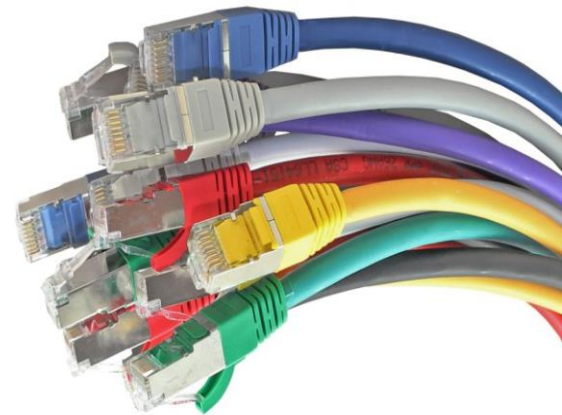


Introduction

As infrastructures become denser and more complex, the value of structured cabling is magnified. Structured cabling makes it easier for the network to grow and change, using a modular design that supports new equipment and applications. The variety of infrastructure cables and accessories are based on Cat6/6A, or Cat7/7A; however, structured cabling is more than just that. It's a comprehensive system of cables and related hardware that provides a flexible, future-ready infrastructure for data communications. One of important infrastructure element is a Patch cables, also called Ethernet patch cords, are short lengths of Cat6/6A, or Cat7/7A shielded or unshielded twisted-pair used to connect active devices to networks. IT administrators also use patch cables to connect two or more "backbone" devices such as switch to switch, or patch panel to switch.



Application

Ethernet patch cables, also called Ethernet patch cords, are often used for short distances in offices and wiring closets of Cat6, Cat6A or Cat7, used to connect active devices to networks. In businesses, IT administrators also use patch cables to connect two or more "backbone" devices such as switch to switch, or patch panel to switch. Patch cables not only send data signals, but also carry PoE or Power over Ethernet to power a remote device such as a standalone Access Point.

- Ethernet Networking
- Computer Networking Project
- Audio & Data Transmission
- Digital Networking
- Broadband Networking Communication
- Data Centers

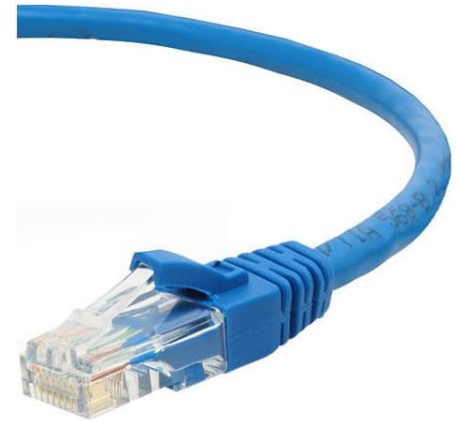


Category 6 Patch Cords

Operation Features

The Category 6 ethernet patch cables are used to deliver a full end-to-end Class E solution, twisted pair stranded copper cable with a high-performance modular plug at each end available in several versions with cable types unshielded and shielded, color and length.

- Cable type options Cat6 U/UTP, F/UTP or SF/UTP
- Fulfills the performance requirements of Category 6, Class E (250MHz)
- RJ45 CAT6 Patch cord with RJ45 Connector and ethernet cable cat6 4 pairs copper twist wire patch cord
- Type EIA/TIA-568B
- Conductor 24AWG Stranded soft circle twisted bare copper wire
- Jacket PVC or LSZH
- Connector RJ45 8P8C golden type
- Application 10BASE-T Ethernet IEEE802.3, 100BASE-T Ethernet IEEE802.3 and 1000BASE-T Ethernet IEEE802.3
- Rating Temperature: 60°C
- 100% component test to guarantee the quality



Mechanical Performance Test compliance

- Standards Specifications:
 - ✓ Tested with guaranteed performance to 250 MHz
 - ✓ TIA/EIA-568-C.2, TIA/EIA-568.2-D
 - ✓ ISO/IEC 11801 Class E, IEC 611565
 - ✓ EN50173-1:2011
 - ✓ UL Listed
 - ✓ RoHS
- Bandwidth: Standard 250 MHz
- Conductor Diameter: 0.57±0.02
- Outer Cable Diameter: 6.2mm ± 0.2 mm
- Conductors: Stranded Copper
- Outer Jacket: PVC or LSZH
- Standard Color of Sheath: Blue RAL 5015, other colors are available.

