

# AT&T Cabling Systems AT&T Millennium™ Lifetime Warranty

A complete & comprehensive warranty for life

## AT&T Millennium Lifetime Warranty Coverage

AT&T Millennium Lifetime Warranty (the "**Warranty**" or "**AT&T Millennium Lifetime Warranty**") covers only structured cabling systems which are comprised of AT&T Cabling Systems components only and which have been installed and commissioned by a certified AT&T Cabling Systems installer, which were tested according to AT&T Cabling Systems instructions and which were officially certified by AT&T Cabling Systems.

All AT&T Cabling Systems structured cabling systems are warranted to operate flawless according to standards based applications and protocols for the related categories as shown in ANNEX A: Balanced Cabling Supported Application and in ANNEX B: Fiber-Optic Supported Applications.

Any equipment, including without limitation, active equipment, public network interface, or terminal equipment, not manufactured by AT&T Cabling Systems are not covered by the AT&T Millennium Lifetime Warranty.

All equipment used in the installation must be installed and tested in full compliance with the practices specified in the AT&T Cabling Systems manuals and documentation.

## AT&T Millennium Lifetime Warranty Performance Commitment

If a channel of a warranted AT&T Cabling Systems structured cabling system fails to comply with any of the warranted parameters, an AT&T Cabling Systems expert will evaluate the AT&T Cabling Systems responsibilities under this Warranty and provide necessary remedies (if any) in accordance with this Warranty. Any such repair or replacement shall be warranted under the terms of this Warranty.

If AT&T Cabling Systems in its sole discretion determines that a failure is caused by an AT&T Cabling Systems component, the rectification of the system by replacement or repair will be made at no cost to the end user. More specifically, this AT&T Cabling Systems Warranty shall be limited to the replacement or repair of any failed components free of charge, although AT&T Cabling Systems shall pay the labor costs associated to associated fault diagnosis and rectification when AT&T Cabling Systems determines there is a failure caused by an AT&T Cabling System component.

## AT&T Millennium Lifetime Warranty Limitations

Only the repair or replacement of elements in an AT&T Cabling Systems network by a certified AT&T Cabling Systems or by its designated certified installer is provided under this Warranty.

Non Transferable Warranty - This Warranty is limited to the original end user only for whom the installation has been setup and is not transferable.

This Warranty is only applicable to the transmission properties and applications of the category and standard to which the channels or links of warranted AT&T Cabling Systems structured cabling system were tested to, as indicated in the specific Warranty.

Updates, modifications and revisions of standards published after the date of testing may not be retroactively applied to this Warranty.

This Warranty is only applicable to channels and links of warranted AT&T Cabling Systems structured cabling system that were tested and reported. Failed or non-tested links or channels of warranted AT&T Cabling Systems structured cabling system are automatically excluded from the Warranty. Each channel and link of warranted AT&T Cabling Systems structured cabling system needs to be registered in order to be covered under the Warranty.

This Warranty is only applicable to fully ratified and published standards. AT&T Cabling Systems does not warrant the performance of its links and channels of warranted AT&T Cabling Systems structured cabling system based on draft standard limits, even if they are available in field-test instruments.

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AT&T Cabling Systems makes no other representation or warranty of any other kind, expressed or implied with respect to the components sold hereunder, whether as to merchantability, fitness for a particular purpose or any other matter. Under no circumstances or conditions shall AT&T Cabling Systems be liable or responsible for any claim of any buyer for costs, expenses, direct or consequential damages due to the use or misuse of AT&T Cabling Systems products.

The limited warranty specified herein states the exclusive and sole remedy for any breach of warranty by or any defects in the products and is in lieu of all other warranties, expressed, implied or statutory. This Warranty does not cover failure of any AT&T Cabling Systems system or component resulting from actions or events beyond the control of AT&T Cabling Systems including, without limitation, unauthorized or improper repairs, modifications, misuse, accidents, fire, water damage, excessive radiation and acts of God.

This Warranty does not cover modular cords and terminated work-area cables.

This Warranty shall be expanded only to the extent required by applicable local laws.

