

Data Cables

Golden Link

02

WWW.FUMOTELECOM.DE



Category 7A Cable



Standard Compliances

- ISO/IEC 11801:2011 (Ed. 2.2)
- IEC 61156-5:2009 (Ed. 2.0)
- EN 50173-1:2011
- EN 50173-2:2007 including amendment A1:2010

Features and Benefits

- Extremely high bandwidth of 1000 MHz
- Individual pair shielding to provide EMI protection
- Highest signal-to-noise ratio to reduce related downtime and network errors
- Provides positive PSACR beyond 1000 MHz
- Every master reel is tested to ensure electrical performance compliance
- Print legend contains footage marking from 305M to 0M or 500M to 0M
- Unique product-specific packaging for ease of identification
- RoHS compliant

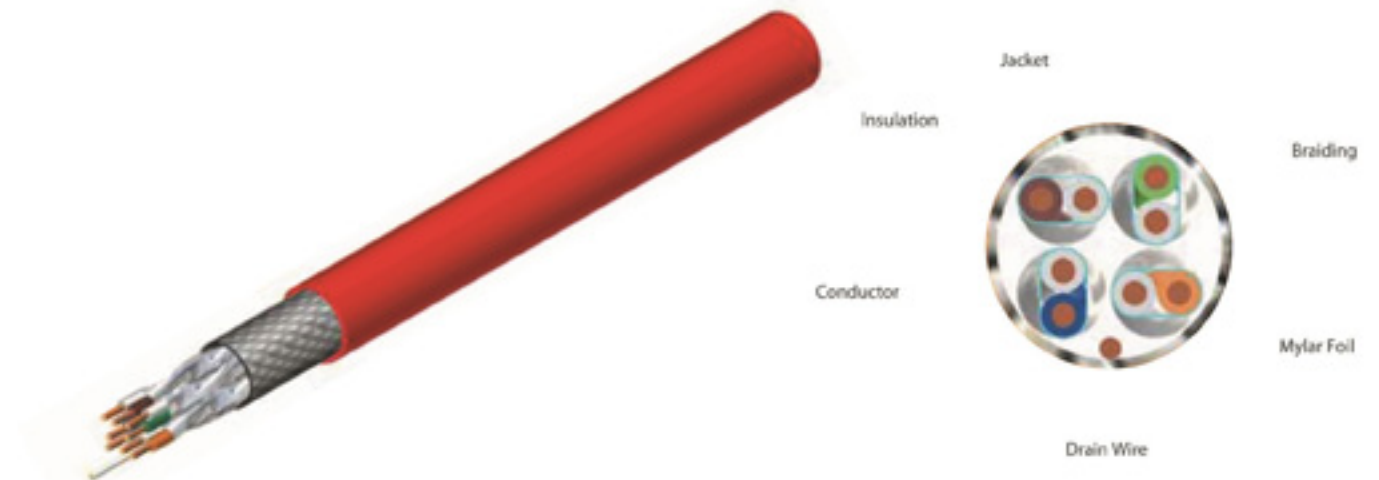
Application

- 2.4/1.2 Gb/s ATM
- IEEE 802.3an:10G BASE-T (10 Gigabit Ethernet) supporting 100 meters
- 3D imaging
- Digital Video
- Broadband and Baseband Analog Video

Technical Details

Capacitance unbalance (max.) @ 0.8 or 1 kHz (pF/km)	1600	Resistance unbalance between pairs (max.) (%)	4
DC Resistance (max.) Ω/km @ 20°C	95	Mean input impedance @100 MHz	100 ± 5 Ω
Resistance unbalance within a pair (max.) (%)	2	Dielectric strength	Min 1.0 kVdc or 0.7 kVac for 1 min. Min 2.5 kVdc or 1.7 kVac for 2 secs

Cat.7A



Electrical Performance

Meet IEC 61156-5 Ed.2.0 Category 7A horizontal cable parameters

Freq. (MHz)	Ins. Loss (dB/100m)	RL (dB)	Pair to Pair		Power Sum		Delay Skew (ns/100m)	Po. Delay (ns/100m)
			NEXT	ELFEXT	NEXT	ELFEXT		
			(dB/100m)		(dB/100m)			
	Max.	Min.	Min.	Min.	Min.	Min.	Max.	Max.
1	2.1	20.0	78.0	75.0	75.0	75.0	25	570
4	3.7	23.0	78.0	75.0	75.0	75.0	25	552.0
10	5.8	25.0	78.0	75.0	75.0	72.3	25	545.4
16	7.3	25.0	78.0	71.2	75.0	68.2	25	543.0
20	8.2	25.0	78.0	69.3	75.0	66.3	25	542.0
31.25	10.3	23.6	78.0	65.4	75.0	62.4	25	540.4
62.5	14.6	21.5	78.0	59.4	75.0	56.4	25	538.6
100	18.5	20.1	75.4	55.3	72.4	52.3	25	537.6
200	26.5	18.0	70.9	49.3	67.9	46.3	25	536.5
250	29.7	17.3	69.4	47.3	66.4	44.3	25	536.3
350	35.4	17.3	67.2	44.4	64.2	41.4	25	535.9
400	38.0	17.3	66.4	43.3	63.4	40.3	25	535.8
500	42.8	17.3	64.9	41.3	61.9	38.3	25	535.6
600	47.1	17.3	63.7	39.7	60.7	36.7	25	535.5
700	51.1	16.6	62.7	38.4	59.7	35.4	25	535.4
800	54.9	16.1	61.9	37.2	58.9	34.2	25	535.3
900	58.5	15.5	61.1	36.2	58.1	33.2	25	535.2
1000	61.9	15.1	60.4	35.3	57.4	32.3	25	535.1

Note: The cable performance between 1MHz and 4MHz is achieved by designed only and it is therefore not necessary to test for this performance below 4MHz.

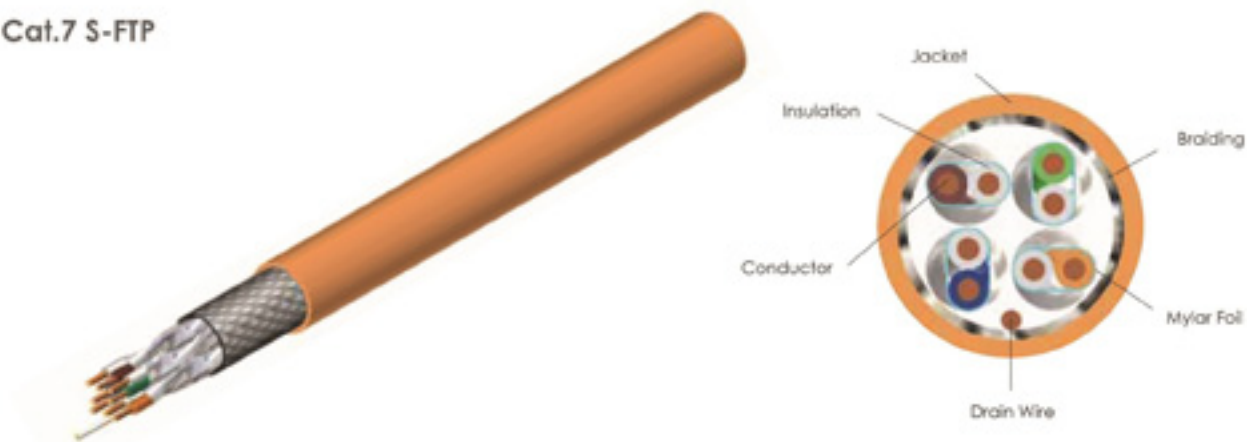
Order Information

Part No.	No. of Pairs	Cable Type	Conductor Size	Core Dimension (mm)	Overall Dimension (mm)	NVP (%)
GLCSF7AP/L	4	S-FTP	23AWG	1.45	8.58	71.5

Jack: t: PVC, LSZH (Low Smoke Zero Halogen), Outdoor PE Packagin g: 305M / 500M Wooden Reel

Category 7 Cable

Cat.7 S-FTP



Standard Compliances

- ISO/IEC 11801:2011 [Ed. 2.2]
- IEC 61156-5:2009 (Ed. 2.0)
- EN 50173-1:2011
- EN 50173-2:2007 including amendment A1:2010

Features and Benefits

- Extremely high bandwidth of 600 MHz
- Individual pair shielding to provide EMI protection
- Highest signal-to-noise ratio to reduce related downtime and network errors
- Provides positive PSACR beyond 600MHz
- Every master reel is tested to ensure electrical performance compliance
- Print legend contains footage marking from 305M to 0M or 500M to 0M
- Unique product-specific packaging for ease of identification
- RoHS compliant

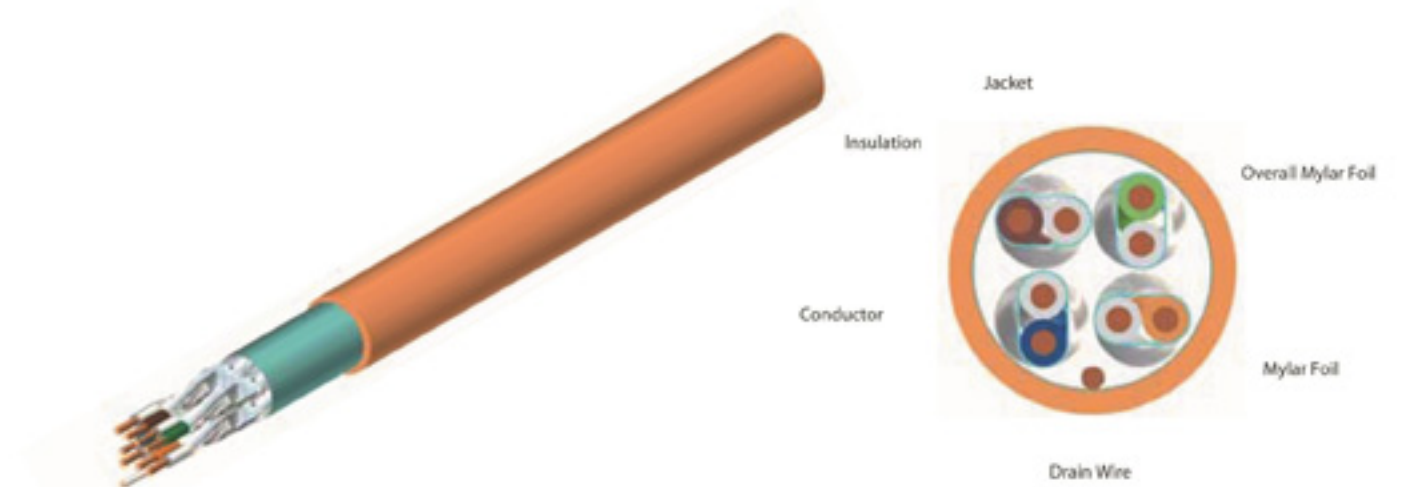
Application

- 2.4/1.2 Gb/s ATM
- IEEE 802.3an:10G BASE-T (10 Gigabit Ethernet) supporting 100 meters
- 3D imaging
- Digital Video
- Broadband and Baseband Analog Video

Technical Details

Capacitance unbalance (max.) @ 0.8 or 1 kHz (pF/km)	1600	Resistance unbalance between pairs (max.) (%)	4
DC Resistance (max.) Ω/km @ 20°C	95	Mean input impedance @100 MHz	100 ± 5 Ω
Resistance unbalance within a pair (max.) (%)	2	Dielectric strength	Min 1.0 kVdc or 0.7 kVac for 1 min. / Min 2.5 kVdc or 1.7 kVac for 2 secs

Cat.7 F-FTP



Electrical Performance

Meet IEC 61156-5 Ed.2.0 Category 7 horizontal cable parameters

Freq. (MHz)	Ins. Loss (dB/100m)	RL (dB)	Pair to Pair		Power Sum		Delay Skew (ns/100m)	Po. Delay (ns/100m)
			NEXT	ELFEXT	NEXT	ELFEXT		
			(dB/100m)					
	Max.	Min.	Min.	Min.	Min.	Min.	Max.	Max.
1	2.1	20.0	78.0	78.0	75.0	75.0	25	570.0
4	3.7	23.0	78.0	78.0	75.0	75.0	25	552.0
10	5.9	25.0	78.0	75.3	75.0	72.3	25	545.4
16	7.4	25.0	78.0	71.2	75.0	68.2	25	543.0
20	8.3	25.0	78.0	69.3	75.0	66.3	25	542.0
31.25	10.4	23.6	78.0	65.4	75.0	62.4	25	540.4
62.5	14.9	21.5	75.5	59.4	72.5	56.4	25	538.6
100	19.0	20.1	72.4	55.3	69.4	52.3	25	537.6
200	27.5	18.0	67.9	49.3	64.9	46.3	25	536.5
250	31.0	17.3	66.4	47.3	63.4	44.3	25	535.3
400	40.0	17.3	63.4	43.3	60.4	40.3	25	535.8
500	45.3	17.3	61.9	41.3	58.9	38.3	25	535.6
600	50.1	17.3	60.7	39.7	57.7	36.7	25	535.5

Note: The cable performance between 1MHz and 4MHz is achieved by designed only and it is therefore not necessary to test for this performance below 4MHz.

