

# Aeroflex Mixed-Signal Products Overview



**BUSINESS** Develop advanced, high-quality captive and open market semiconductor solutions and subsystems utilizing our recognized expertise in mixed-signal design (especially high dynamic range, high density data conversion) and systems integration.

**HISTORY** Formed in 2000 by Aeroflex. Current supplier to several Fortune 500 companies in the x-ray imaging (medical and security), POS, and magnetic card reader markets.

**TEAM** Aeroflex Colorado Springs, now a Cobham Company, Mixed-Signal Team has 30+ employees with 3 design centers (located at Colorado Springs, CO, Aliso Viejo and Grass Valley, CA)

**CAPABILITIES & INTELLECTUAL PROPERTY** High Density (>256 channels), High Performance (~17ENOB)  $\Sigma$ - $\Delta$  ADCs  
High Speed Flash & Pipelined ADCs  
Switched Capacitor Signal Processing  
Clock Generation – PLLs, Oscillators (RC & XTAL)  
Voltage References & Regulators – Bandgap, LDO & Switching  
Custom (Dedicated) DSP  
True Mixed-Signal System on Chip Integration ( $\mu$ C+memory+analog+digital)  
Interface Circuitry – RS232/RS485/USB/SPI/2Wire  
Non-volatile memory – EEPROM, High-Speed FLASH, Proprietary Metal OTP  
Third Party Digital IP – controllers, interface, SRAM, standard logic  
Low Power/Portable Design Experts  
Bi-Polar Power Supply Expertise (e.g. +5V/-5V/GND)  
RadHard Mixed-Signal Expertise  
Custom Package Development  
QML-Q/QML-V/AS9000/ISO-9001 Certified  
Fully Equipped FA & Reliability Labs On-Site

**DESIGN EXAMPLES** **256 Channel Medical Imaging Device** – Concurrent data conversion on all channels. 20 bit output, 17ENOB, Data Filtering, Regulation, Custom Package Development

**Universal Interface Device** – System on Chip supporting RS232, RS485, USB1.1, OCIA, and Keyboard Wedge which integrated an embedded 8051 processor, 2 FLASH blocks, 2 RAM blocks, clock multiplier PLL, RC oscillator (+/-1% over all conditions), bandgap reference, and voltage regulators

**Magnetic Card Reader ASIC** - 3 channel magnetic head reader to amplify, filter, qualify, and digitize ISO7811 magnetic card data. Low noise automatic gain control amplifiers, data converters, digital logic, precision oscillator. Low power sleep and shutdown modes.

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