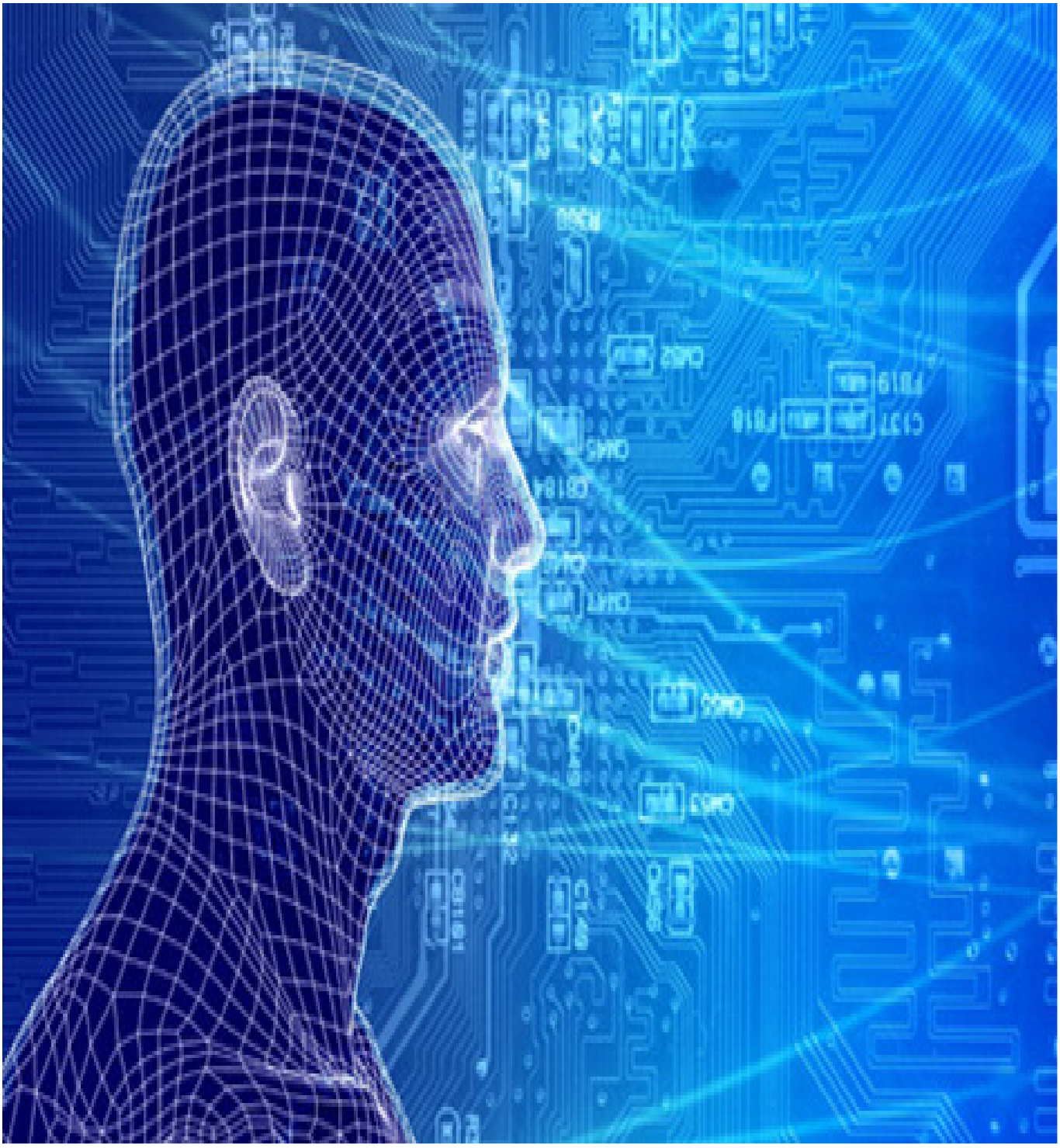
Networking Solution



VELOCITY®
TECHNOLOGY INDUSTRIES

Corporate Profile

Velocity Technology Industries is a young, potent &dynamic growing company. Despite its humble beginnings, the company has been dedicated to establishing a professional relationship with its clients and setting an example in this field by providing the cutting edge technological solutions while assuring high quality products and maintaining a remarkable record of market reputation. Backed up with its state-of the art design and manufacturing technologies, we are able to stay in line with the changing market trend by being innovative through our continuous effort in research and development, to meet the ever increasing market demand.

Velocity has been working intensively to achieve its goal of maximizing the localization of products and intends to provide a one stop shopping experience for its local and regional customers.

Through the clear vision and entrepreneur spirit of our Managing Director, we have focused on developing long term relationships with our customers, suppliers and especially our employees. By being honest, reliable and trustworthy, we have succeeded in helping our customers to achive products satisfaction towards our goods and services provided. We have implemented stringent quality control system to monitor the production line and finished products so as to assure our customers with only top quality and uniformity of our products.

We are company that will overcome all difficulties and as such has committed ourselves to being flexible. With your support, we will be able to realize our vision. The best is yet to be.

Velocity Technology Industries are confident that it's networking products will keep performing to today's industry need and standards. Velocity will provide the replace or repair of it's products if it ever fails to meet the current standards with in 20 years of the date of installation.

What is covered by warranty:

Only Velocity Technology Industries authorized contractors can offer the 20 years system performance warranty. The warranty covers the performance of the entire system(cable, connector, patch panel, face plate, patch cord, …….) for minimum period of 20 years from installation date. The warranty is between the Velocity Technology Industries and end-user.

