

GPS Receiver Modules

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



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A GPS module receives satellite signals and reports position, speed, altitude and time over serial or I2C, letting projects track location, log routes and navigate. The NEO-6M/8M modules are the school standard.

Key Features

- NEO-6M and NEO-8M chips
- Serial NMEA output
- SBAS support for accuracy
- External antenna options
- Backup battery for fast fixes

Typical Uses in the Workshop

- Log routes and positions in projects
- Build vehicle and drone tracking demos
- Time-synchronise loggers
- Navigation and waypoint teaching

Safe Operation

1. Place the antenna with a clear sky view
2. Wire power, ground and TX/RX
3. Wait for the first fix (seconds to minutes)
4. Parse the NMEA sentences in code
5. Check accuracy against known points

SAFETY NOTES

- Do not use GPS modules for safety navigation
- Keep antennas away from metal shields
- Check power from a clean regulated supply
- Protect the module from moisture
- Do not leave modules powered without antennas

Maintenance & Consumables

- Keep the antenna connector clean
- Check the backup battery
- Update the module settings once
- Verify the fix indoors is unreliable
- Store with the antenna protected

Specification & Buying Notes

NEO-8M modules with active antennas get faster fixes than old NEO-6M. Buy modules with the antenna connector and a backup battery installed for reliable indoor testing.