PCB Design Request Brief

Hello, I'm looking to design a PCB for a smart underground cable fault locator project.

Project Overview:

I need support to create a production-ready PCB based on a schematic for a smart fault locator that uses a Rogowski coil for current sensing and includes GPS, LoRa/GSM modules, and battery backup.

Required Deliverables:

1. Schematic review or recreation (based on input)
2. PCB Layout (2-layer or 4-layer, based on complexity)
3. Gerber Files for fabrication
4. Bill of Materials (BOM) with component references (LCSC, DigiKey, Mouser)
5. Pick-and-Place (PNP) file
6. Assembly drawings
7. Mechanical drawings/dimensions for IP52 enclosure compatibility
8. Files compatible with EasyEDA / JLCPCB for fast prototyping

What I Will Provide:

- Block diagram and/or basic schematic
- List of major components (MCU, LoRa, GPS, Rogowski coil input, etc.)
- Power supply requirements
- Preferred board size or constraints
- Enclosure details if available

Please share:

- Your experience with low-power PCB design
- Experience with LoRa/GSM-based IoT PCBs
- Battery management and protection circuit experience
- EMI/EMC design consideration if applicable

Looking forward to collaborating with you.

Best regards,

Sanga