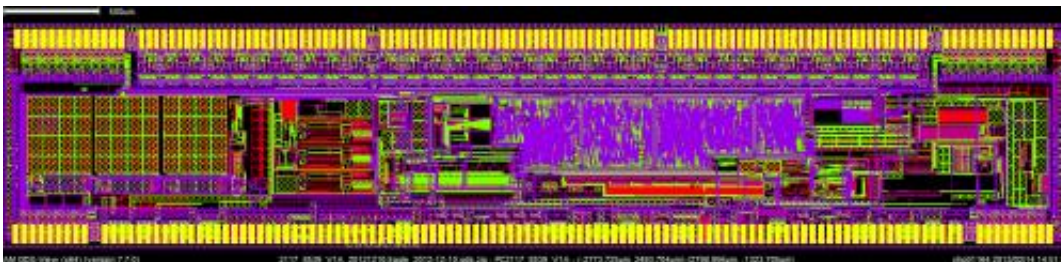


Chip-on-glass LCD drivers for high-resolution, vertical alignment displays

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NXP Semiconductors today announced the production ramp-up of two new chip-on-glass (COG) LCD drivers – the PCA8539 and the PCA2117 – specifically designed for driving vertical alignment (VA) displays. The COG LCD drivers provide high contrast, true black background, a wide viewing angle, and excellent image quality, even at extreme temperatures.

VA displays offer many advantages, but typically require a higher LCD supply voltage and higher frame frequency compared to conventional twisted nematic (TN) displays. The PCA8539 and PCA2117 allow an LCD voltage up to 16V with accurate software-programmable temperature compensation for high and stable contrast over an extended temperature range of -40°C to 105°C . The new COG drivers also offer an on-chip oscillator with calibrated and programmable frame frequency in the range of 45 Hz to 360 Hz. The drivers can be used for

conventional twisted nematic displays with any backlight colour.

The PCA8539 is a single-chip LCD driver that generates drive signals for any static or multiplexed LCD with up to 18 backplanes, 100 segments, and graphics of up to 1800 display elements. Ideally suited for driving VA displays in harsh environments, the PCA8539 is also AEC-Q100 compliant for automotive applications such as climate control units, instrument clusters, and car infotainment systems. The PCA8539 is also optimised to drive big displays size up to 7" and simplified Chinese and Japanese characters. Samples and demo boards are available immediately.

The PCA2117 is a single-chip LCD character driver that can drive up to 2 lines by 20 characters plus an additional 200 icons. The initial release includes the character set "R" (PCA2117DUGR) and "S" (PCA2117DUGS). Other character sets are also available on request. In addition, the PCA2117 has an integrated character generator RAM that can store up to 48 user-defined characters. The PCA2117 is AEC-Q100 grade 2 complaint with an operating temperature range from -40 to 105°C. Samples and demo boards are available immediately.

"Vertical alignment displays are now growing in popularity – not only in automotive LCD applications, but also in home appliances, medical devices and many other consumer and industrial applications where reliable, high-contrast passive LCD displays are required," said Grahame Cooney, General Manager, NXP Semiconductors. "By designing chip-on-glass LCD segment drivers specifically with VA displays in mind, we have been able to address the requirements of major display module manufacturers and automotive Tier 1 suppliers while also making it easier for non-automotive OEMs to incorporate VA displays into their designs."

"As the pioneers of chip-on-glass LCD technology, we have worked

closely with leading manufacturers for over 25 years to lower costs, simplify PCB layouts, and improve the upgradeability, flexibility and reliability of their LCD displays using COG designs. Bringing accurate, reliable solutions for VA displays to market has been a natural next step, which also builds on our proven track record of delivering over 100 million interface product units to the automotive industry," continued Cooney.

Provided by NXP

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