



**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 Nemko India (Test Lab) Private Limited, Faridabad
has been assessed and designated as Conformity Assessment Body (CAB)
for its facilities at

Plot No. 193, Sector-68, IMT Faridabad, Haryana-121 004

In the field of Testing

Certificate No. TEC/MRA/CAB/IND-D/19-III

Issue Date: 07/06/2023

Validity: 07/06/2023 to 06/06/2026

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

**Signed by Sanjeev Kumar
Arya**

Date: 07-06-2023 16:46:46

Reason: Approved

**Sanjeev Kumar Arya
Director (CA)
For Designating Authority
TEC**

1/3106690 Certificate No: TEC/MRA/CAB/IND-D/xxx dated 07/06/2023 issued to
M/s Nemko India (Test Lab) Private Limited, Faridabad
Plot No. 193, Sector-68, IMT Faridabad, Haryana-121004



Validity: - 07/06/2023 to 06/06/2026

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.

SCOPE OF DESIGNATION

(ANNEXURE)

Laboratory Name: M/s Nemko India (Test Lab) Private Limited, Faridabad.
Plot No. 193, Sector-68, IMT Faridabad, Haryana-121004.

Certificate Number: TEC/MRA/CAB/IND-D/19-III

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Validity: 07/06/2023 to 06/06/2026

Last Amended on: ----

Sl. No.	Telecom Equipment/ Product	Test Parameter or Type of Testing	Standard/ Specification
1.	Transmission Terminal Equipment	Parameters link with Product Variant	Channel spacing for 10G or 40G or 100G DWDM (ITU-T G.694.1)
		Interface: 2 Mbps – E1	Input Jitter Tolerance for 2 Mbps Int. (ITU-T G.823)
			Nominal Bit Rate with Tolerance for 2 Mbps Int. (ITU-T G.703)
			Output Jitter for 2 Mbps Int. (ITU-T G.823)
			Pulse Mask for 2 Mbps Int. (ITU-T G.703)
		Interface: 34 Mbps – E3	Input Jitter Tolerance for 34 Mbps Int. (ITU-T G.823)
			Nominal Bit Rate with Tolerance for 34 Mbps Int. (ITU-T G.703)
			Output Jitter for 34 Mbps Int. (ITU-T G.823)
			Pulse Mask for 34 Mbps Int. (ITU-T G.703)

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Sl. No.	Telecom Equipment/ Product	Test Parameter or Type of Testing	Standard/ Specification	
	Transmission Terminal Equipment	Interface: 45 Mbps E1	DC Power (ITU-T G.703)	TEC ER No. TEC78832302 & TEC70122302
			Input Jitter Tolerance for 45 Mbps Int. (ITU-T G.824)	TEC ER No. TEC78832302 & TEC70122302
			Nominal Bit Rate with Tolerance for 45 Mbps Int. (ITU-T G.703)	TEC ER No. TEC78832302 & TEC70122302
			Output Jitter for 45 Mbps Int. (ITU-T G.824)	TEC ER No. TEC78832302 & TEC70122302
			Pulse Mask for 45 Mbps Int. (ITU-T G.703)	TEC ER No. TEC78832302 & TEC70122302
		Interface: STM-1 Electrical	Input Jitter Tolerance STM-1 Electrical (ITU-T G.825)	TEC ER No. TEC78832302 & TEC70122302
			Nominal Bit Rate with Tolerance STM-1 Electrical Int. (ITU-T G.703)	TEC ER No. TEC78832302 & TEC70122302
			Output Jitter for STM-1 Electrical Int. (ITU-T G.825)	TEC ER No. TEC78832302 & TEC70122302

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Sl. No.	Telecom Equipment/ Product	Test Parameter or Type of Testing	Standard/ Specification	
	Transmission Terminal Equipment	Pulse Mask for STM-1 Electrical Int. (ITU-T G.703)	TEC ER No. TEC78832302 & TEC70122302	
		Interface: STM-1 Optical	Input Jitter Tolerance for STM-1 Opt (ITU-T G.825)	TEC ER No. TEC78832302 & TEC70122302
			Mean Launched Power for STM-1 Opt Int. (ITU-T G.957)	TEC ER No. TEC78832302 & TEC70122302
			Operating Wavelength Range for STM-1 Opt Int. (ITU-T G.957)	TEC ER No. TEC78832302 & TEC70122302
			Output Jitter for STM-1 Opt Int. (ITU-T G.783)	TEC ER No. TEC78832302 & TEC70122302
			Receiver Overload for STM-1 Opt Int. (ITU-T G.957)	TEC ER No. TEC78832302 & TEC70122302
			Receiver Sensitivity for STM-1 Opt Int. (ITU-T G.957)	TEC ER No. TEC78832302 & TEC70122302

