अनिवार्य आवश्यकताएँ

संख्या : TEC78831911

Essential Requirements

ER No. : TEC78831911

Transmission Terminal Equipment

MTCTE के तहत जारी:

Issued under MTCTE by:

दूरसंचार अभियांत्रिकी केंद्र

भारत सरकार

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Telecommunication Engineering Centre
Government of India
Khurshid Lal Bhawan, Janpath, New Delhi-110001, INDIA

Essential Requirements for:

Transmission Terminal Equipment

Certification Scheme: **GCS** Product Fee Group: **C**

This ER covers DWDM, SDH, Multiplexing and DXC.

Note: Annexures referred to in this ER are Annexures as mentioned in "Annexures to ERs" No. TEC/SD/DD/TCP-222/02/June19 as updated from time to time and available on MTCTE portal.

This product has the following variants:

1. SDH Equipment
2. Multiplexing Equipment
3. Digital Cross Connect (DXC)
4. Dense Wavelength Division Multiplexing (DWDM) Equipment

1. Variant 1 : SDH Equipment

1.1 Parameters Linked with Product Variant

S.No.	Parameter Name	Standard Name
1.1.1	Conducted And Radiated Emission - Class A	TEC EMI EMC Standard CISPR 22/32 EN55022/32. Annex-B
1.1.2	Immunity to AC Voltage Dips and Short Interruptions	TEC EMI EMC Standard EN/IEC:61000-4-11. Annex-B
1.1.3	Immunity to DC Voltage Dips and Short Interruptions	EN/IEC:61000-4-29. Annex-B
1.1.4	Immunity to Electrostatic Discharge	TEC EMI EMC Standard EN/IEC:61000-4-2. Annex-B
1.1.5	Immunity to Fast Transients (Burst)	TEC EMI EMC Standard EN/IEC:61000-4-4.

		Annex-B
1.1.6	Immunity to Radiated RF	TEC EMI EMC Standard EN/IEC:61000-4-3. Annex-B
1.1.7	Immunity to RF Field Induced Conducted Disturbance	TEC EMI EMC Standard EN/IEC:61000-4-6. Annex-B
1.1.8	Immunity to Surges	TEC EMI EMC Standard EN/IEC:61000-4-5. Annex-B
1.1.9	IT Equipment Safety	IS 13252-1 or IEC:60950-1 or IEC 62368-1. Annex-A1

1.2 Interface 1 : 2 Wire

S.No.	Parameter Name	Standard Name
1.2.1	Idle State Current for 2 wire Int	ETSI EN 300 001 ETSI TBR-21 Cl. 4.4.1. Annex-D
1.2.2	Insulation Test for 2 wire Int	ETSI EN 300 001. Annex-D
1.2.3	Longitudinal Conversion Loss for 2W Int	Q.552 Cl. 2.2.2. Annex-D
1.2.4	Maximum Loop Current for 2W Int	ETSI EN 300 001 ETSI TBR-21 Cl.4.4.3. Annex-D
1.2.5	Return Loss for 2W Int	Q.552 Cl. 2.2.1.2. Annex-D

1.3 Interface 2 : 1 G Optical Ethernet

S.No.	Parameter Name	Standard Name
1.3.1	Average Launch power for 1 GE Opt	IEEE 802.3z Cl. 38. Annex-H
1.3.2	Receiver Sensitivity 1 GE Opt	IEEE 802.3z Cl. 38. Annex-H
1.3.3	Wavelength for 1 GE Opt	IEEE 802.3z Cl. 38. Annex-H

1.4 Interface 3 : 10 100 1000 BASE-T Ethernet

S.No.	Parameter Name	Standard Name
1.4.1	Link Speed and Autonegotiation Test GE	IEEE 802.3. Annex-H

1.5 Interface 4 : 10 100 BASE-T Ethernet

S.No.	Parameter Name	Standard Name
1.5.1	Link Speed and Autonegotiation Test FE	IEEE 802.3 Annex-H

1.6 Interface 5 : 10 G Optical Ethernet

S.No.	Parameter Name	Standard Name
1.6.1	Average Launch power for 10 GE Opt	IEEE 802.3ae Cl. 52. Annex-H
1.6.2	Receiver Sensitivity 10 GE Opt	IEEE 802.3ae Cl. 52. Annex-H
1.6.3	Wavelength for 10 GE Opt	IEEE 802.3ae Cl. 52. Annex-H

1.7 Interface 6 : 2 Mbps - E1

S.No.	Parameter Name	Standard Name
1.7.1	Input Jitter Tolerance for 2 Mbps Int	ITU-T G.823 / ETSI TBR-4. Annex-I
1.7.2	Input Return Loss for 2 Mbps Int	ITU-T G.703 / ETSI TBR-4 Cl. 9.3.1. Annex-I
1.7.3	Nominal Bit Rate with Tolerance for 2 Mbps Int	ITU-T G.703 / ETSI TBR-4 Cl. 9.2.3. Annex-I
1.7.4	Output Jitter for 2 Mbps Int	ITU-T G.823 / ETSI TBR-4. Annex-I
1.7.5	Pulse Mask for 2 Mbps Int	ITU-T G.703 / ETSI TBR-4 Cl. 9.2.1. Annex-I

1.8 Interface 7 : 34 Mbps - E3

S.No.	Parameter Name	Standard Name
1.8.1	Input Jitter Tolerance for 34 Mbps Int	ITU-T G.823. Annex-I
1.8.2	Input Return Loss for 34 Mbps Int	ITU-T G.703. Annex-I
1.8.3	Nominal Bit Rate with Tolerance for 34 Mbps Int	ITU-T G.703 Annex-I
1.8.4	Output Jitter for 34 Mbps Int	ITU-T G.823. Annex-I
1.8.5	Pulse Mask for 34 Mbps Int	ITU-T G.703. Annex-I

1.9 Interface 8 : 45 Mbps

S.No.	Parameter Name	Standard Name
1.9.1	DC power	ITU-T G.703. Annex-I
1.9.2	Input Jitter Tolerance for 45 Mbps Int	ITU-T G.824. Annex-I
1.9.3	Nominal Bit Rate with Tolerance for 45 Mbps Int	ITU-T G.703 Annex-I
1.9.4	Output Jitter for 45 Mbps Int	ITU-T G.824 Annex-I
1.9.5	Pulse Mask for 45 Mbps Int	ITU-T G.703. Annex-I