AT&T Cabling Systems shall not be liable for any costs other than as expressly set forth in this Warranty, including but not limited to costs associated with components fault diagnosis, rectification, and installation labor when a failure is determined by AT&T Cabling Systems not to be caused by an AT&T Cabling Systems component.

The AT&T Cabling Systems products are not designed, manufactured or intended for use, and should not be used or sold or resold for use, in any applications requiring fail-safe performance of the AT&T Cabling Systems products and/or in which a malfunction or a failure of the products could lead to personal injury or death, or serious physical or environmental damage, including but not limited to applications such as (a) life support machines or other life preserving medical devices or systems; (b) air traffic control or aircraft navigation or communication systems; OR (c) control equipment for nuclear facilities (Collectively, "Restricted Uses"). All Restricted Uses of the AT&T Cabling Systems products are strictly prohibited and shall automatically void any warranties or indemnities provided by the supplier, and release AT&T Cabling Systems from any obligation to provide any support with respect to such products.

In no event shall AT&T Cabling Systems cumulative liability for all claims of whatever kind, in the aggregate, whether such claims are based in contract, indemnity, warranty, tort or otherwise, arising under or in connection herewith, exceed the sum of the total amounts paid by the customer/end user to AT&T Cabling Systems with respect thereto.

In no event shall AT&T Cabling Systems be liable for any special, exemplary, indirect, incidental or consequential damages (including loss of use, data, business, revenues, profits or other economic advantage), however caused, arising under or in connection herewith, even if AT&T Cabling Systems has been advised of the possibility or probability of such damages or that such damages were foreseen, and even if any exclusive remedies provided herein fail of their essential purpose. Without derogating from the above said, in no event shall AT&T Cabling Systems be liable for any unforeseen damages.

This Warranty shall be governed by and construed under the laws of the State of Turkey.

This Warranty is provided by AT&T Cabling Systems, an authorized brand licensee of AT&T Intellectual Property.

**ANNEX A: Balanced Cabling Supported Application**

Application	Specification reference	Date	Additional name / reference
<b>Category 1 - Class A (defined up to 0,1 MHz)</b>			
PBX	National requirements		
X.21	ITU-T Rec. X.21	1992	
V.11	ITU-T Rec. X.21	1996	
<b>Category 2 - Class B (defined up to 1 MHz)</b>			
S0-Bus (extended)	ITU-T Rec. I.430	1993	ISDN Basic Access (Physical Layer)
S0 Point-to-Point	ITU-T Rec. I.430	1993	ISD2 Basic Access (Physical Layer)
S1/S2	ITU-T Rec. I.431	1993	ISDN Primary Access (Physical Layer)
<b>Category 3 - Class C (defined up to 16 MHz)</b>			
Ethernet 10BASE-T	IEEE 802.3, Clause 14 <sup>a</sup>	2005	CSMA/CD IEEE 802.3i
Token Ring 4 Mbit/s	ISO/IEC 8802-5	1998	
ATM LAN 25,60 Mbit/s	ATM Forum af-phy-0040.000	1995	ATM-25/Category 3
ATM LAN 51,84 Mbit/s	ATM Forum af-phy-0018.000	1994	ATM-52/Category 3
ATM LAN 155,52 Mbit/s	ATM Forum af-phy-0047.000	1995	ATM-155/Category 3
<b>Category 5 - Class D 1995 (defined up to 100 MHz)</b>			
Token Ring 16 Mbit/s	ISO/IEC 8802-5	1998	IEEE 802.5:1998
ATM LAN 155,52 Mbit/s	ATM Forum af-phy-0015.000	1994	ATM-155/Category 5
Ethernet 100BASE-TX <sup>a,b</sup>	IEEE 802.3, Clause 25 <sup>a</sup>	2005	Fast Ethernet IEEE 802.3u
Token Ring 100 Mbit/s	IEEE 8802-5t	2000	
PoE	IEEE 802.3 af	2005	Power over Ethernet, IEEE 802.3af
<b>Category 5e - Class D 2002 (defined up to 100 MHz)</b>			
Ethernet 1000BASE-T	IEEE 802.3, Clause 40 <sup>a</sup>	2005	Gigabit Ethernet, IEEE 802.3ab
Fibre Channel 1 Gbit/s	ISO/IEC 14165-115	2007	Twisted-pair Fibre Channel 1G
Firewire 100 Mbit/s	IEEE 1394b	2002	Firewire/Category 5
PoE+	IEEE 802.3 at <sup>b</sup>	2009	Power over Ethernet Plus
<b>Category 6 - Class E 2002 (defined up to 250 MHz)</b>			
ATM LAN 1,2 Gbit/s	ATM Forum af-phy-0162.000	2001	ATM-1 200/Category 6
<b>Category 6A - Class E<sub>A</sub> 2008 (defined up to 500 MHz)</b>			
Ethernet 10GBASE-T	IEEE 802.3, Clause 44	2006	10Gigabit Ethernet, IEEE 802.3an
Fibre Channel 2 Gbit/s	INCITS 435	2007	Twisted-pair Fibre Channel 2G-FCBASE-T
Fibre Channel 4 Gbit/s	INCITS 435	2007	Twisted-pair Fibre Channel 4G-FCBASE-T
<b>Category 7 - Class F 2002 (defined up to 600 MHz)</b>			
FC-100GB/s	ISO/IEC 14165-114	2005	FC-100-DF-EL-S
<b>Category 7A - Class F<sub>A</sub> 2008 (defined up to 1 000 MHz)</b>			
No additional supported applications			

