

Haptic feedback for industrial touch applications:

DATA MODUL presents new haptic demo unit

Munich, 12th May 2022

Haptic feedback was already successfully introduced in the consumer electronic market such as in smartphones. In cooperation with Next System and Candera CGI Studio, DATA MODUL has now developed a new demo unit which is the first of its kind to demonstrate the possibilities of haptic feedback in industrial applications. When it comes to haptics, industrial applications require higher standards in terms of reliability and quality than consumer electronics. Here it is crucial that all components are selected to fit to the application and are perfectly matched to each other. This also applies to haptic touch extensions which require an efficient interaction of hardware, software, user experience and design. The advantages of haptic feedback in modern HMI units are obvious: The feedback which is felt by the user during interaction provides additional feedback which in turn significantly increases operating safety, especially when attention is limited during operation.

“Haptic feedback also offers numerous advantages and possible applications in industrial use. To understand how it can be effectively integrated, the best way is to experience haptic feedback yourself. This is exactly where our new haptic demo unit comes into play. In various application examples, the demo unit demonstrates impressively how haptic feedback can be used in a wide variety of HMI solutions,” explains Benjamin Ringlstetter, Head of Product Management - Industrial Division at DATA MODUL.

The new demo unit offers five different application examples, each with different functional parameters. For example, it is possible to simulate an operating unit for construction machinery, a mixing console in the event sector or a classic pin pad as used in ATMs.

The haptic demo unit is based on two different haptic technologies with different actuators: On the upper side of the demo unit users will find a touch screen equipped with an electrostatic actuator. This creates a soft, natural touch feeling, is very quiet and is particularly suitable for displays from a diagonal of 10.1 inches and larger. In addition, this haptic technology offers a vertical displacement of up to 0.8mm which enables a key-like feedback.

On the lower part of the demo unit, there is a touchscreen with a special piezo disk actuator. This technology delivers a stronger and more precise haptic event and is suitable for applications with smaller touchscreens starting from 3.5 inches. In contrast to electrostatic actuators, the vertical displacement created by piezo disk actuators is significantly reduced and ranges up to 0.3mm. To avoid unwanted input, both technologies work with so-called force-sense. With force-sense, the desired touch event is only triggered if pressure is applied to the touch sensor which is then detected and evaluated by a force sensor.

The demo unit also comes with various operating elements which are integrated directly into the cover glass of the touch unit, such as buttons or sliders. This way, the new haptic demo unit from DATA MODUL not only provides extensive and tangible insights into the integration possibilities of haptic feedback in modern HMI solutions, but also makes it easier to introduce this technology in new product development processes.

[You can find further information here.](#)

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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