Electrical Performance

Freq	Insertion Loss dB		NEXT dB		PS NEXT dB		ACR-F dB		PS ACR-F dB		Return Loss dB	
	Std	Typ	Std	Typ	Std	Typ	Std	Typ	Std	Typ	Std	Typ
1	4.0	<4	65.0	>75	62.0	74.8	63.3	>60	60.3	>60	19.0	21.0
4	4.2	4.1	63.0	66.5	60.5	65.0	51.2	58.2	48.2	58.2	19.0	21.0
10	6.6	6.4	56.6	60.1	54.0	58.5	43.3	50.3	40.3	50.3	19.0	21.0
16	8.3	8.1	53.2	56.7	50.6	55.1	39.2	46.2	36.2	46.2	18.0	20.0
20	9.3	9.1	51.6	55.1	49.0	53.5	37.2	44.2	34.2	44.2	17.5	19.5
31.25	11.7	11.4	48.4	51.9	45.7	50.2	33.4	40.4	30.4	40.4	16.5	18.5
62.5	16.9	16.3	43.4	46.9	40.6	45.1	27.3	34.3	24.3	34.3	14.0	16.0
100	21.7	20.8	39.9	43.4	37.1	41.6	23.3	30.3	20.3	30.3	12.0	14.0
155	27.6	26.2	36.7	40.2	33.8	38.3	19.5	26.5	16.5	26.5	10.1	12.1
200	31.7	30.0	34.8	38.3	31.9	36.4	17.2	24.2	14.2	24.2	9.0	11.0
250	35.9	33.8	33.1	36.6	30.2	34.7	15.3	22.3	12.3	22.3	8.0	10.0

Ordering Information



Product Code	Description
LN-PC-UC6x-xx-xxx	Category 6 UTP RJ45 Unshielded Patch Cord w/ T568B Wiring
LN-PC-FC6x-xx-xxx	Category 6 F/UTP RJ45 Foiled Patch Cord w/ T568B Wiring
LN-PC-SFC6x-xx-xxx	Category 6 SF/UTP RJ45 Shielded Foiled Patch Cord w/ T568B Wiring

*** Note:**

x= For the Patch Cord Cable Jacket Types such as “L for LSZH, P for PVC”
 xx= For the Patch Cord Cable Jacket Color such as “BL for Blue, GY for Gray, WH for White”
 xxx= For the Patch Cord Length such as “005 for 0.5 meter, 010 for 1 meter, 030 for 3 meter”

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Category 6A Patch Cords

Operation Features

The Category 6A ethernet patch cables are used to deliver a full end-to-end Class E solution, twisted pair stranded copper cable with a high-performance modular plug at each end available in several versions with cable types unshielded and shielded, color and length.

- Cable type options Cat6A U/UTP, F/UTP or SF/UTP
- Fulfills the performance requirements of Category 6A, Class E (500MHz)
- RJ45 CAT6A Patch cord with RJ45 Connector and ethernet cable cat6 4 pairs copper twist wire patch cord
- Type EIA/TIA-568B
- Conductor 24AWG Stranded soft circle twisted bare copper wire
- Jacket PVC or LSZH
- Connector RJ45 8P8C golden type
- Application 10BASE-T Ethernet IEEE802.3, 100BASE-T Ethernet IEEE802.3, 1000BASE-T Ethernet IEEE802.3 and 10GBASE-T Ethernet IEEE802.3
- Rating Temperature: 60°C
- 100% component test to guarantee the quality



