



PRESS RELEASE

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Contact: Shoji Sakamoto

CerebrEX, Inc.
sakamoto.shoji@cerebrEX.com
Phone: +81-(0)3-6303-9853
Fax: +81-(0)3-6303-9854

Commercial Introduction of CerebrEX' *Cool Pepper*® Technology Achieves Industry-Leading Top Interface Speed of 2Gbps for Display Controllers

Osaka, JAPAN (May 7th, 2015) — CerebrEX, Inc. has announced today that the company has begun commercial shipments of display controller CRX1200, an industry-leading high performance eDP TCON (Timing Controller) specifically designed for small and mid-sized display panels. CRX1200 incorporates significant achievements including high-speed data transmission, low power consumption, higher device density and significant space savings -- all highly sought-after attributes in the mobile communication and computing device industries where vigorous adoption of higher definition displays is underway. CRX1200 utilizes *Cool Pepper*® source driver interface technology, also developed by CerebrEX, to accommodate FHD (1980x1080) to UHD (4K2K) resolutions, and is simultaneously equipped with numerous new features hitherto unseen in conventional timing controllers.

Cool Pepper® is an innovative embedded interface technology developed by CerebrEX in response to the recently increasing demand for higher resolution displays in the mobile device industry. This technology automatically and individually adjusts signal strength, signal correction and timing optimization processes for each data transmission path, while minimizing transmission power at the same time. As a result, *Cool Pepper*® achieves the best data transfer rate in the industry, 2Gbps over COG (Chip On Glass) greatly reducing the number of transmission lines necessary. The technology realizes low power consumption as well as space savings for more efficient surface mounting. Furthermore, its unique power-savings mode and original encoding techniques allow highly power-efficient and yet highly flexible system design.

CerebrEX, Inc. has been promoting *Cool Pepper*® technology towards achieving a de-facto industry-standard status. Licenses have already been granted to Panasonic Corporation's Semiconductor Business Division, Lapis Semiconductor Co., Ltd, and ILI Technology Corporation.

As for the input interface, the controller accommodates the soon-to-be-mainstream mandatory DP1.4 specifications. In addition, it fully supports the newest NVSR (nVIDIA Self Refresh) methodology, a low power consumption functionality patented by nVIDIA®.

CerebrEX is committed to providing maximum value for its customers by supplying products and technology for highest possible performance at lowest possible cost, and by contributing to total system solutions with the highest cost performance.

■ Target Devices

- Notebook and Tablet PCs and other mobile devices with display resolutions from FHD (1980x1080) to UHD (4K2K)

■ CRX1200 Main Features and Characteristics

- High performance eDP 1.4.
- Supports NVSR (nVIDIA Self Refresh): Low power consumption methodology patented by nVIDIA®
- *Cool Pepper*® Source Driver Interface: Enables high speed data transmission rates while maintaining low power consumption
- *PixArt* display quality adjustment engine: Automatically adjusts backlight and contrast commensurate with specific display data
- Dynamic control of refresh rate: An extended function of PSR developed by CerebrEX
- Display correction function during low refresh rate periods: Command transmission function enabled by *Cool Pepper*® appreciably suppresses display deterioration
- PSM (Power Save Mode): Further reduction of power consumption during PSR mode, developed by CerebrEX
- Touch sensor noise avoidance function: Supporting feature provided for touch sensor controller
- SDK (System Development Kit): Development assistance tool available upon request.
- CERES (CerebrEX Reciprocal and Evolutional Solution): Revolutionary approach for providing lower power and better image quality displays to system vendors. This is made possible by closely working with *Cool Pepper* source driver vendors.

Please note: *Cool Pepper*® is a registered trademark of CerebrEX, Inc. An express license agreement is required for use of the *Cool Pepper*® logo.

About CerebrEX, Inc:

CerebrEX, Inc. is a venture-backed semiconductor start-up in the business of developing proprietary display technologies for the flat panel display market. Founded in 2012 and headquartered in Osaka, the company makes full use of its unique technical expertise to directly address the display controller LSI design challenges posed by conventional design, small pixels and high resolution. The company has an additional office in Tokyo, Japan and in Taipei, Taiwan.

For inquiries please contact:

Shoji Sakamoto, Directing VP of Sales & Marketing

CerebrEX, Inc., Shin Osaki Kangyou Building FL6, 1-6-4 Osaki, Shinagawa-ku, Tokyo 141-0032

Phone: +81-(0)3-6303-9853; Fax: +81-(0)3-6303-9854;

URL: <http://cerebrexinc.com/> E-mail: sakamoto.shoji@cerebrexinc.com