Order Information

Part No.	No. of Pairs	Cable Type	Conductor Size	Core Dimension (mm)	Overall Dimension (mm)	NVP (%)
GLCAFF7P/L	4	F-FTP	23AWG	1.32	7.95	76.5
GLCAS7P/L	4	S-FTP	23AWG	1.34	8.05	76.5

Jacket: PVC, LSZH (Low Smoke Zero Halogen), Outdoor PE Packaging: 305M / 500M Wooden Reel

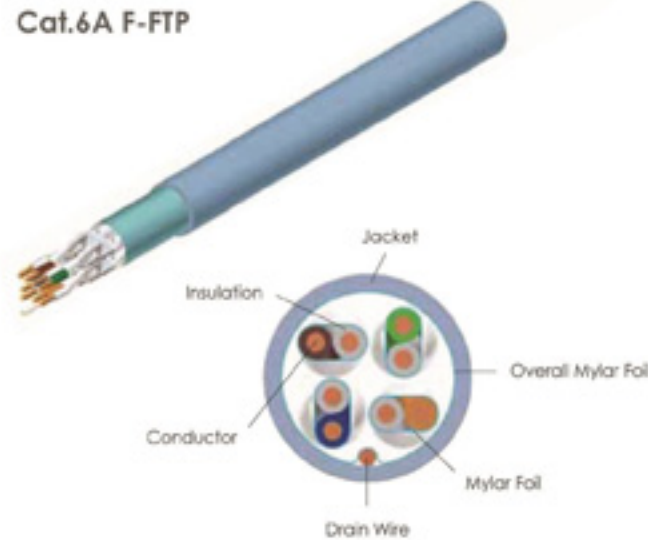
Category 6A Cable

Cat.6A U-UTP

PATENT



Cat.6A F-FTP



Standard Compliances

- ISO/IEC 11801:2011 (Ed. 2.2)
- IEC 61156-5:2009(Ed.2.0)
- EN 50173-1: 2011
- EN 50173-2:2007 including amendment A1:2010
- ANSI/TIA-568-C.2: 2009

Features and Benefits

- Ideal solution for 10 Gigabit Ethernet
- Individual pair shielding or special designed filler to provide EMI protection
- Designed with shielding to offer maximum pair separation, increasing key electrical performance parameters
- Provides positive PSACR beyond 500MHz for higher available bandwidth
- Every master reel is tested to ensure electrical performance compliance
- Print legend contains footage marking from 305M to 0M or 500M to 0M
- Unique product-specific packaging for ease of identification
- RoHS compliant
- Delta EC Verified

Application

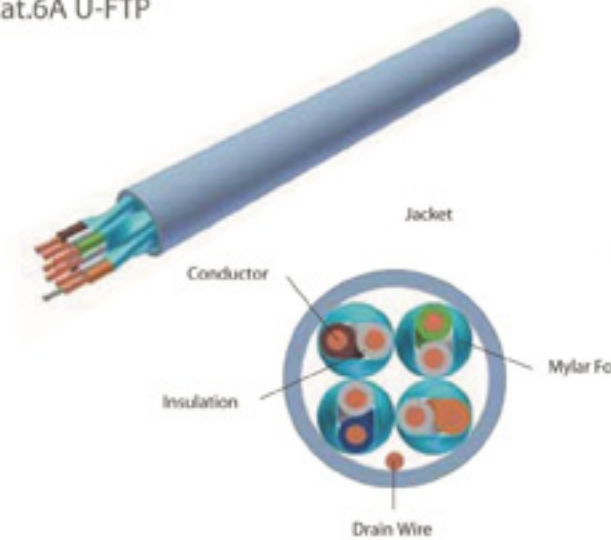
- 2.4/1.2 Gb/s ATM
- IEEE 802.3an:10G BASE-T (10 Gigabit Ethernet) supporting 100 meters
- 3D imaging
- Digital Video
- Broadband and Baseband Analog Video

Technical Details

Capacitance unbalance (max.) @ 0.8 or 1 kHz (pF/km)	1600	Resistance unbalance between pairs (max.) (%)	4
DC Resistance (max.) Ω /km @ 20°C	95	Mean input impedance @100 MHz	100 ± 5 Ω
Resistance unbalance within a pair (max.) (%)	2	Dielectric strength	Min 1.0 kVdc or 0.7 kVac for 1 min. Min 2.5 kVdc or 1.7 kVac for 2 secs

cat6a

Cat.6A U-FTP



Cat.6A S-FTP



Electrical Performance

MEET IEC 61156-5 Ed.2.0 Category 6A horizontal cable parameters								
Freq. (MHz)	Ins. Loss (dB/100m)	RL (dB)	Pair to Pair		Power Sum		Delay Skew (ns/100m)	Po. Delay (ns/100m)
			NEXT	ELFEXT	NEXT	ELFEXT		
			(dB/100m)					
	Max.	Min.	Min.	Min.	Min.	Min.	Max.	Max.
1	2.1	20.0	75.3	68.0	72.3	65.0	45	570.0
4	3.8	23.0	66.3	56.0	63.3	53.0	45	552.0
10	5.9	25.0	60.3	48.0	57.3	45.0	45	545.4
16	7.5	25.0	57.2	43.9	54.2	40.9	45	543.0
20	8.4	25.0	55.8	42.0	52.8	39.0	45	542.0
31.25	10.5	23.6	52.9	38.1	49.9	35.1	45	540.4
42.5	15	21.5	48.4	32.1	45.4	29.1	45	538.6
100	19.1	20.1	45.3	28.0	42.3	25.0	45	537.6
200	27.6	18.0	40.8	22.0	37.8	19.0	45	536.5
250	31.1	17.3	39.3	20.0	36.3	17.0	45	536.3
300	34.3	17.3	38.1	18.5	35.1	15.5	45	536.1
400	40.1	17.3	36.3	16.0	33.3	13.0	45	535.8
500	45.3	17.3	34.8	14.0	31.8	11.0	45	535.6

Note: The cable performance between 1MHz and 4MHz is achieved by designed only and it is therefore not necessary to test for this performance below 4MHz.

Order Information

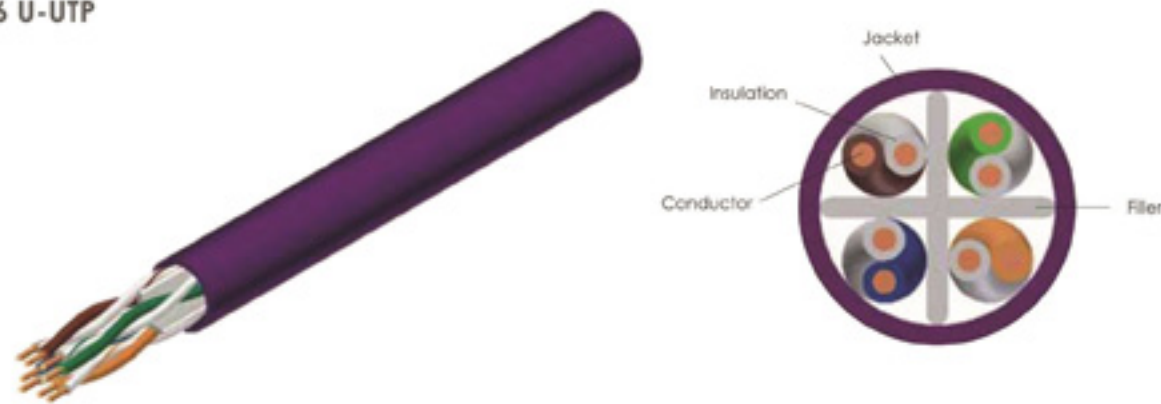
Part No.	No. of Pairs	Cable Type	Conductor Size	Core Dimension (mm)	Overall Dimension (mm)	NVP (%)
GLCAUSAP/L	4	U-UTP	23AWG	1.03	8.3	66.7
GLCAFF6AP/L	4	F-FTP	23AWG	1.32	7.59	76.5
GLCAUF6AP/L	4	U-FTP	23AWG	1.32	7.47	76.5
GLCAFU6AP/L	4	F-UTP	23AWG	1.1	7.73	66.7
GLCAS6AP/L	4	S-FTP	23AWG	1.34	8.05	76.5
GLCAUF6AP/L*	4	U-FTP	26AWG	0.93	5.59	72.9

Jacke t : PVC, LSZH (Low Smoke Zero Halogen), Outdoor PE Packagin g : 305M / 500M Wooden Reel

* Zone Cable / Application length : 60M (Max)

Category 6 Cable

Cat.6 U-UTP



Standard Compliances

- ISO/IEC 11801:2011 (Ed. 2.2)
- IEC 61156-5:2009(Ed.2.0)
- EN 50173-1:2011
- EN 50173-2:2007 including amendment A1:2010
- ANSI / TIA-568-C.2:2009

Features and Benefits

- Tape design engineered for smaller overall diameter and ease of installation
- Characterized and tested to 250MHz
- Positive PSACR up to 300MHz for future bandwidth requirements
- Unique product-specific packaging for ease of identification
- Every master reel is tested to ensure electrical performance compliance
- Print legend contains footage marking from 305M to 0M or 500M to 0M
- RoHS compliant
- Reaction to fire class classification, Class Eca
- Delta EC Verified

Applications

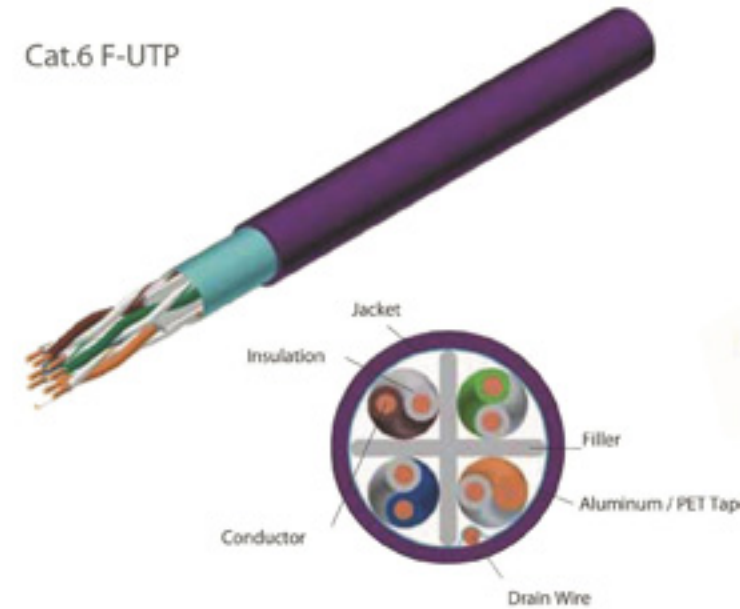
- IEEE 802.3: 1000BASE-T (Gigabit Ethernet), 100BASE-TX, 10BASE-T
- ANSI/TIA / EIA-854: 1000BASE-TX
- 155 Mb/s, 1.2 Gb/s ATM
- ANSI X3.263: 100 Mb/s
- IEEE 802.3af DTE Power (POE)
- 4/16 Mb/s Token Ring
- Digital Video
- Broadband and Baseband Analog Video

