



**GOVERNMENT OF INDIA
MINISTRY OF COMMUNICATIONS
DEPARTMENT OF TELECOMMUNICATIONS
TELECOMMUNICATION ENGINEERING CENTRE
Gate No. 5, Khurshid Lal Bhawan, Janpath, New Delhi-110001**

CERTIFICATE OF DESIGNATION

M/S TARANG LABS, WIPRO LIMITED

has been assessed and designated as Conformity Assessment Body (CAB)
for its facilities at

**SURVEY NO. 70, 77, 78/8A, DODDAKKANELLI, SARJAPUR ROAD,
BENGALURU-560 035**

In the field of Testing

Certificate No. TEC/MRA/CAB/IND-D/67

Issue Date: 20/12/2023

Validity: 17/12/2023 to 16/12/2026

This Certificate remains valid for the Scope of Designation as specified in the Annexure subject to the continued validity of NABL Accreditation and satisfied compliance to the Standards/specifications against which lab has been designated and strict compliance to the relevant terms and conditions of TEC CAB Designation Scheme.

(To see the scope of designation of this laboratory, you may also visit TEC website www.tec.gov.in)

Signed for and on behalf of TEC

**Vijay Dixit
Director (CA)
For Designating Authority
TEC**

Certificate No: TEC/MRA/CAB/IND-D/67 dated 20/12/2023 issued to
M/S Tarang Labs, Wipro Limited,
Survey No. 70, 77, 78/8A, Doddakkanelli, Sarjapur Road,
Bengaluru-560 035.



Validity: - 17/12/2023 to 16/12/2026

Terms & Conditions

This certificate is issued as per the terms and conditions stipulated in the TEC SCHEME FOR DESIGNATING DOMESTIC CONFORMITY ASSESEMENT BODIES AND CERTIFICATION BODIES FOR CONFORMITY ASSESEMENT AND CERTIFICATION OF TELECOMMUNICATION EQUIPMENT ISSUE 3 NO. TEC 04019:2023.

Some of the conditions are reiterated as under:

A. Obligations of the Designated CAB.

1. It shall ensure that it maintains its accreditation status from any recognised Indian accreditation body like NABL during validity period of certificate.
2. It shall follow the stipulated procedures, rules and policies laid down by Designating Authority (DA) or Mutual Recognition Agreement (MRA)* partner for testing and evaluation.
3. In respect of tests for which it is seeking designation, it shall have no interest whatsoever in any business to carry on testing in an unfair or biased manner.
4. It shall fully indemnify DA from and against all liabilities, damages, claims, costs, and expenses incurred or sustained by DA as a result of any action taken or omitted by DA relating to the process of designation.
5. It shall comply with DA's or MRA partner's terms and conditions for designation and recognition as modified from time to time.
6. It shall be under obligation to participate in the online process prescribed by TEC for test and certification against TEC's GR/IR/ER and standards.
7. It shall have a record system which shall have a retention period of at least 5 years for documents related to the equipment testing. It shall maintain all the relevant documents including list of products submitted for testing, product-wise testing and evaluation reports. These documents shall be produced before the DA within seven days, as and when required.
8. It shall ensure the Intellectual Property Rights of the customers in the course of testing by maintaining professional ethics, secrecy and keeping all the product related information confidential.

*Applicable only if recognized by MRA (Mutual Recognition Agreement) partner.

9. It shall notify the DA in writing of occurrence of any of the following incident(s) within 2 weeks of its occurrence
- a) Cessation of its business of conformity assessment for which it is Designated or accredited
 - b) Changes in its legal, commercial, or Organisational status
 - c) Changes, which may affect continuing compliance with any of the criteria or requirement specified by DA or MRA partner.
 - d) Change of premises

B. REFERENCE TO DESIGNATION STATUS

1. Designated CABs may advertise their designation status with regard to standards or parts thereof which are included in the scope of designation.
2. The advertisement should not imply, or otherwise suggest that DA or MRA Partner has endorsed the product or imply that the designated CAB is an agent or representative of DA or MRA Partner.
3. CABs whose designations have been suspended or withdrawn for any reason, shall discontinue advertisement of their designated status and not make any misleading statements regarding their designation status.

C. POST-DESIGNATION SURVEILLANCE

As and when required, DA shall conduct surveillance assessments and other non-routine assessments on the Designated CABs to ensure that standards of practices are maintained as well as to investigate complaints made against them.

D. SUSPENSION OR WITHDRAWAL OF DESIGNATION

1. DA shall suspend or withdraw the designation of a CAB if
 - a. Its accreditation is withdrawn.
 - b. It is found that the CAB is not complying with the stipulated criteria or requirements.
 - c. It is guilty of any offence involving fraud or dishonesty.
 - d. DA concludes that there is a just cause for withdrawing the designation.
2. A CAB whose designation, and recognition in case of MRA, has been suspended or withdrawn shall be removed from the list of designated CABs, in case it fails to take corrective measures.
3. DA shall keep the designation of a Designated CAB under suspension, until the completion of formal review process.