1.10 Interface 9 : 64 kbps

S.No.	Parameter Name	Standard Name
1.10.1	Input Jitter Tolerance for 64 kbps Int	ITU-T G.823. Annex-I
1.10.2	Input Return Loss for 64 kbps Int	ITU-T G.703. Annex-I
1.10.3	Nominal Bit Rate with Tolerance for 64 kbps Int	ITU-T G.703 Annex-I
1.10.4	Output Jitter for 64 kbps Int	ITU-T G.823. Annex-I
1.10.5	Pulse Mask for 64 kbps Int	ITU-T G.703. Annex-I

1.11 Interface 10 : NX64 kbps

S.No.	Parameter Name	Standard Name
1.11.1	Input Jitter Tolerance for NX64 kbps Int	ITU-T G.823. Annex-I
1.11.2	Input Return Loss for NX64 kbps Int	ITU-T G.703. Annex-I
1.11.3	Nominal Bit Rate with Tolerance for NX64 kbps Int	ITU-T G.703. Annex-I
1.11.4	Output Jitter for NX64 kbps Int	ITU-T G.823. Annex-I
1.11.5	Pulse Mask for NX64 kbps Int	ITU-T G.703. Annex-I

1.12 Interface 11 : OTU-1

S.No.	Parameter Name	Standard Name
1.12.1	Central Frequency for OTU-1 Int	ITU-T G959.1 G.693. Annex-L
1.12.2	Input Jitter Tolerance for OTU-1 Int	ITU-T G.8251. Annex-L
1.12.3	Mean Total Input Power for OTU-1 Int	ITU-T G.959.1 G.693. Annex-L
1.12.4	Mean Total Output Power for OTU-1 Int	ITU-T G.959.1 G.693. Annex-L
1.12.5	Minimum Receiver Overload for OTU-1 Int	ITU-T G.959.1 G.693. Annex-L
1.12.6	Nominal Bit Rate with Tolerance OTU-1 Int	ITU-T G.709 Annex-L
1.12.7	Output Jitter for OTU-1 Int	ITU-T G.8251. Annex-L
1.12.8	Receiver Sensitivity for OTU-1 Int	ITU-T G.959.1 G.693. Annex-L

1.13 Interface 12 : OTU-2

S.No.	Parameter Name	Standard Name

1.13.1	Central Frequency for OTU-2 Int	ITU-T G.959.1 G.693 Annex-L
1.13.2	Input Jitter Tolerance for OTU-2 Int	ITU-T G.8251. Annex-L
1.13.3	Mean Total Input Power for OTU-2 Int	ITU-T G.959.1 G.693. Annex-L
1.13.4	Mean Total Output Power for OTU-2 Int	ITU-T G.959.1 G.693. Annex-L
1.13.5	Minimum Receiver Overload for OTU-2 Int	ITU-T G.959.1 G.693. Annex-L
1.13.6	Nominal Bit Rate with Tolerance OTU-2 Int	ITU-T G.709 Annex-L
1.13.7	Output Jitter for OTU-2 Int	ITU-T G.8251. Annex-L
1.13.8	Receiver Sensitivity for OTU-2 Int	ITU-T G.959.1. Annex-L

1.14 Interface 13 : STM-1 Electrical

S.No.	Parameter Name	Standard Name
1.14.1	Input Jitter Tolerance STM-1 Electrical	ITU-T G.825. Annex-K
1.14.2	Input Return Loss for STM-1 Electrical	ITU-T G.703. Annex-K
1.14.3	Nominal Bit Rate with Tolerance STM-1 Electrical Int	ITU-T G.703. Annex-K
1.14.4	Output Jitter for STM-1 Electrical Int	ITU-T G.825. Annex-K
1.14.5	Pulse Mask for STM-1 Electrical Int	ITU-T G.703. Annex-K

1.15 Interface 14 : STM-1 Optical

S.No.	Parameter Name	Standard Name
1.15.1	Input Jitter Tolerance for STM-1 Opt	ITU-T G.825. Annex-K
1.15.2	Mean Launched Power for STM-1 Opt Int	ITU-T G.957. Annex-K
1.15.3	Nominal Bit Rate with Tolerance STM-1 Opt Int	ITU-T G.957. Annex-K
1.15.4	Operating Wavelength Range for STM-1 Opt Int	ITU-T G.957. Annex-K
1.15.5	Output Jitter for STM-1 Opt Int	ITU-T G.783 G.825 Annex-K
1.15.6	Receiver Overload for STM-1 Opt Int	ITU-T G.957. Annex-K
1.15.7	Receiver Sensitivity for STM-1 Opt Int	ITU-T G.957. Annex-K

1.16 Interface 15 : STM-16 Optical

S.No.	Parameter Name	Standard Name

1.16.1	Input Jitter Tolerance for STM-16 Opt	G.825. Annex-K
1.16.2	Mean Launched Power for STM-16 Opt Int	ITU-T G.957. Annex-K
1.16.3	Nominal Bit Rate with Tolerance STM-16 Opt Int	ITU-T G.957. Annex-K
1.16.4	Operating Wavelength Range for STM-16 Opt Int	ITU-T G.957. Annex-K
1.16.5	Output Jitter for STM-16 Opt Int	ITU-T G.783. Annex-K
1.16.6	Receiver Overload for STM-16 Opt Int	ITU-T G.957. Annex-K
1.16.7	Receiver Sensitivity for STM-16 Opt Int	ITU-T G.957. Annex-K

1.17 Interface 16 : STM-256 Optical

S.No.	Parameter Name	Standard Name
1.17.1	Input Jitter Tolerance for STM-256 Opt	ITU-T G.825. Annex-K
1.17.2	Mean Launched Power for STM-256 Opt Int	ITU-T G.693. Annex-K
1.17.3	Nominal Bit Rate with Tolerance STM-256 Opt Int	ITU-T G.693 Annex-K
1.17.4	Operating Wavelength Range for STM-256 Opt Int	ITU-T G.693. Annex-K
1.17.5	Output Jitter for STM-256 Opt Int	ITU-T G.783. Annex-K
1.17.6	Receiver Overload for STM-256 Opt Int	ITU-T G.693. Annex-K
1.17.7	Receiver Sensitivity for STM-256 Opt Int	ITU-T G.693. Annex-K

1.18 Interface 17 : STM-4 Optical

S.No.	Parameter Name	Standard Name
1.18.1	Input Jitter Tolerance for STM-4 Opt	ITU-T G.825. Annex-K
1.18.2	Mean Launched Power for STM-4 Opt Int	ITU-T G.957. Annex-K
1.18.3	Nominal Bit Rate with Tolerance STM-4 Opt Int	ITU-T G.957 Annex-K
1.18.4	Operating Wavelength Range for STM-4 Opt Int	ITU-T G.957. Annex-K
1.18.5	Output Jitter for STM-4 Opt Int	ITU-T G.783. Annex-K
1.18.6	Receiver Overload for STM-4 Opt Int	ITU-T G.957. Annex-K
1.18.7	Receiver Sensitivity for STM-4 Opt Int	ITU-T G.957. Annex-K

