

# A Review Paper on Arudino Based Mini CNC Machine

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**Abstract:** *An Arduino-based mini CNC machine is a small computer numerical control (CNC) machine that uses an Arduino microcontroller board as its brain. Arduino is an open-source electronics platform that allows users to easily create interactive projects. The Arduino board is programmed with a specific set of instructions that control the mini CNC machine's movements, allowing it to precisely cut or engrave materials. The mini CNC machine typically consists of a small frame, a stepper motor for movement control, a spindle for cutting or engraving, and an Arduino board for controlling the motor's movement. The machine can be used to engrave or cut a variety of materials, including wood, plastic, and metal, depending on the spindle and bit used. Arduino-based mini CNC machines are popular with hobbyists and makers because they are relatively easy to build and can be customized to suit specific needs. They are also less expensive than larger industrial CNC machines, making them accessible to a wider range of users. Additionally, the open-source nature of the Arduino platform means that there is a large community of users who share knowledge, code, and projects, making it easier for beginners to get started with this technology.*

**Keywords:** Arduino, mini CNC, Arduino microcontroller, programmable logic controller (PLC), mechanical structure

## REFERENCES

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