Mechanical Performance Test compliance

- Standards Specifications:
 - ✓ Tested with guaranteed performance to 500 MHz
 - ✓ TIA/EIA-568-C.2, TIA/EIA-568.2-D
 - ✓ ISO/IEC 11801 Class E, IEC 611565
 - ✓ EN50173-1:2011
 - ✓ UL Listed
 - ✓ RoHS
- Bandwidth: Standard 500 MHz
- Conductor Diameter: 0.57±0.02
- Outer Cable Diameter: 6.2mm ± 0.2 mm
- Conductors: Stranded Copper
- Outer Jacket: PVC or LSZH
- Standard Color of Sheath: Blue RAL 5015, other colors are available.

Electrical Performance

Freq in MHz	Attn in dB		NEXT in dB			PSNEXT in dB			ACR-F in dB	
	Max	Typ	Std	Min	Typ	Std	Min	Typ	Std	Typ
1	<4	4.0	65.0	67.0	85.0	62.0	64.0	74.8	63.3	69.9
4	4.1	4.1	63.0	65.0	72.9	60.5	62.5	65.0	51.2	57.9
10	6.4	6.3	56.6	58.6	65.0	54.0	56.0	58.5	43.3	49.9
16	8.1	8.0	53.2	55.2	60.9	50.6	52.6	55.1	39.2	45.9
20	9.1	9.0	51.6	53.6	59.0	49.0	51.0	53.5	37.2	43.9
31.25	11.4	11.2	48.4	50.4	55.1	45.7	47.7	50.2	33.4	40.0
62.5	16.3	15.9	43.4	45.4	49.1	40.6	42.6	45.1	27.3	34.0
100	20.8	20.2	39.9	41.9	45.0	37.1	39.1	41.6	23.3	29.9
155	26.2	25.4	36.7	38.7	41.2	33.8	35.8	38.3	19.5	26.1
200	30.0	28.9	34.8	36.8	39.0	31.9	33.9	36.4	17.2	23.9
250	33.8	32.5	33.1	35.1	37.0	30.2	32.2	34.7	15.3	22.0
300	37.3	35.7	31.7	33.7	35.4	28.8	30.8	33.3	13.7	20.4
500	49.3	46.7	27.9	29.9	31.0	24.8	26.8	24.9	9.3	16.0

Ordering Information



Product Code	Description
LN-PC-UCA6x-xx-xxx	Category 6A UTP RJ45 Unshielded Patch Cord w/ T568B Wiring
LN-PC-FC6Ax-xx-xxx	Category 6A F/UTP RJ45 Foiled Patch Cord w/ T568B Wiring
LN-PC-SFC6Ax-xx-xxx	Category 6A SF/UTP RJ45 Shielded Foiled Patch Cord w/ T568B Wiring

*** Note:**

x= For the Patch Cord Cable Jacket Types such as "L for LSZH, P for PVC"
 xx= For the Patch Cord Cable Jacket Color such as "BL for Blue, GY for Gray, WH for White"
 xxx= For the Patch Cord Length such as "005 for 0.5 meter, 010 for 1 meter, 030 for 3 meters"

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Category 7/7A Patch Cords

Operation Features

The Category 7 and 7A ethernet patch cables are used to deliver a full end-to-end Class F and FA solution, twisted pair stranded copper cable with a high-performance modular plug at each end available in several versions with cable types shielded, color and length.