1.19 Interface 18 : STM-64 Optical

S.No.	Parameter Name	Standard Name
1.19.1	Input Jitter Tolerance for STM-64 Opt	ITU-T G.825. Annex-K
1.19.2	Mean Launched Power for STM-64 Opt Int	ITU-T G.691. Annex-K
1.19.3	Nominal Bit Rate with Tolerance STM-64 Opt Int	ITU-T G.957 Annex-K
1.19.4	Operating Wavelength Range for STM-64 Opt Int	ITU-T G.691. Annex-K
1.19.5	Output Jitter for STM-64 Opt Int	ITU-T G.783. Annex-K
1.19.6	Receiver Overload for STM-64 Opt Int	ITU-T G.691. Annex-K
1.19.7	Receiver Sensitivity for STM-64 Opt Int	ITU-T G.691. Annex-K

2. Variant 2 : Multiplexing Equipment

2.1 Parameters Linked with Product Variant

S.No.	Parameter Name	Standard Name
2.1.1	Conducted And Radiated Emission - Class A	TEC EMI EMC Standard CISPR 22/32 EN55022/32. Annex-B
2.1.2	Immunity to AC Voltage Dips and Short Interruptions	TEC EMI EMC Standard EN/IEC:61000-4-11. Annex-B
2.1.3	Immunity to DC Voltage Dips and Short Interruptions	EN/IEC:61000-4-29. Annex-B
2.1.4	Immunity to Electrostatic Discharge	TEC EMI EMC Standard EN/IEC:61000-4-2. Annex-B
2.1.5	Immunity to Fast Transients (Burst)	TEC EMI EMC Standard EN/IEC:61000-4-4. Annex-B
2.1.6	Immunity to Radiated RF	TEC EMI EMC Standard EN/IEC:61000-4-3. Annex-B
2.1.7	Immunity to RF Field Induced Conducted Disturbance	TEC EMI EMC Standard EN/IEC:61000-4-6. Annex-B
2.1.8	Immunity to Surges	TEC EMI EMC Standard EN/IEC:61000-4-5. Annex-B
2.1.9	IT Equipment Safety	IS 13252-1 or IEC:60950-1 or IEC 62368-1.

		Annex-A1

2.2 Interface 1 : GPON

S.No.	Parameter Name	Standard Name
2.2.1	Line Test for GPON Int	IEEE 802.3ah. Annex-J3
2.2.2	Operating Wavelength Recv for GPON Int	G.984.2. Annex-J2
2.2.3	Operating Wavelength Trans for GPON Int	G.984.2. Annex-J2
2.2.4	Opt Output Power for GPON Int at OLT	G.984.2. Annex-J2
2.2.5	Opt Output Power for GPON Int at ONT	G.984.2. Annex-J2
2.2.6	Protocol Test for GPON Int	Ethernet over GEM G.984.2. Annex-J3
2.2.7	Receiver Sensitivity for GPON Int at OLT	G.984.2. Annex-J2
2.2.8	Receiver Sensitivity for GPON Int at ONT	G.984.2. Annex-J2
2.2.9	Throughput for GPON Int	G.984.1 RFC 2544. Annex-J3

2.3 Interface 2 : SHDSL

S.No.	Parameter Name	Standard Name
2.3.1	Impedance Unbalance About Earth for SHDSL Int	G.991.2. Annex-J1
2.3.2	Insulation Resistance for SHDSL int	G.991.2. Annex-J1
2.3.3	LCL for SHDSL Interface	G.991.2. Annex-J1
2.3.4	PSD for SHDSL Int	G.991.2. Annex-J1
2.3.5	Return Loss for SHDSL	G.991.2. Annex-J1
2.3.6	Throughput for SHDSL Interface	G.991.2. Annex-J1
2.3.7	Transmitted Power for SHDSL Int	G.991.2. Annex-J1

2.4 Interface 3 : 2 Wire

S.No.	Parameter Name	Standard Name
2.4.1	Idle State Current for 2 wire Int	ETSI EN 300 001 ETSI TBR-21 Cl. 4.4.1. Annex-D
2.4.2	Insulation Test for 2 wire Int	ETSI EN 300 001. Annex-D
2.4.3	Longitudinal Conversion Loss for 2W Int	Q.552 Cl. 2.2.2. Annex-D
2.4.4	Maximum Loop Current for 2W Int	ETSI EN 300 001 ETSI TBR-21 Cl.4.4.3.

		Annex-D
2.4.5	Return Loss for 2W Int	Q.552 Cl. 2.2.1.2. Annex-D

2.5 Interface 4 : 1 G Optical Ethernet

S.No.	Parameter Name	Standard Name
2.5.1	Average Launch power for 1 GE Opt	IEEE 802.3z Cl. 38. Annex-H
2.5.2	Receiver Sensitivity 1 GE Opt	IEEE 802.3z Cl. 38. Annex-H
2.5.3	Wavelength for 1 GE Opt	IEEE 802.3z Cl. 38. Annex-H

2.6 Interface 5 : ISDN PRI

S.No.	Parameter Name	Standard Name
2.6.1	Bit Rate Tolerance for PRI	G.703 Cl. 11.1 ETSI TBR-4 Cl. 9.2.3. Annex-I
2.6.2	Input Jitter Tolerance for PRI	G.823 I.431 ETSI TBR-4. Annex-I
2.6.3	Input Return Loss for PRI	G.703 Cl. 11.3 ETSI TBR-4 Cl. 9.3.1. Annex-I
2.6.4	Layer-III PRI Specification - Call Clearing	Q.931. Annex-D1
2.6.5	Layer-III PRI Specification - Call Setup	Q.931. Annex-D1
2.6.6	Output Jitter for PRI	G.823 I.431 ETSI TBR-4. Annex-I
2.6.7	Pulse Mask for PRI	G.703 Cl. 11.2 ETSI TBR-4 Cl. 9.2.1. Annex-I

2.7 Interface 6 : 2 Mbps - E1

S.No.	Parameter Name	Standard Name
2.7.1	Input Jitter Tolerance for 2 Mbps Int	ITU-T G.823 / ETSI TBR-4. Annex-I
2.7.2	Input Return Loss for 2 Mbps Int	ITU-T G.703 / ETSI TBR-4 Cl. 9.3.1. Annex-I
2.7.3	Nominal Bit Rate with Tolerance for 2 Mbps Int	ITU-T G.703 / ETSI TBR-4 Cl. 9.2.3. Annex-I
2.7.4	Output Jitter for 2 Mbps Int	ITU-T G.823 / ETSI TBR-4. Annex-I
2.7.5	Pulse Mask for 2 Mbps Int	ITU-T G.703 / ETSI TBR-4 Cl. 9.2.1. Annex-I

