The next Revolution in HMI Design!

nextsystem value added company

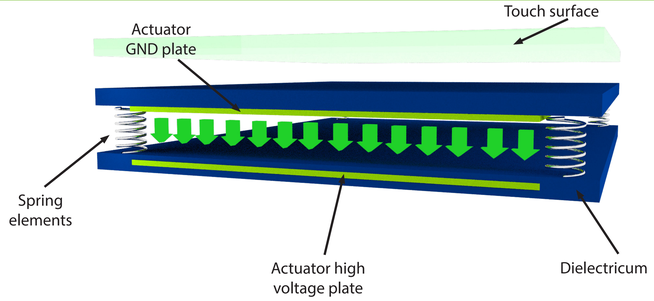
1 Abstract

Years ago nobody could think of interacting with a mobile phone using touch gestures

Today we could no longer imagine everyday life without it.

What's next: 3D Touch?

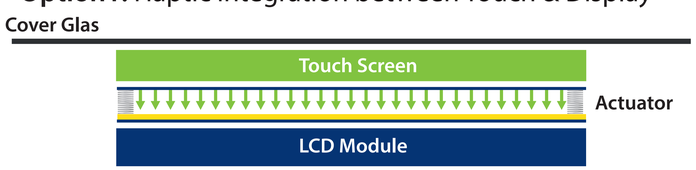
2 Technology & Contstruction



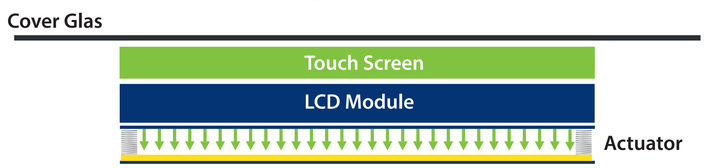
Based on electrostatic principle, we offer solutions that allow you to feel the UI elements, before they are actually activated.

3 Installation Options

Option1: Haptic integration between Touch & Display



Option2: Haptic integration behind the display



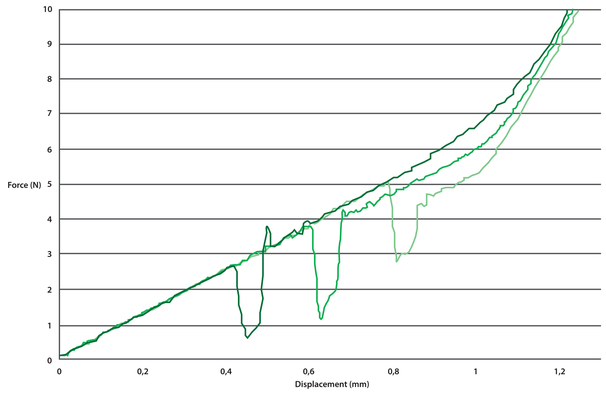
4 Force Sensing

Our haptic controller measures the distance between the actuators and generates a value on the Z-axis

50g

150g

Force sensing defines the actuation torque along the curve. Different strengths can be defined for the activation.

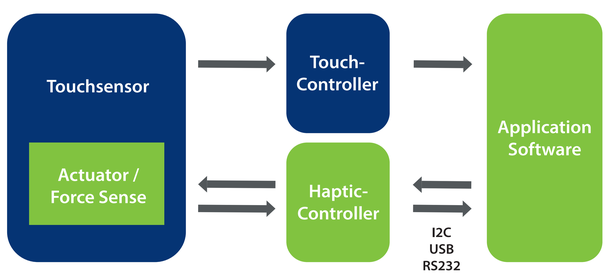


Comparison capacitative and no unintended release!

Often, there are spurious trippings with PCT technologies

Force sensing helps to differentiate accidentally from intentional releases.

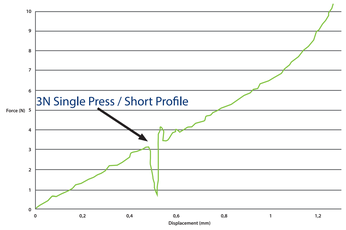
5 Software architecture

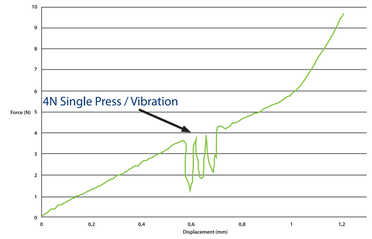


adjustable parameters:

- slope of edge
- force sense
- timing of action sequence
- mechanic lifting

6 Adjustable force-displacement profiles

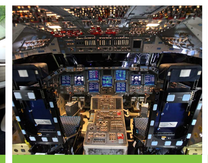




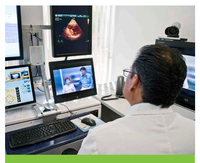
These are only a few examples of possible force displacement proles. As we can adjust the curves to your application, you can create dierent feedbacks - from smooth and softly to rigid and crunchy.

7 Advantages for HMI Applications


automotive


aerospace


gaming industry


medical applications

blind operation:

The combination of
- force sense
- process control
- profiles for different control elements

enables a "blind operation"

further advantages:

- scalable feedback
- flat structure
- easy integration
- low power consumption
- high reaction time

8 Summary

- feedback through z-axis
- controlling the process
- controlling the trigger forces
- different feedback for different elements
- blind operation and operation for the blind

touch - feel - position - release