



The **GSM Trainer** is a modem or mobile equipment for transmission of voice and data calls as well as SMS (Short Message Service) in GSM Network. To control the GSM modem there is an advanced set of AT commands according to GSM European Tele-communications Standards Institute Implemented. The GSM standard has established itself across continents. The trainer is well suited for studying AT commands by camping to real networks using SIM card.

Specifications:

- **MODEM- SIM7600E 4G/GSM/GPRS/GPS UART**
- TDD-LTE B38/B40/B41
- FDD-LTE B1/B3/B5/B7/B8/B20
- WCDMA/HSDPA/HSPA+ B1/B5/B8
- GSM/GPRS/EDGE 900/1800 MHz
- Control Via AT Commands
- Supply voltage range: 3.4V~ 4.2V
- GNSS GPS One Gen 8B; standalone; assisted, XTRA
- Professionally Designed Modem with Impedance Matching Layout.
- Works in 4G/3G/2G GSM Networks
- Onboard SMA & UFL connector for GSM Antenna
- Onboard SMA & UFL connector for GPS Antenna
- Onboard 3V3 Voltage regulator for GPS External Active Antenna
- Onboard Micro USB Connector for module firmware updation
- LM39302 linear voltage regulator is used to provides a low-dropout, high-current output
- Onboard RMC connector for power supply & flight mode
- Onboard TXB0108 voltage level translator IC which helps us to interface with 2.8V to 5V Microcontrollers
- Onboard LED for power indication, Network and status.
- Zener diode is used to prevent Accidental over voltage
- Header option for interfacing ADC,I2C,SPI
- Micro SIM Card Connector

- Built with micro SD card connector
- On board Anti Static Protection IC
- Header option for 4.2V output from VBAT
- Header option for LAN
- Four 3MM Mounting Holes are Provided
- Input voltage : 5V-12V DC Operation
- Working temperature:-40°C ~85°C

Interconnections

- All interconnections are made using 2mm banana Patch cords.
- Test points are provided to analyze signals at various points.
- All ICS are mounted on IC Sockets.
- Bare board Tested Glass Epoxy SMOBC PCB is used.
- In-Built Power Supply of +5V/1.5A, ±12V/250mA with Power ON indication
- Attractive ABS Plastic enclosures
- Set of 2mm Patch cords for interconnections
- User's Manual with sample experimental programs

List of Experiments

- Study of GSM technology
- Getting started with GSM trainer
- Study of GSM MODEM and it's components
- Study of SIM
- Introduction to AT commands
- Voice communication using AT commands (Optional)
- Data communication using AT commands
- Sending text message using AT Commands

Note: Specifications are subject to change.

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