Turn on the Power of Anders Coverlens Customisation


Coverlens Solutions as
unique as your products
anders

The Q Display 2 Series, courtesy of Nextfour Group Oy

At Anders we offer a bespoke range of Coverlens Solutions. These enhance the quality and useability of your products.

The coverlens is the most immediately visible part of your user interface. From the very first glance, it sends a powerful message about the associated product or services. It has to be so much more than merely functional: it must convey brand values; it must invite interaction, and it must be reliable, clean, and retain its appearance over time, whatever the operating environment throws at it – which could be anything from rain or seawater to bleaching sunlight, cleaning chemicals, industrial oils, kitchen grease, or household dust.

While some of our customers come to us with a clear vision for their coverlens design, many others need help to understand all the options that are available and how to make the best use of them. To provide that support, it's our responsibility – as a specialist in user-interface development – to keep up to speed with the latest design trends and manufacturing processes. To do this, we stay active within the displays community and we communicate with our manufacturing and supply partners to hear about their current capabilities and the new innovations and techniques they are developing for the future.

Cut-outs & Custom Shapes

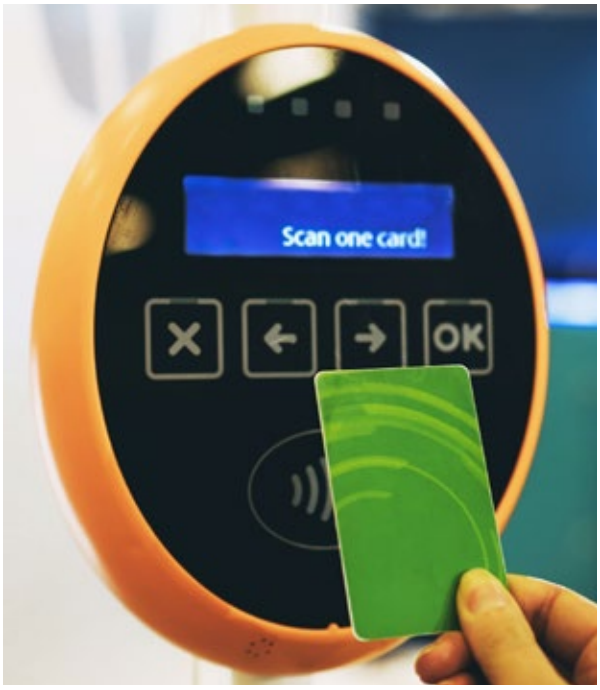
WE NEVER FORGET THE MANY ESTABLISHED TECHNIQUES THAT CAN BE EXTREMELY EFFECTIVE IN MAKING YOUR COVERLENS STAND OUT.

Control over manufacturing processes continues to improve, delivering greater accuracy and finer surface finishes, which ultimately enables options such as laser cutting of regular or irregular shapes.

We can cater for bespoke shapes to match the contours of an enclosure design as well as cut-outs in the coverglass for cameras, sensors and mechanical dials and buttons.

If you want to have printing or touch features outside of the display area, oversized coverglass can be created to enable additional functionality.

- Any coverlens shape can be achieved to match your enclosure
- Cut outs for peripheral devices
- Extended touch or printed area with oversized coverglass



Mechanical Design

Anders Coverlens Solutions

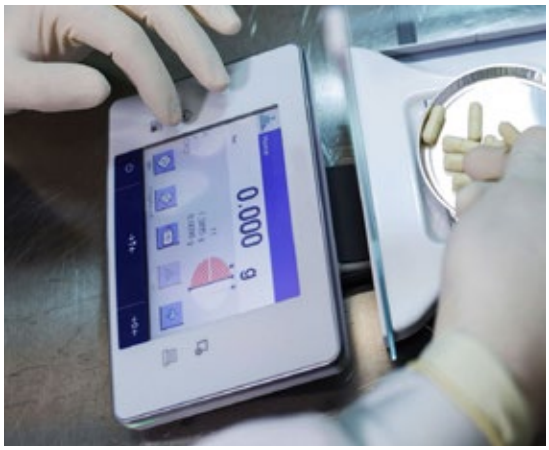

ON/OFF
1:02

Logo and Icon Printing

THINKING CREATIVELY ABOUT YOUR DISPLAY'S COVERLENS CAN BE AN AFFORDABLE WAY TO MAKE YOUR HMI STAND OUT FROM THE REST.

