications. For example, products are visible in the background, while the corresponding information is shown on the display. In a transparent OLED, each pixel consists of a light-emitting area and a transparent area. The transparent area does not emit light; other areas let light through while the displayed image is being viewed. Despite high contrasts and brilliant colours, objects behind them also remain visible.

Since OLED displays do not require additional backlighting, it is possible to have an extremely thin structure. In addition to the excellent display of content, this structure also offers additional attractive possibilities for applications. Especially in areas with limited space or special design requirements, DATA MODUL's new transparent displays offer modern and efficient solutions for a wide range of applications. A 55" transparent FHD display with a very high transparency level of 38%, bright colours and high contrasts will be shown at the trade fair. This finished solution has an OLED glass thickness of 1.38 mm and is equipped with a cover glass of 4 mm, an OCA adhesive layer of 0.5 mm and a protective film on the front and back of 0.2 mm, resulting in a total thickness of 6.28 mm.

[Find more information on our website.](#)

About DATA MODUL

DATA MODUL AG is one of the world's leading specialist providers of display, touch, embedded, monitor and panel PC solutions. Since it was established in 1972, it has consistently pursued the objective of providing its customers with state-of-the-art, tailor-made and individually customised complete solutions for display technologies.

Many years of experience in the field of display, touch, embedded and system technologies enable the company to produce customer-specific value-added services for a variety of industries at its 45,000 m² production and logistics facilities. The extensive distribution portfolio of displays, touchscreens and embedded solutions and the increasingly innovative in-house developments complete the unique modular product portfolio.

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