- Cable type options Cat7 SF/UTP or Cat7A SF/UTP
- Fulfills the performance requirements of Category 7, Class F (600MHz) or Category 7A, Class FA (1000MHz)
- RJ45 Cat7 or Cat7A Patch cord with RJ45 Connector and ethernet cable cat7 or Cat7A 4 pairs copper twist wire patch cord
- Type EIA/TIA-568B
- Conductor 23AWG Stranded soft circle twisted bare copper wire
- Jacket PVC or LSZH
- Connector RJ45 8P8C golden type
- Application 10BASE-T Ethernet IEEE802.3, 100BASE-T Ethernet IEEE802.3, 1000BASE-T Ethernet IEEE802.3 and 10GBASE-T Ethernet IEEE802.3
- Rating Temperature: 60°C
- 100% component test to guarantee the quality



Mechanical Performance Test compliance

- Standards Specifications:
 - ✓ Tested with guaranteed performance to 600 MHz or 1000 MHz
 - ✓ TIA/EIA-568-C.2, TIA/EIA-568.2-D
 - ✓ ISO/IEC 11801 Class F/FA, IEC 61076-3-110
 - ✓ EN50173-1:2011,
 - ✓ UL Listed
 - ✓ RoHS
- Bandwidth: Standard 600 MHz for Cat7 and 1000 MHz for Cat7A
- Conductor Diameter: 0.57±0.02
- Outer Cable Diameter: 8.0mm ± 0.2 mm
- Conductors: Stranded Copper
- Outer Jacket: PVC or LSZH
- Standard Color of Sheath: Blue RAL 5015, other colors are available.

Electrical Performance

Frequency (in MHz)	Attenuation (in dB/100m)		NEXT pp (in dB)		ACR-F (in dB)		RL (in dB)		Coupling Att. (in dB)		PSANEXT (in dB)		PSAFEXT (in dB)	
	Std Max	Typical	Std Min	Typical	Std Min	Typical	Std Min	Typical	Std Min	Typical	Std Min	Typical	Std Min	Typical
	1	4.0	4.0	65.0	104.8	65.0	70.0	19.0	38.0	80.0	106.0	67.0	92.4	80.0
4	4.1	4.0	65.0	94.6	65.0	70.0	19.0	32.0	68.0	94.0	67.0	92.1	79.8	82.8
10	6.4	6.3	65.0	87.8	65.0	70.0	19.0	28.0	60.0	86.0	67.0	91.0	75.9	78.9
16	8.0	7.9	65.0	84.2	63.3	68.3	18.0	26.0	55.9	81.9	67.0	90.0	73.9	76.9
20	9.0	8.9	65.0	82.5	61.4	66.4	17.5	25.0	54.0	80.0	67.0	89.4	72.9	75.9
31.25	11.2	11.1	65.0	79.1	57.5	62.5	16.5	23.1	50.1	76.1	67.0	88.0	71.0	74.0
62.5	15.9	15.6	65.0	73.7	51.5	56.5	14.0	20.0	44.1	70.1	67.0	85.3	68.0	71.0
100	20.3	19.7	65.0	70.0	47.4	52.4	12.0	18.0	40.0	66.0	67.0	83.1	65.9	68.9
155	25.4	24.5	63.0	66.6	43.6	48.6	10.1	16.1	36.2	62.2	67.0	80.8	63.9	66.9
200	28.9	27.9	60.9	64.6	41.4	46.4	9.0	15.0	34.0	60.0	67.0	79.4	62.8	65.8
250	32.5	31.2	59.1	62.8	39.4	44.4	8.0	14.0	32.0	58.0	67.0	78.1	61.8	64.8
300	35.7	34.1	57.7	61.3	37.8	42.8	8.0	13.2	30.5	56.5	67.0	77.1	60.9	63.9
500	46.7	44.1	53.6	57.2	33.4	38.4	8.0	11.0	26.0	52.0	64.5	75.0	58.6	61.6
600	51.4	48.3	52.1	55.8	31.8	36.8	8.0	10.2	24.4	50.4	63.3	75.0	57.8	60.8
700	55.8	52.1	50.8	54.5	30.5	35.5	7.5	9.5	23.1	49.1	62.3	75.0	57.1	60.1
800	59.9	55.7	49.7	53.5	29.3	34.3	7.0	9.0	21.9	47.9	61.5	75.0	56.4	59.4
900	63.8	59.1	48.8	52.5	28.3	33.3	6.5	8.5	20.9	46.9	60.7	74.0	55.9	58.9
1000	67.6	62.3	47.9	51.6	27.4	32.4	6.0	8.0	20.0	46.0	60.0	73.0	55.4	58.4
1250				42.0		25.0		8.0		40.0		70.0		50.0