Anything can be printed onto your cover glass, from a company logo to functional icons which can be permanently visible or hidden until lit for that extra wow factor.

- Brand identity with full colour logo printing
- Icons can be visible or hidden-until-lit
- Affordable solution with maximum impact



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Aesthetics

Branding Opportunities

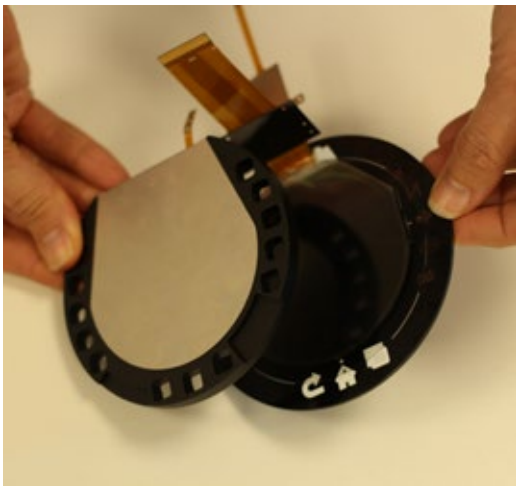

PM
01:00
Info
1 2 3
4 5 6
7 8 9
X 0
KEY

Hidden Til Lit Icons

TO PRODUCE IMAGINATIVE EFFECTS ON THE SURFACE OF THE COVERLENS CONCEALED ICONS CAN BE USED CREATING SECRET OR HIDDEN-UNTIL-LIT FEATURES.

Clear windows of any shape can be lit by different coloured LEDs placed behind the coverlens and only switched on, revealing the icon, when the related feature is activated. For example a battery indicator light can be illuminated when power is low.

- Sleek and stylish appearance
- Uncluttered user interface - only icons in use are shown
- Different coloured LEDs can be used to differentiate features



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anders
Console
10:45AM
route
clean room
random
SETTING
START

Spot Facing and Touch Bumps

A CHEMICAL PROCESS FOR ENGRAVING GLASS TO A SPECIFIC DEPTH WITHOUT PENETRATING THE LOWER FACE.

When applied to a touch panel, it is possible to create engraved areas that correspond to touchable controls such as buttons, dials, or sliders. This enables adding a tactile dimension to the user experience and can also be employed to engrave a logo or brand name in the coverlens without any compromise to the strength of the glass.

Touch bumps are in principle the exact inverse of spot facing, where the active area is indicated by a raised bump.

- Gives a tactile feed to touch controls
- A good touch option for the visually impaired
- Etched logos without compromising the glass

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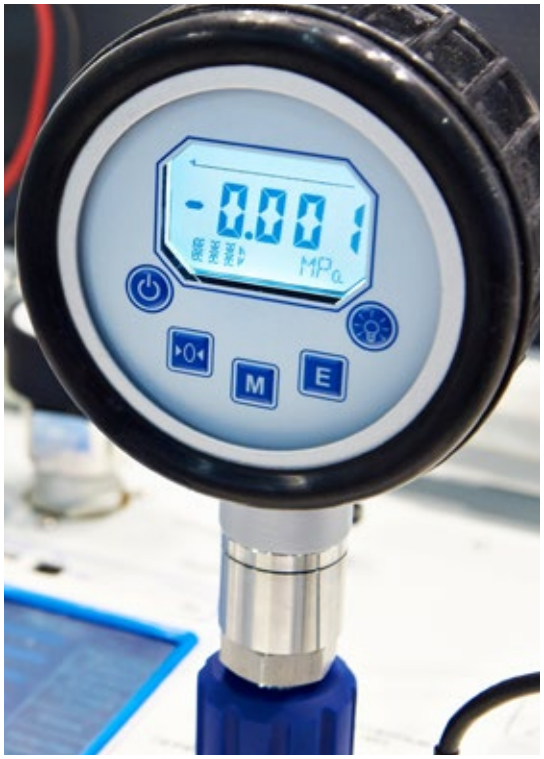
Mon, 12 Mar
Garage door: C
14:12 06
22.5 °C
Burg.Alm.
Windows
Lighting
Garden
1
2 ABC
4 GHI
5 JKL
7 PQRS
8 TUV
9 WXYZ
*
0
#



