

Every touch a success.

**TOUCHSCREEN SOLUTIONS BY ETRONICS**

## Five good reasons for touchscreens by etronics.



### INTEGRATED TOUCH PANEL SOLUTIONS.

Combined capabilities: bundling with other technologies such as LCD. Plastic and metal frames are also readily available.



### QUALITY IS OUR UTMOST PRIORITY.

Our products are produced to the highest standard. Quality is the constant focus at every stage of production and is ensured using suitable test equipments.



### RAPID DEVELOPMENT AND PRODUCTION TIMES.

Save time and money. An innovative etching process reduces developments expenses and times as well as entry barriers.



### PRACTICE MAKES PERFECT.

Our expertise is based on experience. We have been manufacturing designs and displays, touchscreens and housings for more than 30 years.



### SMALL-SCALE PRODUCTION POSSIBLE.

Small batches are also fine. Unlike other touch panel manufacturers, we specialise in the development projects for small-scale production.

## A host of possibilities under one roof.



Customised. Versatile. Sophisticated. We help our customers to develop and manufacture touch panels with varying technologies and deliver these on request as a ready-to-use solution incl. LCD and housings.

## AVAILABLE TOUCH PANEL TECHNOLOGIES:

- **Resistive touch panels**  
(4 WR / 5 WR / 8 WR – 4 to 8 analogue technologies)
- **Capacitive touch panels**  
(multitouch up to 10 fingers)
- **SAW-touch panels**  
(Surface acoustic wave)
- **Optical touch panels**  
(Infrared, CCD-sensor or n-cell)
- **Electromagnetic digitizing tablet**
- **Hybrid touch panels**

## Specification capacitive touch panels.

The demand for projected capacitive (PROCAP) touch panels which are used in smart phones and tablets has increased greatly in the last years. We are also developing solutions for this.

## CONSTRUCTION AND MAIN FEATURES:

**Max. panel size:**

50 inches (150 cm)

**Aspect ratio:**

4:3, 16:9, 16:10 or customised

**Input signal:**

Finger or rubber pen

**Accuracy:**

better than 2.5 mm

**Glass coatings:**

anti-glare, anti-reflection

**LCD resolutions:**

- Full HD: 1920 x 1080
- 2K: 2048 x 1080
- 4K / UHD: 4096 x 2160

**Casing:**

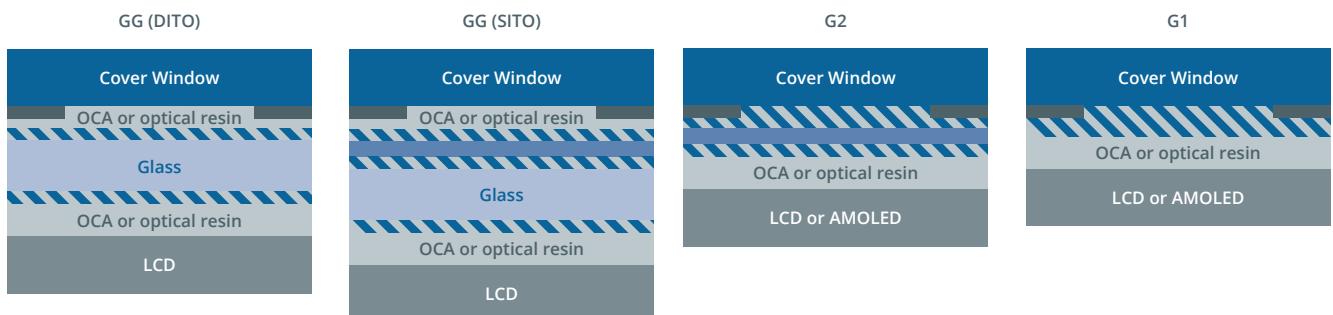
with / without

**Glass or film substrate touch panel structures which combine glass (G) and film (F) layers in various ways:**

- GG structure (eg. iPhone, transparency: 90 ±2 %)
- GGG structure (safeguard against vandalism)
- GF structure
- GFG structure (for outdoor use)
- GFF structure (other manufacturers of mobile phones)
- GFFF structure

**Temperature range:**

- Storage temperature: -30 °C to +80 °C  
(min. 10 % to max. 90 % RH)
- Operating temperature: -30 °C to +70 °C  
(min. 20 % to max. 90 % RH)



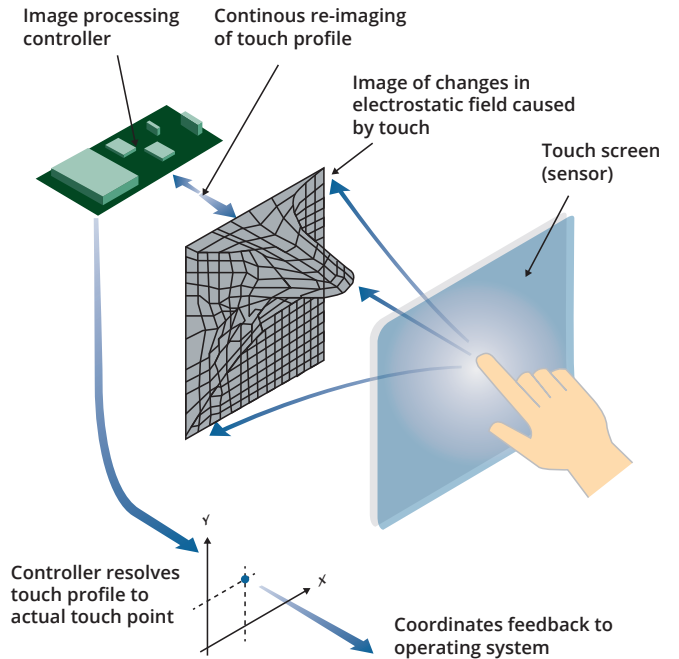
# A control board with peak performance.