VELOCITY®
TECHNOLOGY INDUSTRIES

20 years Performance warranty

VELOCITY®
TECHNOLOGY INDUSTRIES

Company :

Address :

Contact Number :

That the products (cable, connector and connecting accessories, ….etc) listed in Velocity Networking Solution catalogue shall be free from defects in material, workmanship and fabrication, under normal use for a period of **Twenty years** following the date of delivery of products to the customers.

The end-user must inform Velocity Technology Industries/ Distributors within 14 days upon discovery of any failure or defect which may be covered by this warranty.

To be eligible for this warranty, customer need to provide the original sales invoice showing the date of purchase of the products. Velocity Technology Industries my request the original sales invoice or copy as proof of the date of purchase.

Velocity Technology Industries does not warrant third party products. The products has to be warrant by the third party.

Table of contents

VELOCITY®
TECHNOLOGY INDUSTRIES

Cable

Product construction :

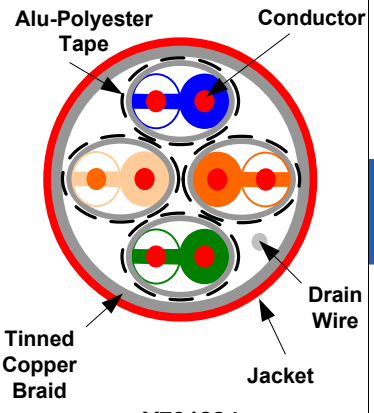
Refer to individual product description

Applications :

- Horizontal Network and Voice in a structured cabling system
- 10G Base-T (Gigabit Ethernet)
- Digital video
- Broadband and Baseband analog video

Packing Details:

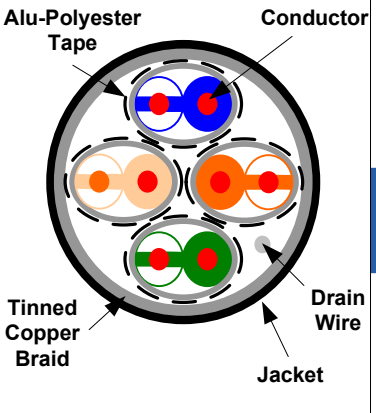
1640ft(500m)
3278ft(1000m)
Available on spools
description



V731284
CAT.7 SFTP

AWG SIZE NOM. DCR (Dia. in Inch)	INSULATION CORE		SHIELD COVERAGE NOM. DCR	SHEATH NOMINAL OD.	
	Inch	mm		Inch	mm
23 (Solid) 0.0226 Bare Copper	Form PE		100% H-Foil Plus 40% Tinned Copper Braid	LSHF RED	
	0.057	1.44		0.315	8.00
Mutual Capacitance (max.) pF/m	DC Resistance (max) Ω/100m @ 20°C		Delay Skew (max) ns/100m	DC Resistance Unbalance (max) %	
58	6.85		15.0	5.0	

ELECTRICAL CHARACTERISTIC									
Freq.	Ins.Loss (dB/100m)	RL (dB)	Pair to Pair (dB/100m)		Power Sum (dB/100m)				PSELFEXT (dB/100m)
			NEXT	ELFEXT	NEXT	ELFEXT	ANEXT	AELEFXT	
(MHz)	Max.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Max.
1	2.1	20.0	102.4	94.0	80.0	78.0	78.0	78.0	75.0
4	3.8	23.0	93.4	82.0	80.0	76.3	76.3	78.0	75.0
10	5.9	25.0	87.4	74.0	80.0	74.1	74.1	74.0	71.0
16	7.4	25.0	84.3	69.9	80.0	72.6	72.6	69.9	66.9
20	8.3	25.0	82.9	68.0	80.0	71.7	71.7	68.0	65.0
31.25	10.4	23.6	80.0	64.1	77.0	69.6	66.6	64.1	61.1
62.50	14.9	21.5	75.5	58.1	72.5	60.6	57.6	58.1	55.1
100	19.0	20.1	72.4	54.0	69.4	53.4	50.4	54.0	47.2
155	24.0	18.8	69.5	50.2	66.5	45.6	42.6	50.2	45.0
200	27.5	18.0	67.9	48.0	64.9	40.4	37.4	48.0	43.0
250	31.0	17.3	66.4	46.0	63.4	35.5	32.5	46.0	40.1
350	37.2	17.3	64.2	43.1	61.2	27.1	24.1	43.1	39.0
400	40.0	17.3	63.4	42.0	60.4	23.4	20.4	42.0	37.9
500	45.3	17.3	61.9	40.0	58.3	13.6	10.6	39.2	36.2
600	50.1	17.3	60.7	38.4	57.7	10.6	7.6	38.4	35.4



V731284P
CAT.7 SFTP

AWG SIZE NOM. DCR (Dia. in Inch)	INSULATION CORE		SHIELD COVERAGE NOM. DCR	SHEATH NOMINAL OD.	
	Inch	mm		Inch	mm
23 (Solid) 0.0226 Bare Copper	Form PE		100% H-Foil Plus 40% Tinned Copper Braid	PE Black	
	0.057	1.44		0.315	8.00
Mutual Capacitance (max.) pF/m	DC Resistance (max) Ω/100m @ 20°C		Delay Skew (max) ns/100m	DC Resistance Unbalance (max) %	
58	6.85		15.0	5.0	

