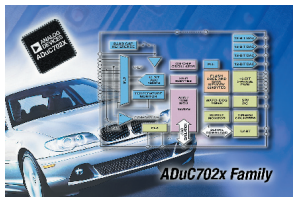


PRECISION ANALOG MICROCONTROLLERS FOR AUTOMOTIVE APPLICATIONS

The ADuC702x

family is designed for high-precision measurement and control, and data acquisition systems with basic digital programming needs. The combination of analog functionality and digital programming on a single chip makes this family of IC products well suited to handle the evolving and rigorous demands of today's advanced automotive applications including body control electronics and automotive battery management. The ADuC702x family integrates a 32-bit ARM7® RISC processing core with precision data conversion technology and supports up to 16 channels of fast, 12-bit accurate analog-to-digital conversion and up to four 12-bit digital-to-analog converters for programmable processing performance.



Featuring a processing capability up to 45 MIPS peak performance and a precision band gap reference with a drift performance of better than 10 ppm/°C, the ADuC702x family peripherals include a comparator, PLA and 3-phase PWM generator.

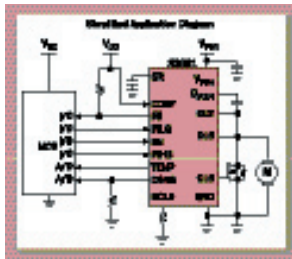


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NEW POWER SWITCH OUTPERFORMS MECHANICAL OR EXISTING SOLID-STATE RELAYS

Freescal

Semiconductor's MC33981 extreme switch offers 4 mΩ on-resistance with fast PWM to allow designers to bring solid-state motor control to cooling fans, fuel pumps and other automotive applications. The MC33981 replaces electromechanical relays, fuses and discrete devices while reducing board space and increasing reliability in embedded systems.



When digitally controlled by a microcontroller, the MC33981 can drive a dc motor with PWM frequencies up to 60 kHz. Using PWM for motor speed control eliminates the need for the power resistors, relays and heat sink, reducing the size and weight of the power module.

The PWM allows for variable speed and torque control, enabling system designers to maximize motor performance and efficiency. It features slew rate control that helps minimize power dissipation while meeting electromagnetic compatibility requirements.

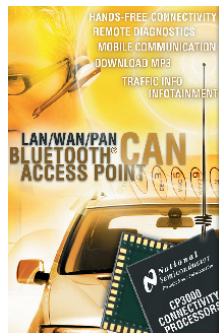


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CONNECTING AUTOMOBILES TO THE OUTSIDE WORLD

National

Semiconductor's CP3000 family of connectivity processors offers a Bluetooth® interface that powers solutions, allowing drivers to talk safely on cell phones. Using other connectivity interfaces such as CAN, it is possible to integrate the system into the vehicle, linking with steering wheel controls, dashboard displays and car stereo systems. The Bluetooth interface also allows connectivity with wide area networks, giving access to traffic information, navigation support services and multimedia downloads.



Other features include Bluetooth embedded controller; ACCESS.bus (I2C); Microwire/Plus (SPI); Integrated stereo codec and I2S interface; Multiple UARTs; Dual CAN bus; Acoustic echo cancellation; NRE and royalty-free Bluetooth stack.

Pricing begins at \$6.00 in 1K-unit quantities.



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MINIATURE CRYSTALS MEET AUTOMOTIVE DEMANDS

NDK

(Nihon Dempa Kogyo Co. Ltd.) has released two series of surface-mount crystal units for automotive applications: the NX5032GA and the NX8045GB. They provide a clock signal source for CPUs in automotive powertrains and safety control device applications requiring high reliability. Available in a frequency range of 8 MHz to 40 MHz with a frequency tolerance (at 25±3°C) of ±50 ppm, they operate over the -40°C to +150°C temperature range and exhibit superior environmental characteristics, including high vibration resistance and impact resistance. The NX5032GA measures 5.0 x 3.2 mm with a height of 1.3 mm. The NX8045GB measures 8.0 x 4.5 mm with a height of 1.8 mm. Drive level for the crystals is 10 μW with a standard load capacitance of 8 pF. Housed in a ceramic lead-free package, the crystals meet the requirements for reflow profiling using lead-free solder.



Applications include electronic control units, remote keyless entry, tire pressure monitor systems and airbag systems.

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