Technical Details

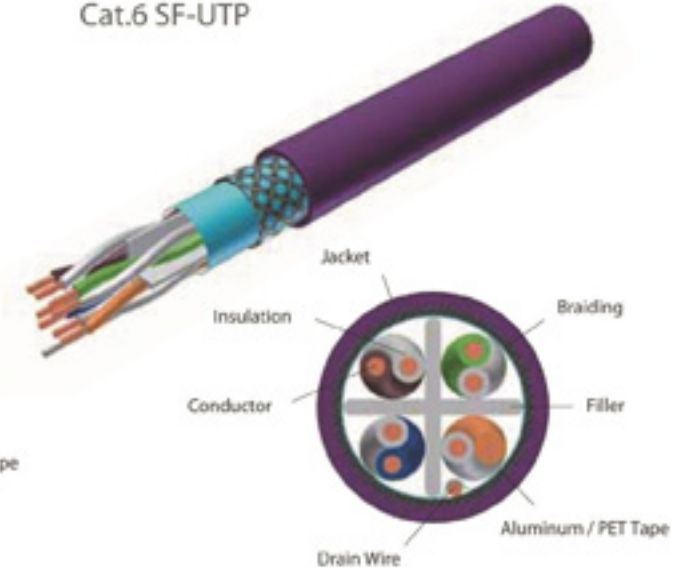
Capacitance unbalance (max.) @ 0.8 or 1 kHz (pF/km)	1600	Delay Skew (max.) ns/100m @ 20° C	45
DC Resistance (max.) Ω/km @ 20° C	95	Mean Input Impedance @ 100 MHz	100 ± 5 Ω
Resistance unbalance within a pair (max.) (%)	2	Dielectric strength	Min 1.0 kVdc or 0.7 kVac for 1 min.
Resistance unbalance between pairs (max.) (%)	4		Min 2.5 kVdc or 1.7 kVac for 2 secs

cat6

Cat.6 F-UTP



Cat.6 SF-UTP



Electrical Performance

MEET IEC 61156-5 ed.2.0 Category 6 horizontal cable parameters							
Freq. (MHz)	Ins. Loss (dB/100m)	RL (dB)	Pair to Pair		Power Sum		Po. Delay (ns/100m)
			NEXT	ELFEXT	NEXT	ELFEXT	
			(dB/100m)				
	Max.	Min.	Min.	Min.	Min.		
1	2.1	20	75.3	68.0	72.3	65	570
4	3.8	23	66.3	56.0	63.3	53.0	552.0
10	6.0	25	60.3	48.0	57.3	45.0	545.4
16	7.6	25	57.2	43.9	54.2	40.9	543.0
20	8.5	25	55.8	42.0	52.8	39.0	542.0
31.25	10.7	23.6	52.9	38.1	49.9	35.1	540.4
62.5	15.5	21.5	48.4	32.1	45.4	29.1	538.6
100	19.9	20.1	45.3	28.0	42.3	25.0	537.6
200	29.1	18	40.8	22.0	37.8	19.0	536.5
250	33.0	17.3	39.3	20.0	36.3	17.0	536.3

Note: The cable performance between 1MHz and 4MHz is achieved by designed only and it is therefore not necessary to test for this performance below 4MHz.

Order Information

Part No.	No. of Pairs	Cable Type	Conductor Size	Core Dimension (mm)	Overall Dimension (mm)	NVP (%)
GLCAU6P/L	4	U-UTP	23AWG	0.97	6.10	66
GLCAFU6P/L	4	F-UTP	23AWG	1.08	6.86	66
GLCASFU6P/L	4	SF-UTP	23AWG	1.16	7.29	66

Jacke t: PVC, LSZH (Low Smoke Zero Halogen), Outdoor PE
Packagin g: 66504: 305M Reelex Box / Reel in Box
Other s: 305M / 500M Wooden Reel

Category 5e Cable

Cat.5e U-UTP



Standard Compliances

- ISO / IEC 11801:2011 (Ed.2.2)
- IEC 61156-5:2009 (Ed.2.0)
- EN 50173-1:2011
- EN 50173-2:2007 including amendment A1:2010
- ANSI / TIA-568-C.2:2009

Features and Benefits

- Positive PSACR beyond 155MHz for future bandwidth requirements
- Characterized and tested to 100 MHz
- Unique product-specific packaging for ease of identification
- Every master reel is tested to ensure electrical performance compliance
- Print legend contains footage marking from 305M to 0M or 500M to 0M
- RoHS compliant

Applications

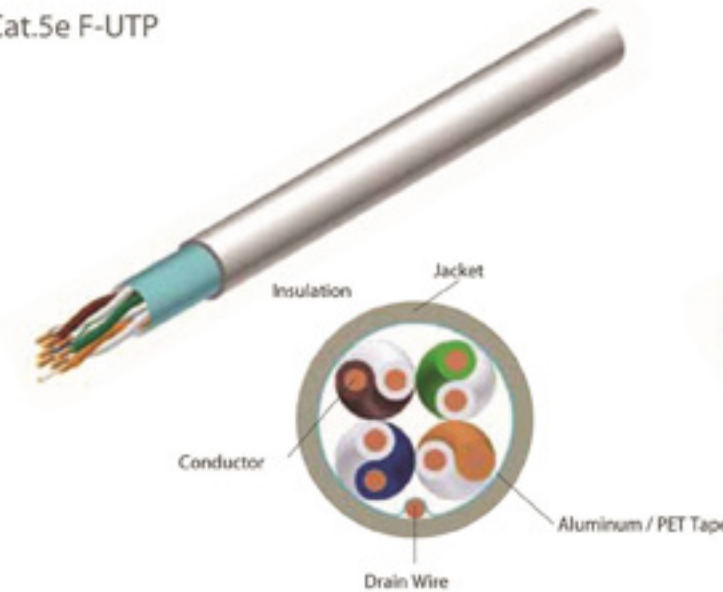
- IEEE 802.3:1000BASE-T (Gigabit Ethernet), 100BASE-TX, 10BASE-T
- 52 / 155 Mp/s ATM
- ANSI X3.263: 100 Mb/s
- 4 / 16 Mb/s Token Ring

Technical Details

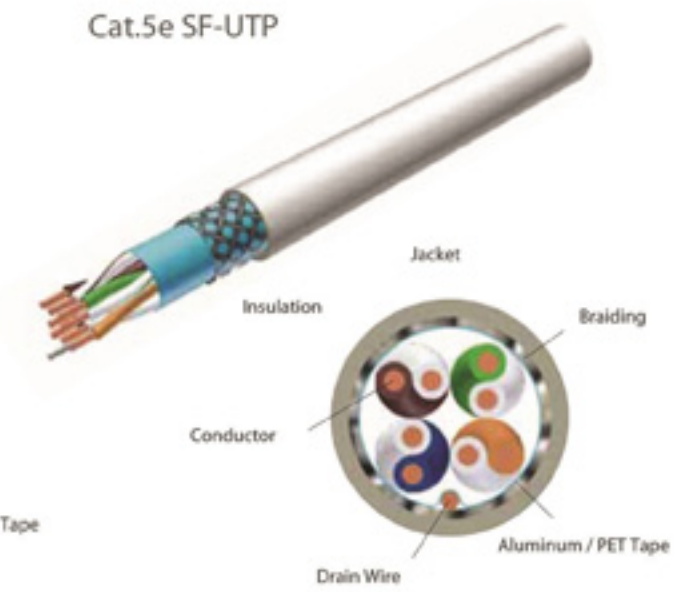
Capacitance unbalance (max.) @ 0.8 or 1 kHz (pF/km)	1600	Delay Skew (max.) ns/100m @ 20° C	45
DC Resistance (max.) Ω/km @ 20° C	95	Mean input impedance @ 100 MHz	100 ± 5 Ω
Resistance unbalance within a pair (max.) (%)	2	Dielectric strength	Min 1.0 kVdc or 0.7 kVac for 1 min.
Resistance unbalance between pairs (max.) (%)	4		Min 2.5 kVdc or 1.7 kVac for 2 secs

cat5e

Cat.5e F-UTP



Cat.5e SF-UTP



Electrical Performance

MEET IEC 61156-5 ed2.0 Category 5e horizontal cable parameters							
Freq. (MHz)	Ins. Loss (dB/100m)	RL (dB)	Pair to Pair		Power Sum		Po. Delay (ns/100m)
			NEXT	ELFEXT	NEXT	ELFEXT	
			(dB/100m)				
	Max.	Min.	Min.	Min.	Min.	Min.	Max.
1	2.1	20.0	65.3	64.0	62.3	61	570
4	4.1	23.0	56.3	52	53.3	49.0	552.0
10	6.5	25.0	50.3	44.0	47.3	41.0	545.4
16	8.3	25.0	47.2	39.9	44.2	36.9	543.0
20	9.3	25.0	45.8	38.0	42.8	35.0	542.0
31.25	11.7	23.6	42.9	34.1	39.9	31.1	540.4
62.5	17.0	21.5	38.4	28.1	35.4	25.1	538.6
100	22.0	20.1	35.3	24.0	32.3	21.0	537.6

Note: The cable performance between 1MHz and 4MHz is achieved by design only and it is therefore not necessary to test for this performance below 4MHz

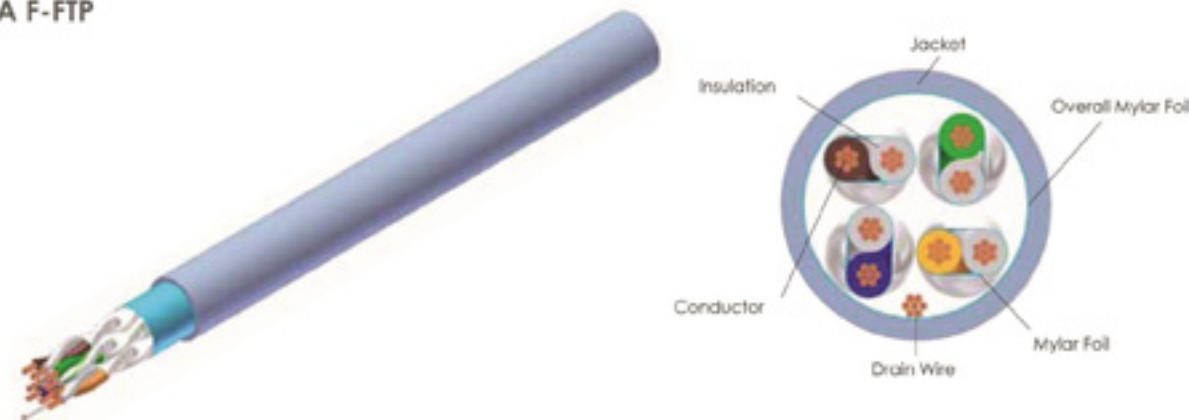
Order Information

Part No.	No. of Pairs	Cable Type	Conductor Size	Core Dimension (mm)	Overall Dimension (mm)	NVP (%)
GLCAUSEP/L	4	U-UTP	24AWG	0.90	4.98	66
GLCAFUSEP/L	4	F-UTP	24AWG	1.03	5.99	66
GLCASFUSEP/L	4	SF-UTP	24AWG	1.03	6.42	66

Jack: t: PVC, LSZH (Low Smoke Zero Halogen), Outdoor PE
Packaging: g: 305M Reel Box / Reel in Box

Category 6A Stranded Cable

Cat.6A F-FTP



Standard Compliances

- IEC 61156-6
- ANSI/TIA 568-C.2
- ISO/IEC 11801 Ed2.0
- CENELEC EN 50173

Features and Benefits

- Extremely high bandwidth of 500MHz
- Flexible and easy for termination
- 24 AWG stranded bare copper conductor for UTP, 26 AWG stranded bare copper conductor for FTP/ SFTP
- Multiple Selection of Colors
- Individual pair shielding to provide EMI protection
- Highest signal-to-noise ration to reduce related downtime and network errors
- Provides positive PSACR beyond 500MHz
- Every master reel is tested to ensure electrical performance compliance

Applications

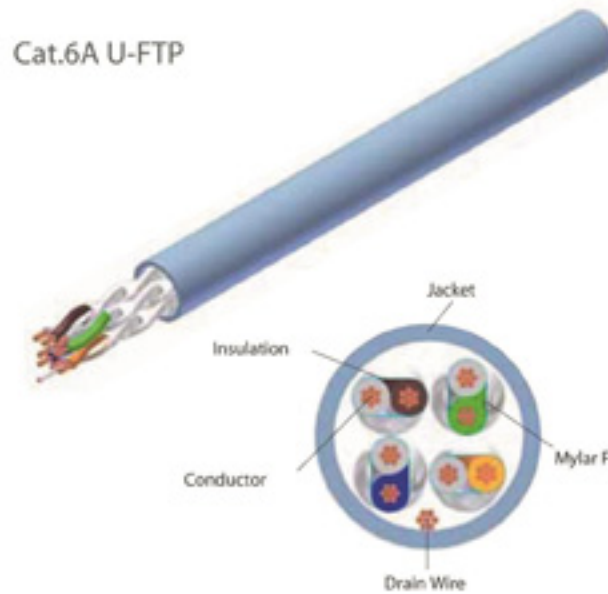
- 2.4 / 1.2 Gb/s ATM
- IEEE 80.3an:10G BASE-T(10 Gigabit Ethernet) supporting 100 meters
- 3D imaging
- Digital Video
- Broadband and Baseband Analog Video