ELECTRICAL CHARACTERISTIC									
Freq.	Ins.Loss (dB/100m)	RL (dB)	Pair to Pair (dB/100m)		Power Sum (dB/100m)				PSELFEXT (dB/100m)
			NEXT	ELFEXT	NEXT	ELFEXT	ANEXT	AELEFXT	
(MHz)	Max.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Max.
1	2.1	20.0	102.4	94.0	80.0	78.0	78.0	78.0	75.0
4	3.8	23.0	93.4	82.0	80.0	76.3	76.3	78.0	75.0
10	5.9	25.0	82.9	68.0	80.0	71.7	71.7	68.0	65.0
16	7.4	25.0	84.3	69.9	80.0	72.6	72.6	69.9	66.9
20	8.3	25.0	82.9	68.0	80.0	71.7	71.7	68.0	65.0
31.25	10.4	23.6	80.0	64.1	77.0	69.6	66.6	64.1	61.1
62.50	14.9	21.5	75.5	58.1	72.5	60.6	57.6	58.1	55.1
100	19.0	20.1	72.4	54.0	69.4	53.4	50.4	54.0	47.2
155	24.0	18.8	69.5	50.2	66.5	45.6	42.6	50.2	45.0
200	27.5	18.0	67.9	48.0	64.9	40.4	37.4	48.0	43.0
250	31.0	17.3	66.4	46.0	63.4	35.5	32.5	46.0	40.1
350	32.7	17.3	64.2	43.1	61.2	27.1	24.1	43.1	39.0
400	40.0	17.3	63.4	42.0	60.4	23.4	20.4	42.0	37.9
500	45.3	17.3	61.9	40.0	58.3	13.6	10.6	39.2	36.2
600	50.1	17.3	60.7	38.4	57.7	10.6	7.6	38.4	35.4

VELOCITY®
TECHNOLOGY INDUSTRIES

Cable

Product construction :

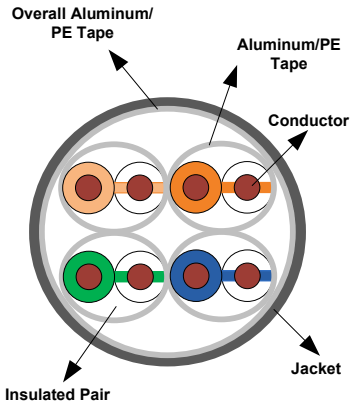
Refer to individual product description

Applications :

- Horizontal Network and Voice in structured cabling system IEEE802.3an:10G Base-T, Gigabit Ethernet)
- Digital video
- Broadband & Baseband analog video

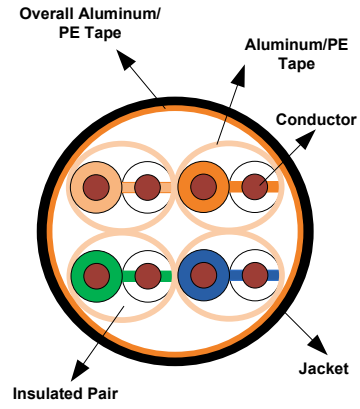
Packing Details:

1640ft(500m)
3278ft(1000m)
Available on spools description



V631284A
CAT.6A FFTP

Catalog Number	AWG SIZE NOM. DCR (Dia. in Inch)	INSULATION CORE		SHIELD COVERAGE NOM. DCR	SHEATH NOMINAL OD.		ELECTRICAL CHARACTERISTIC									
							Freq.	Ins.Loss (dB/100m)	RL (dB)	Pair to Pair		Power Sum				PSELFEXT (dB/100m)
										NEXT (dB/100m)	ELFEXT (dB/100m)	NEXT (dB/100m)	ELFEXT (dB/100m)	ANEXT (dB/100m)	AELEFXT (dB/100m)	
		Inch	mm		Inch	mm	(MHz)	Max.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Max.
	23 (Solid) 0.0226 Bare Copper	Form PE		Each Pair Shielded 100% H-Foil Plus Overall 100% H-Foil	PVC Gray		1	2.1	20.0	102.4	94.0	80.0	78.0	78.0	78.0	75.0
							4	3.8	23.0	93.4	82.0	80.0	76.3	76.3	78.0	75.0
							10	5.9	25.0	87.4	74.0	80.0	74.1	74.1	74.0	71.0
							16	7.4	25.0	84.3	69.9	80.0	72.6	72.6	69.9	66.9
		0.050	1.26		0.287	7.30	20	8.3	25.0	82.9	68.0	80.0	71.7	71.7	68.0	65.0
							31.25	10.4	23.6	80.0	64.1	77.0	69.6	66.6	64.1	61.1
	Mutual Capacitance (max.) pF/m	DC Resistance (max) Ω/100m @ 20°C		Delay Skew (max) ns/100m	DC Resistance Unbalance (max) %		62.50	14.9	21.5	75.5	58.1	72.5	60.6	57.6	58.1	55.1
							100	19.0	20.1	72.4	54.0	69.4	53.4	50.4	54.0	47.2
							155	24.0	18.8	69.5	50.2	66.5	45.6	42.6	50.2	45.0
	58	9.50		25.0 $4 \le f \le 600MHz$	4.0		200	27.5	18.0	67.9	48.0	64.9	40.4	37.4	48.0	43.0
							250	31.0	17.3	66.4	46.0	63.4	35.5	32.5	46.0	40.1
							350	37.2	17.3	64.2	43.1	61.2	27.1	24.1	43.1	39.0
							400	40.0	17.3	63.4	42.0	60.4	23.4	20.4	42.0	37.9
							500	45.3	17.3	61.9	40.0	58.3	13.6	10.6	39.2	36.2
							600	50.1	17.3	60.7	38.4	57.7	10.6	7.6	38.4	35.4



