

# Projected Capacitive Technology (PCT™) Touch Sensing and Display Filter Solutions



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## Untouchable Technology

In today's high-tech world, virtually everyone interacts with powerful computing and display products to live, work and relax. A rich visual experience is expected. Zytronic's expertise and internationally award-winning technologies maximise the success of these modern products and services that depend on smooth and easy customer interactions.

Zytronic touch sensors, optical filters and coatings, EMI shielded windows, rugged security glass and glass composites all ensure the ultimate clarity and convenience for end users. At Zytronic, we strive to be the best in our field. We have achieved our position as a global market leader by continuous pursuit of that goal. Our products are included in ATMs, petrol pumps, web phones, gaming machines, next-generation kiosks, point of sale (PoS) terminals, public information terminals and security access control equipment.

### Stay Focused; Reach Globally

Zytronic is an ISO9001 approved company, designing, developing and building our products in-house, at our state-of-the-art facility in Blaydon, Tyne & Wear, England. Retaining responsibility for every aspect of our products safeguards our reputation for high quality and fast turnaround, and ensures rapid and informative support for our customers anywhere in the world. Our global network of agents, representatives and distributors provides full applications assistance and first-line support to our customers.

### Unique Competencies and Capabilities

The skills, capabilities and technologies that secure our position in the market include specialists in lamination processes, materials science and electronic design; concentrating comprehensive and in-depth competencies into one team. We specialise in the manufacture of inert and touch active glass composites for custom applications and we build touch sensors using our patented Projected Capacitive Technology (PCT™).

Our unique PCT sensing provides the basis for our family of touch sensor products, including the high-performance ZYTOUCH® range, ZYPOS® for cost-sensitive applications including point of sale and ZYBRID®, which combines the best aspects of both technologies to deliver optimal flexibility. PCT offers unrivalled capabilities including zero drift and the elimination of surface-active overlays to minimise wear and vulnerability to damage. PCT senses touch, whether or not the user is wearing gloves and the technology can detect a touch through up to 20mm of glass, opening up numerous opportunities to develop new touch sensor applications for deployment outdoors, in public places and in security applications which, when combined with Zytronic's vandal-resistant glass products, offers the solution to harsh environment applications. And PCT can do all this without compromising the brightness or optical clarity of the display; enabling maximum ease-of-use and low overall power consumption.

Zytronic touch sensors and display technologies enhance products and services that require compelling and inviting user interfaces. To help your products and applications stand out in the market, read what our other customers are saying - then contact us to discuss what Zytronic can do for you.



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## Abuzz

Zytronic's ZYBRID touch sensors have been selected by Abuzz Technologies for use in its globally deployed, award-winning interactive way-finding public information terminal, the 'Edge'. Using Zytronic's unique PCT, the Edge provides stylish looks whilst satisfying the high ergonomic and safety requirements of installations which are typically situated in busy public areas such as shopping malls and airports.

"We assessed several possible solutions and Zytronic was the only manufacturer with the technology to allow us to optimise the functionality and aesthetics of the Edge kiosk without compromising the integrity of our design concept. PCT sensing technology works reliably, even through the thick layer of toughened protective glass, providing the performance we need."

### Morgan Drew, CEO of Abuzz



Zytronic's PCT-based ZYBRID touch sensor chosen by Abuzz for award-winning Edge kiosk



## Scheidt and Bachmann

“An innovative fuel dispensing solution from Scheidt & Bachmann is delivering enhanced multimedia services to forecourts using ZYTOUCH touch sensors from Zytronic. The company chose PCT for its toughness and excellent optical performance in conditions including snow, rain, bright sunlight, dust, corrosive and flammable fuels and extremes of summer and winter temperatures. These innovative dispensers use touchscreen technology to help users access the extensive functionality of the dispensers, and navigate the many options and functions quickly while refuelling. The outdoor and unsupervised forecourt position also poses risk of accidental damage, such as scratches caused by users holding car keys, as well as vandalism. Other touch technologies use vulnerable surface coatings or front-mounted components which are easily degraded, ultimately impairing or preventing operation and resulting in costly downtime. PCT is not subject to these problems, can be operated with a gloved or ungloved hand and offers high levels of display clarity. PCT sensing provides an extremely robust solution, since no external sensors or transducers are required”.