Ordering Information

Product Code	Description
LN-PC-SFC7x-xx-xxx	Category 7 600Mhz SF/UTP RJ45 Shielded Foiled Patch Cord w/ T568B Wiring
LN-PC-SFC7Ax-xx-xxx	Category 7A 1000Mhz SF/UTP RJ45 Shielded Foiled Patch Cord w/ T568B Wiring

*** Note:**

x= For the Patch Cord Cable Jacket Types such as “L for LSZH, P for PVC”
 xx= For the Patch Cord Cable Jacket Color such as “BL for Blue, GY for Gray, WH for White”
 xxx= For the Patch Cord Length such as “005 for 0.5 meter, 010 for 1 meter, 030 for 3 meters”

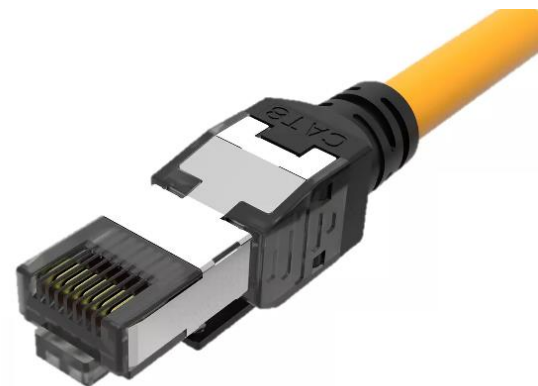
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Category 8 Patch Cords

Operation Features

The Category 8 ethernet patch cables are used to deliver a full end-to-end Class F/FA solution, twisted pair stranded copper cable with a high-performance modular plug at each end available in several versions with cable types shielded, color and length.

- Cable type options Cat8 SF/UTP
- Fulfills the performance requirements of Category 8, Class FA (2000MHz)
- RJ45 Cat8 Patch cord with RJ45 Connector and ethernet cable cat 8 4 pairs copper twist wire patch cord
- Type EIA/TIA-568B
- Conductor 23AWG Stranded soft circle twisted bare copper wire
- Jacket PVC or LSZH
- Connector RJ45 8P8C golden type
- Application 100BASE-T Ethernet IEEE802.3, 1000BASE-T Ethernet IEEE802.3, 10GBASE-T Ethernet IEEE802.3 and 25/40GBASE-T Ethernet IEEE802.3
- Rating Temperature: 60°C
- 100% component test to guarantee the quality



Mechanical Performance Test compliance

- Standards Specifications:
 - ✓ Tested with guaranteed performance to 2000 MHz
 - ✓ TIA/EIA-568-C.2, TIA/EIA-568.2-D
 - ✓ ISO/IEC 11801 Class F/FA, IEC 61076-3-110
 - ✓ EN50173-1:2011,
 - ✓ UL Listed
 - ✓ RoHS
- Bandwidth: Standard 2000 MHz
- Conductor Diameter: 0.57±0.02
- Outer Cable Diameter: 8.0mm ± 0.2 mm
- Conductors: Stranded Copper
- Outer Jacket: PVC or LSZH
- Standard Color of Sheath: Blue RAL 5015, other colors are available.

