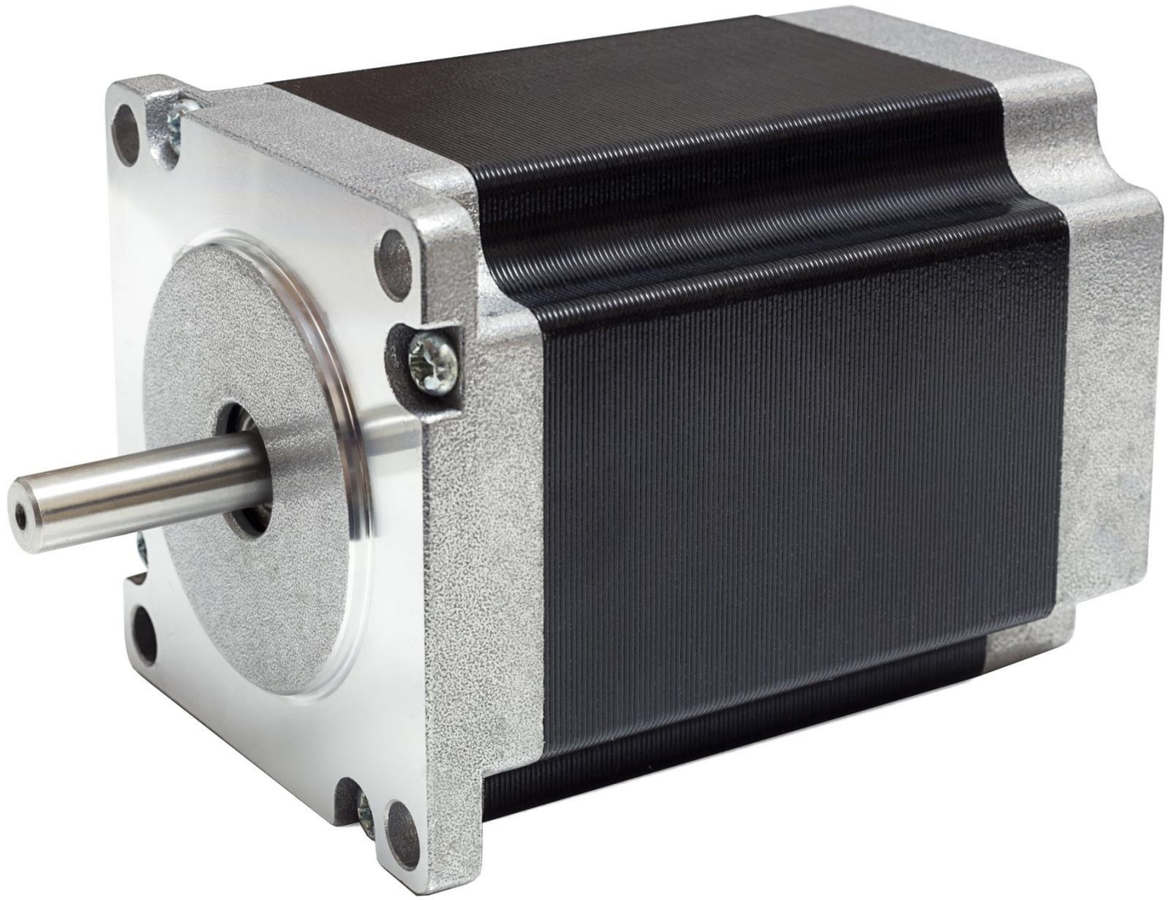
Stepper Motor 2: Drive Circuit

TI Precision Labs – Motor Drivers

