



REFERENCE

HOW PEAKNX TOUCH PANELS CONTROL THE MULTIFUNCTIONAL NIO HOUSE FRANKFURT

Situated in the bustling city centre of Frankfurt, within walking distance of the popular shopping street Zeil, the NIO House showcases and offers the purchase of premium electric cars from NIO. However, the NIO House is much more than just a place to showcase electric cars: it is also an event and venue space. We show how the smart NIO House Frankfurt is controlled using three Controlmicro operating panels and the visualisation software YOUVI from PEAKnx.



NIO House – an international concept

There are 125 NIO Houses worldwide. The European concept for the NIO House, with its stylish spaces, originally came from Norway, where the first NIO House in Europe opened in downtown Oslo in 2021. Spread over two floors, alongside the cars, there is a library, a café, and a shop for lifestyle products. Additional NIO Houses can now be found in Rotterdam in the Netherlands, and at German locations in Berlin, Frankfurt, and Düsseldorf.

Before moving in, extensive modernisation work was necessary at the Frankfurt location. After the planning phase for the technology and the entire architecture, construction began in the autumn of

2022, and the Grand Opening took place in March 2023 with invited guests.

As in all NIO Houses, the community spirit around the car is emphasized in Frankfurt. Some cars are delivered directly from the in-house showroom, including small additional gifts for the customers.

In the modern and thoughtfully designed spaces in Frankfurt, various areas invite visitors to linger, work, relax, meet, or celebrate. On-site, there is a café and bistro area, multiple meeting rooms and offices, an event and presentation space, a large co-working space, and a playroom for children. Approximately 40 events take place at the NIO House each month: from large corporate events and presentations to talks by various speakers, living room con-



certs, and sports events such as yoga classes, salsa workshops, or kickboxing. Everyone is welcome, meeting rooms can be booked whenever needed, and the freely accessible co-working area is always well-attended.

The request from the customer, NIO House Frankfurt, was therefore a compact and centralized solution that would allow all functions to be user-friendly controlled via logics and groups. For pragmatic reasons, the choice fell on DALI and KNX. Since integrator Sakalibüyük had already successfully collaborated with PEAKnx in the past and had integrated various operating panels in several projects, it was quickly decided that three Controlmicro operating panel with the visualisation software YOUVI would be used as the central control unit.

Smart control with KNX and DALI: A behind-the-scenes look

What was challenging for system integrator Tugay Sakalibüyük, Managing Director and Project Manager of WABE Elektrotechnik GmbH during the implementation process of the technology concept, also prescribed from Norway, were the different standards and the complex ceiling construction. One of the requirements included the installation of DALI-capable lamps throughout the entire NIO House. In the NIO House in Berlin, direct DALI



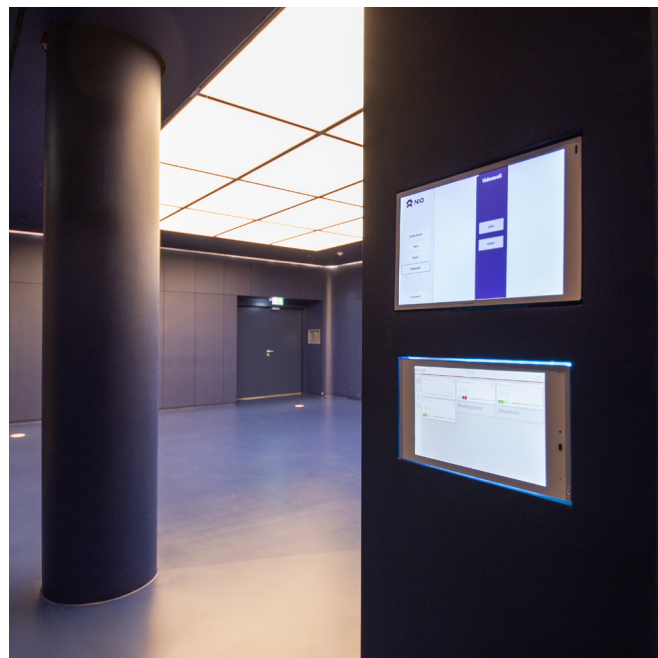


The KNX project was created with the ETS and imported into the visualisation. Further fine adjustments or the subsequent addition of group addresses via YOUVI were made individually by the integrator.

