

OUR GLOBAL COMPETENCE CENTRES



 APOLLO DISPLAY
TECHNOLOGIES



 DISTEC



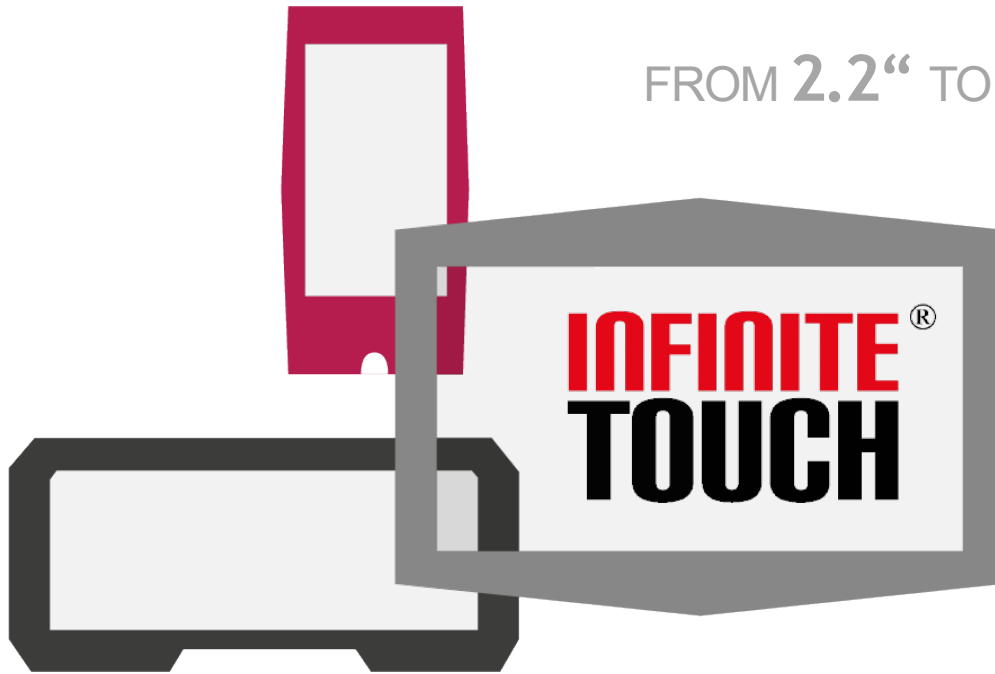
 DISPLAY
TECHNOLOGY



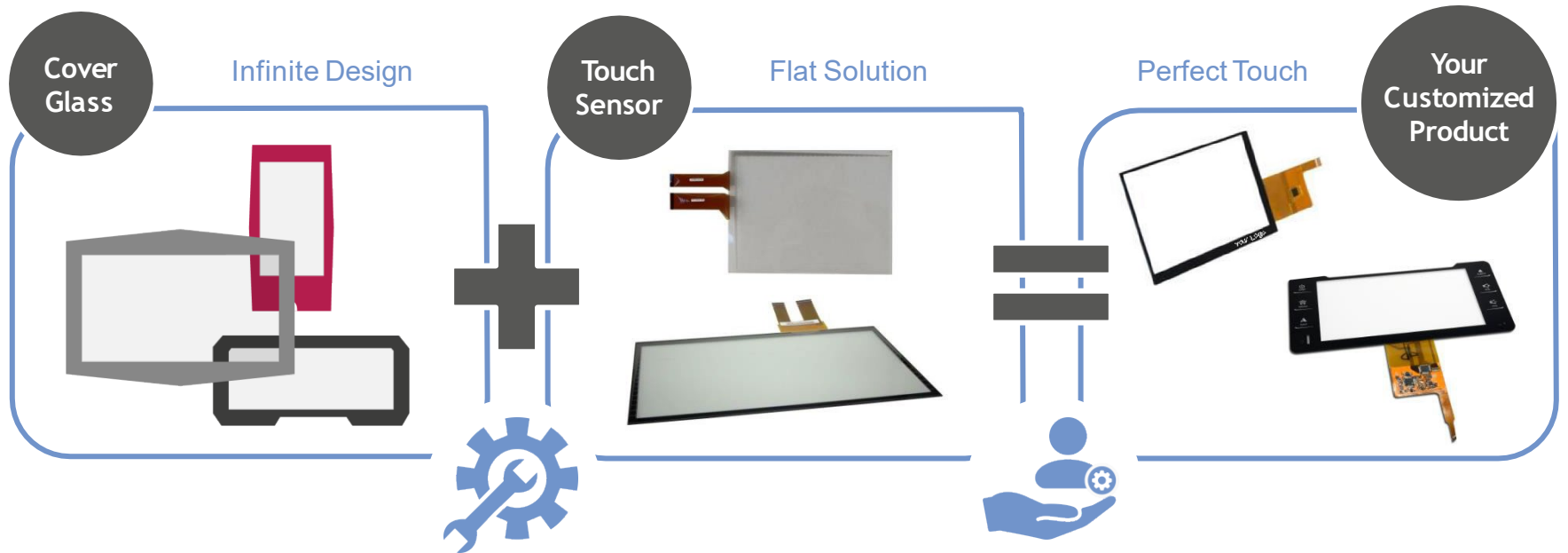
FORTEC
ELEKTRONIK AG

INFINITE FREEDOM OF TOUCH DESIGN

FROM 2.2" TO 75"



INFINITE TOUCH DESIGN



INFINITE TOUCH DESIGN TRUE FLAT

True Flat Design for Projected Capacitive Touch:



Standard sizes⁽¹⁾

5" to 32"



Project based sizes⁽²⁾

2.2" to 75"



Samples glass strength⁽¹⁾

1.1 to 4 mm



Project based glass strength⁽²⁾

up to 15 mm

⁽¹⁾ With immediate availability for samples.
⁽²⁾ On request.



Standard Touch sensor



Customised Touch sensor



Standard Cover glass



Customised Cover glass

INFINITE TOUCH DESIGN TRUE FLAT

Various Combinations



Touchscreen
incl. Cover glass
5" to 32"

Standard touch sensor
including pre-defined
standard cover glass for
quick evaluation
[TP-DD-Series](#)



Touch sensor
5" to 32"

Cover glass
1.1 to 4mm

Standard touch sensor