2.8 Interface 7 : 34 Mbps - E3

S.No.	Parameter Name	Standard Name

2.8.1	Input Jitter Tolerance for 34 Mbps Int	ITU-T G.823. Annex-I
2.8.2	Input Return Loss for 34 Mbps Int	ITU-T G.703. Annex-I
2.8.3	Nominal Bit Rate with Tolerance for 34 Mbps Int	ITU-T G.703 Annex-I
2.8.4	Output Jitter for 34 Mbps Int	ITU-T G.823. Annex-I
2.8.5	Pulse Mask for 34 Mbps Int	ITU-T G.703. Annex-I

2.9 Interface 8 : 64 kbps

S.No.	Parameter Name	Standard Name
2.9.1	Input Jitter Tolerance for 64 kbps Int	ITU-T G.823. Annex-I
2.9.2	Input Return Loss for 64 kbps Int	ITU-T G.703. Annex-I
2.9.3	Nominal Bit Rate with Tolerance for 64 kbps Int	ITU-T G.703 Annex-I
2.9.4	Output Jitter for 64 kbps Int	ITU-T G.823. Annex-I
2.9.5	Pulse Mask for 64 kbps Int	ITU-T G.703. Annex-I

2.10 Interface 9 : 8 Mbps - E2

S.No.	Parameter Name	Standard Name
2.10.1	Input Jitter Tolerance for 8 Mbps Int	ITU-T G.823. Annex-I
2.10.2	Input Return Loss for 8 Mbps Int	ITU-T G.703. Annex-I
2.10.3	Nominal Bit Rate with Tolerance for 8 Mbps Int	ITU-T G.703 Annex-I
2.10.4	Output Jitter for 8 Mbps Int	ITU-T G.823. Annex-I
2.10.5	Pulse Mask for 8 Mbps Int	ITU-T G.703. Annex-I

2.11 Interface 10 : NX64 kbps

S.No.	Parameter Name	Standard Name
2.11.1	Input Jitter Tolerance for NX64 kbps Int	ITU-T G.823. Annex-I
2.11.2	Input Return Loss for NX64 kbps Int	ITU-T G.703. Annex-I
2.11.3	Nominal Bit Rate with Tolerance for NX64 kbps Int	ITU-T G.703. Annex-I
2.11.4	Output Jitter for NX64 kbps Int	ITU-T G.823. Annex-I
2.11.5	Pulse Mask for NX64 kbps Int	ITU-T G.703. Annex-I

2.12 Interface 11 : OTU-1

S.No.	Parameter Name	Standard Name
2.12.1	Central Frequency for OTU-1 Int	ITU-T G959.1 G.693. Annex-L
2.12.2	Input Jitter Tolerance for OTU-1 Int	ITU-T G.8251. Annex-L
2.12.3	Mean Total Input Power for OTU-1 Int	ITU-T G.959.1 G.693. Annex-L
2.12.4	Mean Total Output Power for OTU-1 Int	ITU-T G.959.1 G.693. Annex-L
2.12.5	Minimum Receiver Overload for OTU-1 Int	ITU-T G.959.1 G.693. Annex-L
2.12.6	Nominal Bit Rate with Tolerance OTU-1 Int	ITU-T G.709 Annex-L
2.12.7	Output Jitter for OTU-1 Int	ITU-T G.8251. Annex-L
2.12.8	Receiver Sensitivity for OTU-1 Int	ITU-T G.959.1 G.693. Annex-L

2.13 Interface 12 : STM-1 Optical

S.No.	Parameter Name	Standard Name
2.13.1	Input Jitter Tolerance for STM-1 Opt	ITU-T G.825. Annex-K
2.13.2	Mean Launched Power for STM-1 Opt Int	ITU-T G.957. Annex-K
2.13.3	Nominal Bit Rate with Tolerance STM-1 Opt Int	ITU-T G.957. Annex-K
2.13.4	Operating Wavelength Range for STM-1 Opt Int	ITU-T G.957. Annex-K
2.13.5	Output Jitter for STM-1 Opt Int	ITU-T G.783 G.825 Annex-K
2.13.6	Receiver Overload for STM-1 Opt Int	ITU-T G.957. Annex-K
2.13.7	Receiver Sensitivity for STM-1 Opt Int	ITU-T G.957. Annex-K

2.14 Interface 13 : STM-16 Optical

S.No.	Parameter Name	Standard Name
2.14.1	Input Jitter Tolerance for STM-16 Opt	G.825. Annex-K
2.14.2	Mean Launched Power for STM-16 Opt Int	ITU-T G.957. Annex-K
2.14.3	Nominal Bit Rate with Tolerance STM-16 Opt Int	ITU-T G.957. Annex-K
2.14.4	Operating Wavelength Range for STM-16 Opt Int	ITU-T G.957. Annex-K
2.14.5	Output Jitter for STM-16 Opt Int	ITU-T G.783. Annex-K

2.14.6	Receiver Overload for STM-16 Opt Int	ITU-T G.957. Annex-K
2.14.7	Receiver Sensitivity for STM-16 Opt Int	ITU-T G.957. Annex-K

2.15 Interface 14 : STM-4 Optical

S.No.	Parameter Name	Standard Name
2.15.1	Input Jitter Tolerance for STM-4 Opt	ITU-T G.825. Annex-K
2.15.2	Mean Launched Power for STM-4 Opt Int	ITU-T G.957. Annex-K
2.15.3	Nominal Bit Rate with Tolerance STM-4 Opt Int	ITU-T G.957 Annex-K
2.15.4	Operating Wavelength Range for STM-4 Opt Int	ITU-T G.957. Annex-K
2.15.5	Output Jitter for STM-4 Opt Int	ITU-T G.783. Annex-K
2.15.6	Receiver Overload for STM-4 Opt Int	ITU-T G.957. Annex-K
2.15.7	Receiver Sensitivity for STM-4 Opt Int	ITU-T G.957. Annex-K

3. Variant 3 : Digital Cross Connect (DXC)

3.1 Parameters Linked with Product Variant

S.No.	Parameter Name	Standard Name
3.1.1	Conducted And Radiated Emission - Class A	TEC EMI EMC Standard CISPR 22/32 EN55022/32. Annex-B
3.1.2	Immunity to AC Voltage Dips and Short Interruptions	TEC EMI EMC Standard EN/IEC:61000-4-11. Annex-B
3.1.3	Immunity to DC Voltage Dips and Short Interruptions	EN/IEC:61000-4-29. Annex-B
3.1.4	Immunity to Electrostatic Discharge	TEC EMI EMC Standard EN/IEC:61000-4-2. Annex-B
3.1.5	Immunity to Fast Transients (Burst)	TEC EMI EMC Standard EN/IEC:61000-4-4. Annex-B
3.1.6	Immunity to Radiated RF	TEC EMI EMC Standard EN/IEC:61000-4-3. Annex-B
3.1.7	Immunity to RF Field Induced Conducted Disturbance	TEC EMI EMC Standard EN/IEC:61000-4-6. Annex-B
3.1.8	Immunity to Surges	TEC EMI EMC Standard EN/IEC:61000-4-5.

