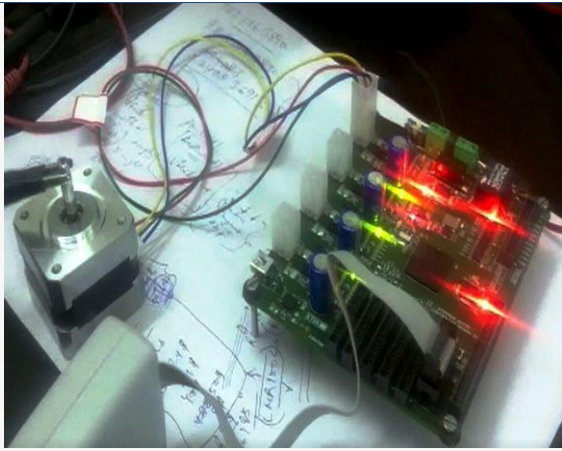




**Table 4 – STEPPER MOTOR CONTROLLER AND DRIVER**



**STEPPER MOTOR CONTROLLER AND DRIVER CARD WHICH IS CONTROLLED BY FPGA CARD, CAN CONTROL 4 NUMBERS OF BIPOLAR STEPPER MOTORS. IT ALSO INCLUDES A STEPPER MOTOR WITH ENCODER ARRANGEMENT TO MEASURE AND VERIFY THE STEP SIZE OF THE MOTOR. THE STEPPER MOTOR CONTROLLER AND DRIVER MODULE IS CAPABLE OF OPERATING THE STEPPER MOTORS WITH AND WITHOUT HOLDING CURRENT. FOLLOWING ARE THE FEATURES OF THE STEPPER MOTOR CONTROLLER AND DRIVER BOARD:-**

It can generate necessary drive sequence to drive four stepper motors or it can also receive commands from external master processes them and generate necessary drive sequence to drive four stepper motors.

- No. of channels : 4
- Interface to external master through SPI interface.
- Can also be controlled through PC using USB interface by using on board USB to UART bridge.
- Suitable MAX V CPLD is used to generate necessary sequence for stepper motor.
- Stepper Motor Drive current 2A.
- Stepper Motor Operating Voltage 8.0V to 60.0V
- Adjustable limiting current
- Over current, Over temperature protection.
- Back EMF monitoring
- Micro-stepping feature ( down to 1/256 step)
- Interfaces with external limit switches 4 numbers for external control
- Generates 2.5KV isolated signals for field communication through suitable isolators and DC to DC converters
- Control Electronics works @ 12V.
- Drive Electronics work at 8.5V to 60V.
- Test Codes provided for all important interfaces.