including standard
cover glass of your
choice for quick
evaluation



Touch sensor
5" to 32"

Cover glass
up to 15mm

Standard touch sensor
including individually
designed cover glass
(e.g. logo print, shape
etc.)



Touch sensor
2.2" to 75"

Cover glass
up to 15mm

Individually designed
touch sensor (e.g. size,
tail position etc.)
including individually
designed cover glass



Standard Touch sensor



Customised Touch sensor



Standard Cover glass

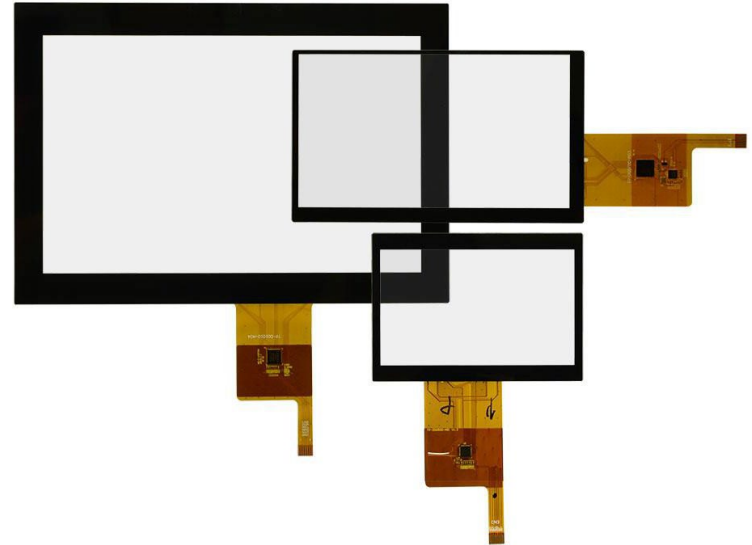


Customised Cover glass

INFINITE TOUCH DESIGN TRUE FLAT PCAP

Distec PCAP sensors:

- ✓ PCAP: Sensorfoil for low overall height and low weight
- ✓ Up to 10 touchpoints (depends on cover glass thickness)
- ✓ Chip on board / Chip on flex
- ✓ Interfaces: USB (HID), RS232, I2C
- ✓ Supported OS: Windows, Linux, Android, Mac, QNX
- ✓ Glove usage or palm recognition (on request)
- ✓ Detection of water / blood / salt water (on request)
- ✓ Tape bonding or optical bonding: **VACUBOND®**



