

The Connectix 25-year system warranty

The Warranty

Part 1 System performance warranty

A Connectix Cabling System, as defined under *Terms and Conditions*, is guaranteed to meet or exceed the electrical or optical performance as defined in the Standards. The Standards are defined as;

- EN 50173
- ISO 11801
- ANSI-TIA/EIA-568B

The Standards include all addenda, editions, versions and Technical Systems Bulletins published or planned relating to those Standards up to the end of 2008.

Performance →	Copper electrical performance			Optical performance							
	Connectix Cabling System ↓	Category 5 Class D	Category 6 Class E	Category 6A Class EA	Optical fibre	OM1	OM2	OM3	OM4*	OS1	OS2
Structured cabling systems											
Connectix Cat5	✓										
Connectix Cat6	✓	✓									
Connectix Cat6A	✓	✓	✓								
Connectix Optical System					With appropriate fibre selected					✓	
Preterminated cabling systems											
Connectix Express	Express C5	Express C6	Express C6A								
Opal					With appropriate fibre selected					✓	
Lightspeed					With appropriate fibre selected					✓	
Intelligent Infrastructure Solutions											
Maxiim	Maxiim C5	Maxiim C6	Maxiim C6A		With appropriate fibre selected					✓	

*Performance will be to the proposed OM4 standard

Part 2 Applications Warranty

A Connectix cabling system is guaranteed to provide error free transmission of the following communication protocols when installed according to Connectix installation requirements. 'Error free' is defined as a bit error rate not worse than 10⁻¹².

Any communications protocol not mentioned below is also guaranteed to work if designed for operation on a structured cabling system, copper or optical, and is used on the appropriate products. For example if a protocol requires a Category 5/Class D

electrical performance then it would be guaranteed to work on all Connectix copper structured cabling products.

Copper electrical performance							
LAN protocol							
	Ethernet 10BASE-10 Mb/s	Ethernet 100BASE-T 100 Mb/s	Ethernet 1000BASE-T 1000 Mb/s	Ethernet 10GBASE-T 10000 Mb/s	Fibre channel 1GFC 1 Mb/s	Fibre channel 2GFC 2 Mb/s	Fibre channel 4GFC 4 Mb/s
Connectix Cat5	100 m	100 m	100 m		100 m	60 m	
Connectix Cat6	100 m	100 m	100 m	37 m	100m	70 m	40 m
Net10G	100 m	100 m	100 m	100 m	100 m	100 m	100 m
Includes all standalone components, preterminated solutions and Maxiim IIM systems							

Optical systems LAN protocol		Optical system performance. Includes all Optix standalone components, preterminated solutions and optical Maxiim IIM solutions						
		Fibre type						
		OM1	OM2	OM3	OM3+/OM4	OS1	OS2	
Ethernet								Speed
100BASE-FX		2000 m	2000 m	2000 m	2000 m			100 Mb/s
1000BASE -SX		275 m	550 m	1100 m	1100 m			1000 Mb/s
1000BASE -LX		550 m	550 m	550 m	550 m			1000 Mb/s
10GBASE-SR		33 m	82 m	300 m	550 m			10 Gb/s
10GBASE-LRM		220 m	220 m	300 m	300 m			10 Gb/s
10GBASE-LX4		300 m	300 m	300 m	300 m	10,000 m	10,000 m	10 Gb/s
10GBASE-LR/W						10,000 m	10,000 m	10 Gb/s
10GBASE-ER/W						40,000 m	40,000 m	10 Gb/s

infiniband								
1X-SX 2 fibres	SDR	125 m	250 m	500 m	500 m			1Gb/s
	DDR	65 m	125 m	200 m	200 m			
	QDR	33 m	82 m	300 m	300 m			
4X-SX 12 fibres	SDR	75 m	125 m	200 m	200 m			4 Gb/s
	DDR	50 m	75 m	150 m	150 m			
8X-SX 2 x 12 fibres	SDR	75 m	125 m	200 m	200 m			8 Gb/s
	DDR	50 m	75 m	150 m	150 m			
12X-SX 2 x 12 fibres	SDR	75 m	125 m	200 m	200 m			12 Gb/s
1X-LX	S/D/ QDR					10,000 m	10,000 m	1 Gb/s
4X-LX	SDR					10,000 m	10,000 m	4 Gb/s

Fibre Channel							
1GFC	300 m	500 m	500 m	500 m	10,000 m	10,000 m	1 Gb/s
2GFC	150 m	300 m	300 m	300 m	10,000 m	10,000 m	2 Gb/s
4GFC	70 m	150 m	380 m	380 m	10,000 m	10,000 m	4 Gb/s
8GFC	40 m	100 m	300 m	300 m	10,000 m	10,000 m	8 Gb/s
Includes all standalone components, preterminated solutions and Maxiim IIM systems							

Part 3 Additional warranties beyond the Standards

6 connector channel model

The current Standards call for a maximum of four connectors within a copper cabling channel, regardless of the Class or Category of operation. In large data centre applications this can prove very restrictive and requires the inclusion of active switches. The attenuation and crosstalk performance of the Connectix copper cabling systems is so good that it means that up to six connectors can be used and still meet the overall channel performance for the cable link. This gives great flexibility of design especially in the larger project.

