

## Taptile™ Waterproof projected capacitive technology

Taptile is the first capacitive touch technology that is truly at home in water. Developed & patented by GPEG and deployed widely in consumer bathroom and kitchen products, taptile is a uniquely flexible solution for wide variety of applications.

- > Shower and wet room controls with no false activation
- > Superior performance in kitchen appliances (cookers & hobs)
- > Safe & Hygienic wipe down without fear of 'false' operation
- > Immune to soap, oil and dirt
- > Auto adapting to dynamic and background changes



Water proof touch controls

GPEG delivers taptile to OEM's in volume as bespoke modules, ready for integration into the customers' mechanical housing. The taptile module can include switches, dials, sliders, displays and LED indicators plus software to interface to the client's hardware. Alternatively, GPEG can oversee the whole product development cycle including mechanical and environmental elements to ensure a fast and smooth transition from design to production.



OEM and consumer

In parallel to GPEG's OEM business, our sister company - Taptile Controls - is deploying this unique technology in the home improvement market as the core product for its novel bathroom mood lighting solutions.

[www.taptilecontrols.com](http://www.taptilecontrols.com)



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# About GPEG International

Headquartered in London, with offices in Italy, Germany and Taiwan, our manufacturing facilities are based in China and South Korea.

Our aim is to create and deliver products that are brighter, clearer and easier to use.

With clients in gaming, consumer and signage our products can be seen at locations including Heathrow Express trains, taxis, electric bicycles and betting shop terminals.

With a group turnover in excess of \$40M, GPEG is recognised as the fastest-growing hardware business in the UK (Source: Sunday Times TechTrack 100 league table).



London



China



Korea



## What makes us different?

We manufacture in-house, ensuring quality, continuity of supply and giving you major advantages in terms of cost. Our customers see us as an extension to their own engineering teams.



We can deploy engineering talent in hardware, firmware, software and mechanical design wherever you are situated, shortening the design cycle and ultimately delivering a more compelling product.

## What do we deliver?

At heart we are a business combining a unique blend of skills and a broad range of electronic solutions. What this means for our customers is that we can deliver novel and advanced products in volume; quickly, safely & cost effectively.

## Areas of expertise

### Displays

- > High reliability monitors
- > TN, STN and TFT glass
- > Passive and active OLED
- > Chip on glass (COG), tape automated bonding (TAB/COF) and chip on board (COB) Module technology



Low cost LCD

Additionally the latest technology information is drawn from the global market and integrated in our design and production facilities in Asia

### Touch and Keyswitch Technology

- > Patented waterproof capacitive technology – taptile™
- > Broad choice of projected and surface capacitive, surface acoustic wave, optical and resistive technologies for large size systems
- > Molded and printed keyboard solutions seamlessly combined with display systems both mechanically and electronically



Multi-touch

### Electronic Firmware and Hardware Engineering

- > Electronic development of 8 and 16bit microcontroller solutions (USB, serial, touch decoders, etc)
- > Low level programming in C, C++ and C#
- > High level programming in VisualBasic, Java and HTML
- > In-depth RF and DSP experience
- > CE, E-mark, UL and other test & approvals advice, guidance and project management



Innovative designs

### Industrial and 3D Mechanical Design

- > 3D CAD development in Solid-works and AutoCAD
- > In-house keyboard and light-guide development in UK
- > Fast turnaround prototyping and injection mold tooling
- > ABS, PC, molded cable looms and vacuum formed housings
- > Fast design and development of metal chassis and casing for large size monitors



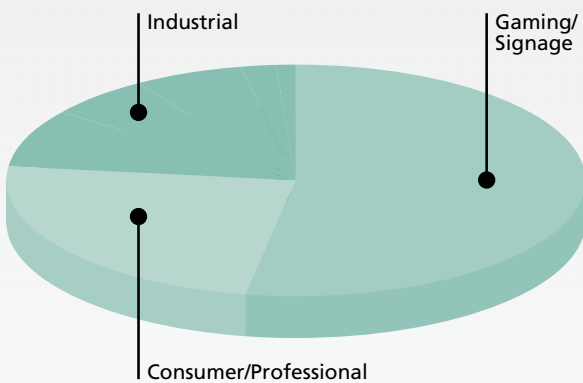
High and low volume housings

**GPEG International Ltd is the UK's no.1 display developer**

# Our Markets

GPEG is active across a broad range of markets that include the following: Gaming and Digital Signage; Consumer and Professional; Instrumentation and Industrial. Although each area has its own specific requirements GPEG's experience and knowledge ensures that we deliver highly competitive solutions to all customers.

## Product sales by industry



On-train signage



## Gaming and Digital Signage

GPEG offers significant advantages to the gaming market through our vertically integrated design cycle and supply chain management. This results in us offering one of the fastest design, development, test, approval and manufacturing response times in the business. It means that we can deliver state-of-the-art solutions for open frame TFT monitors, touch monitors and systems which have long lifetimes and class leading reliability.