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Sl. No.	Telecom Equipment/Product	Test Parameter or Type of Testing	Standard/Specification	
	Transmission Terminal Equipment	Interface: STM-4 Optical	Input Jitter Tolerance for STM-4 Opt (ITU-T G.825)	TEC ER No. TEC78832302 & TEC70122302
			Mean Launched Power for STM-4 Opt Int. (ITU-T G.957)	TEC ER No. TEC78832302 & TEC70122302
			Operating Wavelength Range for STM-4 Opt Int. (ITU-T G.957)	TEC ER No. TEC78832302 & TEC70122302
			Output Jitter for STM-4 Opt Int. (ITU-T G.783)	TEC ER No. TEC78832302 & TEC70122302
			Receiver Overload for STM-4 Opt Int. (ITU-T G.957)	TEC ER No. TEC78832302 & TEC70122302
			Receiver Sensitivity for STM-4 Opt Int. (ITU-T G.957)	TEC ER No. TEC78832302 & TEC70122302
		Interface: STM-16 Optical	Input Jitter Tolerance for STM-16 Opt (ITU-T G.825)	TEC ER No. TEC78832302 & TEC70122302
			Mean Launched Power for STM-16 Opt Int. (ITU-T G.957)	TEC ER No. TEC78832302 & TEC70122302

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Sl. No.	Telecom Equipment/ Product	Test Parameter or Type of Testing	Standard/ Specification
	Transmission Terminal Equipment	Operating Wavelength Range for STM-16 Opt Int. (ITU-T G.957)	TEC ER No. TEC78832302 & TEC70122302
		Output Jitter for STM-16 Opt Int. (ITU-T G.783)	TEC ER No. TEC78832302 & TEC70122302
		Receiver Overload for STM-16 Opt Int. (ITU-T G.957)	TEC ER No. TEC78832302 & TEC70122302
		Receiver Sensitivity for STM-16 Opt Int. (ITU-T G.957)	TEC ER No. TEC78832302 & TEC70122302
	Interface: STM-64 Optical	Input Jitter Tolerance for STM-64 Opt (ITU-T G.825)	TEC ER No. TEC78832302 & TEC70122302
		Mean Launched Power for STM-64 Opt Int. (ITU-T G.691)	TEC ER No. TEC78832302 & TEC70122302
		Nominal Bit Rate with Tolerance STM-64 Opt Int. (ITU-T G.707)	TEC ER No. TEC78832302 & TEC70122302
		Operating Wavelength Range for STM-64 Opt Int. (ITU-T G.691)	TEC ER No. TEC78832302 & TEC70122302

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Sl. No.	Telecom Equipment/ Product	Test Parameter or Type of Testing	Standard/ Specification	
	Transmission Terminal Equipment	Output Jitter for STM-64 Opt Int. (ITU-T G.783)	TEC ER No. TEC78832302 & TEC70122302	
		Receiver Overload for STM-64 Opt Int. (ITU-T G.691)	TEC ER No. TEC78832302 & TEC70122302	
		Receiver Sensitivity for STM-64 Opt Int. (ITU-T G.691)	TEC ER No. TEC78832302 & TEC70122302	
		Interface: OTU-1	Input Jitter Tolerance for OTU -1 Int. (ITU-T G.8251)	TEC ER No. TEC78832302 & TEC70122302
		Nominal Bit Rate with Tolerance OTU-1 Int. (ITU-T G.709)	TEC ER No. TEC78832302 & TEC70122302	
		Output Jitter for OTU-1 Int. (ITU-T G.8251)	TEC ER No. TEC78832302 & TEC70122302	
		Interface: OTU-2	Input Jitter Tolerance for OTU-2 Int. (ITU-T G.8251)	TEC ER No. TEC78832302 & TEC70122302
		Nominal Bit Rate with Tolerance OTU-2 Int. (ITU-T G.709)	TEC ER No. TEC78832302 & TEC70122302	
		Output Jitter for OTU-2 Int. (ITU-T G.8251)	TEC ER No. TEC78832302 & TEC70122302	