Technical Details

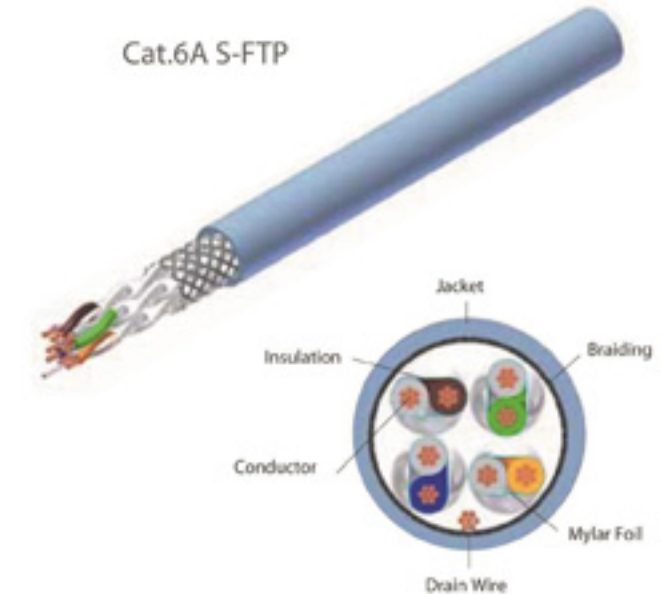
Capacitance unbalance (max.) @ 0.8 or 1 kHz (pF/km)	1600	Delay Skew (max.) ns/100m @ 20°C	45
DC Resistance (max.) Ω/km @ 20°C	145	Mean Input Impedance @100 MHz	100 ± 5 Ω
Resistance unbalance within a pair (max.) (%)	2	Dielectric strength	Min 1.0 kVdc or 0.7 kVac for 1 min. Min 2.5 kVdc or 1.7 kVac for 2 secs
Resistance unbalance between pairs (max.) (%)	4		

cat6a

Cat.6A U-FTP



Cat.6A S-FTP



Electrical Performance

MEET IEC 61156-6 Category 6A horizontal cable parameters							
Freq. (MHz)	Ins. Loss (dB/100m)	RL (dB)	Pair to Pair		Power Sum		Po. Delay (ns/100m)
			NEXT	ELFEXT	NEXT	ELFEXT	
			(dB/100m)				
	Max.	Min.	Min.	Min.	Min.	Min.	
1	3.1	20	75.3	68.0	72.3	65.0	570.0
4	5.8	23	66.3	56.0	63.3	53.0	552.0
10	9.0	25	60.3	48.0	57.3	45.0	545.4
16	11.4	25	57.2	43.9	54.2	40.9	543.0
20	12.8	25	55.8	42.0	52.8	39.0	542.0
31.25	16.1	23.3	52.9	38.1	49.9	35.1	540.4
62.5	23.3	20.7	48.4	32.1	45.4	29.1	538.6
100	29.9	20.0	45.3	28.0	42.3	25.0	537.6
200	43.8	16.4	40.8	22.0	37.8	19.0	536.5
250	49.7	15.6	39.3	20.0	36.3	17.0	536.3
300	55.1	15.6	38.1	18.5	35.1	15.5	536.1
400	65.0	15.6	36.3	16.0	33.3	13.0	535.8
500	74.1	15.6	34.8	14.0	31.8	11.0	535.6

Note: The cable performance between 1MHz and 4MHz is achieved by designed only and it is therefore not necessary to test for this performance below 4MHz.

Order Information

Part No.	No. of Pairs	Cable Type	Conductor Size	Core Dimension (mm)	Overall Dimension (mm)
GLCAFF6ASP/L	4	F-FTP	26AWG	1.01	5.99
GLCAUF6ASP/L	4	U-FTP	26AWG	1.01	5.92
GLCAS6ASP/L	4	S-FTP	26AWG	1.05	6.32

Jacket: PVC, LSZH (Low Smoke Zero Halogen), Outdoor PE

Packaging: 500M Coiled in Box
305M / 500M Wooden Reel

Category 6 Stranded Cable

Cat.6 U-UTP



Standard Compliances

- ISO / IEC 11801 Edition 2.0
- IEC 61156-6
- CENELEC EN 50173
- ANSI / TIA 568-C.2

Features and Benefits

- Characterized and tested to 250 MHz
- Flexible and easy for termination
- 24 AWG stranded bare copper conductor for UTP, 26 AWG stranded bare copper conductor for FTP/ SFTP
- Multiple Selection of Colors
- Every master reel is tested to ensure electrical performance compliance
- Print legend contains footage marking from 500M to 0M
- RoHS compliant

Applications

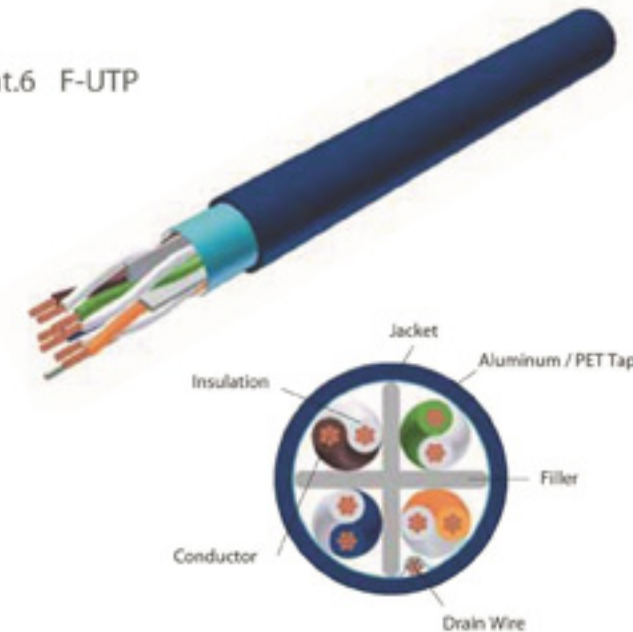
- Support Cat.6 application
 - IEEE 802.3:1000BASE-T (Gigabit Ethernet) , 100BASE-TX, 10BASE-T
 - ANSI / TIA / EIA-854: 1000BASE-TX
 - 155 Mb/s, 1.2 Gb/s ATM
 - ANSI X3.263:100 Mb/s
- IEEE 802.3af DTE Power (POE)
- 4 / 16 Mb/s Token Ring
- Digital Video
- Broadband and Baseband Analog Video

Technical Details

Capacitance unbalance (max.) @ 0.8 or 1 kHz (pF/km)	1600	Delay Skew (max.) ns/100m @ 20°C	45
DC Resistance (max.) Ω/km @ 20°C	145	Mean input impedance @ 100 MHz	100 ± 5 Ω
Resistance unbalance within a pair (max.) (%)	2	Dielectric strength	Min 1.0 kVdc or 0.7 kVac for 1 min.
Resistance unbalance between pairs (max.) (%)	4		Min 2.5 kVdc or 1.7 kVac for 2 secs

cat6

Cat.6 F-UTP



Cat.6 SF-UTP



Electrical Performance

Freq. (MHz)	Ins. Loss (dB/100m)	RL (dB)	Pair to Pair		Power Sum		Po. Delay (ns/100m)
			NEXT	ELFEXT	NEXT	ELFEXT	
			(dB/100m)		(dB/100m)		
	Max.	Min.	Min.	Min.	Min.	Min.	Max.
1	3.1	20.0	75.3	68.0	72.3	65.0	570.0
4	5.8	23.0	66.3	56.0	63.3	53.0	552.0
10	9.0	25.0	60.3	48.0	57.3	45.0	545.4
16	11.4	25.0	57.2	43.9	54.2	40.9	543.0
20	12.8	25.0	55.8	42.0	52.8	39.0	542.0
31.25	16.1	23.3	52.9	38.1	49.9	35.1	540.4
62.5	23.3	20.7	48.4	32.1	45.4	29.1	538.6
100	29.9	19.0	45.3	28.0	42.3	25.0	537.6
200	43.8	16.4	40.8	22.0	37.8	19.0	536.5
250	49.7	15.6	39.3	20.0	36.3	17.0	536.3

Note: The cable performance between 1MHz and 4MHz is achieved by designed only and it is therefore not necessary to test for this performance below 4MHz.

Order Information

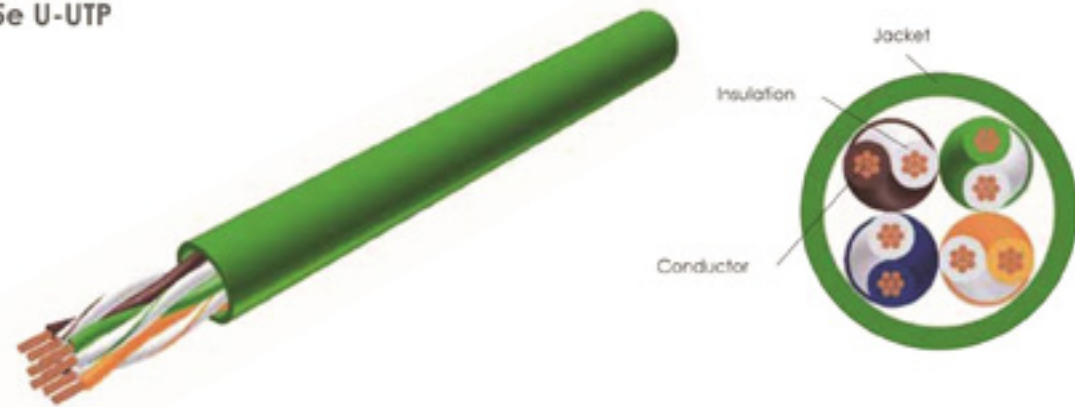
Part No.	No. of Pairs	Cable Type	Conductor Size	Core Dimension (mm)	Overall Dimension (mm)
GLCAU6SP/L	4	U-UTP	24AWG	0.95	5.86
GLCAFU6SP/L	4	F-UTP	26AWG	0.90	5.95
GLCASFU6SP/L	4	SF-UTP	26AWG	0.90	6.14

Jacket: PVC, LSZH (Low Smoke Zero Halogen), Outdoor PE

Packaging: 500M coiled in Box
305M / 500M Wooden Reel

Category 5e Stranded Cable

Cat.5e U-UTP



Standard Compliances

- ISO / IEC 11801 Edition 2.0
- IEC 61156-6
- CENELEC EN 50173
- ANSI / TIA 568-C.2

Features and Benefits

- Characterized and tested to 100 MHz
- Flexible and easy for termination
- 24 AWG stranded bare copper conductor for UTP, 26 AWG stranded bare copper conductor for FTP/ SFTP
- Multiple Selection of Colors
- Every master reel is tested to ensure electrical performance compliance
- Print legend contains footage marking from 500M to 0M
- RoHS compliant

Applications

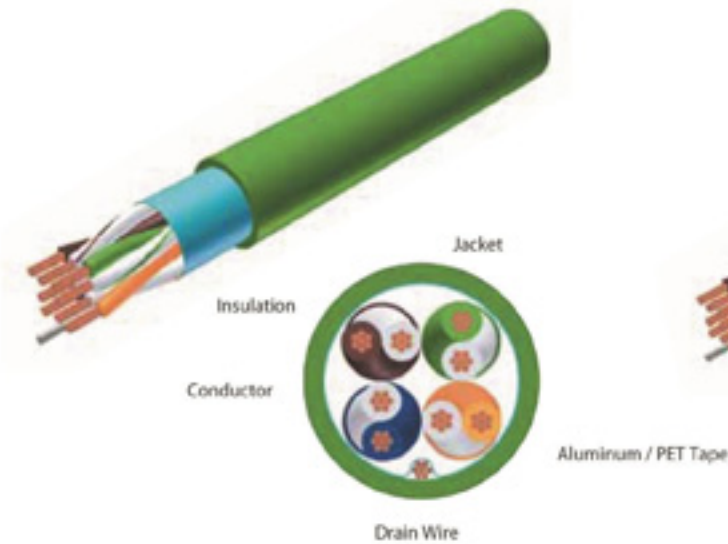
- Support Cat.5e application
 - IEEE 802.3:1000BASE-T (Gigabit Ethernet) , 100BASE-TX, 10BASE-T
 - 52 / 155 Mb/s ATM
 - ANSI X3.263:100 Mb/s
 - 4 / 16 Mb/s Token Ring

Technical Details

Capacitance unbalance (max.) @ 0.8 or 1 kHz (pF/km)	1600	Delay Skew (max.) ns/100m @ 20° C	45
DC Resistance (max.) Ω/km @ 20° C	145	Mean input impedance @ 100 MHz	100 ± 5 Ω
Resistance unbalance within a pair (max.) (%)	2	Dielectric strength	Min 1.0 kVdc or 0.7 kVac for 1 min.
Resistance unbalance between pairs (max.) (%)	4		Min 2.5 kVdc or 1.7 kVac for 2 secs

cat5e

Cat.5e F-UTP



Cat.5e SF-UTP



Electrical Performance

IEC 61156-6 Category 5e Stranded cable parameters							
Freq. (MHz)	Ins. Loss (dB/100m)	RL (dB)	Pair to Pair		Power Sum		Po. Delay (ns/100m)
			NEXT	ELFEXT	NEXT	ELFEXT	
			(dB/100m)				
	Max.	Min.	Min.	Min.	Min.	Min.	Max.
1	3.2	20.0	65.3	64.0	62.3	61.0	570.0
4	6.0	23.0	56.3	52.0	53.3	49.0	552.0
10	9.5	25.0	50.3	44.0	47.3	41.0	545.4
16	12.1	25.0	47.2	39.9	44.2	36.9	543.0
20	13.5	25.0	45.8	38.0	42.8	35.0	542.0
31.25	17.1	23.3	42.9	34.1	39.9	31.1	540.4
62.5	24.8	20.7	38.4	28.1	35.4	25.1	538.6
100	32.0	19.0	35.3	24.0	32.3	21.0	537.6

Note: The cable performance between 1MHz and 4MHz is achieved by designed only and it is therefore not necessary to test for this performance below 4MHz.

