

Family of Industry-Leading Capacitive-Sense Controllers with Mutual Sensing

IS31SE5120 & IS31CS8977 are higher pin count integrating Mutual and active-proximity sensing Cap-Touch Technology with very low power consumption for Industrial and White Goods applications

MILPITAS, CA: MAR 22, 2022 – LUMISSIL MICROSYSTEMS, a Division of ISSI, today announced a new addition to the family of capacitive touch sensor controllers consisting of IS31SE5120 Touch Sensor and IS31CS8977 MCU which simplify the replacement of mechanical buttons in a variety of applications such as home appliances, IoT devices, instrumentation, control panels and liquid level measurement devices. This enables easy prototyping and rapid implementation into any product. The downloadable software package is part of an Integrated Development Environment (IDE) that comes complete with a standard code and calibration GUI.

“Adding the new products to the Lumissil portfolio opens up many opportunities in Automotive, White Goods and Small Appliances that may require larger sensor count and high performance touchless sensing” said Ven Shan, VP of Marketing at Lumissil Microsystems. “With rapid adoption of Touchless, Proximity & Gesture sensing this enhanced family of devices offer customers a broader range of cost effective and easy to use solutions in their applications”.

IS31CS8977 MCU is supplied with IDE, code libraries for free SDCC compiler or for a Keil compiler. It enables a complete and flexible utilization of part’s features for any type of capacitive sensing. IS31SE5120 Cap-touch sensor is supplied as a quick-implementation turn-key product with a standard code. They are applicable for a variety of cap-touch sensors interfaces (button, wheel, slider and proximity) and materials (glass, plastics, wood etc.).

The IS31SE5120 sensor calibration GUI enables simple device configuration in one flow for calibrating capacitive touch sensors, configuring GPIO ports and saving configuration directly to a file or target device’s flash, with no programming required. A GPIO can also be configured to output melody using on-chip melody/tone generator. Product debugging support is available from ISSI’s application engineers.

Key features and benefits

IS31SE5120

- Up to 24 Sigma Delta Capacitive touch sensors– up to 24-bit precision count
- Liquid Tolerance Shield Driver
- GUI sensors calibration & Auto-calibration
- Multiple-button-press and press-and-hold
- 5µA Quiescent current with Wake-on-touch
- fast I²C interface to host controller
- Melody/Tone output options

IS31CS8977 – Additional functions

- 64Kb ECC Flash / 2Kb ECC RAM
- Up to 28 configurable GPIOs; Up to 27 Cap-touch sensors; Up to 6 interrupts
- Active Proximity sensing ; Mutual sense matrix
- 2*I²C M/S ; 1*SPI; 1*EUART1 & 1*LIN capable EUART2
- 12-bit ADC; 8-Bit DAC
- Free IDE with SDCC compiler and EzISP integration

Packaging and Availability

IS31CS8977 is available in 20/24/28 pin TSSOP-20/24/28 packages and 32 pin LQFP-32 Package. IS31SE5120 is available in 32 pin QFN-32 package. They operate from 2.3V to 5.5V over a temperature range of -40°C to +85°C. Samples can be ordered through Lumissil Microsystems's global sales team and worldwide distribution partners.

The IS31CS8977-QFLS2-TR is available and priced at \$0.60 in quantities of 10,000.

The IS31SE5120-QFLS3-TR is available and priced at \$0.65 in quantities of 10,000

For pricing on the other package options contact local sales.

Automotive AEC-Q100 qualified options will be released later this year

About Lumissil Microsystems

Lumissil Microsystems is the analog/mixed-signal product division of ISSI, a fabless semiconductor company that designs and markets high performance integrated circuits for the following key markets: (i) automotive, (ii) communications, (iii) industrial/medical, and (iv) digital consumer. Lumissil Microsystems's primary products are LED drivers for low to mid-power RGB color mixing and high power lighting applications. Other products include audio, sensor, high speed wired communications, optical networking ICs and Application-specific microcontrollers. ISSI/Lumissil Microsystems is headquartered in Silicon Valley with worldwide offices in Taiwan, Japan, Singapore, mainland China, Europe, Hong Kong, India, and Korea. Visit our web site at <http://www.lumissil.com/>

About Integrated Silicon Solution, Inc. (ISSI)

ISSI is a fabless semiconductor company that designs, develops and markets high performance SRAM, DRAM, Flash memory (including NOR flash, NAND flash and managed NAND solutions (eMMC)), and Analog/Mixed-signal integrated circuits. ISSI provides high-quality semiconductor products and has been a committed long-term supplier to its customers. ISSI is headquartered in Silicon Valley with worldwide offices in Taiwan, Japan, Singapore, mainland China, Europe, Hong Kong, India, and Korea. Visit our web site at <http://www.issi.com/>

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LUMISSIL Microsystems
A Division of ISSI

IS31SE5120 & IS31CS8977
Introducing Additions to Family of
Industry-Leading Capacitive-Sense Controllers