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Sl. No.	Telecom Equipment/Product	Test Parameter or Type of Testing	Standard/Specification
	Transmission Terminal Equipment	Interface: OTU-3	Nominal Bit Rate with Tolerance OTU-3 Int. (ITU-T G.709) TEC ER No. TEC70122302
		Interface: OTU-4	Nominal Bit Rate with Tolerance OTU-4 Int. (ITU-T G.709) TEC ER No. TEC70122302
2.	IoT Gateway	Basic RF Requirements for NFC- interface	Transmitter Radiated Spurious Domain Limit > 30MHz ETSI EN 300 330 V2.1.1 (2017-02) TEC ER No. TEC24492301
			Receiver Spurious Emissions (Radiated) ETSI EN 300 330 V2.1.1 (2017-02) TEC ER No. TEC24492301
3.	Radio Broadcast Receiver RBR	Parameters link with Product Variant	Receiver Blocking ETSI EN 303 413 V1.2.1 Clause 4.2.1 TEC ER No. TEC50012301
			Receiver Spurious Emissions ETSI EN 303 413 V1.2.1 Clause 4.2.2 TEC ER No. TEC50012301
			Broadcast Sound Receivers ETSI EN 303 345 V1.1.7 Clause 4.2.1 TEC ER No. TEC50012301

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Sl. No.	Telecom Equipment/ Product	Test Parameter or Type of Testing	Standard/ Specification
	Radio Broadcast Receiver RBR	AM testing ETSI EN 303 345 V1.1.7 Clause 4.2.3.1	TEC ER No. TEC50012301
		Broadcast Radio Frequency Bands ETSI EN 303 345 V1.1.7 Clause 4.2.2	TEC ER No. TEC50012301
		FM Testing ETSI EN 303 345 V1.1.7 Clause 4.2.3.2	TEC ER No. TEC50012301
		Sensitivity ETSI EN 303 345 V1.1.7 Clause 4.2.4	TEC ER No. TEC50012301
		Unwanted Emissions in the Spurious Domain ETSI EN 303 345 V1.1.7 Clause 4.2.6	TEC ER No. TEC50012301
		Adjacent Channel Selectivity and Blocking ETSI EN 303 345 V1.1.7 Clause 4.2.5	TEC ER No. TEC50012301
4.	PON Family of Broadband Equipment	Parameters link with product Variant	Latency and Frame loss of PON RFC 2544 TEC ER No. TEC14762301

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Sl. No.	Telecom Equipment/Product	Test Parameter or Type of Testing	Standard/Specification
	PON Family of Broadband Equipment	Parameters link with product Variant	
		Latency and Frame loss of PON RFC 2544	TEC ER No. TEC14762301
		MAC Address Learning and Aging Control G.984.1, G.987.2, G.989.2, IEEE 802.3ah, IEEE 802.3av, G.9807.1, IEEE 802.1Q	TEC ER No. TEC14762301
		MAC Address Limitation in PON IEEE 802.3	TEC ER No. TEC14762301
		MAC Learning Support at OLT IEEE 802.3	TEC ER No. TEC14762301
		Minimum Two Classification G.984.3, IEEE 802.3ah, G.987.2, G.9807.1, G989.2, IEEE 802.3av	TEC ER No. TEC14762301
		Minimum Guaranteed bandwidth in PON G.984.3, IEEE 802.3ah, G.987.2, G.9807.1, G989.2, IEEE 802.3av	TEC ER No. TEC14762301

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Sl. No.	Telecom Equipment/Product	Test Parameter or Type of Testing	Standard/Specification
	PON Family of Broadband Equipment	Parameters link with product Variant	
		Maximum Bandwidth Limiting in PON G.984.3, IEEE 802.3ah, G.987.2, G.9807.1, G989.2, IEEE 802.3av	TEC ER No. TEC14762301
		Password Based Authentication in PON G.984.3 IEEE802.3	TEC ER No. TEC14762301
		Port-id Based VLAN Support at OLT G.984.1, G.987.1, G.989.2, IEEE 802.3ah, IEEE 802.3av, G.9807.1, G.984.5, IEEE 802.1Q	TEC ER No. TEC14762301
		Switch Fabric Throughput Capability G.984.1, IEEE 802.3ah, G.987.2, G.9807.1, G.984.5, G.989.2, IEEE 802.3av, IEEE 802.1Q	TEC ER No. TEC14762301
VLAN Stacking to Network Support at OLT IEEE 802.1ad and IEEE 802.1Q	TEC ER No. TEC14762301		