V631280PA
CAT.6A FFTP

	23 (Solid) 0.0226 Bare Copper	Form PE		Each Pair Shielded 100% H-Foil Plus Overall 100% H-Foil	PE Black		1	2.1	20.0	102.4	94.0	80.0	78.0	78.0	78.0	75.0
							4	3.8	23.0	93.4	82.0	80.0	76.3	76.3	78.0	75.0
							10	5.9	25.0	82.9	68.0	80.0	71.7	71.7	68.0	65.0
							16	7.4	25.0	84.3	69.9	80.0	72.6	72.6	69.9	66.9
		0.050	1.26		0.287	7.30	20	8.3	25.0	82.9	68.0	80.0	71.7	71.7	68.0	65.0
							31.25	10.4	23.6	80.0	64.1	77.0	69.6	66.6	64.1	61.1
	Mutual Capacitance (max.) pF/m	DC Resistance (max) Ω/100m @ 20°C		Delay Skew (max) ns/100m	DC Resistance Unbalance (max) %		62.50	14.9	21.5	75.5	58.1	72.5	60.6	57.6	58.1	55.1
							100	19.0	20.1	72.4	54.0	69.4	53.4	50.4	54.0	47.2
							155	24.0	18.8	69.5	50.2	66.5	45.6	42.6	50.2	45.0
	58	9.50		25.0 $4 \le f \le 600MHz$	4.0		200	27.5	18.0	67.9	48.0	64.9	40.4	37.4	48.0	43.0
							250	31.0	17.3	66.4	46.0	63.4	35.5	32.5	46.0	40.1
							350	32.7	17.3	64.2	43.1	61.2	27.1	24.1	43.1	39.0
							400	40.0	17.3	63.4	42.0	60.4	23.4	20.4	42.0	37.9
							500	45.3	17.3	61.9	40.0	58.3	13.6	10.6	39.2	36.2
							600	50.1	17.3	60.7	38.4	57.7	10.6	7.6	38.4	35.4

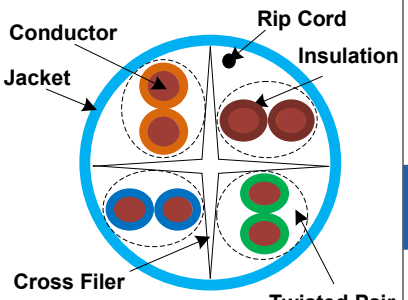
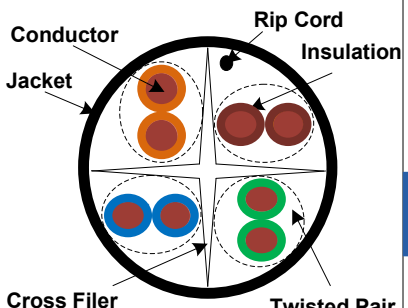
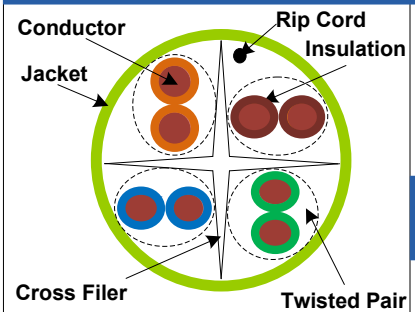
VELOCITY®
TECHNOLOGY INDUSTRIES

Cable

Product construction :
Refer to individual product description

Applications :
- IEEE 802.3:1000BASE-T (Gigabit Ethernet), 100BASE-T
- ANSI X3.263: 100Mb/s
- 155Mp/s, 1.2 Gb/s ATM
- POE, 4/16 Mb/s Token Ring
- Digital video
- Broadband and Baseband analog video

