Abstract

In this paper, presenting the approach to remotely control and monitor "High Voltage Module" through Personal Computer. A programmable voltage input is provided to the analog module ranging from 0 to +4.64V equals to 0 to 100% of rated voltage output (4kV). Current programmability allows the user to set current limit, anywhere from 0 to 100% of maximum rated current (5mA). The buffered low impedance voltage and current monitor signals can drive external circuitry directly. The IMON and VMON signal is a true output current and voltage monitoring signal. High Voltage (H. V) power supplies are used in various applications in industry. The need was to control the parameter such as voltage and current of the unit remotely and monitor the same. ADuC841 an embedded microcontroller with 8052 core of analog device is used for this application which is providing precision analog input and readout of the output voltages of high voltage module.
- PROTEL99SE/printed circuit board design with PROTEL SE99/printed by star printery pty Ltd.
- Serial Communications RS232/RS422/RS485/www.omega.com/techref/das/rs-232422-485
- Embedded c programming language http://www.engineersgarage.com/tutorials/embedded-c-language
- Datasheet/Analog device/ADuC841/ADuC842/ADuC843/Micro Converter® Multichannel 24-/16-Bit ADCs with Embedded 62 kB Flash and Single-Cycle MCU/2003).

**Index Terms**

Computer Science Control Systems

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**Keywords**

HV High Voltage VPROG Programmable Voltage IPROG Programmable Current VMON Voltage Monitor IMON Current Monitor ADuC841 Analog Device Microcontroller ADC Analog to Digital Conversion DAC Digital to Analog Conversion LCD Liquid Crystal Display PWM Pulse Width Modulation