Order Information

Part No.	No. of Pairs	Cable Type	Conductor Size	Core Dimension (mm)	Overall Dimension (mm)
GLCAUSESP/L	4	U-UTP	24AWG	0.93	5.32
GLCAFUSESP/L	4	F-UTP	26AWG	0.89	5.40
GLCASFUSESP/L	4	SF-UTP	26AWG	0.89	5.99

Jacke t : PVC, LSZH (Low Smoke Zero Halogen), Outdoor PE

Packagin g : 500M coiled in Box
305M / 500M Wooden Reel



Compound Cable



Features

- All-in-one cable design
- Series 6 Quad Shield coaxial cable with typical bandwidth
- Multiple constructions available

Benefits

- Reduces installation time, provides additional protection to the individual cables
- "Future-Proofing" installation Supports extended bandwidth satellite service and high-definition TV signals
- Customized flexibility for application
- Integrated fiber reduces the need to install separate cables for in home optical networks

Applications

- Multi-media Connections for Smart Home
- 10BASE-T through 1000BASE-T Ethernet, ATM, Token Ring
- HDTV, CATV, CCTV, DBS

Physical Description

- UTP**
 - Cat.5e 4PR UTP Cable Complies to ANSI/TIA 568-C.2 24AWG solid bare copper conductor / PE insulation
 - Cat.6 4PR UTP Cable Complies to ANSI/TIA 568-C.2 23AWG solid bare copper conductor / PE insulation
- Coax**
 - RG6 Quad shield coaxial cables complies to SCTE ISP-ip-001 28 AWG solid bare copper clad steel conductors
 - Al foil/60 % Al braid shield+ Al foil / 40 %
 - Al braid shield
- Fiber**
 - Fiber interconnect cable FDDI-grade fiber 50/125um

Part No.	Description	Color	Nominal O.D. mm	Packing
GLCAC05-1C1R	1 Series 6 Quad *1 Cat.5e	Purple	0.365*0.535 in (9.27*13.59)	305M
GLCAC05-2C1R	1 Series 6 Quad *2 Cat.5e	Purple	0.530*0.535 in (13.46*13.59)	152M
GLCAC05-2C2R	2 Series 6 Quad *2 Cat.5e	Purple	0.620*0.535 in (15.75*13.59)	152M
GLCAC05-2C2R1F	2 Series 6 Quad *2 Cat.5e* 1 Duplex MMF	Purple	0.622*0.535 in (15.79*13.64)	152M
GLCAC06-1C1R	1 Series 6 Quad *1 Cat.6	Purple	0.37*0.54 in (9.27*13.59)	305M
GLCAC06-2C1R	1 Series 6 Quad *2 Cat.6	Purple	0.62*0.54 in (15.75*13.59)	152M
GLCA CO6-2C2R1F	2 Series 6 Quad *2 Cat.6* 1 Duplex 62.5/125 MMF	Purple	0.622*0.535 in (15.79*13.64)	152M

Outdoor Cable

W/ Messenger



W/O Messenger



Description

- 4 Pair Solid -Bare Copper Cable with messenger cable is used for outdoor installation
- Conductive material: wire made of soft annealed electrolytic copper

- Conductor insulation :HDPE
- The cable jacket: Black PE
- Messenger: galvanized steel wire

Application

- Horizontal communication cable
- Arial Applications
- Outdoor Applications

Compliances

- ISO/IEC 11801
- ANSI/TIA-568-C.2 Category 5E, 6, 6A
- RoHS Compliance for the Requirement of European Union Issued Directive 2002/95/EC

Order Information

Cat.6A

Part No.	Cable Type	Conductor	Conductor Material	Insulation Material	Insulation Diameter (mm)	Messenger	Outer Jacket Diameter (mm)
GLCA66504A	U-UTP	23 AWG	Bare	HDPE	1.03	1.2 mm Steel Wires	8.30 / 2.6
GLCA66704A	F-UTP	23 AWG	Bare	HDPE	1.10	1.2 mm Steel Wires	7.73 / 2.6
GLCA66304BA	U-FTP	23 AWG	Bare	HDPE	1.32	1.2 mm Steel Wires	7.47 / 2.6
GLCA66304A	F-FTP	23 AWG	Bare	HDPE	1.32	1.2 mm Steel Wires	7.59 / 2.6
GLCA66904A	S-FTP	23 AWG	Bare	HDPE	1.34	1.2 mm Steel Wires	8.05 / 2.6

Cat.6

GLCA 66504	U-UTP	23 AWG	Bare	HDPE	0.97	1.2 mm Steel Wires	6.10 / 2.6
GLCA66704	F-UTP	23 AWG	Bare	HDPE	1.08	1.2 mm Steel Wires	6.86 / 2.6
GLCA66904	SF-UTP	23 AWG	Bare	HDPE	1.16	1.2 mm Steel Wires	7.29 / 2.6

Cat.5E

GLCA66504A	U-UTP	24 AWG	Bare	HDPE	0.86	1.2 mm Steel Wires	4.98 / 2.6
GLCA66704A	F-UTP	24 AWG	Bare	HDPE	1.03	1.2 mm Steel Wires	5.99 / 2.6
GLCA66904A	SF-UTP	24 AWG	Bare	HDPE	1.03	1.2 mm Steel Wires	6.42 / 2.6

*Messenger size can meet different requirements upon customer's demand.

CAT3

Multi-pair Cable



Standard Compliances	Features and Benefits	Applications
<ul style="list-style-type: none"> ANSI / TIA 568-C.2 	<ul style="list-style-type: none"> ANSI / TIA 568-C.2 Category 3 Backbone Cable 	<ul style="list-style-type: none"> Ethernet 10BASE-T Voice

Technical Details		
Capacitance unbalance (max.) @ 0.8 or 1 kHz (pF/km)		3300
DC Resistance (max.) Ω / km @ 20 °C		89
Resistance unbalance within a pair (max.) (%)		5
Mean input impedance (min.) @ 16 MHz		100 \pm 15 Ω
Dielectric strength	500V AC / 1min	



Planetary Twister

It's a new trend to use multi-pair cable for most data centers. To manufacture diversified products and meet growing customers' demands, we invested the Planetary Twister which is one remarkable machine that can produce up to 50-pair cable at a time.

Electrical Performance

ANSI / TIA 568C.2 Category 3 horizontal cable parameters			
Freq. (MHz)	Ins. Loss (dB/100m)	Structural Return Loss (dB)	NEXT (dB/100m)
	Min.	Min.	Min.
1	2.6	12.0	41.3
4	5.6	12.0	32.3
8	8.5	12.0	27.8
10	9.7	12.0	26.3
16	13.1	9.95	23.2

Order Information

Part No.	No. of Pairs	Cable Type	Conductor Size	Core Dimension (mm)	Overall Dimension (mm)
GLCAU3P/L	25	U-UTP	24AWG	0.9	13.00
GLCAU3P/L	50	U-UTP	24AWG	0.9	19.64
GLCAU3P/L	100	U-UTP	24AWG	0.9	28.42

Jack: PVC, LSZH (Low Smoke Zero Halogen), Outdoor PE
Packaging: 305M / 500M Wooden Reel



Cat.6A Patch Cord



Features and Benefits

- Specified to 500MHz
- Suitable for 10G BASE-T, 10 Gigabit Ethernet Applications
- Meets or exceeds Cat.6A requirements when full product system is used
- 50-micron gold plated RJ-45 male-to-male
- PVC, Low Smoke Zero Halogen & Outer Sheath are available
- Multiple Selection of Lengths and Colors
- 24 AWG stranded bare copper conductor for unshielded; 26 AWG stranded bare copper conductor for shielded
- Backward compatible with Cat.5e and Cat.6
- RoHS Compliant

Order Information

Part Number	Description	Length	Part Number	Description	Length
GLCA966AXXX-X010	Cat.6A 24AWG U-UTP PVC patch cord	1M 966	GLCA966AXXX-X010	Cat.6A 24AWG U-UTP LSZH patch cord	1M
GLCA968AXXX-X010	Cat.6A 26AWG U-FTP PVC patch cord	1M 968	GLCA968AXXX-X010	Cat.6A 26AWG U-FTP LSZH patch cord	1M
GLCA964AXXX-X010	Cat.6A 26AWG F-FTP PVC patch cord	1M 964A	GLCA964AXXX-X010	Cat.6A 26AWG F-FTP LSZH patch cord	1M
GLCA969AXXX-X010	Cat.6A 26AWG S-FTP PVC patch cord	1M 969	GLCA969AXXX-X010	Cat.6A 26AWG S-FTP LSZH patch cord	1M

Length: 0.5 / 1 / 2 / 3 / 5 / 7 / 10M available

Coding scheme

Assembly type= X	Jacket color= XX	Packing= X
P=P+P S=P+P+SR (Assembly)	GY=gray, IV=ivory, RD=red YL=yellow, GN=green, BL=blue	1=1pcs / PE bag

Cat.6 Patch Cord

Features and Benefits

- Specified to 250MHz
- Suitable for Gigabit 1000 BASE-T; 100 BASE-T; 10BASE-T (IEEE 802.3) Applications
- Meets or exceeds Cat.6 requirements
- 50-micron gold plated RJ-45 male-to-male
- PVC, Low Smoke Zero Halogen & Outer Sheath are available
- Multiple Selection of Lengths and Colors
- 24 AWG stranded bare copper conductor for unshielded ; 26 AWG stranded bare copper conductor for shielded
- RoHS Compliant

Order Information

Part Number	Description	Length	Part Number	Description	Length
GLCA956AXXX-X010	Cat.6 24AWG U-UTP PVC patch cord	1M 966	GLCA956AXXX-X010	Cat.6 24AWG U-UTP LSZH patch cord	1M
GLCA952AXXX-X010	Cat.6 26AWG F-UTP PVC patch cord	1M 962	GLCA952AXXX-X010	Cat.6 26AWG F-UTP LSZH patch cord	1M
GLCA959AXXX-X010	Cat.6 26AWG SF-UTP PVC patch cord	1M 969	GLCA959AXXX-X010	Cat.6 26AWG SF-UTP LSZH patch cord	1M

