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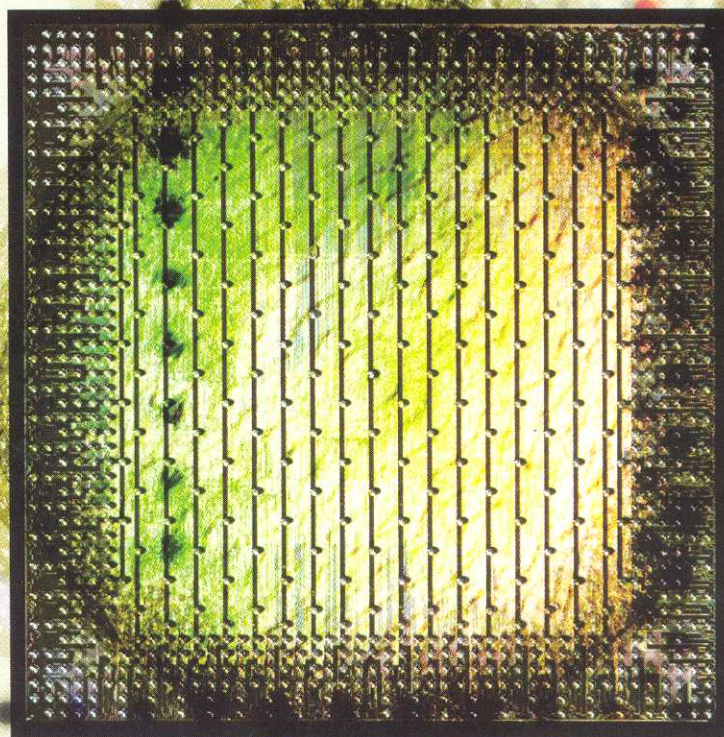
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ASIC evolution



ASIC technology is morphing as demand for custom chips remains solid despite rising mask costs and slow growth in many end markets. >>> 25

INTEGRATED CIRCUITS, DISCRETES, IP&E DEVICES, POWER SOURCES

Touch display rolls three into one

Supplier says part combines features of resistive, capacitive, SAW panels

BY SPENCER CHIN

Touch International Inc. said it has introduced a touch panel that combines features of resistive, capacitive, and surface-acoustic-wave panels.

The touch display, called Digital Ink, uses technology the Austin, Texas, start-up said possesses the durability of capacitive panels and the ability to be activated by a pen or gloved input, like a resistive panel. The panel can incorporate plastic as well as glass, can be made to conform to nonflat surfaces, and provides higher resolution than other touch displays, according to the company.

"We need something to address the shortcomings of other touch display technologies," said chief technology officer Gary Barrett. Touch International is aiming initial versions of the display at cellular phones and PDAs and hopes to compete against industry-leading suppliers 3M TouchSystems and

EloTouch Systems.

Because patents are being applied for, Barrett said he cannot disclose certain details. He did say that the display incorporates a thin capacitance array overlaying touch sensors, and the design doesn't expose the touch surface to direct contact with the touch input, minimizing wear and eliminating accidental finger or palm input.

Barrett said the panel's resolution—1,000 points per sq. in.—exceeds that of capacitive, resistive, or surface-acoustic-wave panels. "You can do pen or finger sensing because of the higher resolution," he said.

Barrett also said the panel's thin design allows up to 95% light transmission, which he said was higher than the 78% to 84% for a resistive panel. The

touch sensors can be made in thicknesses of 0.36 to 50.8mm, and be made of plastic to allow it to conform to curved or irregular surfaces.

While declining to state the selling price, Barrett said the display would be cost-competitive with other panels as the company employs a fab-less manufacturing strategy. Most of the displays will be built through Touch's strategic partner in Taiwan, eTurboTouch, though the company will build some of them in its custom manufacturing facility in Austin.