INFINITE TOUCH DESIGN INDIVIDUAL DESIGN

Individual Cover Glass Design:

- ✓ Size _____ Custom
- ✓ Design _____ Infinite
- ✓ Floatglass _____ Chemically or thermally toughened
- ✓ Surface _____ AG (anti-glare)
AR (anti-reflection)
AF (anti-finger-print)
- ✓ Print _____ organic, digital, ceramic (therm. tough. only),
opaque/lightproof, single/multicolor for customer
logo, buttons, passe-partout, ...
- ✓ Edges _____ ground, faceted, c-cut, polished, ...
- ✓ Other glass _____ laminated safety glass, Xensation, Gorilla,
antibacterial glass, UV blocker, ...
- ✓ Tape bonding or optical bonding _____ **VACUBOND®**



INFINITE TOUCH DESIGN OVERVIEW VACUBOND®

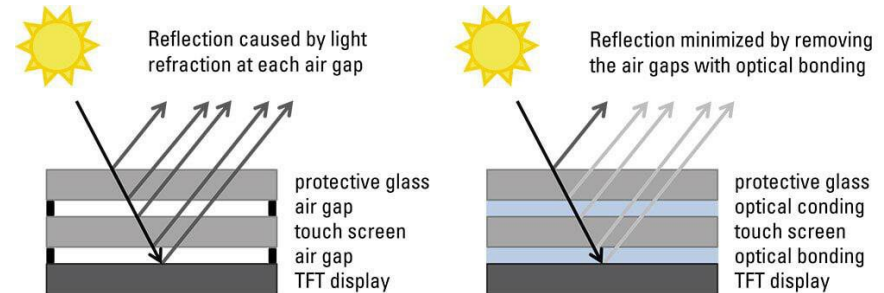
In close strategic and technical co-operation with the Japanese Taica - Group we developed the latest generation of optical bonding and assembly technology.

For supply security and for support of your risk management we installed the identical machines and processes in Germering/Munich, Germany as well as in Ronkonkoma/NY, USA.



Vacuum Bonding doesn't need:

- ✓ Drying process / curing time
- ✓ Dam construction as wet bonding
- ✓ Comprehensive "optical defect specification"
- ✓ Stable mechanical structure of TFT



INFINITE TOUCH DESIGN ADVANTAGES VACUBOND®

Advantages VacuBond®:

- ✓ Perfect contrast and readability in sunshine by eliminating the air gaps between TFT display and cover glass / touch
- ✓ No condensation / fogging in air-gap
- ✓ Reduced danger of splintering during glass breakage
- ✓ Improved shock absorption, more robust construction
- ✓ Improved heat transmission via front-glass (up to factor 8)
- ✓ Cost-efficient and reliable bonding of small and sensitive TFTs in the range of 2,4" to 7" and of TFTs up to 32"+ in general
- ✓ "free air exclusion" bonding: we fill free space inside of the TFT by bonding (ex-protection)
- ✓ We can directly bond into your front-panel
- ✓ High precision in production due to production jig and automated process
- ✓ Our process is reversible, we can re-bond e.g. for repair



VACUBOND®

FORTEC
ELEKTRONIK AG

INFINITE TOUCH DESIGN ADVANTAGES ASSEMBLY WITH VACUBOND®

Advantages Assembly with VacuBond®:

- ✓ Easy assembly of the fragile new generation TFT displays without metal housings
- ✓ Zero anomalies production (opaque, translucent) makes a cosmetic specification superfluous
- ✓ Assembly of protective glass of any thickness for increased ruggedness (drop ball tests, IEC60721-3-7 as well as MIL STD 810F passed with VacuBond)
- ✓ Assembly of touch screens of all common technologies: resistive, glass/glass, AMR, projected capacitive
- ✓ Assembly at room temperature in contrast to assembly in autoclaves, which may exceed the maximum specified temperature of the touch screen.



Modern 3,2" TFT display assembled in VacuBond technology with a protective glass



Same 3,2" TFT display without protective glass: the very small bezel and the fragile mechanics do not allow for tape assembly or wet bonding

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