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Sl. No.	Telecom Equipment/Product	Test Parameter or Type of Testing	Standard/Specification	
	PON Family of Broadband Equipment	Interface: FE	Link Speed and Auto Negotiation for FE IEEE 802.3	TEC ER No. TEC14762301
		Interface: GE	Link Speed and Auto Negotiation for GE IEEE 802.3	TEC ER No. TEC14762301
		Interface: EPON	Operating Wavelength Transmitter IEEE 802.3ah (Annex. J2)	TEC ER No. TEC14762301
			Operating Wavelength Receiver IEEE 802.3ah (Annex. J2)	TEC ER No. TEC14762301
			Opt Output Power at OLT IEEE 802.3ah (Annex. J2)	TEC ER No. TEC14762301
			Opt Output Power at ONT IEEE 802.3ah (Annex. J2)	TEC ER No. TEC14762301
			Receiver Sensitivity at OLT IEEE 802.3ah (Annex. J2)	TEC ER No. TEC14762301
			Receiver Sensitivity at ONT IEEE 802.3ah (Annex. J2)	TEC ER No. TEC14762301
			Throughput (G.984.1 RFC 2544 Annex-J3)	TEC ER No. TEC14762301
		Interface: GPON	Operating Wavelength Trans. (G.984.2. Annex-J2)	TEC ER No. TEC14762301

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Sl. No.	Telecom Equipment/Product	Test Parameter or Type of Testing	Standard/Specification	
	PON Family of Broadband Equipment	Interface: GPON	Operating Wavelength Recv. (G.984.2. Annex-J2)	TEC ER No. TEC14762301
			Opt Output Power at OLT (G.984.2. Annex-J2)	TEC ER No. TEC14762301
			Opt Output Power at ONT (G.984.2. Annex-J2)	TEC ER No. TEC14762301
			Receiver Sensitivity at OLT (G.984.2. Annex-J2)	TEC ER No. TEC14762301
			Receiver Sensitivity at ONT (G.984.2. Annex-J2)	TEC ER No. TEC14762301
			Throughput (G.984.1 RFC 2544 Annex-J3)	TEC ER No. TEC14762301
			Interface: XGPON	Operating Wavelength Recv. (G.987.2. Annex-J2)
		Operating Wavelength Trans (G.987.2. Annex-J2)		TEC ER No. TEC14762301
		Opt Output Power at OLT (G.987.2. Annex-J2)		TEC ER No. TEC14762301
		Opt Output Power at ONT (G.987.2. Annex-J2)		TEC ER No. TEC14762301
		Receiver Sensitivity at OLT (G.987.2. Annex-J2)		TEC ER No. TEC14762301
		Receiver Sensitivity at ONT (G.987.2. Annex-J2)		TEC ER No. TEC14762301

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Sl. No.	Telecom Equipment/Product	Test Parameter or Type of Testing	Standard/Specification	
	PON Family of Broadband Equipment	Interface: XGPON	Throughput (G.987.1 RFC 2544 Annex-J3)	TEC ER No. TEC14762301
		Interface: XGSPON	Operating Wavelength Trans (G.9807.1. Annex-J2)	TEC ER No. TEC14762301
			Operating Wavelength Recv. (G.9807.1. Annex-J2)	TEC ER No. TEC14762301
			Opt Output Power at OLT (G.9807.1. Annex-J2)	TEC ER No. TEC14762301
			Opt Output Power at ONT (G.9807.1. Annex-J2)	TEC ER No. TEC14762301
			Receiver Sensitivity at OLT (G.9807.1. Annex-J2)	TEC ER No. TEC14762301
			Receiver Sensitivity at ONT (G.9807.1. Annex-J2)	TEC ER No. TEC14762301
			Throughput (G.9807.1 RFC 2544 Annex-J3)	TEC ER No. TEC14762301
			Interface: NGPON2	Operating Wavelength Recv. (G.989.2. Annex-J2)
		Operating Wavelength Trans. (G.989.2. Annex-J2)		TEC ER No. TEC14762301
		Opt Output Power at OLT (G.989.2. Annex-J2)		TEC ER No. TEC14762301