Packing Details:
1000ft(305m)
1640ft(500m)
Available on spools description

Catalog Number	AWG SIZE NOM. DCR (Dia. in Inch)	INSULATION CORE		Filer	SHEATH NOMINAL OD.		ELECTRICAL CHARACTERISTIC								
							Freq.	Attenuation	RL (dB)	Pair to Pair			Power Sum		
										NEXT	ELFEXT	ACR	NEXT	ELFEXT	ACR
		Inch	mm		Inch	mm	(MHz)	Max.	Min.	(dB/100m) Min.	(dB/100m) Min.	Min.	(dB/100m) Min.	(dB/100m) Min.	Min.
 V610061 CAT.6 UTP	23 (Solid) 0.0226 Annealed Copper	Solid PE		Solid PE Cross Separator	PVC Blue		1	2.0	20.0	74.3	67.8	72.3	72.3	64.8	70.3
							4	3.8	23.0	65.3	55.8	61.5	63.3	52.8	59.5
							10	6.0	25.0	59.3	47.8	53.3	57.3	44.8	51.3
		0.040	1.02		0.244	6.2	16	7.6	25.0	56.2	43.7	48.6	54.3	40.7	46.6
							20	8.5	25.0	54.8	41.8	46.3	52.8	38.8	44.3
							31.25	10.7	23.6	51.9	37.9	41.2	49.9	34.9	39.2
	Mutual Capacitance (max.) (nf/100m)	Capacitance Unbalance (Max) pF		Delay Skew (max) ns/100m	VOP %		62.50	15.4	21.5	47.7	31.9	32.0	45.4	28.9	30.0
							100	19.8	20.1	44.3	27.8	24.5	42.3	24.8	22.5
							200	29.0	18.0	39.8	21.8	10.8	37.8	18.8	8.8
							250	29.0	17.3	38.3	19.8	5.5	36.3	16.8	3.5
	5.60	330		45	60										
 V610002 CAT.6 UTP	23 (Solid) 0.0226 Annealed Copper	Solid PE		Solid PE Cross Separator	PE BLACK		1	2.00	20.00	74.30	67.80	72.30	72.30	64.80	70.30
							4	3.80	23.00	65.30	55.70	61.50	63.30	52.70	59.50
							10	6.00	25.00	59.30	47.80	55.30	57.30	44.80	51.30
		0.040	1.02		0.251	6.40	16	7.60	25.00	56.30	43.70	48.70	54.30	40.70	46.70
							20	8.50	25.00	75.00	68.00	75.00	67.00	67.00	51.00
							31.25	10.70	23.60	51.90	37.90	41.20	49.90	34.90	39.20
	Mutual Capacitance (max.) (nf/100m)	Capacitance Unbalance (Max) pF		Delay Skew (max) ns/100m	VOP %		62.50	15.40	21.50	47.40	31.80	32.00	45.10	28.80	30.00
							100	19.80	20.10	44.30	27.80	24.50	42.30	24.80	22.50
							200	22.40	19.40	42.80	25.90	20.50	40.80	22.90	18.50
							250	25.10	18.80	41.50	23.90	16.40	39.50	20.90	14.40
	5.60	330		45	60										
 V610053 CAT.6 UTP	23 (Solid) 0.0226 Annealed Copper	Solid PE		Solid PE Cross Separator	LSZH Green		1	2.00	20.00	74.30	67.80	72.30	72.30	64.80	70.30
							4	3.80	23.00	65.30	55.70	61.50	63.30	52.70	59.50
							10	6.00	25.00	59.30	47.80	55.30	57.30	44.80	51.30
		0.040	1.02		0.251	6.40	16	7.60	25.00	56.30	43.70	48.70	54.30	40.70	46.70
							20	8.50	25.00	75.00	68.00	75.00	67.00	67.00	51.00
							31.25	10.70	23.60	51.90	37.90	41.20	49.90	34.90	39.20
	Mutual Capacitance (max.) (nf/100m)	Capacitance Unbalance (Max) pF		Delay Skew (max) ns/100m	VOP %		62.50	15.40	21.50	47.40	31.80	32.00	45.10	28.80	30.00
							100	19.80	20.10	44.30	27.80	24.50	42.30	24.80	22.50
							200	22.40	19.40	42.80	25.90	20.50	40.80	22.90	18.50
							250	25.10	18.80	41.50	23.90	16.40	39.50	20.90	14.40
	5.60	330		45	60										

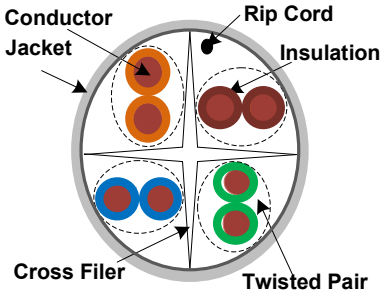
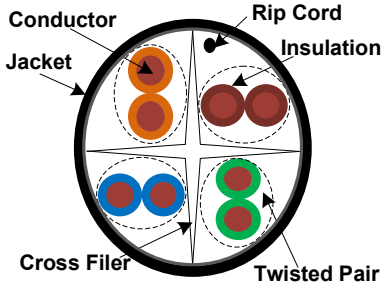
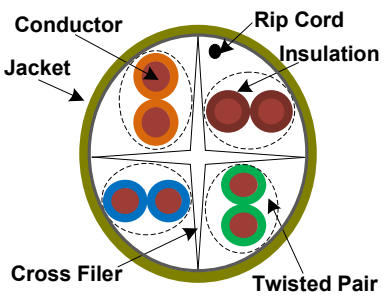
VELOCITY®
TECHNOLOGY INDUSTRIES

Cable

Product construction :
Refer to individual product description

Applications :
- IEEE 802.3:1000BASE-T (Gigabit Ethernet), 100BASE-T
- ANSI X3.263: 100Mb/s
- 155Mp/s, 1.2 Gb/s ATM
- POE, 4/16 Mb/s Token Ring
- Digital video
- Broadband and Baseband analog video