Length: 0.5 / 1 / 2 / 3 / 5 / 7 / 10M available

Cat.5e Patch Cord

Features and Benefits

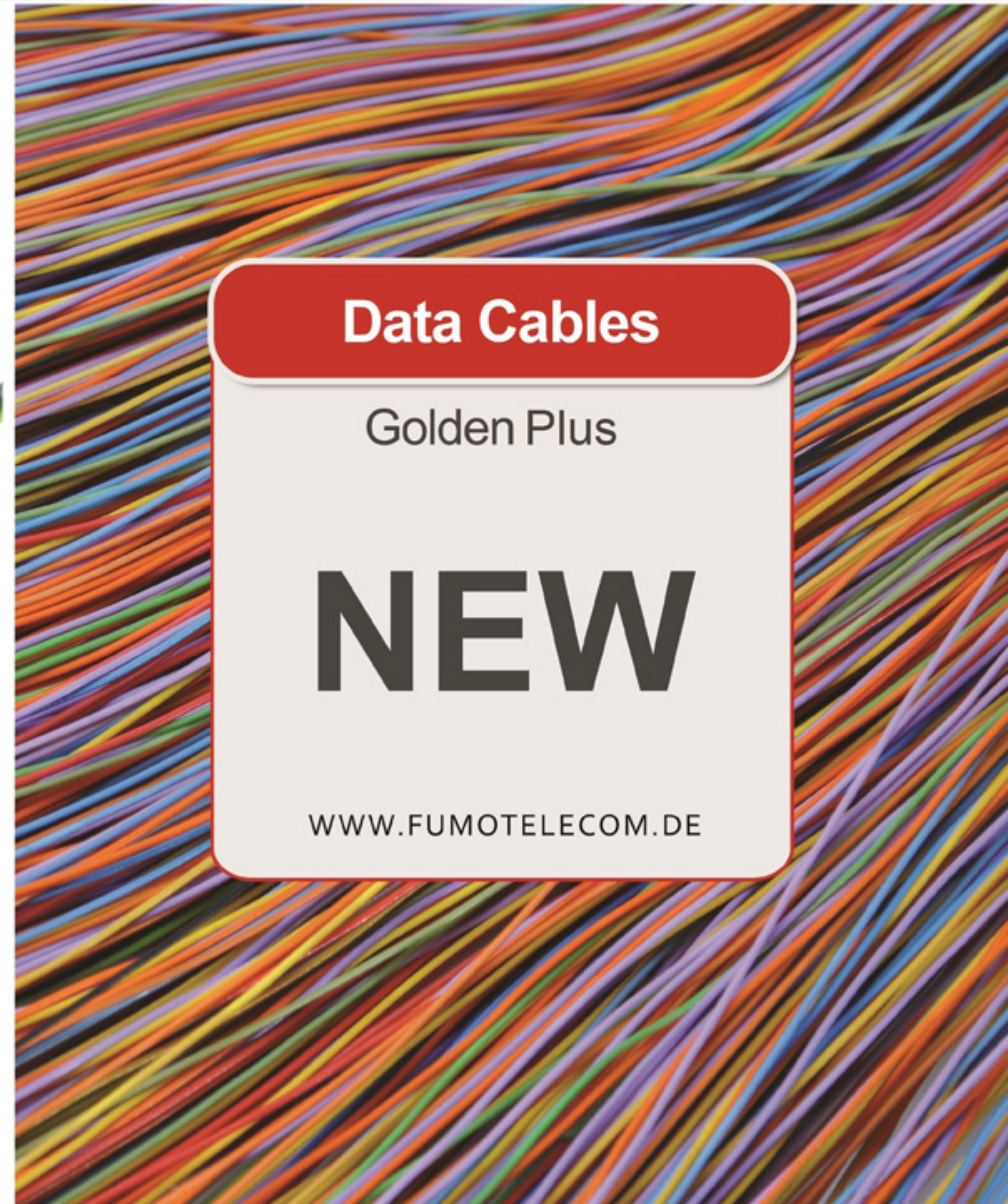
- Specified to 100MHz
- Suitable for Gigabit Ethernet, ATM 155.622Mbps, FDDI/CDDI 100Mbps, Ethernet 100 Base-TX, 100 Base VG; Token Ring, 10 Base-T Applications
- Meets or exceeds Cat.5e requirements
- 50-micron gold plated RJ-45 male-to-male
- PVC, Low Smoke Zero Halogen & Outer Sheath are available
- Multiple Selection of Lengths and Colors
- 24 AWG stranded bare copper conductor for unshielded ; 26 AWG stranded bare 952LXX-X005 copper conductor for shielded
- RoHS Compliant

Part Number	Description	Length	Part Number	Description	Length
GLCA956AXXX-X010	Cat.5e 24AWG U-UTP PVC patch cord	956A	GLCA956AXXX-X010	Cat.5e 24AWG U-UTP LSZH patch cord	1M
GLCA952AXXX-X010	Cat.5e 26AWG F-UTP PVC patch cord	952A	GLCA952AXXX-X010	Cat.5e 26AWG F-UTP LSZH patch cord	1M
GLCA959AXXX-X010	Cat.5e 26AWG SF-UTP PVC patch cord	959A	GLCA959AXXX-X010	Cat.5e 26AWG SF-UTP LSZH patch cord	1M

Length: 0.5 / 1 / 2 / 3 / 5 / 7 / 10M available

Coding scheme

Assembly type= X	Jacket color= XX	Packing= X
P=P+P S=P+P+SR (Assembly) M=P+P+SR (Molding- regular) N=P+P+SR (Molding- with hood) O=P+P+SR (Molding- short type) C=P+P+SR (Molding- short type with hood)	BK=black, WH=white, GY=gray, IV=ivory, RD=red, OR=orange, YL=yellow, GN=green, BL=blue, BG=beige, VL=violet	1=1pcs / PE bag 2=1pcs / Blister



Data Cables

Golden Plus

NEW

WWW.FUMOTELECOM.DE



Cat6 patch cord UTP PVC GPLPCP6U

Performance

Electrical Characteristics (20°)

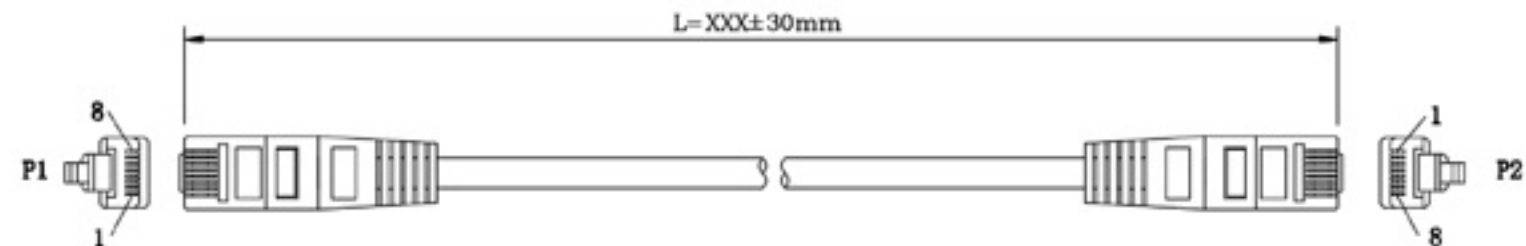
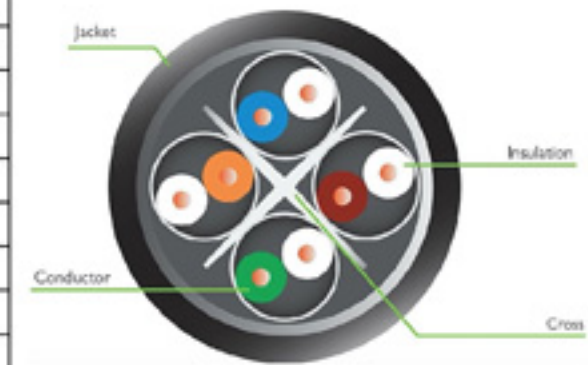
- Max. Conductor DC resistance (/KM) #23:93.8
- Min. Insulation resistance (/KM) PE:100M
- Dielectric strength AC-500V/1 Min No breakdown
- D-C resistance unbalance: Max 2%
- Pair-to-ground capacitance unbalance: Max. 330PF/100M
- Input impedance: 4-100MHz 100+/-15ohm
100-250MHz 100+/-22ohm
- Mean characteristic impedance@100MHz: 100+/-5 OHMS
- Nominal Velocity of Propagation (NVP) 68+/-2%
- Propagation Delay@100MHz ≥537.6 ns/100M
- Propagation Delay skew: Max ≥45ns/100M
- Frequency Range minimum requirements (Equations)
- Insertion loss 4-250MHz IEC61156-6: Equation (2)
- Return loss 4-250MHz IEC61156-6
- Input impedance 4-250MHz IEC61156-6
- NEXT 4-250MHz IEC61156-6: Equation (6)
- PS NEXT 4-250MHz IEC61156-6: Equation (5)
- ELFEXT 4-250MHz IEC61156-6: Equation (7)
- PS ELFEXT 4-250MHz IEC61156-6: Equation (7)



Physical Properties	Insulation	Tens strength (before aging)	Kgf/mm ²	>1.68	
			Tens strength (after aging)	Kgf/mm ²	
			Elongation (before aging)	%	>300%
			Elongation (after aging)	%	
	Jacket		Tens strength (before aging)	Kgf/mm ²	>1.41
			Tens strength (after aging)	Kgf/mm ²	
			Elongation (before aging)	%	>100%
			Elongation (after aging)	%	
Conductor Resistance		Ω/kM		<93.8	
		20°C			
Insulation shrink back				121°Cx1hr	
Insulation cold bend				-20°Cx4hr	
Jacket cold bend				-20°Cx4hr	

Construction:

Conductor	Bare Coper
4 Twisted Pair	8C
AWG	26
Constraction (mm)	7/0.16
Stranded Dia. (mm)	0.6
Insulation	PE
Nom. Thickness (mm)	0.21
Insulation Dia. (±0.005)	0.87/0.91
Sepaiaior	PE Cross
Shield/Braid	/
Overlap (%)	/
Darin wire	/
Jacket	PVC/Black
Nom. Thickness (mm)	0.5-0.6
Outer Dia. (±0.2mm)	5.86.0
Cores: Pairs color	P1:Blue & white
	P2: Orange & White
	P3: Green & White
	P4: Brown & White



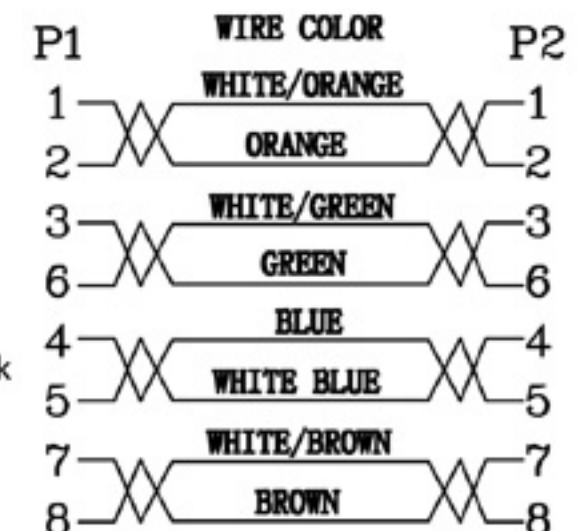
Notes:

- Electrical Test: 100% open, short & Miss wire test.
- Conductor Resistance: 2 OHMS max. insulator resistance: 10M OHMS min.
- HI-POT: DC 300V 0.01sec.

Remark:

- Cable: UTP Cat6 Cable 4P*26AWG (7/0.16BC). OD: 6.0 ± 0.20mm. Jacket PVC, Color:Black
- Conn. :P1, P2 8P8C UTP Plug, Gold Plated FU".
- Packing: Each Cable in Poly-bag.
- Molded: PVC, Color: Black

WIRE CONNECTION



Cat6 180 Degree Keystone Jack Module Tool Less Short Body GLUC80-6HT-A

Specification

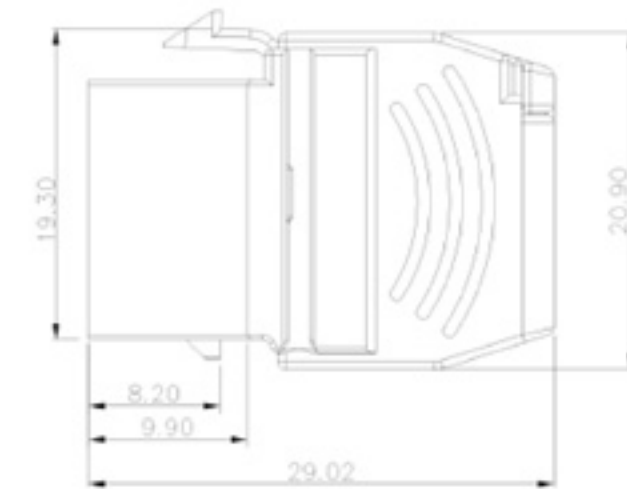
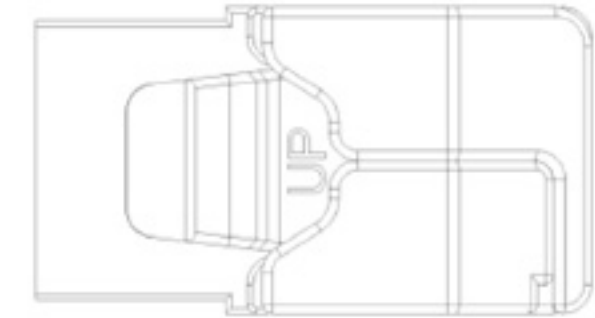
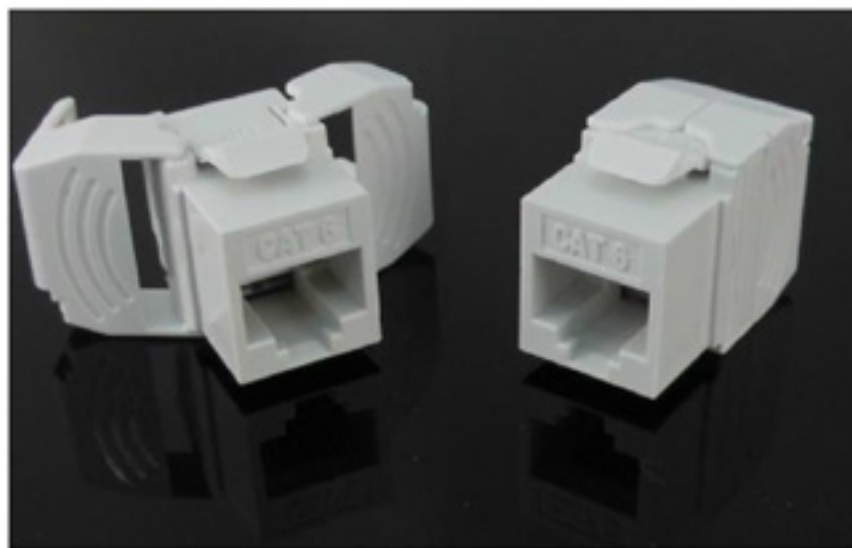
Meets ANSI/TIA-568-C.2 Category 6 Connecting Hardware