***The validity of Certificate is up to 06/06/2026 or the continued validity of NABL Accreditation, whichever is earlier.**

GOVERNMENT OF INDIA
MINISTRY OF COMMUNICATIONS
DEPARTMENT OF TELECOMMUNICATIONS
TELECOMMUNICATION ENGINEERING CENTRE
Gate No. 5, Khurshid Lal Bhawan, Janpath, New Delhi - 110 001



SCOPE OF DESIGNATION
(ANNEXURE)

Laboratory Name: M/s Nemko India (Test Lab) Private Limited, Faridabad.
Plot No. 193, Sector-68, IMT Faridabad, Haryana-121004.

Certificate Number: TEC/MRA/CAB/IND-D/19-III

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Validity: 07/06/2023 to 06/06/2026

Last Amended on: ----

Sl. No.	Telecom Equipment/Product	Test Parameter or Type of Testing	Standard/Specification	
	PON Family of Broadband Equipment	Interface: NGPON2	Opt Output Power at ONT (G.989.2. Annex-J2)	TEC ER No. TEC14762301
			Receiver Sensitivity at OLT (G.989.2. Annex-J2)	TEC ER No. TEC14762301
			Receiver Sensitivity at ONT (G.989.2. Annex-J2)	TEC ER No. TEC14762301
			Throughput (G.989.2 Annex- J3)	TEC ER No. TEC14762301
		Interface: 10 GEPON	Operating Wavelength in Downstream Direction IEEE 802.3av. Annex-J2	TEC ER No. TEC14762301
			Operating Wavelength in Upstream Direction IEEE 802.3av. Annex-J2	TEC ER No. TEC14762301
			Opt Output Power at OLT IEEE 802.3av. Annex-J2	TEC ER No. TEC14762301
			Opt Output Power at ONT IEEE 802.3av. Annex-J2	TEC ER No. TEC14762301
			Receiver Sensitivity at OLT IEEE 802.3av. Annex-J2	TEC ER No. TEC14762301
			Receiver Sensitivity at ONT IEEE 802.3av. Annex-J2	TEC ER No. TEC14762301
			Throughput IEEE 802.3av. RFC 2544. Annex-J3	TEC ER No. TEC14762301

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Validity: 07/06/2023 to 06/06/2026

Last Amended on: ----

Sl. No.	Telecom Equipment/Product	Test Parameter or Type of Testing	Standard/Specification	
5.	LAN Switch	Parameters link with Product Variant	MAC Learning and Packet Forwarding Annex-P11	TEC ER No. TEC37942304
			Spanning Tree Protocol IEEE 802.1d	TEC ER No. TEC37942304
		Interface: 1G Optical Ethernet	Average Launch Power IEEE 802.3z Cl 38, Annex-H	TEC ER No. TEC37942304
			Receiver Sensitivity IEEE 802.3z Cl 38, Annex-H	TEC ER No. TEC37942304
			Wavelength IEEE 802.3z Cl 38, Annex-H	TEC ER No. TEC37942304
		Interface: 10G Optical Ethernet	Average Launch Power IEEE 802.3ae Cl 52, Annex-H	TEC ER No. TEC37942304
			Receiver Sensitivity IEEE 802.3ae Cl 52, Annex-H	TEC ER No. TEC37942304
			Wavelength IEEE 802.3ae Cl 52, Annex-H	TEC ER No. TEC37942304
		Interface: 100G Optical Ethernet	Average Launch Power IEEE 802.3ba Cl 86,88, Annex-H	TEC ER No. TEC37942304
			Receiver Sensitivity IEEE 802.3ba Cl 86,88, Annex-H	TEC ER No. TEC37942304

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Certificate Number: TEC/MRA/CAB/IND-D/19-III

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Validity: 07/06/2023 to 06/06/2026