		Annex-B
3.1.9	IT Equipment Safety	IS 13252-1 or IEC:60950-1 or IEC 62368-1. Annex-A1

3.2 Interface 1 : 1 G Optical Ethernet

S.No.	Parameter Name	Standard Name
3.2.1	Average Launch power for 1 GE Opt	IEEE 802.3z Cl. 38. Annex-H
3.2.2	Receiver Sensitivity 1 GE Opt	IEEE 802.3z Cl. 38. Annex-H
3.2.3	Wavelength for 1 GE Opt	IEEE 802.3z Cl. 38. Annex-H

3.3 Interface 2 : 10 100 1000 BASE-T Ethernet

S.No.	Parameter Name	Standard Name
3.3.1	Link Speed and Autonegotiation Test GE	IEEE 802.3. Annex-H

3.4 Interface 3 : 10 100 BASE-T Ethernet

S.No.	Parameter Name	Standard Name
3.4.1	Link Speed and Autonegotiation Test FE	IEEE 802.3 Annex-H

3.5 Interface 4 : 10 G Optical Ethernet

S.No.	Parameter Name	Standard Name
3.5.1	Average Launch power for 10 GE Opt	IEEE 802.3ae Cl. 52. Annex-H
3.5.2	Receiver Sensitivity 10 GE Opt	IEEE 802.3ae Cl. 52. Annex-H
3.5.3	Wavelength for 10 GE Opt	IEEE 802.3ae Cl. 52. Annex-H

3.6 Interface 5 : 100 G Optical Ethernet

S.No.	Parameter Name	Standard Name
3.6.1	Average Launch power for 100 GE Opt	IEEE 802.3ba Cl. 86 88. Annex-H
3.6.2	Receiver Sensitivity 100 GE Opt	IEEE 802.3ba Cl. 86 88. Annex-H
3.6.3	Wavelength for 100 GE Opt	IEEE 802.3ba Cl. 86 88. Annex-H

3.7 Interface 6 : 40 G Optical Ethernet

S.No.	Parameter Name	Standard Name

3.7.1	Average Launch power for 40 GE Opt	IEEE 802.3ba Cl. 86 87. Annex-H
3.7.2	Receiver Sensitivity 40 GE Opt	IEEE 802.3ba Cl. 86 87. Annex-H
3.7.3	Wavelength for 40 GE Opt	IEEE 802.3ba Cl. 86 87. Annex-H

3.8 Interface 7 : ISDN PRI

S.No.	Parameter Name	Standard Name
3.8.1	Bit Rate Tolerance for PRI	G.703 Cl. 11.1 ETSI TBR-4 Cl. 9.2.3. Annex-I
3.8.2	Input Jitter Tolerance for PRI	G.823 I.431 ETSI TBR-4. Annex-I
3.8.3	Input Return Loss for PRI	G.703 Cl. 11.3 ETSI TBR-4 Cl. 9.3.1. Annex-I
3.8.4	Layer-III PRI Specification - Call Clearing	Q.931. Annex-D1
3.8.5	Layer-III PRI Specification - Call Setup	Q.931. Annex-D1
3.8.6	Output Jitter for PRI	G.823 I.431 ETSI TBR-4. Annex-I
3.8.7	Pulse Mask for PRI	G.703 Cl. 11.2 ETSI TBR-4 Cl. 9.2.1. Annex-I

3.9 Interface 8 : 140 Mbps - E4

S.No.	Parameter Name	Standard Name
3.9.1	Input Jitter Tolerance for 140 Mbps Int	G.823. Annex-I
3.9.2	Input Return Loss for 140 Mbps Int	G.703 ETSI TBR-4 Cl. 9.3.1. Annex-I
3.9.3	Nominal Bit Rate with Tolerance 140 Mbps Int	ITU-T G.703 ETSI TBR-4 Cl. 9.2.3. Annex-I
3.9.4	Output Jitter for 140 Mbps Int	G.823. Annex-I
3.9.5	Pulse Mask for 140 Mbps Int	G.703 ETSI TBR-4 Cl. 9.2.1. Annex-I

3.10 Interface 9 : 64 kbps

S.No.	Parameter Name	Standard Name
3.10.1	Input Jitter Tolerance for 64 kbps Int	ITU-T G.823. Annex-I
3.10.2	Input Return Loss for 64 kbps Int	ITU-T G.703. Annex-I
3.10.3	Nominal Bit Rate with Tolerance for 64 kbps Int	ITU-T G.703 Annex-I
3.10.4	Output Jitter for 64 kbps Int	ITU-T G.823. Annex-I

3.10.5	Pulse Mask for 64 kbps Int	ITU-T G.703. Annex-I

3.11 Interface 10 : 8 Mbps - E2

S.No.	Parameter Name	Standard Name
3.11.1	Input Jitter Tolerance for 8 Mbps Int	ITU-T G.823. Annex-I
3.11.2	Input Return Loss for 8 Mbps Int	ITU-T G.703. Annex-I
3.11.3	Nominal Bit Rate with Tolerance for 8 Mbps Int	ITU-T G.703 Annex-I
3.11.4	Output Jitter for 8 Mbps Int	ITU-T G.823. Annex-I
3.11.5	Pulse Mask for 8 Mbps Int	ITU-T G.703. Annex-I