**Maximum supportable distances for balanced twisted-pair cabling applications**

<b>Application</b>	<b>Media</b>	<b>Distance m (ft)</b>	<b>Comments</b>
Ethernet 10BASE-T	category 3, 5e, 6, 6A	100 (328)	
Ethernet 100BASE-TX	category 5e, 6, 6A	100 (328)	
Ethernet 1000BASE-T	category 5e, 6, 6A	100 (328)	
Ethernet 10GBASE-T	category 6A	100 (328)	
ADSL	category 3, 5e, 6, 6A	5,000 (16404)	1.5 Mb/s to 9 Mb/s
VDSL	category 3, 5e, 6, 6A	5,000 (16404)	1500 m (4900 ft) for 12.9 Mb/s; 300 m (1000 ft) for 52.8 Mb/s
Analog Phone	category 3, 5e, 6, 6A	800 (2625)	
FAX	category 3, 5e, 6, 6A	5,000 (16404)	
ATM 25.6	category 3, 5e, 6, 6A	100 (328)	
ATM 51.84	category 3, 5e, 6, 6A	100 (328)	
ATM 155.52	category 5e, 6, 6A	100 (328)	
ATM 1.2G	category 6, 6A	100 (328)	
ISDN BRI	category 3, 5e, 6, 6A	5,000 (16404)	128 kb/s
ISDN PRI	category 3, 5e, 6, 6A	5,000 (16404)	1.472 Mb/s