Packing Details:
1640ft(500m)
3278ft(1000m)
Available on spools description

Catalog Number	AWG SIZE NOM. DCR (Dia. in Inch)	INSULATION CORE		SHIELD COVERAGE NOM. DCR	SHEATH NOMINAL OD.		ELECTRICAL CHARACTERISTIC										
							Freq.	Attenuation	RL (dB)	Pair to Pair			Power Sum				
										NEXT	ELFEXT	ACR	NEXT	ELFEXT	ACR		
		Inch	mm		Inch	mm	(MHz)	Max.	Min.	(dB/100m)			(dB/100m)				
										Min.	Min.	Min.	Min.	Min.	Min.		
 V621081 CAT.6 FTP	23 (Solid) 0.0226 Bare Copper	Solid Polyethylene			PVC		1	2.00	20.00	74.30	67.80	72.30	72.30	64.80	70.30		
							4	3.80	23.00	65.30	55.70	61.50	63.30	52.70	59.50		
							10	6.00	25.00	59.30	47.80	55.30	57.30	44.80	51.30		
		0.043	1.10		0.300	7.60	16	7.60	25.00	56.30	43.70	48.70	54.30	40.70	46.70		
							20	8.50	25.00	75.00	68.00	75.00	67.00	67.00	51.00		
							31.25	10.70	23.60	51.90	37.90	41.20	49.90	34.90	39.20		
	Mutual Capacitance (max.) (nf/100m)	DC Resistance (max) Ohms/100m (328ft) @ 20°C		Delay Skew (max) ns/100m	DC Resistance Unbalance (max) Individual Pair %		62.50	15.40	21.50	47.40	31.80	32.00	45.10	28.80	30.00		
							100	19.80	20.10	44.30	27.80	24.50	42.30	24.80	22.50		
							125	22.40	19.40	42.80	25.90	20.50	40.80	22.90	18.50		
	5.60	9.38		45	5		155	25.10	18.80	41.50	23.90	16.40	39.50	20.90	14.40		
							175	26.90	18.40	40.70	22.90	13.70	38.70	20.00	11.70		
							200	29.00	18.00	39.80	21.70	10.80	37.80	18.70	8.80		
							250	32.80	17.30	38.30	19.80	5.50	36.30	16.80	3.50		
 V621002 CAT.6 FTP	23 (Solid) 0.0226 Bare Copper	Solid Polyethylene			BLACK PE		1	2.00	20.00	74.30	67.80	72.30	72.30	64.80	70.30		
							4	3.80	23.00	65.30	55.70	61.50	63.30	52.70	59.50		
							10	6.00	25.00	59.30	47.80	55.30	57.30	44.80	51.30		
		0.043	1.10		0.300	7.60	16	7.60	25.00	56.30	43.70	48.70	54.30	40.70	46.70		
							20	8.50	25.00	75.00	68.00	75.00	67.00	67.00	51.00		
							31.25	10.70	23.60	51.90	37.90	41.20	49.90	34.90	39.20		
	Mutual Capacitance (max.) (nf/100m)	DC Resistance (max) Ohms/100m (328ft) @ 20°C		Delay Skew (max) ns/100m	DC Resistance Unbalance (max) Individual Pair %		62.50	15.40	21.50	47.40	31.80	32.00	45.10	28.80	30.00		
							100	19.80	20.10	44.30	27.80	24.50	42.30	24.80	22.50		
							125	22.40	19.40	42.80	25.90	20.50	40.80	22.90	18.50		
	5.60	9.38		45	5		155	25.10	18.80	41.50	23.90	16.40	39.50	20.90	14.40		
							175	26.90	18.40	40.70	22.90	13.70	38.70	20.00	11.70		
							200	29.00	18.00	39.80	21.70	10.80	37.80	18.70	8.80		
							250	32.80	17.30	38.30	19.80	5.50	36.30	16.80	3.50		
 V621052 CAT.6 FTP	23 (Solid) 0.0226 Bare Copper	Solid Polyethylene			LSZH		1	2.00	20.00	74.30	67.80	72.30	72.30	64.80	70.30		
							4	3.80	23.00	65.30	55.70	61.50	63.30	52.70	59.50		
							10	6.00	25.00	59.30	47.80	55.30	57.30	44.80	51.30		
		0.043	1.10		0.300	7.60	16	7.60	25.00	56.30	43.70	48.70	54.30	40.70	46.70		
							20	8.50	25.00	75.00	68.00	75.00	67.00	67.00	51.00		
							31.25	10.70	23.60	51.90	37.90	41.20	49.90	34.90	39.20		
	Mutual Capacitance (max.) (nf/100m)	DC Resistance (max) Ohms/100m (328ft) @ 20°C		Delay Skew (max) ns/100m	DC Resistance Unbalance (max) Individual Pair %		62.50	15.40	21.50	47.40	31.80	32.00	45.10	28.80	30.00		
							100	19.80	20.10	44.30	27.80	24.50	42.30	24.80	22.50		
							125	22.40	19.40	42.80	25.90	20.50	40.80	22.90	18.50		
	5.60	9.38		45	5		155	25.10	18.80	41.50	23.90	16.40	39.50	20.90	14.40		
							175	26.90	18.40	40.70	22.90	13.70	38.70	20.00	11.70		
							200	29.00	18.00	39.80	21.70	10.80	37.80	18.70	8.80		
							250	32.80	17.30	38.30	19.80	5.50	36.30	16.80	3.50		

VELOCITY®
TECHNOLOGY INDUSTRIES

Cable

Product construction :
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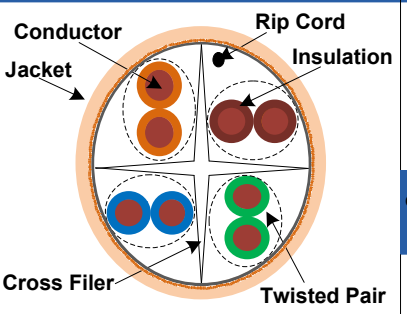
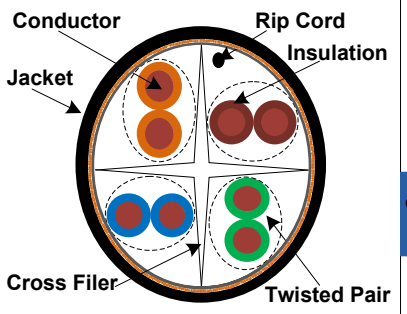
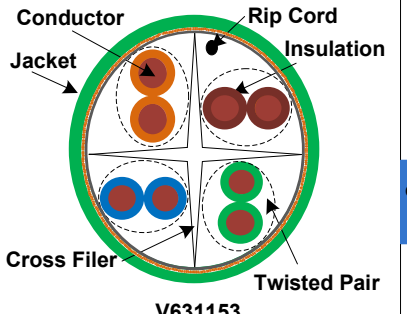
Applications :
- IEEE 802.3:1000BASE-T (Gigabit Ethernet), 100BASE-T
- ANSI X3.263: 100Mb/s
- 155Mp/s, 1.2 Gb/s ATM
- POE, 4/16 Mb/s Token Ring
- Digital video
- Broadband and Baseband analog video