Electrical

- Insulation Resistance: 500 MΩhm minimum @ 100 Vdc
- Dielectric Withstanding Voltage: 1000 Vac rms @ 60Hz for one minute
- Current Rating: 1.5 Amps
- Spring wire contact resistance: 20 MΩhm maximum
- IDC Contact resistance: 2.5 MΩhm maximum

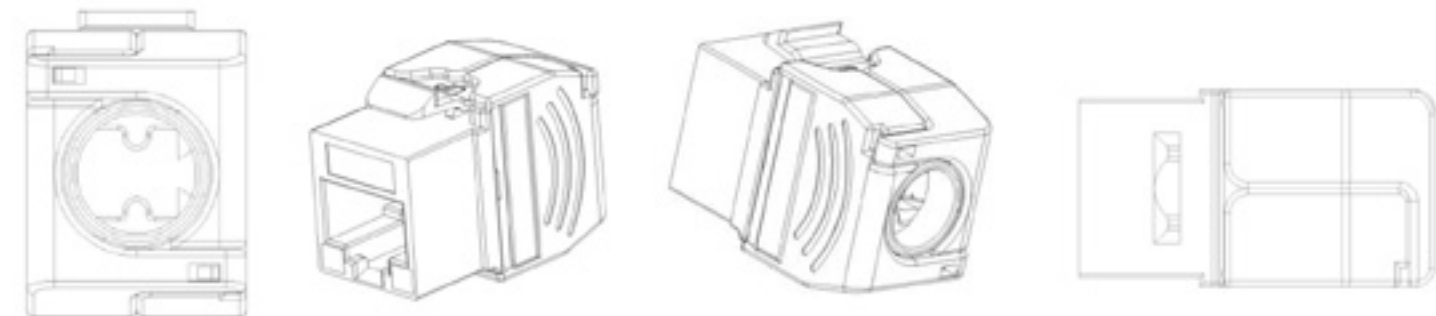
Mechanical

- Total Contact force : >100 GRAMS per contact wire lead
- Retention : 50 N(11 lbf) for 60s ± 5s
- Durability : 750 cycles minimum
- Conductor compatibility : 22~24AWG
- Temperature range storage : -40° C ~ +70 C
- Temperature range operation : -10° C ~ +60 C
- Relative humidity operation : Maximum noncondensing 93%



Materials

- Housing: High Impact flame retardant plastic, UL 94 V-0 Rated
- PCB : FR4, 1.6mm thickness
- Spring wire : Phosphor Bronze Alloy plated with 50 micro-inch of gold over 70 ~ 100 micro-inch of nickel
- IDC : Phosphor Bronze alloy plated with 100 micro-inch of tin



LAN Cables - Symmetrical Twisted Pair Cables for Data Transmission

GLPLUS 640



Application	Primary (Campus), Secondary (Riser), Tertiary (Horizontal)
Standard	IEEE 802.3; 10Base-T; 100Base-T; 1000Base-T IEEE 802.5 16 MB; ISDN; TPDDI; ATM EIA-TIA 568B.2 EN 50173; EN 50288-6-1 IEC 61156-5 ISO/IEC 11801
Fire-Resistance Rating	PVC LSZH IEC 60332-1 IEC 60332-1

Fumo code	GLPLUS 640
Category	6 U/UTP
Construction	4x2x AWG23/1

CONSTRUCTION DATA

Conductors	dia. mm	0,57
	material	Cu
Insulation	material	PE
	dia. mm	1,00
Screen		(U/UTP)
Outer Sheath	dia. mm	6,60
	material	white PVC
2° Outer Sheath	dia. mm	
	material	

PHISICAL DATA

Copper Content	kg/km	18,6
Cable Weight	kg/km	42,4
Min. Bending Radius 1/n	mm	30/60
Temperature installation	°C	0° +50°
operation	°C	-20° +60°
Max. Tensile Strength	N	100
Fire Load	MJ/km	660
	KWh/km	183

ELETTRICAL DATA

Impedance	Ohm	100 ± 5
100 MHz	pF/m	48
Mutual Capacitance (@800Hz)	%	67
Velocity Radio		
Transmission Data	a 20° C	Att. dB/100m
at 100	MHz	17,4
at 200	MHz	25,0
Coupling Attenuation (30 ÷ 100 MHz)	dB	> 45
DC Conductor Resistance	Ohm/km	80,0
Loop Resistance	Ohm/km	160
Sheath Insulation Voltage	kV	1,0
Insulation Resistance (500V)	MOhm/km	> 5000
Voltage Test (1 min DC)	V	1000



GLPLUS 640 ZH
6 U/UTP
4x2x AWG23/1

Conductors	dia. mm	0,57
	material	Cu
Insulation	material	PE
	dia. mm	1,00
Screen		(U/UTP)
Outer Sheath	dia. mm	6,60
	material	grey LSZH
2° Outer Sheath	dia. mm	
	material	



GLPLUS 640 PE
6 U/UTP
4x2x AWG23/1

Conductors	dia. mm	0,57
	material	Cu
Insulation	material	PE
	dia. mm	1,00
Screen		(U/UTP)
Outer Sheath	dia. mm	6,60
	material	black PE
2° Outer Sheath	dia. mm	
	material	



GLPLUS 640 2G
6 U/UTP
4x2x AWG23/1

Conductors	dia. mm	0,57
	material	Cu
Insulation	material	PE
	dia. mm	1,00
Screen		(U/UTP)
Outer Sheath	dia. mm	6,60
	material	white PVC
2° Outer Sheath	dia. mm	7,80
	material	black PE



2x GLPLUS 640 ZH
2x (6 U/UTP)
2x (4x2x AWG23/1)

Conductors	dia. mm	0,57
	material	Cu
Insulation	material	PE
	dia. mm	1,00
Screen		(U/UTP)
Outer Sheath	dia. mm	6,60 x 14,20
	material	grey LSZH
2° Outer Sheath	dia. mm	
	material	



RL dB	NEXT dB	ACR dB/100m
25,0	60,0	42,6
20,0	55,0	30,0

LAN Cables - Symmetrical Twisted Pair Cables for Data Transmission

GLPLUS6A40



Application	Primary (Campus), Secondary (Riser), Tertiary (Horizontal)	
Standard	IEEE 802.3; 10Base-T; 100Base-T; 1000Base-T EIA-TIA 568C.2 EN 50173; EN 50288-11-1 DRAFT IEC 61156-5 ISO/IEC 11801	
Fire-Resistance Rating	PVC LSZH	IEC 60332-1 IEC 60332-1
Fumo code	GLPLUS 6A40	
Category	6A U/UTP	
Construction	4x2x AWG23/1	
CONSTRUCTION DATA		
Conductors	dia. mm material	0,57 Cu
Insulation	material dia. mm	PE 1,00
Screen		(U/UTP)
Outer Sheath	dia. mm material	6,60 white PVC
PHISICAL DATA		
Copper Content	kg/km	18,6
Cable Weight	kg/km	42,5
Min. Bending Radius:	70/35	
installation / operation	mm	70/35
Temperature installation	°C	0° a +50°
operation	°C	-20° + +60°
Max. Tensile Strength	N	100
Fire Load	MJ/km KWh/km	741 206
ELETTRICAL DATA		
Impedance	100 ± 5	
100 MHz	Ohm	100 ± 5
Mutual Capacitance (@800Hz)	pF/m	48
Velocity Radio	%	67
Transmission Data	a 20° C	Att. dB/100m
at 100	MHz	17,4
at 200	MHz	25,0
Coupling Attenuation (30 + 100 MHz)	dB	> 45
DC Conductor Resistance	Ohm/km	80,0
Loop Resistance	Ohm/km	160
Sheath Insulation Voltage	kV	1,0
Insulation Resistance (500V)	MOhm/km	> 5000
Voltage Test (1 min DC)	V	1000

GLPLUS 6A40 ZH
6A U/UTP
4x2x AWG23/1

0,57
Cu
PE
1,00
(U/UTP)

6,60
grey LSZH

18,6
46

70/35
0° a +50°
-20° + +60°
100
731
206

RL dB **NEXT dB** **ACR dB/100m**
25,0 60,0 42,6
20,0 55,0 30,0

Application	Primary (Campus), Secondary (Riser), Tertiary (Horizontal)	
Standard	IEEE 802.3; 10Base-T; 100Base-T; 1000Base-T IEEE 802.5 16 MB; ISDN; TPDDI; ATM EIA-TIA 568B.2 EN 50173; EN 50288-5-1 IEC 61156-5 ISO/IEC 11801 IEC 60332-1 IEC 60332-1	
Fire-Resistance Rating	PVC LSZH	IEC 60332-1 IEC 60332-1
Fumo code	GLPLUS 6A 43 ZH	
Category	6A U/FTP	
Construction	4x2x AWG23/1	
CONSTRUCTION DATA		
Conductors	dia. mm material	0,57 Cu
Insulation	material dia. mm	PEG 1,40
Screen		(U/FTP)
Drain Wire	Mat./dia.	CuSn/0,40
1. Pairs Screen	mode material	Al/Pet
Film Foil	material	Pet
Outer Sheath	dia. mm material	7,20 grey LSZH
PHISICAL DATA		
Copper Content	kg/km	20,3
Cable Weight	kg/km	55,5
Min. Bending Radius 1/n	mm	35/70
Temperature installation	°C	0° + +50°
operation	°C	-20° + +60°
Max. Tensile Strength	N	340
Fire Load	MJ/km KWh/km	608 169
ELETTRICAL DATA		
Impedance	100 ± 5	
100 MHz	Ohm	100 ± 5
Mutual Capacitance (@800Hz)	pF/m	43
Velocity Radio	%	77
Transmission Data	a 20° C	Att. dB/100m
at 100	MHz	17,4
at 200	MHz	25,0
Coupling Attenuation (30 + 100 MHz)	dB	> 45
DC Conductor Resistance	Ohm/km	73,0
Loop Resistance	Ohm/km	164
Sheath Insulation Voltage	kV	1,0
Insulation Resistance (500V)	MOhm/km	> 5000
Voltage Test (1 min DC)	V	1000
Shield Transfer Impedance (Zt)		
1 MHz	mΩ/m	< 11
10 MHz	mΩ/m	< 5
30 MHz	mΩ/m	< 3
Screening Attenuation (SA)		
30 - 100 MHz	dB	> 70
100 - 1000 MHz	dB	> 50

GLPLUS 6A43



GLPLUS 6A 44 ZH
6A F/FTP
4x2x AWG23/1

0,57
Cu
PEG
1,40
(F/FTP)
CuSn/0,40

7,20
grey LSZH

20,3
55,5

35/70
0° + +50°
-20° + +60°
340
665
185

RL dB **NEXT dB** **ACR dB/100m**
25,0 80,0 62,6
25,0 75,0 50,0

GLPLUS 6A44



Cat. 7 and 7A LAN CABLES

APPLICATION AND STANDARD

The standard cable Cat.7 was created to enable the transmission of network protocols 10 Gigabit Ethernet over 100 meters of copper cables. It is compatible with previous networks realized with Cat.5e, 6 and 6A but has characteristics that are more stringent for crosstalk and system noise.

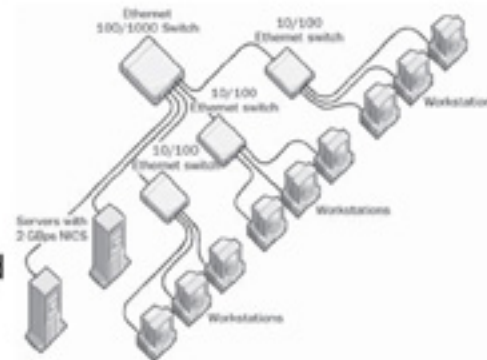
The cable Cat.7 can be terminated either with 8P8C compatible GG45 electrical connectors and with TERA connectors. In combination with said connectors it is suitable to transmit up to 600 MHz.