Presented and prepared by Rick Duncan

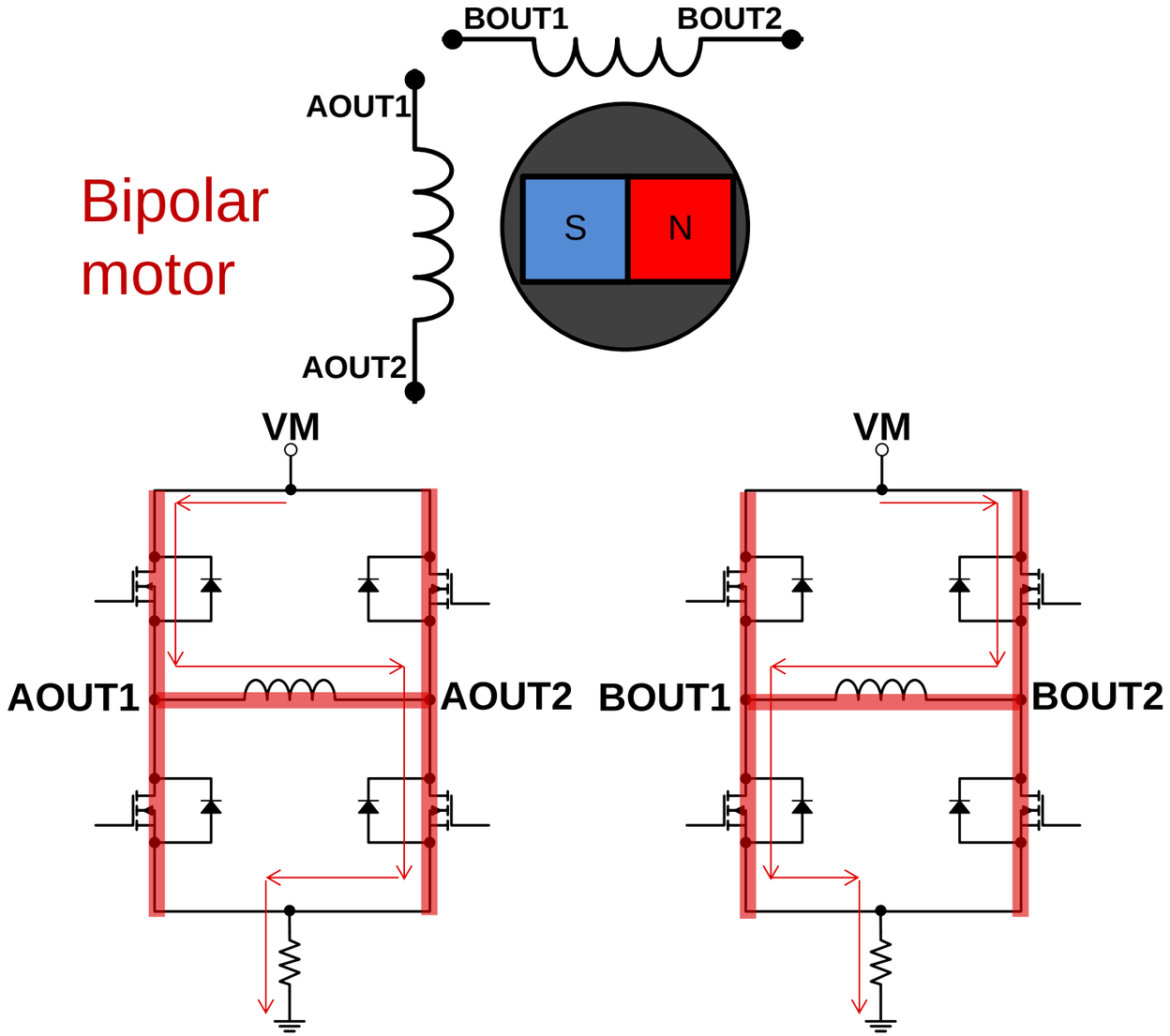
What is a stepper motor?