3.12 Interface 11 : OTU-1

S.No.	Parameter Name	Standard Name
3.12.1	Central Frequency for OTU-1 Int	ITU-T G959.1 G.693. Annex-L
3.12.2	Input Jitter Tolerance for OTU-1 Int	ITU-T G.8251. Annex-L
3.12.3	Mean Total Input Power for OTU-1 Int	ITU-T G.959.1 G.693. Annex-L
3.12.4	Mean Total Output Power for OTU-1 Int	ITU-T G.959.1 G.693. Annex-L
3.12.5	Minimum Receiver Overload for OTU-1 Int	ITU-T G.959.1 G.693. Annex-L
3.12.6	Nominal Bit Rate with Tolerance OTU-1 Int	ITU-T G.709 Annex-L
3.12.7	Output Jitter for OTU-1 Int	ITU-T G.8251. Annex-L
3.12.8	Receiver Sensitivity for OTU-1 Int	ITU-T G.959.1 G.693. Annex-L

3.13 Interface 12 : OTU-2

S.No.	Parameter Name	Standard Name
3.13.1	Central Frequency for OTU-2 Int	ITU-T G.959.1 G.693 Annex-L
3.13.2	Input Jitter Tolerance for OTU-2 Int	ITU-T G.8251. Annex-L
3.13.3	Mean Total Input Power for OTU-2 Int	ITU-T G.959.1 G.693. Annex-L
3.13.4	Mean Total Output Power for OTU-2 Int	ITU-T G.959.1 G.693. Annex-L
3.13.5	Minimum Receiver Overload for OTU-2 Int	ITU-T G.959.1 G.693. Annex-L
3.13.6	Nominal Bit Rate with Tolerance OTU-2 Int	ITU-T G.709 Annex-L
3.13.7	Output Jitter for OTU-2 Int	ITU-T G.8251. Annex-L
3.13.8	Receiver Sensitivity for OTU-2 Int	ITU-T G.959.1. Annex-L

3.14 Interface 13 : OTU-3

S.No.	Parameter Name	Standard Name
3.14.1	Central Frequency for OTU-3 Int	ITU-T G.959.1 G.693. Annex-L
3.14.2	Mean Total Input Power for OTU-3 Int	ITU-T G.959.1 G.693. Annex-L
3.14.3	Mean Total Output Power for OTU-3 Int	ITU-T G.959.1 G.693. Annex-L
3.14.4	Minimum Receiver Overload for OTU-3 Int	ITU-T G.959.1 G.693. Annex-L
3.14.5	Nominal Bit Rate with Tolerance OTU-3 Int	ITU-T G.709 Annex-L
3.14.6	Receiver Sensitivity for OTU-3 Int	ITU-T G.959.1 G.693. Annex-L

3.15 Interface 14 : OTU-4

S.No.	Parameter Name	Standard Name
3.15.1	Central Frequency for OTU-4 Int	ITU-T G.959.1 G.695.1. Annex-L
3.15.2	Mean Total Input Power for OTU-4 Int	ITU-T G.959.1 G.695. Annex-L
3.15.3	Mean Total Output Power for OTU-4 Int	ITU-T G.959.1 G.695. Annex-L
3.15.4	Minimum Receiver Overload for OTU-4 Int	ITU-T G.959.1 G.695. Annex-L
3.15.5	Nominal Bit Rate with Tolerance OTU-4 Int	ITU-T G.709 Annex-L
3.15.6	Receiver Sensitivity for OTU-4 Int	ITU-T G.959.1 G.695. Annex-L

3.16 Interface 15 : STM-1 Electrical

S.No.	Parameter Name	Standard Name
3.16.1	Input Jitter Tolerance STM-1 Electrical	ITU-T G.825. Annex-K
3.16.2	Input Return Loss for STM-1 Electrical	ITU-T G.703. Annex-K
3.16.3	Nominal Bit Rate with Tolerance STM-1 Electrical Int	ITU-T G.703. Annex-K
3.16.4	Output Jitter for STM-1 Electrical Int	ITU-T G.825. Annex-K
3.16.5	Pulse Mask for STM-1 Electrical Int	ITU-T G.703. Annex-K

3.17 Interface 16 : STM-1 Optical

S.No.	Parameter Name	Standard Name
3.17.1	Input Jitter Tolerance for STM-1 Opt	ITU-T G.825. Annex-K
3.17.2	Mean Launched Power for STM-1 Opt Int	ITU-T G.957. Annex-K

3.17.3	Nominal Bit Rate with Tolerance STM-1 Opt Int	ITU-T G.957. Annex-K
3.17.4	Operating Wavelength Range for STM-1 Opt Int	ITU-T G.957. Annex-K
3.17.5	Output Jitter for STM-1 Opt Int	ITU-T G.783 G.825 Annex-K
3.17.6	Receiver Overload for STM-1 Opt Int	ITU-T G.957. Annex-K
3.17.7	Receiver Sensitivity for STM-1 Opt Int	ITU-T G.957. Annex-K

3.18 Interface 17 : STM-16 Optical

S.No.	Parameter Name	Standard Name
3.18.1	Input Jitter Tolerance for STM-16 Opt	G.825. Annex-K
3.18.2	Mean Launched Power for STM-16 Opt Int	ITU-T G.957. Annex-K
3.18.3	Nominal Bit Rate with Tolerance STM-16 Opt Int	ITU-T G.957. Annex-K
3.18.4	Operating Wavelength Range for STM-16 Opt Int	ITU-T G.957. Annex-K
3.18.5	Output Jitter for STM-16 Opt Int	ITU-T G.783. Annex-K
3.18.6	Receiver Overload for STM-16 Opt Int	ITU-T G.957. Annex-K
3.18.7	Receiver Sensitivity for STM-16 Opt Int	ITU-T G.957. Annex-K

3.19 Interface 18 : STM-256 Optical

S.No.	Parameter Name	Standard Name
3.19.1	Input Jitter Tolerance for STM-256 Opt	ITU-T G.825. Annex-K
3.19.2	Mean Launched Power for STM-256 Opt Int	ITU-T G.693. Annex-K
3.19.3	Nominal Bit Rate with Tolerance STM-256 Opt Int	ITU-T G.693 Annex-K
3.19.4	Operating Wavelength Range for STM-256 Opt Int	ITU-T G.693. Annex-K
3.19.5	Output Jitter for STM-256 Opt Int	ITU-T G.783. Annex-K
3.19.6	Receiver Overload for STM-256 Opt Int	ITU-T G.693. Annex-K
3.19.7	Receiver Sensitivity for STM-256 Opt Int	ITU-T G.693. Annex-K

3.20 Interface 19 : STM-4 Optical

S.No.	Parameter Name	Standard Name
3.20.1	Input Jitter Tolerance for STM-4 Opt	ITU-T G.825. Annex-K
3.20.2	Mean Launched Power for STM-4 Opt Int	ITU-T G.957. Annex-K
3.20.3	Nominal Bit Rate with Tolerance STM-4 Opt Int	ITU-T G.957 Annex-K
3.20.4	Operating Wavelength Range for STM-4 Opt Int	ITU-T G.957. Annex-K
3.20.5	Output Jitter for STM-4 Opt Int	ITU-T G.783. Annex-K
3.20.6	Receiver Overload for STM-4 Opt Int	ITU-T G.957. Annex-K
3.20.7	Receiver Sensitivity for STM-4 Opt Int	ITU-T G.957. Annex-K