ANNEX B: Fiber-Optic Supported Applications

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Network application	Max. channel insertion loss (dB)			ISO/IEC 11801 channel supported by cabled optical fibre Category							
	Multimode <sup>a</sup>		Single-mode	OM1		OM2		OM3/OM4		OS1/OS2	
	850 nm	1 300 nm	1 310 nm	850 nm	1 300 nm	850 nm	1 300 nm	850 nm	1 300 nm	1 310 nm	1 550 nm
IEEE 802-3: 10BASE-FLand FB <sup>b</sup>	12,5(6,8)	–	–	OF-2000		OF-2000		OF-2000			
ISO/IEC TR 11802-4: 4 and 16 Mbit/s Token Ring <sup>b</sup>	13,0(8,0)	–	–	OF-2000		OF-2000		OF-2000			
ATM at 52 Mbit/s <sup>c</sup>	NA	10,0(5,3)	10,0		OF-2000		OF-2000		OF-2000	OF-2000	
ATM at 155 Mbit/s <sup>c</sup>	7,2	10,0(5,3)	7,0	OF-500	OF-2000	OF-500	OF-2000	OF-500	OF-2000	OF-2000	
ATM at 622 Mbit/s <sup>b, c, d</sup>	4,0	6,0(2,0)	7,0	OF-300	OF-500	OF-300	OF-500	OF-300	OF-500	OF-2000	
ISO/IEC 14165-111: Fibre Channel (FC-PH) at 1 062 Mbit/s <sup>c, d</sup>	4,0	–	6,0	OF-300		OF-500		OF-500		OF-2000	
IEEE 802-3: 1000BASE-SX <sup>d</sup>	2,6(3,56)	–	–	<sup>e</sup>		OF-500		OF-500			
IEEE 802-3: 1000BASE-LX <sup>c, d</sup>	–	2,35	4,56		OF-500		OF-500		OF-500	OF-2000	
ISO/IEC 9314-3: FDDI PMD <sup>b</sup>	–	11,0(6,0)	–		OF-2000		OF-2000		OF-2000		
ISO/IEC 9314-4: FDDI SMF-PMD <sup>c</sup>	–	–	10,0							OF-2000	
ISO/IEC 8802-3: 100BASE-FX <sup>b</sup>		11,0(6,0)	–		OF-2000		OF-2000		OF-2000		
IEEE 802.3: 10GBASE-LX4		2,00	6,20		OF-300		OF-300		OF-300	OF-2000	
IEEE 802.3: 10GBASE-ER/EW											OF-2000
IEEE 802.3: 10GBASE-SR/SW	1,60 (62,5) 1,80 (OM-2 50) 2,60 (OM-3)	–	–					OF-300			
IEEE 802.3: 10GBASE-LR/LW <sup>c</sup>	–	–	6,20							OF-2000	
IEEE 802.3: 40GBASE-LR4	–	–	f.f.s.							OF-2000	
IEEE 802.3: 100GBASE-LR4	–	–	6,3							OF-2000	
IEEE 802.3: 100GBASE-ER4	–	–	18,0							OF-2000	
1 Gbps FC (1.0625 GBd)	3,85 (OM-2) 2,62 (OM-3)	–	7,8			OF-500		OF-500		OF-2000	
2 Gbps FC (2,125 GBd)	2,1 (OM-1) 2,62 (OM-2) 3,31 (OM-3)	–	7,8			OF-300		OF-300		OF-2000	
4 Gbps FC (4,25 GBd)	1,78 (OM-1) 2,06 (OM-2) 4,48 (OM-3)–	–	4,8					OF-300		OF-2000	
8 Gbps FC (8,5 GBd)	1,62 (OM-1) 1,77 (OM-2) 2,32 (OM-3)	–	6,4							OF-2000	