Glass Alternatives

POLYMETHYLMETHACRYLATE (PMMA) AND POLYCARBONATE (PC) ARE ALTERNATIVES TO CONSIDER WHEN DESIGNING A COVERLENS.

Both these plastic materials have high clarity meaning they compare visually to glass, but have the benefit of being lighter weight and stronger.

This type of cover material is useful in environments where safety is critical such as food processing plants and in hand held devices due to their superior impact resistance and unlike glass cannot be shattered.

However, some plastic materials cannot be used with certain coatings such as anti-scratch or ODLC (Optical Diamond Like Coating).

- Lightweight alternative to glass
- Superior impact resistance with no shattering
- Transparency comparable to glass

Anti-viral Protection

THE INCREASING USE OF TOUCHSCREENS IN OUR EVERYDAY LIVES IS CLEAR TO SEE, BUT HOW CAN WE MAKE SURE THOSE TOUCHSCREENS ARE SAFE FROM THE SPREAD OF BACTERIA. CONTINUOUS SANITISING OF THE DISPLAYS IS ONE OPTION, BUT NOT ALWAYS PRACTICAL OR RELIABLE.

Anders has partnered with world leading brand Kastus® to offer a globally patented antimicrobial & antiviral surface coating which has a proven kill rate of up to 99.99% against harmful bacteria, fungi and antibiotic-resistant superbugs, which makes it particularly useful for products including glass and ceramics. An independent testing report found Kastus® to be effective against human Coronavirus on screens.

Kastus® coating technology can be integrated into new screens and is also available as an aftermarket antimicrobial & antiviral tempered glass screen protector that can be retro-fitted to protect existing displays in the field.

- Available as screen protector of built into glass at manufacture
- No impact on PCAP or touchscreen functionality
- Lasts for the lifetime of the product

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Human Safety


Time Remaining
17 min
Charging
12:36
82%
START
STOP

Tinted Glass

TINTING THE COVERLENS REMAINS AN EFFECTIVE AND ECONOMICAL WAY OF DISGUISING THE VIEWING AREA WHEN THE DISPLAY IS NOT ACTIVATED.

Effectively giving a complete black effect and achieving a very stylish appearance for use in devices from high-end audio to home appliances and smart-home devices.

However a high-brightness display would be needed as the glass transparency is between 35-40% on average. This may not be ideal for power-conscious designs, but we can help customers optimise the backlight power consumption and cost to meet the overall system budget. Alternatively the transparency of the glass can be tweaked at manufacture.

- Display appears completely black when switched off
- Stylish, modern look and feel to any device
- Backlight power consumption can be optimised

Display OFF

Display ON

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Aesthetics


BPM 132
CAL 276
30m
LET'S GO!
Average
Begin
07:45
Average
Duration
00:45
Average
Training Quality
75%

