

RFID Reader/Writer Modules

DT Workshop Equipment Reference — D&T / STEM resource for school workshops | Sensors & Modules

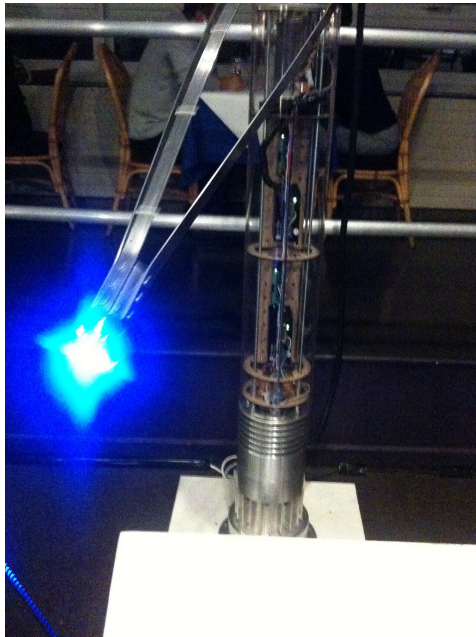


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RFID modules read and write the unique IDs stored in RFID tags and cards by radio frequency, letting projects identify access cards, track objects and gate what the system allows. The RC522 is the common school module.

Key Features

- RC522 and PN532 reader modules
- 13.56 MHz frequency
- Read/write M1 cards and tags
- SPI or I2C interfaces
- Antenna on board

Typical Uses in the Workshop

- Build access-control demos
- Track library items and tools
- Identify pets or objects
- Create attendance and registration systems

Safe Operation

1. Wire the module to the microcontroller
2. Place a card on the antenna
3. Read the UID from the reader
4. Match the UID against allowed list
5. Test range and angle

SAFETY NOTES

- Keep modules away from metal that detunes antennas
- Do not touch the antenna while powered
- Store cards away from learners' wallets and passes
- Keep the module dry
- Mount clear of power cables

Maintenance & Consumables

- Check the antenna solder joints
- Clean the card contacts
- Verify reading range with a gauge
- Keep spare cards in stock
- Test the module wiring each session

Specification & Buying Notes

RC522 modules with a pack of blank cards and key fobs cover school demos. Quality modules read reliably at a few centimetres. Buy a few spares - antennas are fragile.