



Synaptics Launches SmartBridge™ (SB7900) Local Dimming IC to Enable Larger, Higher-Contrast, Higher-Resolution Automotive Touch Displays

January 3, 2023

AEC-Q100 Grade 2-qualified IC simultaneously drives backlight LED array and multiple Synaptics TDDI LCD touch/display drivers for high-performance, cost-effective displays

LAS VEGAS, Jan. 03, 2023 (GLOBE NEWSWIRE) -- Synaptics® Incorporated (Nasdaq: [SYNA](#)) today announced the SmartBridge SB7900 local dimming IC to enable larger, higher-contrast, higher-resolution automotive LCDs while lowering overall power and cost. The AEC-Q100 Grade 2-qualified solution works with Synaptics' portfolio of touch and display driver integrated (TDDI) ICs to provide OEMs with a proven, cost-effective, efficient, automotive-grade solution. By combining the ability to drive multiple TDDI controllers with best-in-class local dimming of the backlight array, the SB7900 SmartBridge provides superior image quality, greater system implementation flexibility, and reduced device footprint, power consumption, and complexity for displays up to 30 inches and resolutions up to 6K.

CES 2023: To experience SmartBridge, visit us in the Venetian Hotel, Level 2 Exhibitor, Bellini Ballroom, #2105. Email press@synaptics.com for an appointment.

"SmartBridge local dimming complements our proven TDDI interface innovation with advanced video processing and local dimming backlighting technology so that automobile manufacturers are assured of reliability and performance as they develop next-generation display experiences," said John Brady, Sr. Director of Product Marketing at Synaptics. "As a leading provider of automotive TDDI technology, we understand how to support their user requirements across an increasingly diverse range of display form factors and at higher luminance over the lifetime of a vehicle."

High contrast is critical for display readability. To accomplish this, the SB7900 supports full-array local dimming, which allows independent control of each zone of an LCD's LED backlight array. By analyzing incoming images, the SB7900 is able to precisely control the brightness of each LED in the array, enabling contrast ratios of up to 10000:1 while reducing halo—light fringing at the border of bright and dark areas of the image—which affects clarity. The result is an easy-to-read display with improved visibility and higher image quality across a variety of lighting conditions, even for large zone sizes. The SB7900 also adjusts image parameters in sync with the LED backlight calculations for the best possible image visibility and outputs the final image to the Synaptics TDDI display driver ICs. By delivering performance for large zones, the SB7900 reduces the overall system BOM cost by optimizing the cost of the LED backlight array.

Additional SB7900 features include:

- Standard compliance/support: VESA embedded DisplayPort (eDP) v1.4b
- Multi-data-rate support in main link: 1.62 Gbps, 2.7 Gbps, 5.4 Gbps, and 8.1 Gbps
- Supports 1/2/4 lanes of eDP main link
- High-speed bi-directional auxiliary channel (AUX CH): 1 MHz
- Supports resolutions up to 5760RGB x 1920; 8/10 bit per color pixel input
- Programmable pixel data remapping, and internal built-in pattern
- Digital GAMMA for RGB separate gamma correction function
- Color enhancement (CE) with color space management
- Sunlight readability enhancement (SRE) function

Availability

Synaptics is currently sampling the SB7900 to select customers.

For more information, contact your [local Synaptics sales representative](#).

To schedule an appointment at CES, email press@synaptics.com.

About Synaptics Incorporated

Synaptics (Nasdaq: [SYNA](#)) is changing how humans engage with connected devices and data, engineering exceptional experiences throughout the home, at work, in the car, and on the go. Synaptics is the partner of choice for the world's most innovative intelligent system providers who are integrating multiple experiential technologies into platforms that make our digital lives more productive, insightful, secure, and enjoyable. These customers combine Synaptics' differentiated technologies in touch, display, and biometrics with a new generation of advanced connectivity and AI-enhanced video, vision, audio, speech, and security processing. Follow Synaptics on [LinkedIn](#), [Twitter](#), and [Facebook](#), or visit www.synaptics.com.

Synaptics and the Synaptics logo are trademarks of Synaptics in the United States and/or other countries. All other marks are the property of their respective owners.

Media Contact

Synaptics Incorporated

Patrick Mannion

Director of External PR and Technical Communications

+1 631-678-1015

patrick.mannion@synaptics.com