**Frank Horak, Product Manager of Scheidt & Bachmann GmbH**



Zytronic's PCT fuels growth for petrol retailers

## APC Technology

APC Technology's 'FT' range of ruggedised panel PCs uses the moisture and dirt-resistant properties of Zytronic's ZYBRID touch sensors to provide high reliability and levels of display clarity, with resistance to a wide range of contaminants in weather conditions ranging from bright sunlight to heavy rain. The touch sensor can easily satisfy the strict requirements of applications in the general industrial, pharmaceutical and food processing industries. This flexibility in turn allows the FT range to be used in a wide range of demanding environments, including production and assembly lines, hose-down areas, food production and livestock management areas.

“We chose Zytronic for a combination of outstanding product features...and by using PCT-based screens, we can ensure that our FT products satisfy our customers' requirements of working well when they are wet or dirty.”

**Scott Begbie, Engineering Manager of APC Technology**



Zytronic's PCT is key in enabling APC Technology's FT touch panel PCs to operate in the most extreme of environments



## Sound Leisure

Digital jukebox specialist Sound Leisure has selected Zytronic's ZYBRID PCT to deliver interactive Bingo and a host of other touchscreen based services in its flagship 'Milestones in Music' jukebox system. A combination of new software and the ZYBRID touch sensor technology has allowed Sound Leisure to augment the jukebox functionality by adding an interactive Bingo capability to the system. The whole process is controlled through a clear and bright touchscreen interface.

PCT offers high resistance to chemicals, is easy to wipe clean and is ideally suited for high profile locations which demand ultra durable touchscreen solutions such as bars, clubs, cruise liners and public houses. The technology is extremely reliable and is not prone to drift, which eliminates the need for any recalibration, thereby significantly reducing maintenance costs.

"We have been manufacturing jukeboxes for over 30 years and are known for our innovation and quality. Reliability and durability are key criteria. We chose ZYBRID for its excellent product features. As most of our units are situated in public areas, drink spills, for example, are a common occurrence. This will have a negative effect on some types of touchscreens, but with ZYBRID, we simply wipe the units clean and they keep on working. It is an extremely cost-effective solution."

**Chris Black, Managing Director of Sound Leisure**



It's open 'House' for Bingo, thanks to Zytronic's touch technology. World leading Jukebox company, Sound Leisure, adds touch sensor operated Bingo to its flagship product

## Mobile Knowledge

Mobile Knowledge, a company which specialises in dispatch technologies for the global 'For Hire' industry, has selected Zytronic's PCT-based ZYPOS touch sensors as the primary input interface for its ruggedised in-taxi, Passenger Information Monitor. The Passenger Information Monitor is purpose-built and offers users everything from real-time GPS navigation and infotainment, to the ability to process credit or debit card transactions. The services provided by the touch operated unit are required reliably in all weathers, at any time of the day and night and in addition must withstand regular cleaning.

"A touch sensor technology that offers easy integration, reliability, durability and resistance to contaminants and harsh chemicals ranging from coffee to cleaning fluids was seen as critical to the success of the Passenger Information Monitor, which is why we selected ZYPOS. Passengers must be able to read the display in very bright sunlight, for example, and so optical clarity was also an important consideration. In addition to this, taxis need to be out in extreme weather conditions, so we needed a touchscreen that could be operated with a gloved hand. ZYPOS was able to meet all of these design criteria."

**Travis Gray, Product Line Manager of Mobile Knowledge**



Mobile Knowledge selects Zytronic's ZYPOS touch sensor technology for ruggedised, single terminal design-in ZYPOS based terminals to be sold to taxi companies



## Aeroflex

The Aeroflex 6413A Base Station Test System features PCT to deliver enhanced ease of use and durability, while eliminating hardware and low level drivers required by conventional switches or keypads.