As of November 2010, all manufacturers of active equipment have chosen to support the connection 8P8C for their products compatible to 10 Gigabit Ethernet over copper, but not connections GG45, ARJ45 or TERA which remain applicable to the Cat.6A.

Channel Class FA and cable Cat.7A were introduced for transmissions up to 1,000 MHz on 10 Gigabit Ethernet over 100m. The cable is suitable for multiple applications, including transmission at 40 Gigabit Ethernet up to 50m, 100 Gigabit Ethernet up to 15m and CATV (bandwidth up to 862 MHz). Each pair offers up to 1.200 MHz of bandwidth.

CABLE CONSTRUCTION

The cable Cat.7 contains four pairs of copper twisted wires, just like the previous regulations, but to obtain the characteristics described above, were added: both the individual shielding for each pair of wires and that of the cable as a whole (S/FTP). Also, the screen, the stranding of the pairs and the number of turns per unit length of the individual pairs optimize the RF shield and protect better from Crosstalk.



GG45 connector



Tera connector

LAN Cables - Symmetrical Twisted Pair Cables for Data Transmission

Application		Primary (Campus), Secondary (Riser), Tertiary (Horizontal)			
Standard	acc. to	IEEE 802.3; 10Base-T; 100Base-T; 1000Base-T IEEE 802.5 16 MB; ISDN; TPDD; ATM EIA-TIA 568B.2 EN 50173; EN 50288-5-1 IEC 61156-5 ISO/IEC 11801 IEC 60332-1 IEC 60332-1			
Fire-Resistance Rating	PVC LSZH				
Fumo code		GLPLUS 7 454 ZHA			
Category		7 S/FTP			
Construction		4x2x AWG23/1			
CONSTRUCTION DATA					
Conductors	dia. mm material	0,57 Cu			
Insulation	material dia. mm	PEG 1,40			
Screen		(S/FTP)			
1. Pairs Screen	mode				
Film Foil Laminate	material	Al/Pet			
2. Overall Braid Screen	material	Cu Sn			
Braid Optical Coverage	%	41			
Outer Sheath	dia. mm material	8,00 orange LSZH			
PHISICAL DATA					
Copper Content	kg/km	24,9			
Cable Weight	kg/km	59,6			
Min. Bending Radius 1/n	mm	80/40			
Temperature installation	°C	0° + +50°			
operation	°C	-20° + +60°			
Max. Tensile Strength	N	320			
Fire Load	MJ/km KWh/km	623 173			
ELETTRICAL DATA					
Impedance	Ohm	100 ± 5			
1 + 100 MHz	pF/m	43			
Mutual Capacitance (@800Hz)	%	77			
Velocity Radio					
Transmission Data	a 20° C	Att. dB/100m	RL dB	NEXT dB	ACR dB/100m
at 100	MHz	17,4	25,0	80,0	62,6
at 200	MHz	25,0	25,0	75,0	50,0
Coupling Attenuation (30 + 100 MHz)	dB	> 45			
DC Conductor Resistance	Ohm/km	73,0			
Loop Resistance	Ohm/km	164			
Sheath Insulation Voltage	kV	1,0			
Insulation Resistance (500V)	MOhm/km	> 5000			
Voltage Test (1 min DC)	V	1000			
Shield Transfer Impedance (Zt)					
1 MHz	mΩ/m	< 9			
10 MHz	mΩ/m	< 7			
30 MHz	mΩ/m	< 5			
Screening Attenuation (SA)					
30 - 100 MHz	dB	> 80			
100 - 1000 MHz	dB	> 85			

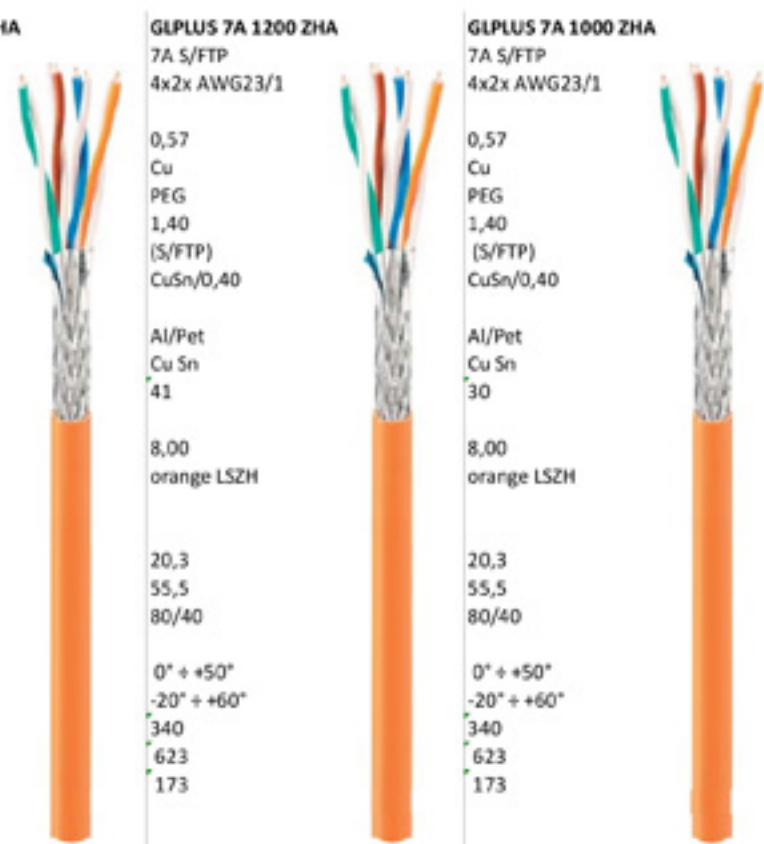
GLPLUS 745



LAN Cables - Symmetrical Twisted Pair Cables for Data Transmission

Application	Primary (Campus), Secondary (Riser), Tertiary (Horizontal) IEEE 802.3; 10Base-T; 100Base-T; 1000Base-T IEEE 802.5 16 MB; ISDN; TPDDI; ATM EIA-TIA 568B.2												
Standard	acc. to EN 50173; EN 50288-5-1 IEC 61156-5 ISO/IEC 11801 IEC 60332-1 IEC 60332-1												
Fire-Resistance Rating	PVC LSZH IEC 60332-1												
Fumo code													
Category													
Construction													
CONSTRUCTION DATA													
Conductors	dia. mm	0,64			0,57			0,57			0,57		
Insulation	material	Cu			Cu			Cu			Cu		
Screen	material	PEG			PEG			PEG			PEG		
Drain Wire	dia. mm	1,52			1,40			1,40			1,40		
1. Pairs Screen	Mat./dia.	CuSn/0,40			CuSn/0,40			CuSn/0,40			CuSn/0,40		
2. Overall Braid Screen	mode	Al/Pet			Al/Pet			Al/Pet			Al/Pet		
Braid Optical Coverage	material	Cu Sn			Cu Sn			Cu Sn			Cu Sn		
Outer Sheath	%	40			41			30			30		
PHYSICAL DATA	dia. mm	8,20			8,00			8,00			8,00		
Copper Content	material	orange LSZH			orange LSZH			orange LSZH			orange LSZH		
Cable Weight	kg/km	29,9			20,3			20,3			20,3		
Min. Bending Radius 1/n	kg/km	66,3			55,5			55,5			55,5		
Temperature installation	mm	80/40			80/40			80/40			80/40		
operation	°C	0° + +50°			0° + +50°			0° + +50°			0° + +50°		
Max. Pulling Strength	°C	-20° + +60°			-20° + +60°			-20° + +60°			-20° + +60°		
Fire Load	N	380			340			340			340		
ELETTRICAL DATA	MJ/km	655			623			623			623		
Impedance	KWh/km	182			173			173			173		
1 + 100 MHz	Ohm	100 ± 5			100 ± 5			100 ± 5			100 ± 5		
Mutual Capacitance (@800Hz)	pF/m	43			43			43			43		
Velocity Ratio	%	77			77			77			77		
Transmission Data	Att. dB/100m	RL dB	NEXT dB	ACR dB/100m	Att. dB/100m	RL dB	NEXT dB	ACR dB/100m	Att. dB/100m	RL dB	NEXT dB	ACR dB/100m	
at 100 MHz	16,5	25,0	80,0	63,5	17,4	25,0	80,0	62,6	17,4	25,0	80,0	62,6	
at 200 MHz	23,2	25,0	75,0	51,8	25,0	25,0	75,0	50,0	25,0	25,0	75,0	50,0	
Coupling Attenuation (30 ÷ 100 MHz)	> 45												
DC Conductor Resistance	Ohm/km	57,5											
Loop Resistance	Ohm/km	115											
Sheath Insulation Voltage	kV	1,0											
Insulation Resistance (500V)	MOhm/km	> 5000											
Voltage Test (1 min DC)	V	1000											
Shield Transfer Impedance (Zt)													
1 MHz	mΩ/m	< 9											
10 MHz	mΩ/m	< 7											
30 MHz	mΩ/m	< 5											
Screening Attenuation (SA)													
30 - 100 MHz	dB	> 80											
100 - 1000 MHz	dB	> 85											

GLPLUS 7A



ECOLOGICAL PACKING

CABLEBOX DISPENSER PACKING SYSTEM

Until recently, coils in a box or non-returnable cardboard and plastic reels were the most popular means of packaging cables. In spite of some inconveniences, these packages were accepted as the norm. Today, due to environmental studies and concerns, the concept of recycling has become a paramount issue, prompting Fumo to develop a total solution in terms of **EFFICIENCY, ECONOMY** and **ECOLOGY**.

This has led to the introduction of a revolutionary product - the CABLEBOX dispenser - a design based on the concepts of **REDUCTION** and **REUTILISATION**.

The CABLEBOX dispenser is made of a stand containing one reel, which can be easily opened into two parts. These pieces, made of a shock resistant, very strong plastic material, form a cable dispenser with a very long life expectancy.

The "refi II" is represented by the coil of cable supplied by Fumo.

The dispensers are available in two sizes, suitable for either the 100 or 250 metre coil of cable.

They can be carried and are also provided with a shoulder strap. This is a safety feature that enables the installer to move with both hands free.

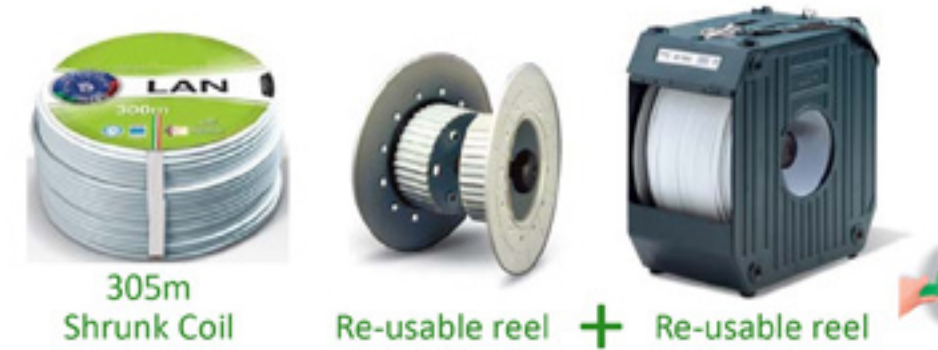


After the use

305m

The Past old pack solution

...of just 1 pallet with 12 km of cable, WHAT DO YOU DO WITH: 48 dirty wooden drums or 40 useless Fumo board boxes? **THIS IS A WASTE DISPOSAL PROBLEM!**



305m
Shrunk Coil

Re-usable reel + Re-usable reel

The Present new smart pack solution

of 1 pallet with 12,0 km cable, you waste just FEW hg of paper and plastic.

This is a Total Solution!

The cable will always unroll perfectly without assuming a "spiral shape", an annoying drawback of box dispensers that makes installation in ducts very difficult. This is most useful when installing a bundle of cables together in a conduit.

Rewinding excess cable back into the dispenser is very straightforward due to the access through the centre hole. The sheath of all Fumo cables supplied in shrinkpack form is provided with a decreasing meter marking, allowing the installer to check the length of a run or drop against the remaining contents of the dispenser.

With the CABLEBOX dispenser packing system, there is no reel disposal to consider, only a small piece of shrinkwrap. Supplying installers with CABLEBOX dispensers offers the following advantages:

- easier installation
- savings on cost and effort
- opportunity to avoid environmental problems
- improved safety.