


# C-DOT-TSDSI Webinar Series

The National Standards for IoT  
Smart Cities Perspective

 5-8 July, 2021

 2:00PM to 4:00PM IST



# C-DOT-TSDSI Webinar Series: The National Standards for IoT – Smart Cities Perspective IoT Standards and Smart Cities: oneM2M use cases, interworking, Testing and Certifications

## Testing and Certification of IoT Ecosystem in India

By

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DDG (MRA),TEC

# WHY DO WE NEED TESTING AND CERTIFICATION

## CONFIRMITY ASSESMENT AND CERTIFICATION-EMPHASIS

Conformity assessment is the comprehensive term for procedures by which products and processes are evaluated and determined to conform to particular standards...

Gives confidence certainty of environment in which we deploy, helps to ensure product are delivered as per promise

As a public policy professionals our focus is on protecting and providing the services and goods to last man with out discrimination

Complications in testing IOT technologies



In today's Homo Economicus society, telecommunication technology has become cardinal thread in the ambitiously emerging civilisations

Nudging public policy in an emerging new great civilisations is not possible without data acquisition through IOT and telecom technologies...

Telecom technologies are changing civilisation from homo economicus to Homo socio economicus by connecting people and things intelligently ..

How can we sustain such societies with out standardisation and conformity assesment..

# METAMORPHISIS OF TESTIGN AND CERTIFICATION

Emerging technologies are re-defining the testing as a process of continuum- NATIONAL STRATEGY .

To dream for 5 trillion dollar Indian economy, telecom is pivotal sector  
The Conformity Assessment and certification shall be cardinal thread to accelerate such growth in any sector

Virtualisation and softwareisation are biggest challenges in testing



To Meet such demand in the industry TEC has started an ambitious scheme called Conformity Assessment Bodies Designation scheme and Mutual Recognition Agreement (MRAs)  
Where is the compliance eco- system to realise such big dream ? ONLY PPP is the way !!!!  
CAB designation scheme is the answer



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# TEC National strategy - Social justice vs markets



various certifications that TEC awards apart from Mandatory  
AN INNOVATIVE PUBLIC POLICY TO MEET ASPIRATION OF GOVT

## TYPES OF CERTIFICATES ISSUED BY TEC

S.No	Certificate issued by TEC	Available Standard  (Test Guide in accordance with)	Eligibility	Applicable to  (Telecom & related ICT sector)	Certification fee	Remarks
1	Type Approval (TA)	Generic Requirements (GRs)	Any Indian Entity	Standard Products/Equipment/Solutions (Commercially Deployable)	Fixed fee  *Shall be incentivised for startups/SMEs appropriately	To Ensure Technical & Interoperable standards
2	Interface Approval (IA)	Interface Requirements (IRs)	Any Indian Entity	Standard Products/Equipment/Solutions (Commercially Deployable)	Fixed fee  *Shall be incentivised for startups/SMEs appropriately	To Ensure Interoperable

3	Certificate of Approval (CoA)	DEM/ODM/Developer Specs (based on available International & Regional benchmarks)	Any Indian Entity  (Especially-Startups, MSMEs, Academia, R&D Institutions)	Innovative Product/Solution/Use-case (Incl. Integrated product & Software) for which TEC standards (GRs/IRs) are not specified	Determined Based on the product/use-case type & Test Guide (Variable)  *Shall be incentivised for startups/SMEs appropriately	To Encourage Innovation & Indigenisation w.r.t Emerging/Next Generation Technologies & use-cases (including 5G, IoT/M2M etc.)
4	Technology Approval	Generic Requirements (GRs)	Any Indian R&D Organisation:  (Especially-Startups, MSMEs, Academia, R&D Institutions)	Non-Commercial or R&D-Prototype/System/Subsystem	No Fee	To Encourage Innovation & Indigenisation w.r.t Standard Products



Following Essential Requirements are published by TEC as on date

- IOT Gate Way
- Smart Watch
- Smart Electric meters
- Feed back devices
- Tracking devices



# lot gateway

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# smart watch

# feed back

# devices



Sr. No.	Lab Name	Address
1	Bharat Test House Pvt. Ltd.	781, HSIIDC Industrial Estate, Rai, Dist-Sonepat HARYANA INDIA
2	Compliance International Telecom Laboratories (A Unit of Compliance International Pvt. Ltd.)	X-35, 3rd Floor, Okhla Phase-II New Delhi DELHI INDIA
3	Criterion Network Labs	#3, G Floor, Explorer, International Tech Park, Whitefield Bangalore Rural KARNATAKA INDIA
4	iTEMCLAB Pvt ltd	3, 8TH FLOOR, SPTBI, BHAVANS CAMPUS, MUNSHI NAGAR, ANDHERI WEST, Mumbai
5	AA Electro Magnetic Test Laboratory Private Limited	PLOT NO 174, UDYOG VIHAR, PHASE 4, SECTOR 18, Gurugram
6	Alpha Test House	198-199, M.I.E., Phase-I, Bahadurgarh HARYANA INDIA
7	UL INDIA PRIVATE LIMITED, LABORATORY BUILDING	KALYANI PLATINA CAMPUS, SY.NO.129/4, EPIP ZONE, PHASE II, WHITEFIELD
8	DELHI TEST HOUSE	PLOT NO.50, PHASE-IV, SECTOR- 57, HSIIDC INDUSTRIAL AREA
9	TUV RHEINLAND (INDIA) PVT. LTD	SAFETY, EMI EMC, WIRELESS/ IOT AND ENVIRONMENTAL TESTING LABORATORY, FIRST FLOOR,GROUND FLOOR & BASEMENT, NO. 27/B, 2ND CROSS ROAD, ELECTRONIC CITY PHASE 1
10	TATA Advanced Systems Limited	42-43 HOSUR ROAD, ELECTRONIC CITY

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5	AA Electro Magnetic Test Laboratory Private Limited	PLOT NO 174, UDYOG VIHAR, PHASE 4, SECTOR 18, Gurugram
6	TUV Rheinland (India) Pvt. Ltd.	Plot No. 330-331, Udyog Vihar, Phase-IV, Gurgaon HARYANA INDIA
7	Delhi Test House	Plot No. 50, Phase- IV, Sector-57, HSIIDC Industrial Area, Kundli Sonipat HARYANA INDIA
8	Tata Power Strategic Engineering Division, A Division of the Tata Power Company Ltd.	42-43 Electronic City, Phase 1, Hosur Road, Bengaluru KARNATAKA INDIA
9	iTEMCLAB Pvt ltd	3, 8TH FLOOR, SPTBI, BHAVANS CAMPUS, MUNSHI NAGAR, ANDHERI WEST, Mumbai
10	Sunren Telecom Laboratory	C-475, TTC Industrial area Pawane, MIDC Mumbai-City MAHARASHTRA INDIA
11	Conformity Testing Labs Pvt. Ltd.	Unit-2, A-33, Mayapuri Industrial Area, Phase-1 New Delhi DELHI INDIA
12	Tarang-Product Qualification and Compliance Planet, Wipro Technologies	Survey No. 70, 77, 78/8A, Dodda Kannelli, Sarjapur Road, Bengaluru KARNATAKA INDIA

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# Thank You

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