### Fast response design and delivery

We design products locally to you, utilising our own intellectual property in our video processing cards and our patented m2talk™ monitor diagnostic system. By manufacturing in-house at our facility in Seoul, South Korea, we can directly control the quality and reliability of these high revenue critical display systems. Examples of our products can be seen on the Heathrow Express train service, most high street bookmakers and London's black cab fleet.



## Consumer and Professional Market

Success in the consumer market demands delivering superb product design and functionality – just ask Apple. Our design teams work in tandem with you to deliver first class digital display screens, whatever your budget.

We design and manufacture products in-house at our 8,000 sq m facility in Dong Guan, China. Our 'new product introduction team' supervises all processes, ensuring a safe and swift production ramp-up. Combined with our own key switches and traditional touch technologies we deliver products that put you ahead of your competition, without the need for significant intervention from your own engineering resources.



Award winning designs

*Our products can be seen in household named handheld products, bathroom TVs, electric bikes and automotive after-market devices.*



Technical challenges solved

## Instrumentation, Medical and Industrial Market

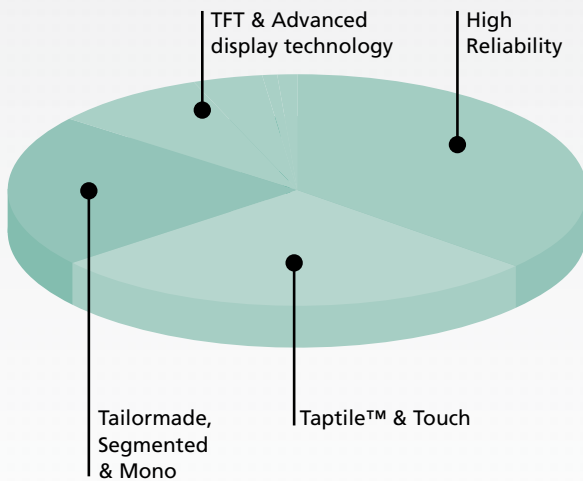
GPEG develops dozens of custom designs each year for these demanding markets. This ensures our customers get precisely what they need to meet their own highly diverse requirements. By using our unique blend of software, firmware, hardware and manufacturing knowledge we guide our customers to the best 'off-the-shelf' or 'custom design' that will meet their needs now and into the future. Produced in-house or sourced from our wide network of long-term product partners, we are able to safely manufacture designs that will add value to your product.

*You can find our solutions in industrial process control, hospital diagnostic equipment, patient systems and energy metering throughout Europe and beyond.*

# Our Products

GPEG creates, designs, manufactures and supplies bespoke display product solutions. We achieve this through our unique combination of added value and novel design concepts which have been accepted by major OEM's across the globe. This results in providing our customers with a huge competitive advantage and significant product differentiation.

## Product split



In-house project teams



## Open Frame & Touch Monitors

GPEG is one of the largest TFT integrators in the UK, delivering more than 10,000 units per year across the markets that we serve. Both project and product driven, our design teams work constantly to deploy the latest display and mechanical technologies in both small and large volume projects.



### High reliability monitors

- > In-house video card design and development
- > In-house 2D/3D CAD housing design, vandal proof, waterproof and easy to mount
- > Globally sourced TFT panels from 1" to 102"
- > GPEG's Patented m2talk™ monitor diagnostic system for maximum in service reliability
- > Volume production experience with all touch technologies: SAW, Capacitive, resistive and optical
- > Dual-touch and multi-touch systems
- > Haptic feedback design solutions in any size

*Example customer solutions are: touch kiosks, betting terminals and outdoor digital advertising.*



### Tailormade, Segmented and Monochrome LCD Systems

When it comes to delivering high functionality on a tight budget, GPEG's custom solutions are the answer. Using low cost microcontrollers, LCD panels and keyswitch technology we create user interfaces that are brighter, clearer and easier to use. Example product improvements when using this approach are: an increase in the usable size of the product, adding colour or input buttons for no increase in cost.



#### Low cost turn key solutions

Designed and specified locally, we then supervise the manufacturing process in our Chinese factory thus delivering the benefits of Western design with the cost effectiveness of Asian mass production.

*Example customer solutions are: Bluetooth adaptors, electric bicycle computers, remote controls and industrial metering.*

### TFT, OLED, eINK and advanced display technology

GPEG, as a major display integrator, works with many of the largest display panel manufacturers in the world, directly from our facilities in South Korea and China. These relationships enable us to access a huge choice of technologies, which can be tailored to meet your every need. However if a specific product request can't be met from our standard portfolio, our ability to design a semi or fully customised display technology solution is available to you.



#### Bright and colourful

- > Active Matrix TFT from 1" to 102"
- > Built-in controllers and drivers
- > Monochrome and Colour OLED
- > Active matrix OLED
- > Projected Capacitive (PCT) and resistive overlays
- > eINK and Electrochromic bi-stable technology expertise

*Example customer solutions: audio desks, digital information displays, handheld instruments and in-car accessories.*