E. AMENDMENT TO THE SCHEME

DA reserves the rights to amend the scheme, as and when required, for the purpose of streamlining designation process.

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Gate No. 5, Khurshid Lal Bhawan, Janpath, New Delhi - 110 001

SCOPE OF DESIGNATION
(ANNEXURE)

Laboratory Name: M/s Tarang Labs, Wipro Limited,
Survey No. 70, 77, 78/8A, Doddakkanelli, Sarjapur Road,
Bengaluru-560 035

Certificate Number: TEC/MRA/CAB/IND-D/67

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Validity: 17/12/2023 to 16/12/2026

Last Amended on: ----

Sl. No.	Telecom Equipment/Product	Test Parameter or Type of Testing	Standard/Specification
1.	Audio/Video, information and communication technology equipment-Safety Requirements	Accessibility to electrical energy sources and safeguards (Clause 5.3.2)	IEC-62368-1:2018
		Ball Pressure test (Clause 5.4.1.10.3)	IEC-62368-1:2018
		Clearance, Creepage (Clause 5.4.2, 5.4.3)	IEC-62368-1:2018
		Electric Strength test (Clause 5.4.9)	IEC-62368-1:2018
		Capacitor Discharge (Clause 5.5.2.2)	IEC-62368-1:2018
		Resistance of Protective bonding (Clause 5.6.6)	IEC-62368-1:2018
		Prospective touch voltage, touch current and protective conductor current (Clause 5.7)	IEC-62368-1:2018
		Static Stability (Clause No. 8.6.2)	IEC-62368-1:2018
		Relocation Stability (Clause 8.6.3)	IEC-62368-1:2018
		Horizontal Force test (Clause 8.6.5)	IEC-62368-1:2018
		Telescoping or rod antennas (Clause 8.12) (Annex T.11)	IEC-62368-1:2018
		Input test (Annex B.2.5)	IEC-62368-1:2018

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Sl. No.	Telecom Equipment/Product	Test Parameter or Type of Testing	Standard/Specification
	Audio/Video, information and Communication Technology Equipment-Safety Requirements	Heating/Temperature test (Clause 9.2.5)	IEC-62368-1:2018
2.	EMI/EMC Testing of Telecommunication Equipment	Conducted Emission Test CISPR 32/ EN 55032, EN 55011, EN 55022	TEC/SD/DD/EMC-221/05/OCT-16 and ER Parameters
		Conducted Emission Test CISPR 14-1	TEC/SD/DD/EMC-221/05/OCT-16 and ER Parameters
		Conducted Emission Test CISPR 25	TEC/SD/DD/EMC-221/05/OCT-16 and ER Parameters
		Radiated Emission Test CISPR 32/ EN 55032, EN 55011, EN 55022	TEC/SD/DD/EMC-221/05/OCT-16 and ER Parameters
		Radiated Emission Test CISPR 14-1	TEC/SD/DD/EMC-221/05/OCT-16 and ER Parameters
		Radiated Emission Test CISPR 25	TEC/SD/DD/EMC-221/05/OCT-16 and ER Parameters
		Electrostatic Discharge Immunity Test ITU-T K.21: 2018	TEC/SD/DD/EMC-221/05/OCT-16 and ER Parameters

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Sl. No.	Telecom Equipment/Product	Test Parameter or Type of Testing	Standard/Specification
	EMI/EMC Testing of Telecommunication Equipment	High Energy (1.2/50 μ s) / Telecom Surge Immunity Test (10/700 μ s) ITU-T K.21: 2018	TEC/SD/DD/EMC-221/05/OCT-16 and ER Parameters
3.	Equipment operating in 2.4 GHz, 5GHz Frequency Bands Equipment operating in 2.4 GHz, 5GHz Frequency Bands	Accumulated Transmit Time, Frequency occupation and Hopping sequence (Clause 4.3.1.4)	ETSI EN 300 328 v 2.2.2
		Adaptivity (Clause 4.3.1.7 or 4.3.2.6)	ETSI EN 300 328 v 2.2.2
		Duty Cycle (Clause 4.3.1.3, 4.3.2.4)	ETSI EN 300 328 v 2.2.2
		Hopping Frequency Separation (Clause 4.3.1.5)	ETSI EN 300 328 v 2.2.2
		Occupied channel bandwidth (Clause 4.3.1.8, 4.3.2.7)	ETSI EN 300 328 v 2.2.2
		Power spectral density (Clause 4.3.2.3)	ETSI EN 300 328 v 2.2.2
		Receiver Blocking (Clause 4.3.1.12 , 4.3.2.11)	ETSI EN 300 328 v 2.2.2
		Receiver spurious Emission (Clause 4.3.1.11, 4.3.2.10)	ETSI EN 300 328 v 2.2.2
		Transmitter RF output Power (Clause 4.3.1.2 & 4.3.2.2)	ETSI EN 300 328 v 2.2.2
		Transmitter Spurious Emission (Clause 4.3.1.10, 4.3.2.9)	ETSI EN 300 328 v 2.1.1 & v 2.2.2