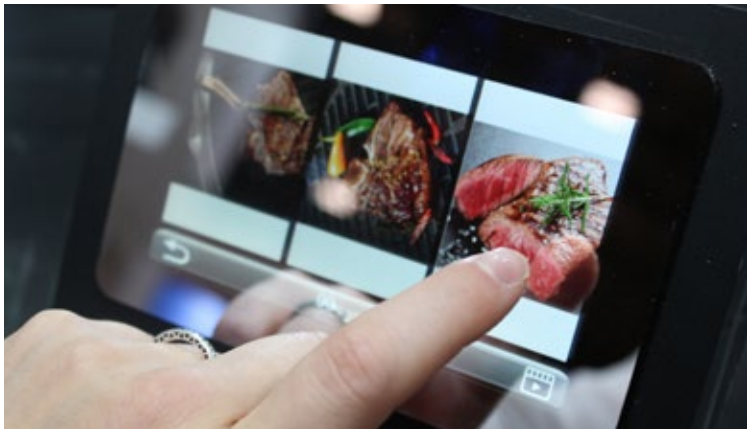
Mirrored Glass

WITH MORE AND MORE SMART DISPLAYS MAKING THEIR WAY INTO OUR HOMES, CONSUMERS ARE SEEING THESE DEVICES AS FEATURES IN THEIR LIVING SPACES.

By using mirrored glass, designers of home appliances, smart meters or control surfaces can provide an elegant display that gives a reflective surface when not in use, but a clear display experience when in operation.

Although this will give a high-end look and feel to the device, it comes at a power budget compromise as the backlight would need to be tuned to ensure optimum clarity.

- Luxury look and feel to user interfaces
- Hidden until operated display
- Ideal for high-end home-appliance control panels



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Aesthetics

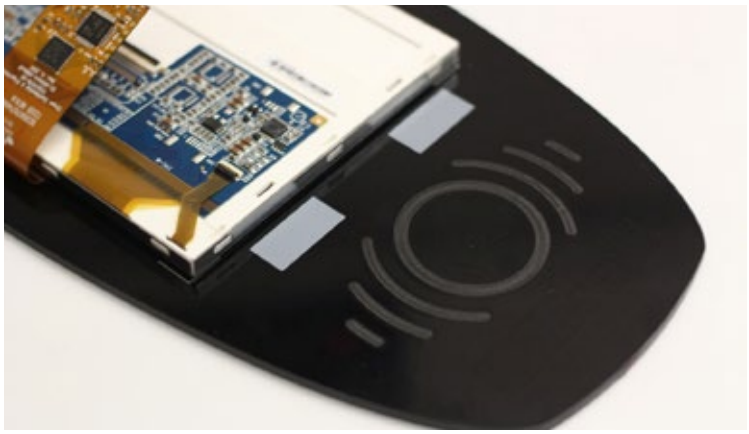
Oversized Coverglass

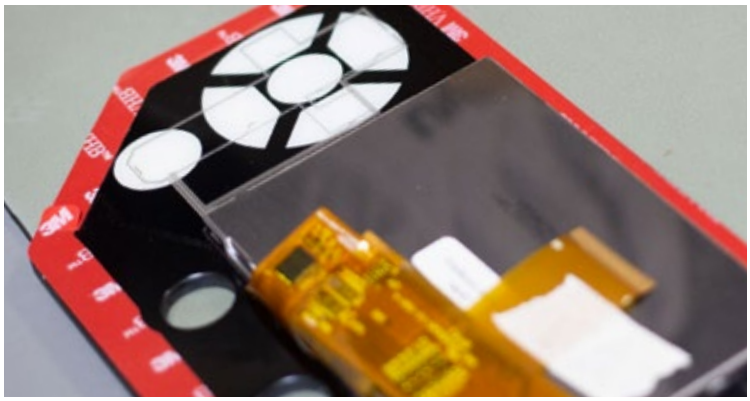
COVERLENS DESIGN DOES NOT HAVE TO BE BOUND BY THE DIMENSIONS OF THE DISPLAY.

Extending the coverlens in any direction beyond the boundaries of the display modules enables different shapes to be created to integrate other aspects of the user interface - such as capacitive-touch electrodes - and create an overall unified appearance.