3.21 Interface 20 : STM-64 Optical

S.No.	Parameter Name	Standard Name
3.21.1	Input Jitter Tolerance for STM-64 Opt	ITU-T G.825. Annex-K
3.21.2	Mean Launched Power for STM-64 Opt Int	ITU-T G.691. Annex-K
3.21.3	Nominal Bit Rate with Tolerance STM-64 Opt Int	ITU-T G.957 Annex-K
3.21.4	Operating Wavelength Range for STM-64 Opt Int	ITU-T G.691. Annex-K
3.21.5	Output Jitter for STM-64 Opt Int	ITU-T G.783. Annex-K
3.21.6	Receiver Overload for STM-64 Opt Int	ITU-T G.691. Annex-K
3.21.7	Receiver Sensitivity for STM-64 Opt Int	ITU-T G.691. Annex-K

4. Variant 4 : Dense Wavelength Division Multiplexing (DWDM) Equipment

4.1 Parameters Linked with Product Variant

S.No.	Parameter Name	Standard Name
4.1.1	Conducted And Radiated Emission - Class A	TEC EMI EMC Standard CISPR 22/32 EN55022/32. Annex-B
4.1.2	Immunity to AC Voltage Dips and Short Interruptions	TEC EMI EMC Standard EN/IEC:61000-4-11. Annex-B
4.1.3	Immunity to DC Voltage Dips and Short Interruptions	EN/IEC:61000-4-29. Annex-B
4.1.4	Immunity to Electrostatic Discharge	TEC EMI EMC Standard EN/IEC:61000-4-2.

		Annex-B
4.1.5	Immunity to Fast Transients (Burst)	TEC EMI EMC Standard EN/IEC:61000-4-4. Annex-B
4.1.6	Immunity to Radiated RF	TEC EMI EMC Standard EN/IEC:61000-4-3. Annex-B
4.1.7	Immunity to RF Field Induced Conducted Disturbance	TEC EMI EMC Standard EN/IEC:61000-4-6. Annex-B
4.1.8	Immunity to Surges	TEC EMI EMC Standard EN/IEC:61000-4-5. Annex-B
4.1.9	IT Equipment Safety	IS 13252-1 or IEC:60950-1 or IEC 62368-1. Annex-A1
4.1.10	Channel spacing for 10G / 40G / 100G DWDM	ITU-T G.694.1

4.2 Interface 1 : 1 G Optical Ethernet

S.No.	Parameter Name	Standard Name
4.2.1	Average Launch power for 1 GE Opt	IEEE 802.3z Cl. 38. Annex-H
4.2.2	Receiver Sensitivity 1 GE Opt	IEEE 802.3z Cl. 38. Annex-H
4.2.3	Wavelength for 1 GE Opt	IEEE 802.3z Cl. 38. Annex-H

4.3 Interface 2 : 10 100 1000 BASE-T Ethernet

S.No.	Parameter Name	Standard Name
4.3.1	Link Speed and Autonegotiation Test GE	IEEE 802.3. Annex-H

4.4 Interface 3 : 10 100 BASE-T Ethernet

S.No.	Parameter Name	Standard Name
4.4.1	Link Speed and Autonegotiation Test FE	IEEE 802.3 Annex-H

4.5 Interface 4 : 10 G Optical Ethernet

S.No.	Parameter Name	Standard Name
4.5.1	Average Launch power for 10 GE Opt	IEEE 802.3ae Cl. 52. Annex-H
4.5.2	Receiver Sensitivity 10 GE Opt	IEEE 802.3ae Cl. 52. Annex-H
4.5.3	Wavelength for 10 GE Opt	IEEE 802.3ae Cl. 52. Annex-H

4.6 Interface 5 : 100 G Optical Ethernet

S.No.	Parameter Name	Standard Name
4.6.1	Average Launch power for 100 GE Opt	IEEE 802.3ba Cl. 86 88. Annex-H
4.6.2	Receiver Sensitivity 100 GE Opt	IEEE 802.3ba Cl. 86 88. Annex-H
4.6.3	Wavelength for 100 GE Opt	IEEE 802.3ba Cl. 86 88. Annex-H

4.7 Interface 6 : 40 G Optical Ethernet

S.No.	Parameter Name	Standard Name
4.7.1	Average Launch power for 40 GE Opt	IEEE 802.3ba Cl. 86 87. Annex-H
4.7.2	Receiver Sensitivity 40 GE Opt	IEEE 802.3ba Cl. 86 87. Annex-H
4.7.3	Wavelength for 40 GE Opt	IEEE 802.3ba Cl. 86 87. Annex-H

4.8 Interface 7 : OTU-1

S.No.	Parameter Name	Standard Name
4.8.1	Central Frequency for OTU-1 Int	ITU-T G959.1 G.693. Annex-L
4.8.2	Input Jitter Tolerance for OTU-1 Int	ITU-T G.8251. Annex-L
4.8.3	Mean Total Input Power for OTU-1 Int	ITU-T G.959.1 G.693. Annex-L
4.8.4	Mean Total Output Power for OTU-1 Int	ITU-T G.959.1 G.693. Annex-L
4.8.5	Minimum Receiver Overload for OTU-1 Int	ITU-T G.959.1 G.693. Annex-L
4.8.6	Nominal Bit Rate with Tolerance OTU-1 Int	ITU-T G.709 Annex-L
4.8.7	Output Jitter for OTU-1 Int	ITU-T G.8251. Annex-L
4.8.8	Receiver Sensitivity for OTU-1 Int	ITU-T G.959.1 G.693. Annex-L

4.9 Interface 8 : OTU-2

S.No.	Parameter Name	Standard Name
4.9.1	Central Frequency for OTU-2 Int	ITU-T G.959.1 G.693 Annex-L
4.9.2	Input Jitter Tolerance for OTU-2 Int	ITU-T G.8251. Annex-L
4.9.3	Mean Total Input Power for OTU-2 Int	ITU-T G.959.1 G.693. Annex-L
4.9.4	Mean Total Output Power for OTU-2 Int	ITU-T G.959.1 G.693. Annex-L
4.9.5	Minimum Receiver Overload for OTU-2 Int	ITU-T G.959.1 G.693. Annex-L
4.9.6	Nominal Bit Rate with Tolerance OTU-2 Int	ITU-T G.709 Annex-L

