



World Leader in Capacitive Proximity Sensing



Azoteq sensor technology drives the latest Sharp feature phone

Sharp's new feature phone includes a trackpad under the keypad

In February 2015, Sharp Japan launched their latest feature phone for the Japanese market. The feature phone is an important product in the mobile phone arena for Japan and South Korea. The feature phone, with a high level of specifications on hardware, remains popular today.

The Sharp Aquos K SHF31 features a full sized touchpad under the numeric keypad area. The touchpad greatly extends the flexibility of the feature phone. The Aquos K SHF31 offers a navigation interface in the same area covered by the traditional numeric keypad.

The touchpad offers full navigation of the screen without the tedious use of discreet up, down, left, or right keys. The user interface can also support acceleration to allow for:

- Large travel distance with fast finger swipes
- High accuracy with slower movements

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Azoteq enables next generation user interfaces for users to interact naturally with products through capacitive proximity and touch

Kobus Marneweck

VP of Marketing for USA

Kobus Marneweck joined Azoteq from Texas Instruments where he was the Software Director for Low Power RF products responsible for ZigBee, RF4CE and Bluetooth Low Energy development. Mr. Marneweck was the Vice Chairman of the ZigBee board and represented TI in the ZigBee Alliance.

Prior to TI Mr. Marneweck was the Product and Strategic Marketing Manager for 8 and 16-bit PICmicro microcontroller products at Microchip Technology. He was one of the original developers of the Keeloq technology at Nanoteq that was later sold to Microchip Technology.

Mr. Marneweck holds Bachelors and Honors degrees from the University of Pretoria and an MBA in High Technology from Arizona State University



Kobus Marneweck

For more information, email info@azoteq.com.



Sales contact information can be found [here!](#)

Azoteq Sales Offices

Azoteq has distribution and sales representatives around the globe. But there are three main sales offices that can help assist designers with their capacitive sensing needs. Sales offices and contacts are as follows:

- North America
 - Kobus Marneweck – VP Marketing
- International
 - Jean Viljoen – VP Marketing: Europe & Asia
- Hong Kong
 - Eric Tsang

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With Azoteq's technology, users can use multiple fingers to manipulate content on a graphical user interface. Azoteq's technology can also allow for implementing gesture based frequently used functions. This would be similar to the user input provided by a notebook touchpad.

"Azoteq is proud to be providing the distinctive touch interface for this product", said Jean Viljoen, Azoteq's VP of Marketing for Europe and Asia. "Along with innovation, our Japanese customers demand only the highest level of quality and performance. This underlines Azoteq's key values and the Sharp Aquos K is the perfect vehicle to show a novel approach to enhance the product and user experience"



The touch interface is based on Azoteq's flagship IQS550 sensor IC. Not only does the IQS550 provide touchpad functionality, but it also performs key scanning that uses a patented method developed by Azoteq. Where traditional tactile buttons are detected with an electro-mechanical method, Sharp uses a purely capacitive method, combining the sensing of XY touches and key presses with a single capacitive controller.

The touchpad design differs greatly from the familiar notebook touchpad in the sense that it's combined with several sources of interference. The touchpad coexists in close proximity to the rest of the analog and RF circuitry of the mobile phone. Traditional touchpad overlay material uses a flat and uniform surface, whereas the IQS device can cope with the non-uniform keypad. Conductive elements in the keypad effectively form "shadow" areas over the touchpad, thus impacting on linearity. Also, the touchpad has to make provisions for backlighting, further impacting on the uniformity of the touch pad.

The touchpad required careful simulations and was optimized with routing techniques to provide the highest possible SNR and uniformity under these conditions. Azoteq's team's experience was crucial to providing performance under these severe conditions to the same level of that of a conventional touchpad. Users are accustomed to conventional touchpads and demanded the same performance.

To meet power consumption requirements and allow for specific user cases, customized firmware was developed. The custom firmware further optimized the performance of the touchpad.

The perfect execution of this product was made possible by the extremely high SNR and sensitivity offered by Azoteq's family of sensors. Excellent hardware combined with the engineering team's experience and close collaboration with the customer, yields this novel enhancement to the Sharp Aquos K SHF31.

For more information please email info@azoteq.com

Squarp Instruments announces the release of Pyramid, a standalone sequencer with extensive possibilities

Pyramid uses the IQS550 for their Touch Trackpad

Squarp Instruments is a young company, consisting of an innovative team of engineers and based in Paris. Squarp Instruments' first product, Pyramid is a standalone sequencer with extensive possibilities.

About Pyramid

Pyramid is a standalone sequencer which allows you to record polyphonic sequences whether by playing them live, with the integrated keyboard or with an external controller, or by using the improved step-by-step/Euclidean sequencer. It offers several real-time midi effects, a mode to manage tracks and a sequence chaining tool.

Its complete workflow, based on four modes, has been conceived for both stage and studio use. Pyramid can handle midi, CV/Gate and USB, for a full connectivity. It's possible to customize the whole interface, therefore the user can assign the touchpad, the accelerometer, or any encoder to a wide range of internal controls.

Finally, Pyramid allows the creation of polyrhythmic and polymetric sequences, almost without restrictions, permitting wild experimentation.

The full technical and functional description is available at www.squarp.net

Sales information

Squarp Instruments' website is now online. You can find all the information about the machine and a pre-order page. 100 machines are available now, for a price of 699 euros (799 \$, 524 £) VAT included. Sales are restricted to Europe but we should open to USA in the course of the year.

Feel free to contact Squarp Instruments for any extra information or to simply share views to tom@squarp.net

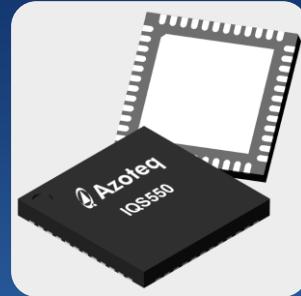


Pyramid is based on 16 tracks and has 4 modes. These modes are Live Mode, Step Mode, Track Mode, and Seq Mode.

Azoteq's IQS5XX Trackpad/Touchscreen Controller family

The IQS5xx-A000 is a projected capacitive touch and proximity trackpad/touchscreen controller implementation on the IQS550, IQS572, and IQS525 platforms. The IQS5xx-A000 features best in class sensitivity, signal-to-noise ratio and automatic tuning of electrodes. Low power proximity detection allows extreme low power operation.

Full Datasheet can be found [here!](#)



The IQS550 is Azoteq's flagship IC for touchpads and touchscreens.

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