Packing Details:
1640ft(500m)
3278ft(1000m)
Available on spools description

Catalog Number	AWG SIZE NOM. DCR (Dia. in Inch)	INSULATION CORE		SHIELD COVERAGE NOM. DCR	SHEATH NOMINAL OD.		ELECTRICAL CHARACTERISTIC								
							Freq.	Attenuation	RL (dB)	Pair to Pair			Power Sum		
										NEXT	ELFEXT	ACR	NEXT	ELFEXT	ACR
										(dB/100m)			(dB/100m)		
		Inch	mm		Inch	mm	(MHz)	Max.	Min.	Min.	Min.	Min.	Min.	Min.	Min.
 V631181 CAT.6 SFTP	23 (Solid) 0.0226 Bare Copper	Solid Polyethylene			PVC		1	2.00	20.00	74.30	67.80	72.30	72.30	64.80	70.30
							4	3.80	23.00	65.30	55.70	61.50	63.30	52.70	59.50
							10	6.00	25.00	59.30	47.80	55.30	57.30	44.80	51.30
		0.043	1.10		0.300	7.60	16	7.60	25.00	56.30	43.70	48.70	54.30	40.70	46.70
							20	8.50	25.00	75.00	68.00	75.00	67.00	67.00	51.00
							31.25	10.70	23.60	51.90	37.90	41.20	49.90	34.90	39.20
	Mutual Capacitance (max.) (nf/100m)	DC Resistance (max) Ohms/100m (328ft) @ 20°C		Delay Skew (max) ns/100m	DC Resistance Unbalance (max) Individual Pair %		62.50	15.40	21.50	47.40	31.80	32.00	45.10	28.80	30.00
							100	19.80	20.10	44.30	27.80	24.50	42.30	24.80	22.50
							125	22.40	19.40	42.80	25.90	20.50	40.80	22.90	18.50
							155	25.10	18.80	41.50	23.90	16.40	39.50	20.90	14.40
	5.60	9.38		45	5		175	26.90	18.40	40.70	22.90	13.70	38.70	20.00	11.70
							200	29.00	18.00	39.80	21.70	10.80	37.80	18.70	8.80
							250	32.80	17.30	38.30	19.80	5.50	36.30	16.80	3.50
 V631102 CAT.6 SFTP	23 (Solid) 0.0226 Bare Copper	Solid Polyethylene			BLACK PE		1	2.00	20.00	74.30	67.80	72.30	72.30	64.80	70.30
							4	3.80	23.00	65.30	55.70	61.50	63.30	52.70	59.50
							10	6.00	25.00	59.30	47.80	55.30	57.30	44.80	51.30
		0.043	1.10		0.300	7.60	16	7.60	25.00	56.30	43.70	48.70	54.30	40.70	46.70
							20	8.50	25.00	75.00	68.00	75.00	67.00	67.00	51.00
							31.25	10.70	23.60	51.90	37.90	41.20	49.90	34.90	39.20
	Mutual Capacitance (max.) (nf/100m)	DC Resistance (max) Ohms/100m (328ft) @ 20°C		Delay Skew (max) ns/100m	DC Resistance Unbalance (max) Individual Pair %		62.50	15.40	21.50	47.40	31.80	32.00	45.10	28.80	30.00
							100	19.80	20.10	44.30	27.80	24.50	42.30	24.80	22.50
							125	22.40	19.40	42.80	25.90	20.50	40.80	22.90	18.50
							155	25.10	18.80	41.50	23.90	16.40	39.50	20.90	14.40
	5.60	9.38		45	5		175	26.90	18.40	40.70	22.90	13.70	38.70	20.00	11.70
							200	29.00	18.00	39.80	21.70	10.80	37.80	18.70	8.80
							250	32.80	17.30	38.30	19.80	5.50	36.30	16.80	3.50
 V631153 CAT.6 SFTP	23 (Solid) 0.0226 Bare Copper	Solid Polyethylene			LSZH		1	2.00	20.00	74.30	67.80	72.30	72.30	64.80	70.30
							4	3.80	23.00	65.30	55.70	61.50	63.30	52.70	59.50
							10	6.00	25.00	59.30	47.80	55.30	57.30	44.80	51.30
		0.043	1.10		0.300	7.60	16	7.60	25.00	56.30	43.70	48.70	54.30	40.70	46.70
							20	8.50	25.00	75.00	68.00	75.00	67.00	67.00	51.00
							31.25	10.70	23.60	51.90	37.90	41.20	49.90	34.90	39.20
	Mutual Capacitance (max.) (nf/100m)	DC Resistance (max) Ohms/100m (328ft) @ 20°C		Delay Skew (max) ns/100m	DC Resistance Unbalance (max) Individual Pair %		62.50	15.40	21.50	47.40	31.80	32.00	45.10	28.80	30.00
							100	19.80	20.10	44.30	27.80	24.50	42.30	24.80	22.50
							125	22.40	19.40	42.80	25.90	20.50	40.80	22.90	18.50
							155	25.10	18.80	41.50	23.90	16.40	39.50	20.90	14.40
	5.60	9.38		45	5		175	26.90	18.40	40.70	22.90	13.70	38.70	20.00	11.70
							200	29.00	18.00	39.80	21.70	10.80	37.80	18.70	8.80
							250	32.80	17.30	38.30	19.80	5.50	36.30	16.80	3.50

