SD Card Logging Modules

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

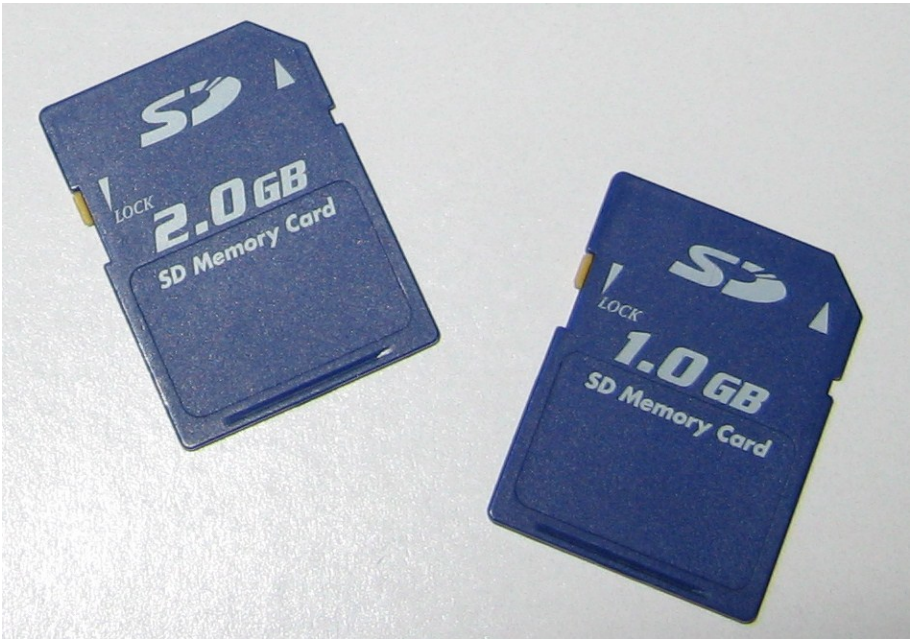

Photo: Rstoplabe14 at English Wikipedia — Public domain — via Wikimedia Commons (Toshiba_SD-M02G_and_SD-M01G_memory_cards.jpg)

SD card modules let microcontrollers write data to microSD cards, logging sensor readings, positions and events over long periods without a computer. They are the backbone of data-logging and telemetry projects.

Key Features

- SPI interface modules
- microSD and full SD support
- 3.3-5 V adapters
- CS pin selection
- File system libraries

Typical Uses in the Workshop

- Log environmental sensor data over time
- Record robot performance and GPS tracks
- Store settings and configuration files
- Build standalone data loggers

Safe Operation

1. Format the card for the library (FAT32)
2. Wire the SPI pins and chip select
3. Initialise the card and create a file
4. Write in batches to avoid corruption
5. Safely unmount before removing

SAFETY NOTES

- Remove cards with the power off
- Keep cards away from water and magnets
- Do not eject while writing
- Format cards correctly for the system
- Store cards in their cases

Maintenance & Consumables

- Re-format cards that stop logging
- Check the module pins and connections
- Clean the card contacts
- Test card capacity and speed
- Keep spare cards with the module

Specification & Buying Notes

Simple SPI modules plus genuine microSD cards cover school logging. Quality modules have stable power regulation; cheap ones corrupt files under load.