Last Amended on: ----

Sl. No.	Telecom Equipment/Product	Test Parameter or Type of Testing	Standard/Specification		
	LAN Switch	Interface: 100G Optical Ethernet	Wavelength IEEE 802.3ba Cl 86,88, Annex-H TEC ER No. TEC37942304		
		Interface: 40G Optical Ethernet	Average Launch Power IEEE 802.3ba Cl 86,87, Annex-H TEC ER No. TEC37942304		
			Receiver Sensitivity IEEE 802.3ba Cl 86,87, Annex-H TEC ER No. TEC37942304		
			Wavelength IEEE 802.3ba Cl 86,87, Annex-H TEC ER No. TEC37942304		
		Interface: Fast Ethernet Optical	Average Launch Power IEEE 802.3u, Annex-H TEC ER No. TEC37942304		
			Receiver Sensitivity IEEE 802.3u, Annex-H TEC ER No. TEC37942304		
			Wavelength IEEE 802.3u, Annex-H TEC ER No. TEC37942304		
		6.	Router	Parameters link with Product Variant	PPPoE RFC2516, Annex-P11 TEC ER No. TEC37682305
				TCP Parameters RFC 793, Annex-P11 TEC ER No. TEC37682305	
				IPv4 parameters Set-D RFC 791 Annex-P11 TEC ER No. TEC37682305	
		Dynamic routing Annex-P11 TEC ER No. TEC37682305			

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SCOPE OF DESIGNATION

(ANNEXURE)

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Plot No. 193, Sector-68, IMT Faridabad, Haryana-121004.

Certificate Number: TEC/MRA/CAB/IND-D/19-III

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Validity: 07/06/2023 to 06/06/2026

Last Amended on: ----

Sl. No.	Telecom Equipment/ Product	Test Parameter or Type of Testing	Standard/ Specification	
	Router	Parameters link with Product Variant	Manageability SNMP v2 or V3 RFC 3410 3416 Annex-P11	TEC ER No. TEC37682305
			Static Routing Annex-P11	TEC ER No. TEC37682305
		Interface: 25G Optical Ethernet	Average Launch Power IEEE 802.3 Cl 114, Annex-H	TEC ER No. TEC37682305
			Receiver Sensitivity IEEE 802.3 Cl 114, Annex-H	TEC ER No. TEC37682305
			Wavelength IEEE 802.3 Cl 114, Annex-H	TEC ER No. TEC37682305
		Interface: 200G Optical Ethernet	Average Launch Power IEEE 802.3cn Cl 121, 122, Annex-H	TEC ER No. TEC37682305
			Receiver Sensitivity IEEE 802.3cn Cl 121, 122, Annex-H	TEC ER No. TEC37682305
			Wavelength IEEE 802.3cn Cl 121, 122, Annex-H	TEC ER No. TEC37682305
		Interface: 400G Optical Ethernet	Average Launch Power IEEE 802.3cn Cl 122,124, Annex-H	TEC ER No. TEC37682305

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SCOPE OF DESIGNATION

(ANNEXURE)

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Certificate Number: TEC/MRA/CAB/IND-D/19-III

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Validity: 07/06/2023 to 06/06/2026

Last Amended on: ----

Sl. No.	Telecom Equipment/Product	Test Parameter or Type of Testing	Standard/Specification	
	Router	Interface: 400G Optical Ethernet	Receiver Sensitivity IEEE 802.3cn Cl 122,124, Annex-H	TEC ER No. TEC37682305
			Wavelength IEEE 802.3cn Cl 122,124, Annex-H	TEC ER No. TEC37682305
		Interface: 50G Optical Ethernet	Average Launch Power IEEE 802.3cn	TEC ER No. TEC37682305
			Receiver Sensitivity IEEE 802.3cn	TEC ER No. TEC37682305
			Wavelength IEEE 802.3cn	TEC ER No. TEC37682305
		7.	IP Security Equipment	Parameters link with Product Variant
NAT Functional Test Annex-P11	TEC ER No. TEC34732305			
Policy Functional test Annex-P11	TEC ER No. TEC34732305			

Signed by Anshul Kumar
Gupta
Date: 07-06-2023 16:51:41
Reason: Approved

AD (CA), TEC

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Government of India
Telecommunication Engineering Centre
Department of Telecommunication
Gate No. 5, Khurshid Lal Bhawan, Janpath, New Delhi – 110001.