Although the number of connectors in an optical channel is not defined in the Standards the maximum allowed attenuation certainly is. Connectix optical cables and connectors have such low attenuation that at least six points of optical interconnection are also allowed when using Connectix optical systems.

EU Electromagnetic Compatibility Directive

A correctly installed Connectix cabling system will not degrade the EMC performance of any CE- marked communications device connected to it.

A Connectix cabling system will maintain operation within its stated limits when subjected to an external electrostatic field of up to 3 V/m (up to 250 MHz) for unscreened systems and up to 10 V/m (up to 500 MHz) for screened systems. Optical cable systems are guaranteed for use in any EMC environment.

Fire performance

All Connectix cable sheath materials will meet the flammability requirements of IEC 60332-1. Higher performance cables will meet IEC 60332-3, IEC 61034 and IEC 60754-2.

RoHS and WEEE

Connectix cabling systems conform to the requirements of The Restriction of Hazardous Substances (RoHS) Directive and the Waste Electrical and Electronic Equipment Directive (WEEE) in so far as they apply to communications cabling products.

Extended distances

A correctly installed Connectix copper cabling system can offer extended transmission distances above the usual 100 m channel model as defined in the Standards. The table below shows the maximum guaranteed transmission distances for different named protocols over the Connectix copper cabling products. It should be noted that the electrical performance guaranteed for any overlength link will be according to the Standards. For example a Category 5 cable system with a 140 m channel length would be guaranteed to transmit 100BASE-T signals but the electrical performance would be Class C as defined by the Standards.

Protocol	Distance on Connectix copper cabling systems
Ethernet 10BASE-T	175 m
Fast Ethernet 100BASE-TX	140 m
Gigabit Ethernet 1000BASE-T	100 m
Token ring 16 Mb/s	250 m
ATM 155	150 m
IBM 3270	820 m
AS400/System 3X	800 m
ISDN basic rate	500 m

Quality systems

Connectix Ltd is approved to ISO 9001 and maintains third party approvals on the performance of products and systems from Delta Laboratories of Denmark. Connectix is an IET approved training partner, a supplier of CIBSE Continuing Professional Development, a supplier of BICSI Continuing Education Credits and employs CIBSE Low Carbon Consultants.



Terms and Conditions

1. The Warranty is effective from the date of issue and lasts for twenty-five years
2. The Warranty is effective in the European Union and other territories as agreed by Connectix in advance of installation of the products
3. The Products must be exclusively supplied by Connectix or approved by Connectix
4. The Products must be new
5. The Warranty is offered between Connectix and the user or owner of the cabling system and may be transferred to other users at the discretion and permission of Connectix which must be sought in writing at the time of transfer of ownership
6. The products must be installed according to the current installation manuals and other design guidelines of Connectix. Where advice is not specifically given within Connectix' documentation the relevant standards and best practices must be used. For cabling this must include adherence to EN 50174 parts 1, 2 & 3 and BS 6701
7. The products must be tested after installation according to the installation manuals and other design guidelines of Connectix. The results must be submitted in the manner defined by Connectix. A Warranty will be only be issued after the test results have been received and accepted by Connectix
8. The Warranty is only available to installation companies that are members of a Connectix approved installer scheme
9. The Warranty is only available to installation companies that have a level of training approved by Connectix
10. The cabling system and products must have been stored and used within the environmental limits as described on the data sheets appertaining to those Products for the entire life of the installation
11. Any payments due to Connectix in respect of the Products supplied in pursuance to the Warranty application must have been made in full before a Warranty will be issued or before a claim will be considered

Actions in the event of a claim

12. The owner/end-user of the Products, or their representative, must raise a warranty claim within 30 days of the fault becoming apparent
13. In the first instance the user of the products will contact the installer of the products and that installer will initiate the claims procedure with Connectix. If the installer is no longer in existence or in a position to initiate the claim then the owner/end-user may contact Connectix directly
14. If the installer is unable to correct the defect then Connectix will send or appoint qualified engineers to report on the claimed defect
15. If, in the opinion of Connectix, the defect is caused by defective products supplied by Connectix then Connectix will repair or replace the defective goods. This will include the reasonable costs of reinstatement of the Products as long as;
 - a. A valid Connectix Warranty is in force at the site of the installation
 - b. The Terms & Conditions of points 2 to 10 above have been met

And

16. That reasonable costs will mean works carried out under normal working hours by a contractor appointed by Connectix or approved by Connectix in advance of any works being carried out
17. Only those products shown to be at fault or defective will be repaired or replaced
18. The choice of repair or replacement shall be at the sole discretion of Connectix
19. Connectix will not accept any consequential or liquidated damages or any other consequential claims due to the performance or non-performance of Connectix or products supplied by Connectix

20. This Warranty agreement is governed by the and under the jurisdiction of the laws of England and Wales

Definitions

'Connectix'

Connectix Limited
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Registered in England No: 2814569

'Products'

Any cabling product supplied by Connectix or approved by them and intended for use in a Connectix Category 5, 6, 6A or optical fibre cabling system

'Connectix Cabling Systems'

A group of cabling products brought together and supplied by Connectix for the construction of a structured cabling system as described in the Standards such as BS EN 50173, amongst others