## CONTROLLER TOUCH FUNCTION:

- **10+ touch detection and tracking** (on the X- and Y-axis)
- **Palm recognition**
- **Touch recognition latency period:** 10 ms
- **Max. refresh time for position recognition:** 5 ms
- **Max. response time:** 20 ms

## DETECTION AND POWER CHARACTERISTICS:

- **High resistance tolerance**
- **High sensitivity:** <0.1 pF (picofarad)
- **Resistant to LCD noise**
- **Resistant to RF and power supply interference**

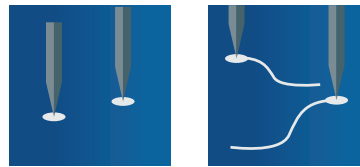


## MULTITOUCH TECHNOLOGIES:



### Single Touch:

- Resistive Analogue Type
- Surface Capacitive
- Surface Acoustic Wave (SAW)
- Magnetic / Digitizing



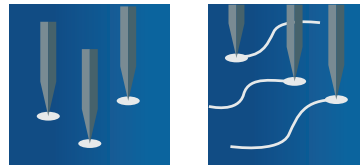
### Multi-Touch (2 points only):

- Resistive Multitouch (Win7)
- Projected Capacitive
- SAW – ELO intelliTouch (Win7)
- Magnetic / Digitizing



### Gestures:

- Resistive 4 W / 5 W
- Projected Capacitive



### Multi-Touch (more than 2):

- Resistive Multi-Touch
- Projected Capacitive
- CCD
- Hybrid: N-trig

**SPECIAL FEATURES:****Water detection:**

Unlike standard touchscreens, splashes of water or sprays do not trigger any touch events.

**Usage of gloves:**

In the medical sector as well as other sectors the use of gloves is essential. A special algorithm allows the controller to recognise multi-touch events despite the use of gloves.



Surgical gloves



Cotton gloves



Working gloves



Heavy working gloves

**SUPPLY VOLTAGE:**

**Input voltage:** 5 V (USB interface)

**POWER CONSUMPTION AT 5V:**

**On mode:** <174 mW (5 touch points, 125 Hz refresh, 104 inch)

**Standby mode:** <18.2 mW (50 Hz refresh)

**Off mode:** <1.5 mW

**Max. / min. power supply:** -0.3 V to 7 V

**TEMPERATURE RANGES:**

**Storage temperature:** -40 °C to +150 °C

**Operating temperature:** +25 °C to +85 °C

**COMPATIBILITY CONTROLLER INTERFACE:**

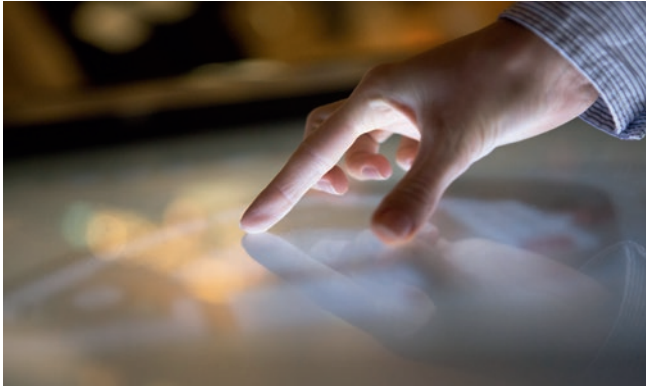
- **Microsoft Windows XP**
- **Windows Vista**
- **Windows 7**
- **Windows 8**
- **Mac OS**
- **Linux**
- **Fedora**
- **Ubuntu**
- **Android**

## On the safe side of quality.

For us quality is a given. The touch panels do not leave our plant without a host of extensive tests to ensure this quality:

- **Visual inspection**  
(FAI report, cosmetic inspection report)
- **Mechanical inspection**  
(Hard body drop test, impact test, bend test, glass hardness test, FPC peeling test)
- **Environmental inspection**  
(High temperature durability test, thermal shock test, humidity test)
- **Electronic functionality inspection**  
(Functionality test of the end product, contact resistance test)

## Waiting can be such bliss. For your customers.



Do your customers often have to wait at the counter? Why not use a large-large display with touchscreen to entertain your customers and to draw attention to your offers. Such solutions boost your image as a modern and innovative company.

## Cooperation is the way to go. Especially with us.

Regardless of what you are looking for: a hardware solution or someone who can provide a ready-to-install touch solution. You decide how exactly you would like to work with us because we in any case are a capable and reliable partner. As a general contractor we avail of the best people from software development and technical installation so we can offer comprehensive solutions. In the future your customers may even be glad to have to wait a little.

## Comprehensive service. For comprehensive satisfaction.

We have over 30 years of experience in the design and manufacture of displays and casings – Knowledge we can apply to your solutions. When our company started we manufactured mostly LCD displays for our customers. Over the last 15 years we have expanded our focus to include resistive touch panels. For the last few years we have been focusing more and more on capacitive touch panels.

Why not show your company from its innovative side – nothing at your company shows that are moving with the times more than a touchscreen which cuts waiting time for your customers.



**Philipp Helfenstein**  
CEO

Direct: +41 44 751 80 50  
Mobile: +41 79 669 88 33  
[philipp.helfenstein@etronics.ch](mailto:philipp.helfenstein@etronics.ch)



**Thomas Badat**  
Account Manager

Direct: +41 44 751 80 58  
Phone: +41 44 751 80 51  
[thomas.badat@etronics.ch](mailto:thomas.badat@etronics.ch)