

## **Developing a Low Cost Shut Down MEMS Base Accelerometer Suitable for Rapid Response and Structural Applications**

Mega-cities, specially when located in a high potential seismic region, are always threatened by huge damage because of earthquake. Decreasing the earthquake side effects is the main target of our developed low cost MEMS base accelerometer unit. There are more than 300 CGS gas stations distributed all over the Tehran city which can act like a bomb when an earthquake happens. There are lots of hospitals which need to switch on emergency electricity state before an earthquake the system crashed. Lots of general structural applications are defined on the software and various relay switch are considered for the system such as elevator stop at the nearest floor, industrial machinery switch off, schools and organizations alarm, CGS controlling and auto shut down, power lines switching off, metro stop alarm, toy city alarms and stops, trains speed control and etc. the system exactly monitor the noise level of the installed place and based on CAV algorithm discard the transient peaks and shocks to reach the minimum level of false detection.

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