



INSIDE

1. Introduction
2. Brief
3. SUNREN Policy
4. Our Facilities
5. Our Testing Capabilities

INTRODUCTION

SUNREN is an NABL accredited ISO-17025 testing lab for conformance testing and certification of most electronic products.

Sunren's test facilities are accredited for :

1. Telecom Interface testing as per DoT requirements for TEC approvals.
2. Safety testing as per IEC 60950 / IS13252 for BIS registration
3. RF testing as per WPC requirements for Equipment Type approval.
4. Climatic testing as per QM333 / IEC 60068
5. Energy Efficiency Testing as per BEE (Bureau of Energy Efficiency) requirements

With knowledgeable experienced testing personnel and well equipped calibrated test instruments, Sunren Telecom laboratory is capable of providing testing services including, but not limited for each of the above, with the shortest lead time and at reasonable prices.

SunRenTM Technical Solutions Pvt. Ltd.

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SunRen™ Technical Solutions Pvt. Ltd.

BRIEF

SUNREN Technical Solutions Pvt. Ltd. is a Mumbai based company formed in 1998 (incorporated on October 1999).

Services include testing and evaluation of IT and Telecom products for conformance to Indian standards, environmental testing, wireless products' testing & all regulatory matters. Product testing as required by per Indian regulatory requirements is done in the fully equipped lab **Sunren Telecom Laboratory**

Sunren Telecom Laboratory is India's first Lab accredited by NABL as per DoT requirements for Telecom testing.

SUNREN Quality Policy

Sunren Telecom Laboratory is committed to continual improvement of processes and service to achieve ongoing customer satisfaction. It is therefore our policy to :

Consistently provide quality testing services that conform to customer and regulatory requirements.

Ensure that all personnel are competent and qualified for the task they perform, and that all personnel familiarize themselves with quality system documentation in order to implement the policies and procedures in their work.

Professionally and effectively perform testing services to produce accurate and precise results.

Consistently comply with ISO 17025 to ensure quality testing services, maintain Customer Confidentiality, ensure Impartiality and to continually improve the effectiveness of the Quality Management System

28/10/2020-Mumbai

SUNIL J. SHENOY
C.E.O.

Commitment to development and implementation of laboratory management system and its continual improvement is evident through periodic review of achievements of objectives. Importance of meeting customer requirements as well as statutory and regulatory requirements is communicated to all employees of SUNREN from time to time.

SunRen™ Technical Solutions Pvt. Ltd.



Our Facilities

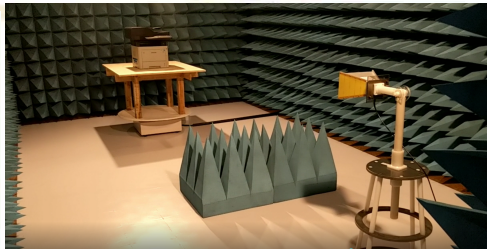
SUNREN TELECOM LABORATORY: C-475, MIDC PAVANE, NAVI MUMBAI



Telecom Labs



EMC & Safety Labs



Safety & Climatic Labs





Our Testing Capabilities

RF Testing

- 1) Conducted RF Power
- 2) Power Spectral Density
- 3) Bandwidth 20dB/6dB
- 4) Frequency Range (10 MHz – 26 GHz)
- 5) Spurious / OOB Emissions

RF Frequency Range : 10 MHz – 26 GHz, WLAN – 2.4 GHz & 5 GHz, Bluetooth – 2.4 GHz, RFID – 13.56 MHz, Low Power – 433 MHz, RFID / RF – 865-867 MHz & 402 MHz – 405 MHz

Telecommunication Interfaces

ANALOG ELECTRICAL

2Wire Analog Interface Testing :

Impedance, Return Loss, Longitudinal Conversion Loss, Noise, Transmission tests, Insulation Resistance, Distortion, DTMF / Decadic Signaling Analysis, Idle Channel Noise, Cross Talk, Psophometric Noise etc.

DIGITAL ELECTRICAL

E1 / E2 / E3 / E4 / DS3 / STM0 / STM1e Interfaces:

Pulse Mask, Return Loss, BER, Output Jitter / Wander, Jitter / wander Transfer, Jitter Tolerance, Clock Stability, PCM analysis, Bit Rate Measurement, Group Delay, Slip Measurement, Transmit Power Spectral Density, Ss7 Protocol Analysis etc.

ISDN PRI / ISDN BRI Interfaces:

Layer 1 / Layer 2 / Layer 3 Protocol Analysis, Alarms etc.

ETHERNET Interface

10/100/1000 Base Electrical 1 G / 40 G / 100 G optical Physical Layer, full conformance testing as per relevant RFCs.

OPTICAL

STM1, STM4, STM16, STM64 (1310nm / 1550nm)

Eye Pattern, Extinction Ratio, Optical Wavelength, Spectral width, SMSR, Spectrum Analysis Receiver sensitivity, Return Loss, BER, Output jitter/ Wander, Jitter / Wander Transfer, Jitter- Tolerance etc.

ACOUSTIC

Corded/Cordless Telephone Testing

Loudness Ratings: SLR, RLR, STMR, Harmonic – Distortion, Echo Return Loss, DC/AC Impedance (using B&K Type tester) etc.

Climatic

As per QM-333 & IEC 60068

Temp: - 20°C ~ + 65°C, Relative Humidity (RH 5% to 95%),

Walk-In Chamber dimension (9 feet x 9 feet x 9 feet)

- 1) Cold test
- 2) Dry Heat
- 3) Damp Heat Cyclic
- 4) Rapid Temperature Cyclic
- 5) Damp Heat Steady State
- 6) Drop test
- 7) Topple test
- 8) Fall test

Safety Testing

As per IS-13252 and IS 616

- 1) Insulation Breakdown / Electric Strength Test
- 2) Leakage Current
- 3) Earth Bonding
- 4) Temperature Rise
- 5) Protection from Surge Mains & Telecom
- 6) Power Input
- 7) Capacitor Discharge
- 8) Impact Test
- 9) Drop Test
- 10) Ball Pressure Test
- 11) Steady State Force Test
- 12) Stability Test
- 13) Discharge of Capacitor
- 14) RMS Working Voltage
- 15) Peak Working Voltage

Cellular

1. GSM/WCDMA/LTE testing for all IoT / Cellular
2. GSM/WCDMA/LTE testing Mobile BTS, Node B, eNodeB, repeaters etc.)

EMI/EMC

Conducted Emission CISPR32

ESD upto 12 KV IEC 61000-4-2

EFT upto 6KV IEC 61000-4-4

Surge Protection upto 6KV IEC 61000-4-5

Lightning Protection 6KV ITU-T K.21