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Lumissil Launches 32bit ARM M0+ MCU

MCU with LumiBus™, SVB and Touch Sense enables Infotainment and Cascade Lighting Operations

MILPITAS, CA., Nov 9, 2026 – Lumissil Microsystems introduced the IS31CS9202 and IS32CS9202, 32-bit microcontrollers for industrial/consumer and automotive applications, respectively. The devices integrate an Arm® Cortex®-M0+ core operating at up to 50 MHz, serial video bus (SVB), LumiBus™, and a capacitive touch-key controller.

The MCUs include 256 KB of Flash memory with ECC and 16 KB of SRAM with ECC, along with a DMA controller for data transfers between memory and peripherals. The integrated LumiBus™ controller supports control of up to 256 external addressable RGB LEDs over a single communication channel. The touch-key controller provides 24-bit resolution and supports up to 25 keys in 32-pin configurations or 39 keys in 48-pin configurations. It also includes a dedicated shield output and active proximity sensing.

The touch-key architecture supports capacitive sensing for HMI applications, including proximity detection. A pseudo-random sequence is available in the touch-key controller to help reduce EMI.

For system communication, the devices integrate a CAN FD controller supporting data rates up to 10 Mbps, along with SPI master/slave, I2C master/slave, and two enhanced UART interfaces, including support for LIN 2.0/2.2. Additional digital peripherals include PWM, timer/capture controllers, a quadrature encoder, watchdog timers, and CRC acceleration.

The analog subsystem includes a 14-bit sigma-delta incremental ADC, 12-bit SAR ADC, 8-bit DAC, four analog comparators with programmable thresholds, and an integrated temperature sensor. Up to 42 GPIOs are available, depending on package configuration.

The automotive device is intended for applications requiring MCU-based command and control, capacitive touch sensing, and RGB LED control, including center-stack controls, entertainment consoles, keyless entry, trunk control, and heating and air-conditioning systems. The industrial/consumer version provides the same MCU architecture for HMI, touch-control, and RGB LED applications outside the automotive environment.

By integrating MCU processing, capacitive touch sensing, proximity detection, LumiBus™ LED control, SVB, CAN FD, and mixed-signal peripherals in a single device, the CS9202 family can support HMI and dynamic RGB lighting functions without requiring separate controllers for each function. LumiBus™ provides a dedicated interface for cascaded addressable RGB LEDs, while the MCU continues to handle application control and user-input functions.

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Availability

The IS31CS9202 and IS32CS9202 are available in WFQFN-32, WFQFN-48, QFN-48, and LQFP-48 packages. The automotive IS32CS9202 operates from –40°C to +125°C and is listed as AEC-Q100 and ASIL-B. The IS31CS9202 operates from –40°C to +85°C. Both devices support a 2.5 V to 5.5 V supply range.

About Lumissil Microsystems

Lumissil Microsystems specializes in analog/mixed-signal products for automotive, communications, industrial, and consumer markets. Lumissil's primary products are LED drivers for low to mid-power RGB color mixing and high-power lighting applications. Other products include audio, sensors, high-speed wire communications, optical networking, and application-specific microcontrollers. Lumissil Microsystems has worldwide offices in the US, Taiwan, Japan, Singapore, mainland China, Europe, Hong Kong, India, Israel, and Korea. Website: www.lumissil.com

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