Portability and reliability are increased and thanks to the ZYTOUCH sensor, the controls can be dramatically reassigned to optimally support multiple operational modes, and reconfigured to accommodate evolving 3G standards. Different product variants can easily be created.

“The use of the touchscreen made for a fast and easy development, and has also enhanced the product.”

**Bob Miller, Senior Project Manager of Aeroflex**



Aeroflex chooses ZYTOUCH product for its touch sensor 3G network testers

## Esprit Digital

Zytronic's vandal-resistant, anti-glare, laminated glass display panels are enhancing the security and clarity of London Underground's next-generation digital LCD advertising poster networks.

These innovative E5C panels, created by Esprit Digital, feature a built-in media player that synchronises with a remote media management centre via the Internet, and other networked posters to support dynamic and novel campaigns that can be updated every two weeks.

“Zytronic's glass display panels offer reliability, optical clarity and resistance to the harsh environment of the underground system.”

**Peter Livesey, Managing Director, Esprit Digital**



Zytronic's vandal-resistant glass is the clear winner for London Underground's first digital poster network



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## Optical Filters for Display

Zytronic offers numerous optical control filter technology solutions to enhance and protect LCD display performance, including reduced screen reflections, greater contrast ratios and improved readability in direct sunlight. Cost-effective bonding of the filter to the LCD creates a solution that meets the most stringent of optical and environmental specifications, including those demanded by automotive manufacturers.

The safety of motorists is always a primary concern, therefore this technology is ideal for in-car satellite navigation and integrated vehicle entertainment systems where elimination of distracting reflections is an essential design criteria.



Anti-glare display filter technology combines control of unwanted reflected image with enhanced contrast levels

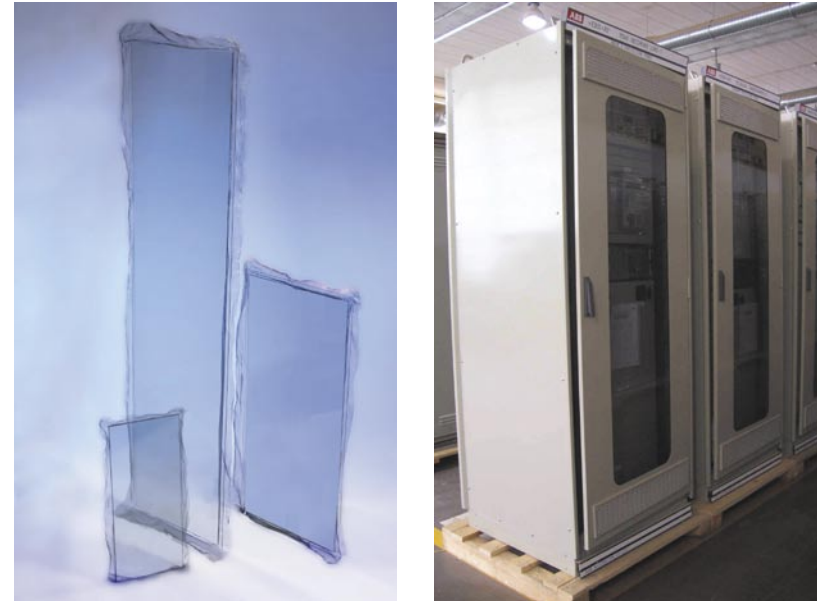
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## EMI and RFI Glass Filter Products

A shielded window is the optimum solution for reducing RFI and other electrical interference transmitted through monitors, LCD instrument panels and inspection windows fitted to electronic equipment. Zytronic's unique attention to detail achieves high attenuation, with minimum impact on optical performance.

Zytronic's state-of-the-art facilities can produce one-piece shielding meshes for windows up to 2m x 1m, as well as small windows for cost-sensitive TFT-LCD applications.

Shielded window services from Zytronic create a total solution, covering design, assembly, framing and termination.



Zytronic's range of RFI windows includes shielded glass doors for telecom racks in sizes ranging up to 2m x 1m





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