

# Socionext Develops Next Generation Graphics Controller for In-Vehicle Remote Display Applications

## Display Support for 4K Resolution and High Dynamic Range

**Langen/Germany and Yokohama/Japan 25. January, 2018** --- Socionext Inc., a leader in state-of-the art system-on-chip technology, has developed the "SC1701" series, the third generation of its high-performance graphics display controllers. In addition to further strengthening the graphics function enabling 4K resolution and deep color processing for state-of-the art in-vehicle display systems, Socionext incorporated APIX®3 technology supporting increased demand for high speed video and data connectivity up to 12 Gbps.

The SC1701 features further evolved functions and performance for in-vehicle remote display applications, supporting up to one U-HD (4K) or two F-HD (2K) displays at 30bpp. The controller is capable of driving up to two TCON-less displays by its integrated TCON function. To support that, the device is capable of receiving two separate video streams over a single link. Its future-proof design supports through its video link up to 9,6 Gbps uncompressed or up to 28 Gbps compressed video by utilizing the VESA DSC compression method. The built-in HDCP decryption technology enables video content protection allowing high-value content for a richer user experience.



Photo: the "SC1701" series graphics display controllers

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The built-in Socionext SEERIS<sup>®</sup> graphics processor provides 2D rendering with deep color (30bpp) support through its entire pipeline. In addition, it provides extended flexibility by its capture port through a MIPI-DSI2 or OpenLDI input interface.

The featured MII/Ethernet interface allows bidirectional communication to utilize most of the capabilities provided by the APIX3 protocol. This allows video or auxiliary data originating from an Ethernet camera or a touch controller connected directly to the SC1701 to be streamed back to the central or head unit.

Socionext paid special attention to implementing latest automotive safety functions which are necessary to meet the industry's integrity requirements. The SC1701 Display Controller stands out through its diagnostic capabilities, the built-in multi window signature unit, its picture freeze detection feature and the multi-level CRC checks. In addition, it provides protection against illegal access, therefore, enhancing the security features and data integrity.

The SC1701 display controller is designed to support high performance domain computing architecture within the car, one of the most innovative evolutions in automotive system architectures, which enables design flexibility through scalability, increases safety and security, makes development cycles more efficient, eases the qualification processes and provides significant potential for system cost reduction.

Engineering samples will be made available in third quarter 2018.

Socionext is presenting the SC1701 at Embedded World 2018, Hall A3, Booth 119.

#### **About Socionext Inc.**

Socionext is a new, innovative enterprise that designs, develops and delivers System-on-Chip products to customers worldwide. The company is focused on imaging, networking and other dynamic technologies that drive today's leading-edge applications. Socionext combines world-class expertise, experience, and an extensive IP portfolio to provide exceptional solutions and ensure a better quality of experience for customers. Founded in 2015, Socionext Inc. is headquartered in Yokohama, and has offices in Japan, Asia, United States and Europe to lead its product development and sales activities. For more information, visit [socionext.com](http://socionext.com).

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