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Sl. No.	Telecom Equipment/Product	Test Parameter or Type of Testing	Standard/Specification
	Equipment operating in 2.4 GHz, 5GHz Frequency Bands	Transmitter unwanted Emission in Outside band (Clause 4.3.1.9, 4.3.2.8)	ETSI EN 300 328 v 2.2.2
		Adaptivity (Clause 4.2.7)	ETSI EN 301 893 v 2.1.1
		Dynamic Frequency Selection (DFS)-Amplitude (Clause 4.2.6)	ETSI EN 301 893 v 2.1.1
		Dynamic Frequency Selection (DFS)-Time (Clause 4.2.6)	ETSI EN 301 893 v 2.1.1
		EIRP (Equivalent isotropically radiated power) (Clause 4.2.3)	ETSI EN 301 893 v 2.1.1
		Frequency error & Frequency stability (Clause 4.2.1, 5.4.2)	ETSI EN 301 893 v 2.1.1
		Nominal and occupied channel bandwidth (Clause 4.2.2)	ETSI EN 301 893 v 2.1.1
		Power Spectral density (Clause 4.2.3.1.3, 5.4.4)	ETSI EN 301 893 v 2.1.1
		Receiver Blocking (Clause-4.2.8)	ETSI EN 301 893 v 2.1.1
		Receiver Spurious emission (Clause 4.2.5)	ETSI EN 301 893 v 2.1.1
		Transmitter Power Control (TPC) (Clause 4.2.3)	ETSI EN 301 893 v 2.1.1
		Transmitter RF Output Power (Clause 4.2.3)	ETSI EN 301 893 v 2.1.1

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Sl. No.	Telecom Equipment/Product	Test Parameter or Type of Testing	Standard/Specification
	Equipment operating in 2.4 GHz, 5GHz Frequency Bands	Transmitter spurious emission [*] (Clause 4.2.4.1)	ETSI EN 301 893 v 2.1.1
		Transmitter Unwanted emission within the band (Clause 4.2.4.2)	ETSI EN 301 893 v 2.1.1
		Radiated Emission (Annex B.2 and C.2)	ETSI EN 301 893 v 2.1.1
		Radiated Emission test (Annex C.2)	ETSI EN 302 502 v 2.1.1
		Accumulated Transmit Time, Frequency occupation and Hopping sequence (15.247)	FCC CFR 47 Subpart C
		Occupied Channel bandwidth/Channel bandwidth (15.247)	FCC CFR 47 Subpart C
		Power Spectral density (15.247)	FCC CFR 47 Subpart C
		Transmitter RF Output Power (15.247)	FCC CFR 47 Subpart C
		Transmitter Spurious emission (15.205)	FCC CFR 47 Subpart C
		Band edge measurements (15.407)	FCC CFR 47 Subpart E
		Dynamic Frequency Selection (DFS)-Amplitude (15.407)	FCC CFR 47 Subpart E

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Sl. No.	Telecom Equipment/Product	Test Parameter or Type of Testing	Standard/Specification
	Equipment operating in 2.4 GHz, 5GHz frequency bands	Dynamic Frequency Selection (DFS)-Time (15.407)	FCC CFR 47 Subpart E
		EIRP (Equivalent isotropically radiated power) (15.407)	FCC CFR 47 Subpart E
		Frequency error & Frequency stability (15.407)	FCC CFR 47 Subpart E
		Occupied Channel bandwidth/channel bandwidth (15.407)	FCC CFR 47 Subpart E
		Power Spectral density (15.407)	FCC CFR 47 Subpart E
		Transmitter RF Output Power (15.407)	FCC CFR 47 Subpart E
		Transmitter Spurious Emission (15.407)	FCC CFR 47 Subpart E
4.	Safety Requirement for Radio transmitting equipment- General requirement and terminology	Marking relevant to safety (Clause 6.4 a)	IEC 60215
		Insulation (Clause 7.6)	IEC 60215
		High Temperatures (Clause 8.2)	IEC 60215
		Creepage and Clearance Distance (Annex A)	IEC 60215
5.	Environmental Testing of Telecommunication Equipment	Cold (Low Temperature) Test	QM-333:2010
		Dry Heat (High Temperature) Test	QM-333:2010
		Tropical exposure (Damp Heat cyclic) Test	QM-333:2010

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Sl. No.	Telecom Equipment/Product	Test Parameter or Type of Testing	Standard/Specification
	Environmental Testing of Telecommunication Equipment	Temperature Cycling Test	QM-333:2010
		Damp Heat (Steady State) Test	QM-333:2010
		Vibration Test	QM-333:2010
		Salt Mist Test	QM-333:2010

AD (CA), TEC

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