4.9.7	Output Jitter for OTU-2 Int	ITU-T G.8251. Annex-L
4.9.8	Receiver Sensitivity for OTU-2 Int	ITU-T G.959.1. Annex-L

4.10 Interface 9 : OTU-3

S.No.	Parameter Name	Standard Name
4.10.1	Central Frequency for OTU-3 Int	ITU-T G.959.1 G.693. Annex-L
4.10.2	Mean Total Input Power for OTU-3 Int	ITU-T G.959.1 G.693. Annex-L
4.10.3	Mean Total Output Power for OTU-3 Int	ITU-T G.959.1 G.693. Annex-L
4.10.4	Minimum Receiver Overload for OTU-3 Int	ITU-T G.959.1 G.693. Annex-L
4.10.5	Nominal Bit Rate with Tolerance OTU-3 Int	ITU-T G.709 Annex-L
4.10.6	Receiver Sensitivity for OTU-3 Int	ITU-T G.959.1 G.693. Annex-L

4.11 Interface 10 : OTU-4

S.No.	Parameter Name	Standard Name
4.11.1	Central Frequency for OTU-4 Int	ITU-T G.959.1 G.695.1. Annex-L
4.11.2	Mean Total Input Power for OTU-4 Int	ITU-T G.959.1 G.695. Annex-L
4.11.3	Mean Total Output Power for OTU-4 Int	ITU-T G.959.1 G.695. Annex-L
4.11.4	Minimum Receiver Overload for OTU-4 Int	ITU-T G.959.1 G.695. Annex-L
4.11.5	Nominal Bit Rate with Tolerance OTU-4 Int	ITU-T G.709 Annex-L
4.11.6	Receiver Sensitivity for OTU-4 Int	ITU-T G.959.1 G.695. Annex-L

4.12 Interface 11 : STM-1 Electrical

S.No.	Parameter Name	Standard Name
4.12.1	Input Jitter Tolerance STM-1 Electrical	ITU-T G.825. Annex-K
4.12.2	Input Return Loss for STM-1 Electrical	ITU-T G.703. Annex-K
4.12.3	Nominal Bit Rate with Tolerance STM-1 Electrical Int	ITU-T G.703. Annex-K
4.12.4	Output Jitter for STM-1 Electrical Int	ITU-T G.825. Annex-K
4.12.5	Pulse Mask for STM-1 Electrical Int	ITU-T G.703. Annex-K

4.13 Interface 12 : STM-1 Optical

S.No.	Parameter Name	Standard Name

4.13.1	Input Jitter Tolerance for STM-1 Opt	ITU-T G.825. Annex-K
4.13.2	Mean Launched Power for STM-1 Opt Int	ITU-T G.957. Annex-K
4.13.3	Nominal Bit Rate with Tolerance STM-1 Opt Int	ITU-T G.957. Annex-K
4.13.4	Operating Wavelength Range for STM-1 Opt Int	ITU-T G.957. Annex-K
4.13.5	Output Jitter for STM-1 Opt Int	ITU-T G.783 G.825 Annex-K
4.13.6	Receiver Overload for STM-1 Opt Int	ITU-T G.957. Annex-K
4.13.7	Receiver Sensitivity for STM-1 Opt Int	ITU-T G.957. Annex-K

4.14 Interface 13 : STM-16 Optical

S.No.	Parameter Name	Standard Name
4.14.1	Input Jitter Tolerance for STM-16 Opt	G.825. Annex-K
4.14.2	Mean Launched Power for STM-16 Opt Int	ITU-T G.957. Annex-K
4.14.3	Nominal Bit Rate with Tolerance STM-16 Opt Int	ITU-T G.957. Annex-K
4.14.4	Operating Wavelength Range for STM-16 Opt Int	ITU-T G.957. Annex-K
4.14.5	Output Jitter for STM-16 Opt Int	ITU-T G.783. Annex-K
4.14.6	Receiver Overload for STM-16 Opt Int	ITU-T G.957. Annex-K
4.14.7	Receiver Sensitivity for STM-16 Opt Int	ITU-T G.957. Annex-K

4.15 Interface 14 : STM-256 Optical

S.No.	Parameter Name	Standard Name
4.15.1	Input Jitter Tolerance for STM-256 Opt	ITU-T G.825. Annex-K
4.15.2	Mean Launched Power for STM-256 Opt Int	ITU-T G.693. Annex-K
4.15.3	Nominal Bit Rate with Tolerance STM-256 Opt Int	ITU-T G.693 Annex-K
4.15.4	Operating Wavelength Range for STM-256 Opt Int	ITU-T G.693. Annex-K
4.15.5	Output Jitter for STM-256 Opt Int	ITU-T G.783. Annex-K
4.15.6	Receiver Overload for STM-256 Opt Int	ITU-T G.693. Annex-K
4.15.7	Receiver Sensitivity for STM-256 Opt Int	ITU-T G.693. Annex-K

4.16 Interface 15 : STM-4 Optical

S.No.	Parameter Name	Standard Name
4.16.1	Input Jitter Tolerance for STM-4 Opt	ITU-T G.825. Annex-K
4.16.2	Mean Launched Power for STM-4 Opt Int	ITU-T G.957. Annex-K
4.16.3	Nominal Bit Rate with Tolerance STM-4 Opt Int	ITU-T G.957 Annex-K
4.16.4	Operating Wavelength Range for STM-4 Opt Int	ITU-T G.957. Annex-K
4.16.5	Output Jitter for STM-4 Opt Int	ITU-T G.783. Annex-K
4.16.6	Receiver Overload for STM-4 Opt Int	ITU-T G.957. Annex-K
4.16.7	Receiver Sensitivity for STM-4 Opt Int	ITU-T G.957. Annex-K

4.17 Interface 16 : STM-64 Optical

S.No.	Parameter Name	Standard Name
4.17.1	Input Jitter Tolerance for STM-64 Opt	ITU-T G.825. Annex-K
4.17.2	Mean Launched Power for STM-64 Opt Int	ITU-T G.691. Annex-K
4.17.3	Nominal Bit Rate with Tolerance STM-64 Opt Int	ITU-T G.957 Annex-K
4.17.4	Operating Wavelength Range for STM-64 Opt Int	ITU-T G.691. Annex-K
4.17.5	Output Jitter for STM-64 Opt Int	ITU-T G.783. Annex-K
4.17.6	Receiver Overload for STM-64 Opt Int	ITU-T G.691. Annex-K
4.17.7	Receiver Sensitivity for STM-64 Opt Int	ITU-T G.691. Annex-K