Design and implementation of Brushless DC Motor Drive

DC brushless motors (BLDC) Due to its unique features including high energy density, High output torque and appropriate dynamic characteristic is the growing trend in the global industry. These motors require a control circuit for operation .The control methods of this engine are based on determining the precise position of the rotor. To this end, they mainly use Hall Effect sensors to get the rotor's exact position which has the disadvantages of increasing the cost of the controller, making it more complicated and.... To solve these problems, sensorless methods can be used to control the engine. In these procedures, a rotor position sensor is not required. Among different methods of sensorless control, the use of Back EMF voltage method is due to its simplicity as well as its non-dependence on engine parameters. This method is implemented on the base of the measurement of Back EMF voltage, which is a kind of rotor position display.