Barrett said Touch will build the display in 3.8, 5.7, and 6.4in. diagonal sizes, expanding to 15in. by year's end as it seeks design-ins for point-of-sale terminals, kiosks, tablet PCs, and industrial and process control systems. <>



Gary Barrett, Touch Int'l

Electronic energy meters get single-chip controller from TI

BY CRISTA SOUZA
SILICON VALLEY

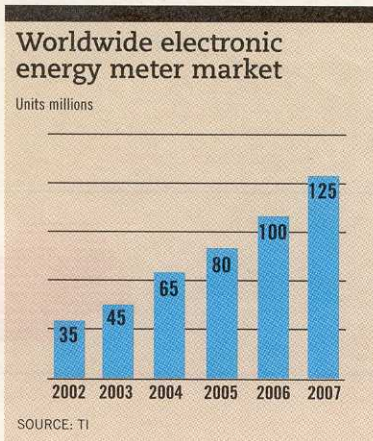
Texas Instruments Inc. last week unveiled what it claims is the first single-chip mixed-signal controller designed for electronic energy meters.

The MSP430FE42X family targets an accelerating shift by energy meter makers away from mechanical systems to electronic designs, which allow remote monitoring and require fewer components.

TI's new chips are part of a series of 16-bit application-specific MCUs the Dallas-based company plans to introduce this year. Additional products will be geared for use in glucose and water meters, among other devices, for which ultralow power consumption and sensing accuracy are critical.

TI said the chip family reduces the bill of materials for energy meters by

incorporating five of the main system components in a single IC, comprising a high-performance analog front end, a 16-bit microcontroller, flash memory, real-time clock, and LCD driver.



The MCU block contains an embedded signal processor (ESP) to handle

metrology calculations, and a second RISC processor that can be used for remote management functions—such as automated meter reading, smartcard prepayment, and multiple-rate billing—via an RF, Bluetooth, or powerline interface.

Remote management is driving growth in the deployment of electronic energy meters, primarily in Asia, where utility companies are scrambling to keep up with rapid housing development, according to May Ann Choo, marketing manager for e-meter products at TI.

It is catching on to a lesser extent in the United States, and TI is engaged with one major U.S. meter maker, Choo said.

This year, TI estimates that roughly 45 million electronic energy meters will ship worldwide out of a total of 100 million units overall. While some new deployments contain a mixture of electronic and mechanical components, by 2010 all energy meters manufactured will be electronic, Choo said.

To offload metrology calculations from the main CPU, TI has em- >>> 18

AU BUILDING PLANT FOR LCD TV PANELS
AU Optronics Corp. has announced it is constructing a plant in Science Park in central Taiwan to produce 30in. and larger panels for flat-panel displays. The plant will employ 1,000 workers and open the second quarter of 2005, according to the company. The cost of construction is expected to be \$2.6 billion.

KODAK LICENSES OPTOELECTRONICS TO CHINESE COMPANIES
Eastman Kodak Co., a New York-based company, has extended a manufacturing license to Trulight Holdings Ltd., a Hong Kong-based LCD and optoelectronics supplier, to produce Kodak's passive-matrix light-emitting-diode technology for flat-panel displays. The agreement also allows the company to purchase materials from Kodak. Under the agreement, one of the company's Hong Kong-based licensees.

AUTHENTEC TAPS PLEXUS FOR ENGINEERING SERVICES
AuthenTec Inc., a Melbourn, Mass.-based company, has named Plexus Corp. a qualified design center for its print sensor ICs and a part of its global Solution Provider network. Plexus, a Neenah, Wis.-based EMS company, will provide engineering, design, and integration services for OEMs looking for biometric user authentication capability to their products.

SIRF APPOINTS CANNING TO PRESIDENT/CEO
GPS chip supplier SIRF Technology Inc., San Jose, Calif., has named Michael Canning president and chief executive. Canning took the post vacated late last year by Jackson Hu, who is now president of United Microelectronics Corp.