



Product news

Automotive-Compliant Level Shifters from Diodes Incorporated Provide High-Speed, Flexible, and Easy-to-Use Logic Translation

Plano, Texas – October 31, 2019 Diodes Incorporated (Nasdaq: DIOD) today announced two flexible, high-speed automotive-compliant voltage translators for use in environments with ambient temperatures up to 125°C. The [PI4ULS5V108Q](#) and [PI4ULS5V202Q](#) are designed for use in advanced driver-assistance systems (ADAS), infotainment, and telematics equipment.

Both devices are compatible with either push-pull or open-drain connections, delivering the convenience of a single part number to address multiple applications. In addition, bidirectional flexibility with automatic direction sensing simplifies level shifting between bus interfaces, such as SMBus, PMBus, or I²C devices, by eliminating any requirement for a direction-control signal.

The 8-channel PI4ULS5V108Q performs up-translation at up to 100MHz and down-translation at over 100MHz, delivering responsive performance for use in high data-rate interfaces. Designers can ensure fast exchanges across SPI or other interfaces, with no limitation due to level shifting. This enables data transfers between system-on-chip (SoC) and peripheral components to be executed with optimum efficiency.

The PI4ULS5V202Q is a 2-channel translator with internal 10kΩ pull-up resistors, allowing direct connection to interfaces with open-drain topology, such as I²C ports. The large maximum voltage-translation range of 1.2V to 5.5V provides flexibility to work with a wide variety of I²C chips and circuit designs. The PI4ULS5V202Q features fast rise and fall times, due to high-speed one-shot detectors at the IC inputs and is able to support data rates of up to 20Mbps.

Both devices are AEC-Q100 grade 1 qualified, PPAP capable, and in production at IATF 16949 certified sites.

The PI4ULS5V108Q and PI4ULS5V202Q are available now in the TSSOP-20 and MSOP-8 packages, respectively.

Further information is available at www.diodes.com.

About Diodes Incorporated

Diodes Incorporated (Nasdaq: DIOD), a Standard and Poor's SmallCap 600 and Russell 3000 Index company, is a leading global manufacturer and supplier of high-quality application specific standard products within the broad discrete, logic, analog, and mixed-signal semiconductor markets. Diodes serves the consumer electronics, computing, communications, industrial, and automotive markets. Diodes' products include diodes, rectifiers, transistors, MOSFETs, protection devices, function-specific arrays, single gate logic, amplifiers and comparators, Hall-effect and temperature sensors, power management devices, including LED drivers, AC-DC converters and controllers, DC-DC switching and linear voltage regulators, and voltage references along with special function devices, such as USB power switches, load switches, voltage supervisors, and motor controllers. Diodes also has timing, connectivity, switching, and signal integrity solutions for high-speed signals. Diodes' corporate headquarters and Americas' sales office are located in Plano, Texas and Milpitas, California. Design, marketing, and engineering centers are located in Plano; Milpitas; Taipei, Taiwan; Taoyuan City, Taiwan; Zhubei City, Taiwan; Manchester, UK; and Neuhaus, Germany. Diodes' wafer fabrication facilities are located in Manchester and Greenock, UK, and Shanghai, China. Diodes has assembly and test facilities located in Shanghai, Jinan, Chengdu, and Yangzhou, China, as well as in Hong Kong, Neuhaus, and Taipei. Additional engineering, sales, warehouse, and logistics offices are located in Taipei; Hong Kong; Manchester; Shanghai; Shenzhen, China; Seongnam-si, South Korea; Munich, Germany; and Tokyo, Japan, with support offices throughout the world.

Recent news releases, annual reports and SEC filings are available at the Company's website: <http://www.diodes.com>. Written requests may be sent directly to the Company, or they may be e-mailed to: diodes-fin@diodes.com.

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Company Contact:

Diodes Incorporated
Emily Yang
VP, Worldwide Sales and Marketing
P: 972-987-3900
E: pressinquiries@diodes.com

Investor Relations Contact:

Shelton Group
Leanne K. Sievers
EVP, Investor Relations
P: 949-224-3874
E: lsievers@sheltongroup.com