SMART METER INTEGRATED TESTING AND HIGHER ANALYSIS (SMITHA)
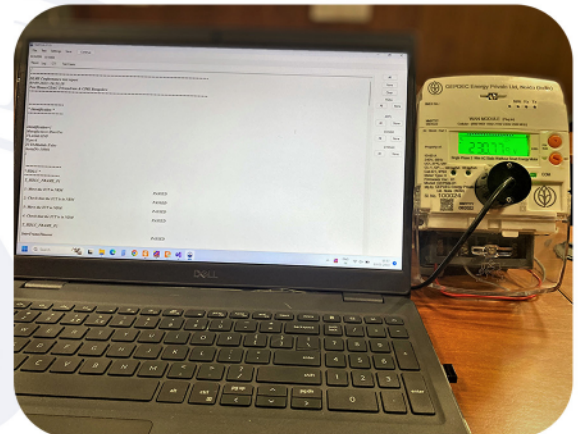
Bharat Smart Meter Protocol Analyser

Joint Project by CPRI, Bengaluru & C-DAC, Thiruvananthapuram

Economical test tool for testing open protocol systems of IEC62056 protocol based devices like Smart Energy meters to ensure their compliance to National/ International standards. Performs both conformance and functional evaluation tests of Energy Meters.

Features of SMITHA

❖ Tests conducted based on standards: IS16444 series & IS 15959 series

❖ Protocol conformance as per IEC62056 customized with Indian requirements

❖ Communication Profiles Supported: High-Level Data Link Control (HDLC) and Transmission Control Protocol TCP/IP

❖ Supports Communication module of different variants like NAN & WAN

❖ Implementation of Basic level and Advanced level security using encryption and authentication algorithms based on standards NIST 800-38D (Mechanism ID5) and manufacturer specific algorithms (Mechanism ID2)

❖ Conformance Tests include Serial Physical Layer(SPL) tests, Association Layer (AL) tests, Specific Objects / Parameters of Energy Meter (SOEM) tests & Security tests

❖ Functional evaluation tests for downloading different profile data, general purpose parameters, programmable parameters etc.

Additional features:

❖ Firmware upgrade

❖ Remote connect /disconnect of meters
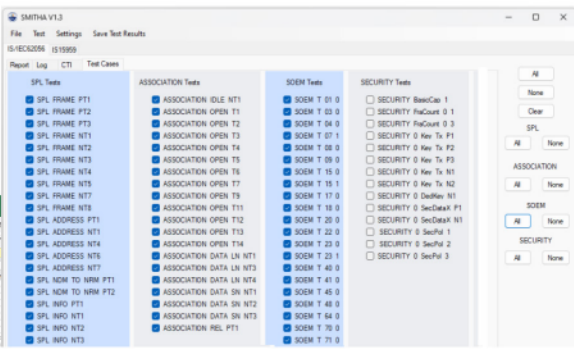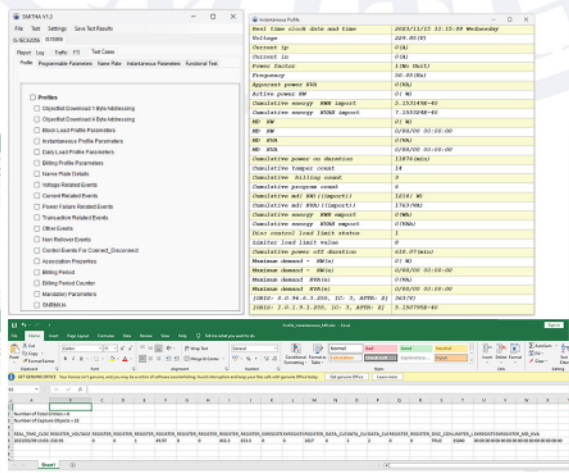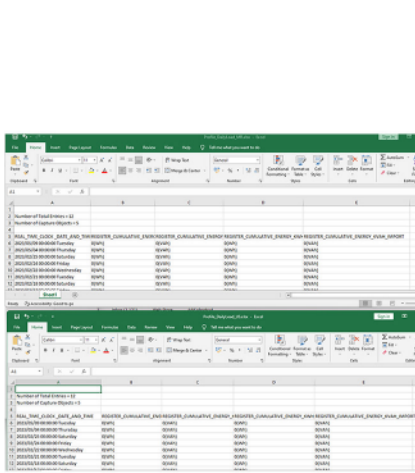
❖ Customized report generation

System Requirements

❖ Operating System: Windows 10 or later

❖ Framework: .Net Framework 4.8 or above

SMITHA

SMART ENERGY METER → *CONFORMANCE TESTS* / *PARAMETER VERIFICATION TESTS* → *TEST RESULTS/ LOG REPORT*
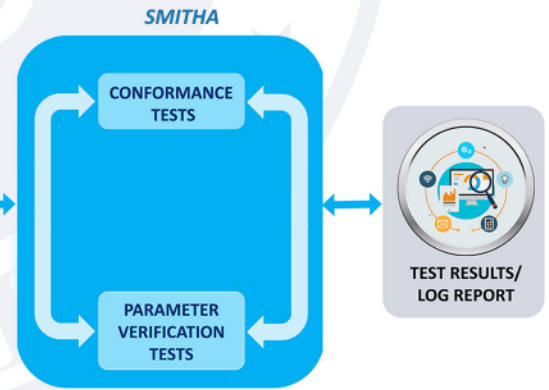
Screenshots of Smitha Testing Tool