As well as extending the touch, other features could be added to the extended coverglass such as additional printing and RF sensors for point of sale payments

- Extend the coverglass for additional touch functionality
- Add peripherals such as RF sensors
- Extra space for logos and printing





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Aesthetics

Mechanical Design

Customer Features


10:16 Fri
Room 22.0℃
Cool
Set temp.
21.5℃
Mode
— Temp. +
Fan

Bevelled Edges

BEVELLED EDGE GLASS NOT ONLY LOOKS SLEEK BUT HAS ADDED SAFETY BENEFITS.

The technique of chamfering the glass gives smooth rounded edges, taking the sharp angles off the glass.

Another benefit of this is the glass edge is less prone to chipping if the device is dropped, prolonging the life of the product.

We can achieve a variety of different chamfer finishes as shown below.

- Sleek stylish finish to glass edges
- Smooth edges less likely to chip when dropped
- Different shape finishes available

EXAMPLES OF CHAMFER FINISHES

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72
IN 15 MIN
74

3D Shaped Coverglass

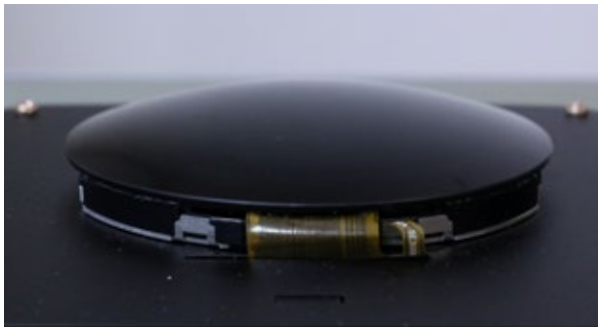
IT IS POSSIBLE TO ACHIEVE THREE-DIMENSIONAL SHAPES SUCH AS A CONVEX CIRCULAR DISPLAY.

This effect can be achieved using glass, polycarbonate or acrylic (PMMA).

The space between the display and coverlens is filled with optical-resin, with the touch being tuned so functionality is possible.

Popular applications include smart home energy controls, marine controls and motorcycle clusters.

- A different dimension to your coverglass
- Touch functionality possible
- Glass or plastic coverlens options



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Aesthetics

The 3one6 Touch, courtesy of Comelit Group S.p.A.

Optical Bonding

AS MORE AND MORE DISPLAYS ARE BEING USED OUTDOORS, OR IN ENVIRONMENTS WITH A HIGH LEVEL OF OVERHEAD LIGHTING, THE CLARITY AND VIEWING ANGLES OF THE DISPLAY ARE PARAMOUNT TO DESIGNERS TO ENSURE OPTIMAL VISUAL EXPERIENCE.

Optical bonding is a process which dramatically reduces the internal reflections produced between the coverlens, sensor and display layers by filling the air gaps in between those layers with optically clear adhesives. This makes a huge difference to screen readability and because the air gap is filled, also prevents condensation or fog on the display. By making the contrast ratio up to four times higher, optical bonding helps reduce power consumption.

When applied in combination with suitable mechanical enclosure, optical bonding can considerably increase the overall impact resistance to help the end-product achieve a desired IK rating. In addition, when combined with toughened or strengthened glass, optical bonding can help increase the vandal resistance of products such as security panels and ATM machines.

- Improved readability in sunlight or brightly lit environments
- Increased durability of the display
- Up to four times higher contrast ratio

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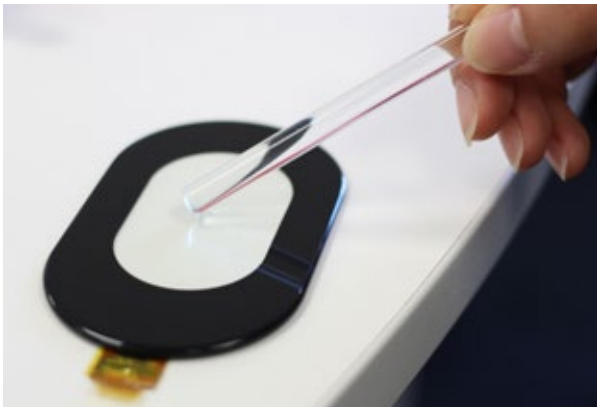
ODLC

ACHIEVING DROP, SCRATCH AND IMPACT RESISTANCE FOR DISPLAY COVER GLASS HAS BECOME MUCH MORE AFFORDABLE WITH PROTECTIVE COATINGS SUCH AS OPTICAL DIAMOND LIKE COATING (oDLC).