The main panel is responsible for controlling heating, ventilation, and air conditioning and is connected to the central sub-distribution in the utility room. Two additional Controlmicros control the lighting in the event space and display the current temperature of the ventilation there, while also controlling the sales area and meeting rooms. The analogue inputs and outputs of the ventilation and air conditioning systems were integrated into the visualisation via the logic module and visualised understandably for users. Control can be carried out either directly via

the panels or the NIO app.

In the complex, not easily accessible ceiling construction in the building, DALI offers the advantage that any reprogramming can be easily carried out. For example, in the café area, lamps were subsequently installed that were not yet integrated into the DALI system and could not be automatically switched off or controlled via switches. However, this contradicted the requirement that only the showroom should be illuminated in the evenings and at night. The designer lamps had to be individually converted to DALI by the integrator, and a scheme was developed to control them via DALI groups. The lighting control was implemented via the panel or YOUVI using a DALI-KNX gateway.



The only KNX devices in the building are the motion detectors in the washrooms.

Smooth operations at NIO House

In daily operation, building management runs smoothly. All employees have access to the panels at any time and can control lighting, heating, or room climate as needed via the clearly structured and user-friendly YOUVI interface. They can also set specific building control times. However, underlying logics or individual settings are only accessible by the integrator through panel configuration.

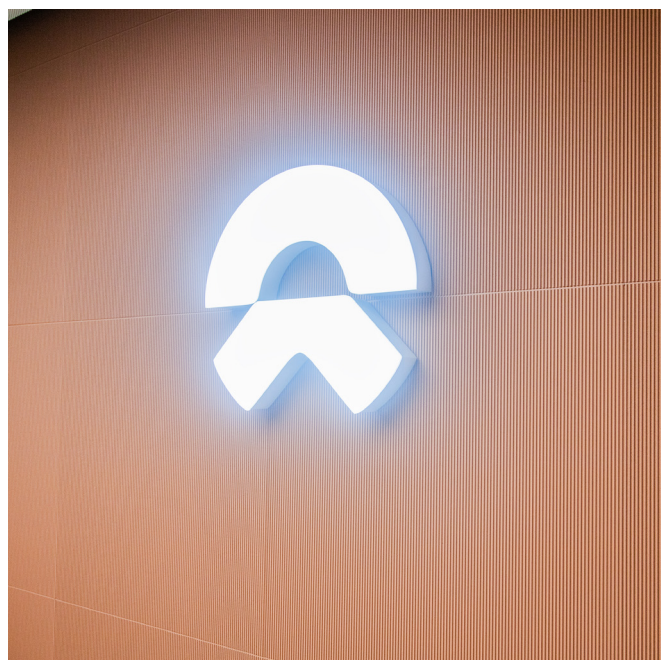
The smart building project at NIO House Frankfurt is ongoing, as new features are added from time to time. Since the panels at NIO House do not have permanent internet access, WABE operates an in-



ternal network with its own Wi-Fi, allowing the integrator to log in on-site. This allows them to make new configurations via YOUVI, switch DALI lamps on or off, or directly access the panels. Remote access is only possible in exceptional cases with approval from NIO's IT department. In such cases, the Windows-based PEAKnx touch panels are particularly advantageous, as remote maintenance is then conducted via Windows with Anydesk.

Happy customers and guests

Since moving into the NIO House, both employees and customers alike have drawn a positive conclusion. The international, modern, and smart concept, combining an automotive dealership, event venue, and co-working space, proves to be highly successful, offering visitors a versatile experience.



Thanks to well-implemented building automation, easy operation via the PEAKnx Controlmicros, and intuitive visualisation with YOUVI, users can control all authorized elements at any time, thus contributing to the overall satisfaction.

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