- Basic function: uses electrical signals to control rotor position
- Advantages:
  - Hold rotor in place for long periods of time
  - Precise positioning without sensors
  - Low cost
  - Easy to control



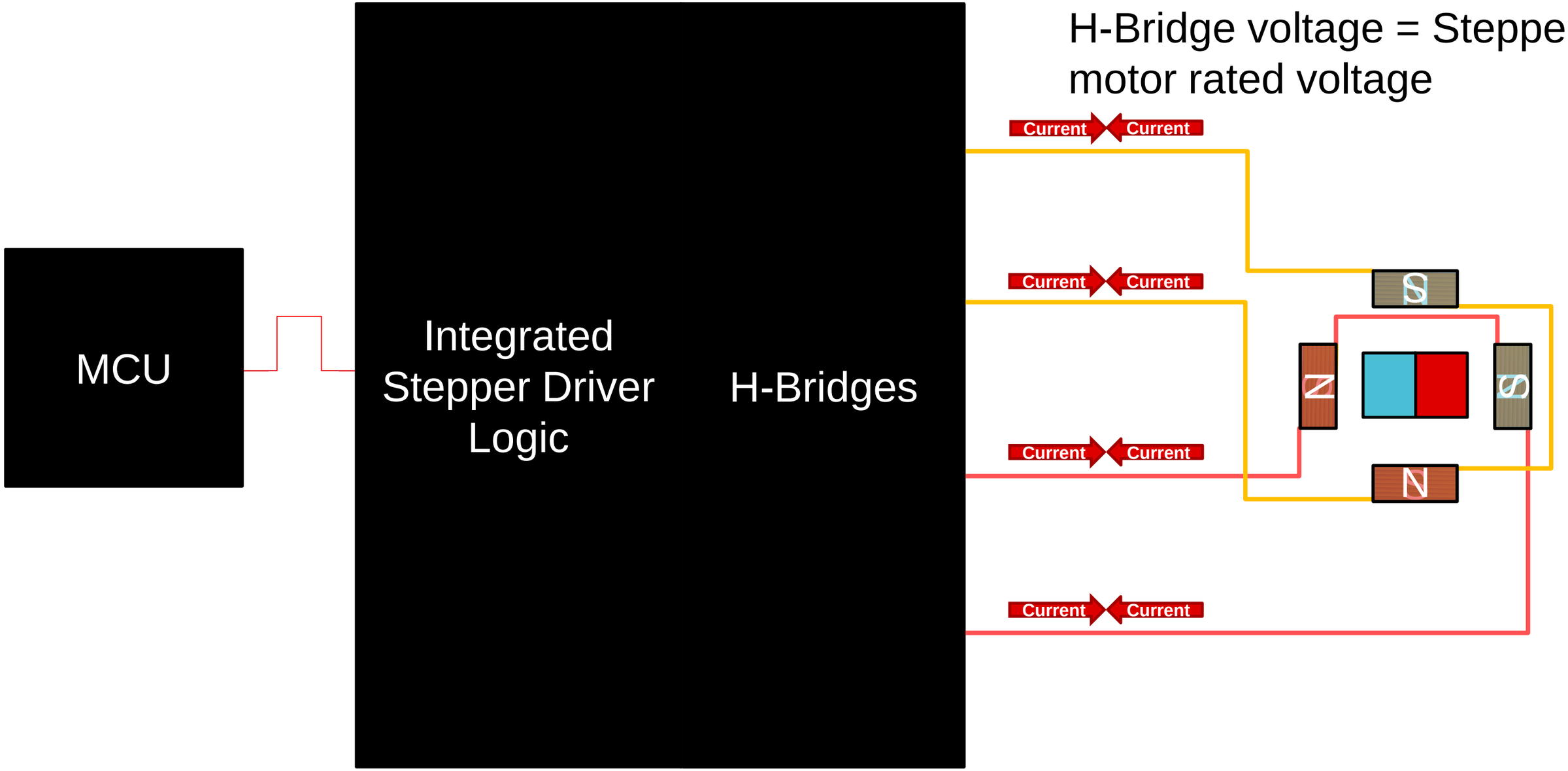
Bipolar steppers

Bipolar motor



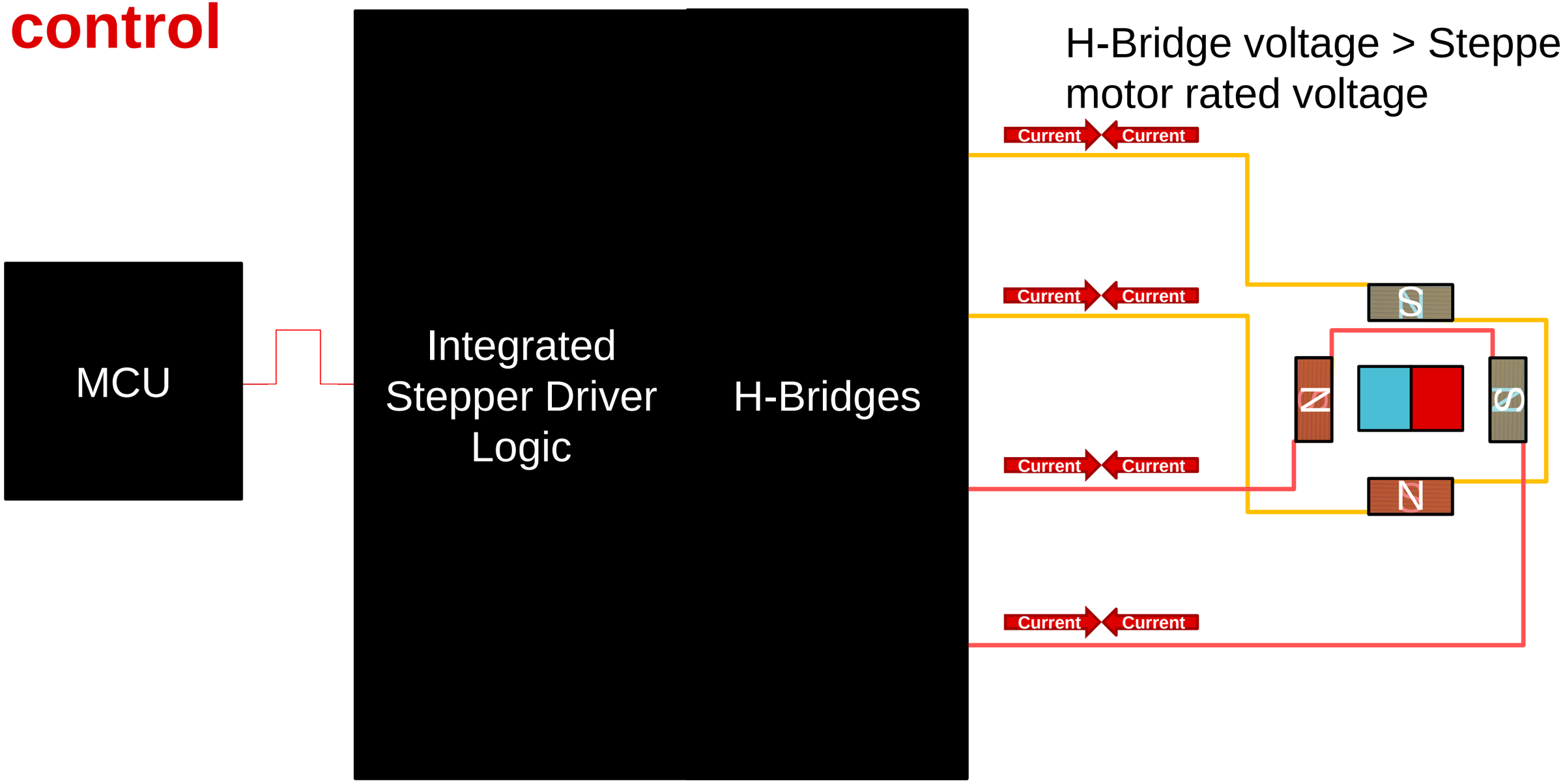
Basic stepper driving

Basic bipolar stepper drive circuit



Advanced bipolar stepper drive circuit with current control

H-Bridge voltage > Stepper motor rated voltage



To find more stepper driver technical resources and search products, visit http://www.ti.com/motor-drivers/stepper-driver/overview.html

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Resources

- [1] “Technology – Stepper Motors and Drivers” www.orientalmotor.com