Microelectronic integrated circuits can be considered as the thinking brain of a system, and MEMS has enhanced this decision-making capability with eyes and arms to allow micro-systems to sense the environment and collect data magnets. The electronics then instruct the arms to display the information taken from the sensors and make some decisions to react by moving, stabilizing, adjusting, pumping, and filtering. As a result, the environment is controlled for the desired demands. At each level of the design hierarchy, the efficiency of the system in the realm of its behavior for evaluation, optimization, and correction of the optimization and composition process is used to find new solutions. ICs must meet the performance characteristics of MEMS, such as electromagnetic-based electromechanical instrumentation and structures, input-output channels, analog-to-digital conversion, and analog-to-analog data.

Micro and nano-electromechanical systems (MEMS / NEMS) are devices in which the physical motion of a micro or nano-scale structure is controlled by an electronic circuit or vice versa. MEMS and NEMS can be used to build sensitive sensors and stable timing devices.

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