Electrical Performance

FREQ in MHz	IL in dB		RL in dB		NEXT in dB		ACRF in dB		TCL in dB		Prop.Delay in ns		PSANEXT in dB		PSAACRF in dB	
	Std Req.	Max	Std Req.	Min	Std Req.	Min	Std Req.	Min	Std Req.	Min	Std Req.	Min	Std Req.	Min	Std Req.	Min
1	3.0	0.7	19.0	19.0	65.0	65.0	65.0	65.0	30.0	55.0	0.176	0.176	75.0	110.0	75.0	106.0
4	3.0	1.3	19.0	19.0	63.9	65.0	59.9	65.0	30.0	44.8	0.171	0.154	75.0	104.0	75.0	94.0
10	3.0	2.0	19.0	19.2	57.4	65.0	52.0	65.0	30.0	38.0	0.169	0.152	75.0	100.0	75.0	86.0
16	3.0	2.6	18.0	18.1	54.0	65.0	47.9	65.0	29.5	34.5	0.168	0.151	75.0	98.0	75.0	81.9
20	3.0	2.9	17.5	17.6	52.4	65.0	45.9	65.0	27.9	32.9	0.168	0.151	75.0	97.0	75.0	80.0
31	3.6	3.6	16.5	16.6	49.2	65.0	42.1	63.3	24.6	29.6	0.167	0.151	75.0	95.1	71.2	76.2
63	5.1	5.1	16.0	16.0	44.0	65.0	36.0	57.1	19.4	24.4	0.167	0.150	75.0	92.0	65.0	70.0
100	6.5	6.4	16.0	16.0	40.6	65.0	32.0	53.1	16.0	21.0	0.166	0.150	75.0	90.0	61.0	66.0
155	8.1	8.0	15.3	15.3	37.3	63.0	28.2	49.3	12.8	17.8	0.166	0.150	75.0	87.1	57.2	62.2
200	9.3	9.2	14.3	14.3	35.4	60.9	25.9	47.1	10.9	15.9	0.166	0.150	75.0	85.5	55.0	60.0
300	11.5	11.3	12.7	12.7	32.3	57.7	22.4	43.6	7.9	12.9	0.166	0.150	75.0	82.8	51.5	56.5
400	13.3	13.1	11.6	11.6	30.1	55.4	19.9	41.1	5.8	10.8	0.166	0.149	75.0	81.0	49.0	54.0
600	16.5	16.2	10.0	10.0	26.2	52.1	16.4	37.5	3.0	7.8	0.166	0.149	73.3	78.3	45.4	50.4
1,000	22.0	21.3	8.0	8.0	19.6	48.1	12.0	33.1	3.0	5.0	0.166	0.149	70.0	75.0	41.0	46.0
1,200	24.4	23.6	8.0	8.0	17.0	34.0	10.4	27.9	3.0	5.0	0.166	0.149	68.8	73.8	39.4	44.4
1,500	27.7	26.7	8.0	8.0	13.9	32.0	8.4	20.6	3.0	5.0	0.165	0.149	67.4	72.4	37.5	42.5
1,600	28.7	27.7	8.0	8.0	12.9	31.5	7.9	18.4	3.0	5.0	0.165	0.149	66.9	71.9	36.9	41.9
1,800	30.7	29.6	8.0	8.0	11.2	30.5	6.9	16.4	3.0	5.0	0.165	0.149	66.2	71.2	35.9	40.9
2,000	32.7	31.4	8.0	8.0	9.6	29.6	5.9	14.7	3.0	5.0	0.165	0.149	65.5	70.5	35.0	40.0

Ordering Information

Product Code	Description
LN-PC-SFC8x-xx-xxx	Category 8 2000Mhz SF/UTP RJ45 Shielded Foiled Patch Cord w/ T568B Wiring

*** Note:**

x= For the Patch Cord Cable Jacket Types such as "L for LSZH, P for PVC"
 xx= For the Patch Cord Cable Jacket Color such as "BL for Blue, GY for Gray, WH for White"
 xxx= For the Patch Cord Length such as "005 for 0.5 meter, 010 for 1 meter, 030 for 3 meters"

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