No. -1-100/2023- सी.ए. /टी. ई. सी

Dated: 20.09.2023

Addendum

Subject: Designation of M/s Nemko India (Test Lab) Pvt. Ltd., Faridabad as Conformity Assessment Body (CAB).

Ref: 1. CAB Designation Certificate No. TEC/MRA/CAB/IND-D/19-III dated 07.06.2023

It is informed that the existing scope of Designation of M/s Nemko India (Test Lab) Pvt. Ltd., Faridabad as CONFORMITY ASSESSMENT BODY (CAB) of TEC has been enhanced in respect of following test parameters on account of inclusion of these test parameters in its NABL Scope of Accreditation w.e.f. the date of issue of this Addendum:

Sl. No.	Telecom Equipment/Product	Test Parameter or Type of Testing	Standard/Specification	
1.	Transmission Terminal Equipment	Interface: OTU-1	Central Frequency for OTU-1 Int. ITU-T G.959.1 G.693	TEC ER No. TEC78832308 & TEC70122308
			Mean Total Input Power for OTU-1 Int. ITU-T G.959.1 G.693	TEC ER No. TEC78832308 & TEC70122308
			Mean Total Output Power for OTU-1 Int. ITU-T G.959.1 G.693	TEC ER No. TEC78832308 & TEC70122308
			Receiver Sensitivity for OTU-1 Int. ITU-T G.959.1 G.693	TEC ER No. TEC78832308 & TEC70122308
		Interface: OTU-2	Central frequency for OTU-2 Int. ITU-T G.959.1 G.693	TEC ER No. TEC78832308 & TEC70122308
			Mean Total Input Power for OTU-2 Int. ITU-T G.959.1 G.693	TEC ER No. TEC78832308 & TEC70122308
			Mean Total Output Power for OTU-2 Int. ITU-T G.959.1 G.693	TEC ER No. TEC78832308 & TEC70122308
			Minimum Receiver Overload for OTU-2 Int. ITU-T G.959.1 G.693	TEC ER No. TEC78832308 & TEC70122308
			Receiver Sensitivity for OTU-2 Int. ITU-T G.959.1 G.693	TEC ER No. TEC78832308 & TEC70122308

Transmission Terminal Equipment	Interface: OTU-3	Central Frequency for OTU-3 Int. ITU-T G.959.1 G.693	TEC ER No. TEC70122308
		Mean Total Input Power for OTU-3 Int. ITU-T G.959.1 G.693	TEC ER No. TEC70122308
		Mean Total Output Power for OTU-3 Int. ITU-T G.959.1 G.693	TEC ER No. TEC70122308
		Minimum Receiver Overload for OTU-3 Int. ITU-T G.959.1 G.693	TEC ER No. TEC70122308
		Receiver Sensitivity for OTU-3 Int. ITU-T G.959.1 G.693	TEC ER No. TEC70122308
	Interface: OTU-4	Central Frequency for OTU-4 Int. ITU-T G.959.1 G.695.1	TEC ER No. TEC70122308
		Mean Total Input Power for OTU-4 Int. ITU-T G.959.1 G.695.1	TEC ER No. TEC70122308
		Mean Total Output Power for OTU-4 Int. ITU-T G.959.1 G.695.1	TEC ER No. TEC70122308
		Receiver Sensitivity for OTU-4 Int. ITU-T G.959.1 G.695.1	TEC ER No. TEC70122308

2. This letter is issued as Addendum to Certificate No. TEC/MRA/CAB/IND-D/19-III dated 07.06.2023 for carrying out testing for Parameters against standards as mentioned above.
3. All other scope, terms and conditions and validity of the CAB Designation Certificate No. TEC/MRA/CAB/IND-D/19-III dated 07.06.2023 shall remain unchanged.
4. This is issued with the approval of Competent Authority.

Signed by Sanjay Bhardwaj

Date: 20-09-2023 17:18:02

Reason: Approved

(Sanjay Bhardwaj)

Assistant Director (CA-I)

TEC, New Delhi

To,

Shri Satish Sankhyan, Managing Director,
M/s Nemko India (Test Lab) Pvt. Ltd.
Plot No.193, Sector-68, IMT, Faridabad, Haryana-121004
Mob: 9810629447
E-Mail: Satish.Sankhyan@nemko.com