Faculty of Electrical Engineering & Computer Science
Master Degree Course Electronics Engineering, MSc EE

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Development of Controller Area Network (CAN) Controlled Sensing System.

ABSTRACT - Masterthesis

This thesis gives an overview of CAN controlled sensing system, that how the signals from Strain gauge sensors are acquired and how the signal conditioning, linearization and calibration has been done so that the microcontroller can understand the incoming information for further processing and also sending the processed data over Controller Area Network.

Output signals from these kinds of sensors are actually analog and also those are in very low range of millivolts, that's why before interfacing to microcontroller these signals need some preprocessing dose called signal conditioning and that process includes filtering, amplification and analog to digital conversion to make the signals understandable for the microcontrollers and third step is isolation.

After signal conditioner circuit. These amplified signals are filtered and input to a microcontroller and the value of the incoming data/signals (which is actually the weight in grams) is then monitored using liquid crystal display and then transmitting over controller area network by implementing the ISP and Can protocols.