**Maximum supportable distances and attenuation for optical fiber applications by fiber type**

		Multimode						Single-mode	
		62.5/125 $\mu\text{m}$ TIA 492AAAA (OM1)		50/125 $\mu\text{m}$ TIA 492AAAB (OM2)		850 nm laser- optimized 50/125 $\mu\text{m}$ TIA 492AAAC (OM3)		TIA 492CAA (OS1)	TIA 492CAAB (OS2)
Application	Parameter Nominal wavelength (nm)	850	1300	850	1300	850	1300	1310	1550
Ethernet 10/100BASE-SX	Channel attenuation (dB)	4.0	-	4.0	-	4.0	-	-	-
	Supportable distance m (ft)	300 (984)	-	300 (984)	-	300 (984)	-	-	-
Ethernet 100BASE-FX	Channel attenuation (dB)	-	11.0	-	6.0	-	6.0	-	-
	Supportable distance m (ft)	-	2000 (6560)	-	2000 (6560)	-	2000 (6560)	-	-
Ethernet 1000BASE-SX	Channel attenuation (dB)	2.6	-	3.6	-	4.5	-	-	-
	Supportable distance m (ft)	275 (900)	-	550 (1804)	-	800 (2625)	-	-	-
Ethernet 1000BASE-LX	Channel attenuation (dB)	-	2.3	-	2.3	-	2.3	4.5	-
	Supportable distance m (ft)	-	550 (1804)	-	550 (1804)	-	550 (1804)	5000 (16405)	-
Ethernet 10GBASE-S	Channel attenuation (dB)	2.4	-	2.3	-	2.6	-	-	-
	Supportable distance m (ft)	33 (108)	-	82 (269)	-	300 (984)	-	-	-
Ethernet 10GBASE-LX4	Channel attenuation (dB)	-	2.5	-	2.0	-	2.0	6.3	-
	Supportable distance m (ft)	-	300 (984)	-	300 (984)	-	300 (984)	10000 (32810)	-
Ethernet 10GBASE-L	Channel attenuation (dB)	-	-	-	-	-	-	6.2	-
	Supportable distance m (ft)	-	-	-	-	-	-	10000 (32810)	-
Ethernet 10GBASE-LRM	Channel attenuation (dB)	-	1.9	-	1.9	-	1.9	-	-
	Supportable distance m (ft)	-	220 (720)	-	220 (720)	-	220 (720)	-	-
Fibre Channel 100-MX-SN-I (1062 Mbaud)	Channel attenuation (dB)	3.0	-	3.9	-	4.6	-	-	-
	Supportable distance m (ft)	300 (984)	-	500 (1640)	-	860 (2822)	-	-	-

		Multimode						Single-mode	
		62.5/125 $\mu$ m		50/125 $\mu$ m		850 nm laser-optimized 50/125 $\mu$ m		TIA 492CAAA (OS1)	
		TIA 492AAAA (OM1)		TIA 492AAAB (OM2)		TIA 492AAAC (OM3)		TIA 492CAAB (OS2)	
	Parameter								
Application	Nominal wavelength (nm)	850	1300	850	1300	850	1300	1310	1550
Fibre Channel 100-SM-LC-L (1062 Mbaud)	Channel attenuation (dB)	-	-	-	-	-	-	7.8	-
	Supportable distance m (ft)	-	-	-	-	-	-	10000 (32810)	-
Fibre Channel 200-MX-SN-I (2125 Mbaud)	Channel attenuation (dB)	2.1	-	2.6	-	3.3	-	-	-
	Supportable distance m (ft)	150 (492)	-	300 (984)	-	500 (1640)	-	-	-
Fibre Channel 200-SM-LC-L (2125 Mbaud)	Channel attenuation (dB)	-	-	-	-	-	-	7.8	-
	Supportable distance m (ft)	-	-	-	-	-	-	10000 (32810)	-
Fibre Channel 400-MX-SN-I (4250 Mbaud)	Channel attenuation (dB)	1.8	-	2.1	-	2.5	-	-	-
	Supportable distance m (ft)	70 (230)	-	150 (492)	-	270 (886)	-	-	-
Fibre Channel 400-SM-LC-L (4250 Mbaud)	Channel attenuation (dB)	-	-	-	-	-	-	7.8	-
	Supportable distance m (ft)	-	-	-	-	-	-	10000 (32810)	-
Fibre Channel 1200-MX-SN-I (10512 Mbaud)	Channel attenuation (dB)	2.4	-	2.2	-	2.6	-	-	-
	Supportable distance m (ft)	33 (108)	-	82 (269)	-	300 (984)	-	-	-
Fibre Channel 1200-SM-LL-L (10512 Mbaud)	Channel attenuation (dB)	-	-	-	-	-	-	6.0	-
	Supportable distance m (ft)	-	-	-	-	-	-	10000 (32810)	-
FDDI PMD ANSI X3.166	Channel attenuation (dB)	-	11.0	-	6.0	-	6.0	-	-
	Supportable distance m (ft)	-	2000 (6560)	-	2000 (6560)	-	2000 (6560)	-	-
FDDI SMF-PMD ANSI X3.184	Channel attenuation (dB)	-	-	-	-	-	-	10.0	-
	Supportable distance m (ft)	-	-	-	-	-	-	10000 (32810)	-