ODLC coating is ideal for a variety of portable electronics equipment, consumer and industrial electronics, and costs considerably less than full toughened glass, achieving superior scratch resistance while maintaining outstanding optical clarity.

Ideal for applications where the display is subject to constant use, damage from extreme environments. For example, in a medical application, adding an oDLC coating allowed a touchscreen to achieve the required impact resistance, whilst maintaining compatibility with gloved hands.

- High hardness rating with resistance to wear
- Lightweight and cost saving alternative to strengthened glass
- Impressive optical transparency with a smooth finish



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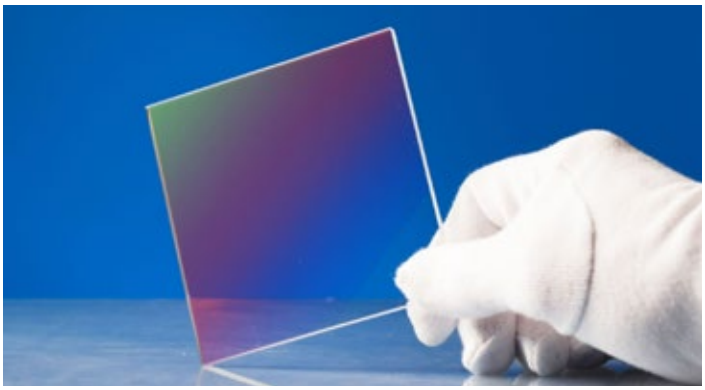
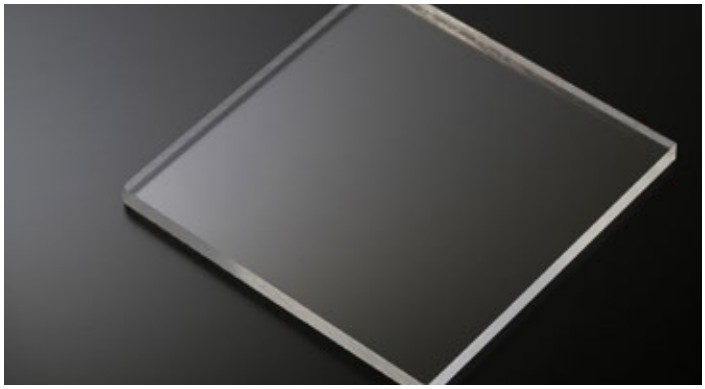
Additional films and Filters

VISUAL EXPERIENCE IS PARAMOUNT AND THAT CAN RANGE FROM READABILITY TO DIRT ON THE SCREEN. THERE ARE A NUMBER OF FILMS AND FILTERS THAT CAN HELP READABILITY.

A lower cost solution than full optical bonding is the use of an Anti-Reflective (AR) film that can be applied to either the top or bottom of the coverglass. This AR film reduces the amount of light reflection created by bright conditions, particularly outdoor applications. Multiple layers of AR film can be applied to reduce the reflection further.



Anti-Glare (AG) is another cost-effective treatment applied to the coverglass to reduce glare caused by bright ambient lighting, such as overhead lights in a building.



Anti-Fingerprint (AF) surface coating has excellent oil and water resistant properties, commonly applied in conjunction with a touchscreen to reduce finger print marks left from display operation, particularly useful in food industries and retail applications.

To discuss how the power of Anders coverlens customisation can enhance your product, please get in touch.

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displaying precision

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#THEPEOPLEBEHINDTHESCREEN