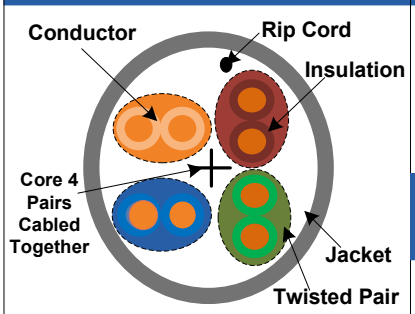
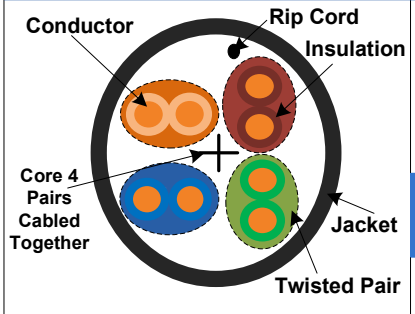
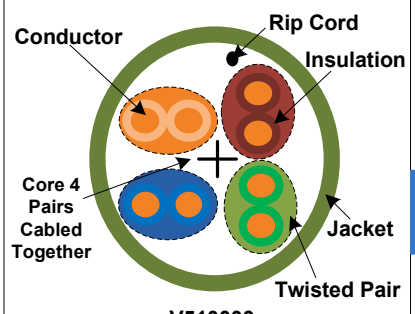
VELOCITY®
TECHNOLOGY INDUSTRIES

Cable

Product construction :
Refer to individual product description

Applications :
- Horizontal network
- Digital video
- Broadband and Baseband analog video

Packing Details:
1640ft(500m)
3278ft(1000m)
Available on spools

Catalog Number	AWG SIZE NOM. DCR (Dia. in Inch)	INSULATION CORE		SHIELD COVERAGE NOM. DCR	SHEATH NOMINAL OD.		ELECTRICAL CHARACTERISTIC								Po.Delay (ns/100)
		Inch	mm		Inch	mm	Freq. (MHz)	Ins. Loss (dB/100) Max.	RL (dB) Min.	Pair to Pair NEXT (dB/100m) Min.	Pair to Pair ELFEXT (dB/100m) Min.	Pair to Pair ACR Min.	Power Sum NEXT (dB/100m) Min.	Power Sum ELFEXT (dB/100m) Min.	
 V510081 CAT.5e UTP	24 (Solid) 0.0201 Bare Copper	Solid Polyethylene			PVC		1	2.10	20.00	65.30	64.00		62.30	61.00	570.00
							4	4.10	23.00	56.30	52.00		53.30	49.00	552.00
							10	6.50	25.00	50.30	44.00		47.30	41.00	545.40
		0.034	0.86		0.197	5.00	16	8.30	25.00	47.20	39.90		44.20	36.90	543.00
							20	9.30	25.00	45.80	38.00		42.80	35.00	542.00
	Pair-to-ground Capacitance unbalance (pF/km)	DC Resistance (max) Ohms/100m (328ft) @ 20°C		Delay Skew (max) ns/100m 4 ≤ f ≤ 100	DC Resistance Unbalance (max) Individual Pair %		31.25	11.70	23.60	42.90	34.10		39.90	31.10	540.40
							62.50	17.00	21.50	38.40	28.10		35.40	25.10	538.60
							100	22.00	20.10	35.30	24.00		32.30	21.00	537.60
	1600	9.5		45	4										
 V510002 CAT.5e UTP	24 (Solid) 0.0201 Bare Copper	Solid Polyethylene			BLACK PE		1	2.10	20.00	65.30	64.00		62.30	61.00	570.00
							4	4.10	23.00	56.30	52.00		53.30	49.00	552.00
							10	6.50	25.00	50.30	44.00		47.30	41.00	545.40
		0.034	0.86		0.197	5.00	16	8.30	25.00	47.20	39.90		44.20	36.90	543.00
							20	9.30	25.00	45.80	38.00		42.80	35.00	542.00
	Pair-to-ground Capacitance unbalance (pF/km)	DC Resistance (max) Ohms/100m (328ft) @ 20°C		Delay Skew (max) ns/100m	DC Resistance Unbalance (max) Individual Pair %		31.25	11.70	23.60	42.90	34.10		39.90	30.90	540.40
							62.50	17.00	21.50	38.40	28.10		35.40	25.10	538.60
							100	22.00	20.10	35.30	24.00		32.30	21.00	537.60
	1600	9.50		45	4										
 V510003 CAT.5e UTP	24 (Solid) 0.0201 Bare Copper	Solid Polyethylene			LSZH		1	2.10	20.00	65.30	64.00		62.30	61.00	570.00
							4	4.10	23.00	56.30	52.00		53.30	49.00	552.00
							10	6.50	25.00	50.30	44.00		47.30	41.00	545.40
		0.034	0.86		0.197	5.00	16	8.30	25.00	47.20	39.90		44.20	36.90	543.00
							20	9.30	25.00	45.80	38.00		42.80	35.00	542.00
	Pair-to-ground Capacitance unbalance (pF/km)	DC Resistance (max) Ohms/100m (328ft) @ 20°C		Delay Skew (max) ns/100m	DC Resistance Unbalance (max) Individual Pair %		31.25	11.70	23.60	42.90	34.10		39.90	30.90	540.40
							62.50	17.00	21.50	38.40	28.10		35.40	25.10	538.60
							100	22.00	20.10	35.30	24.00		32.30	21.00	537.60
	1600	9.50		45	4										

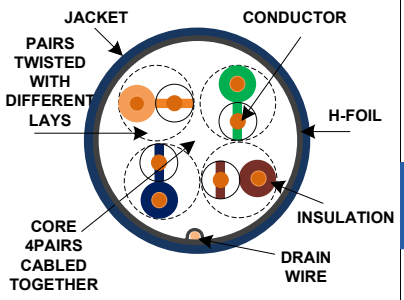
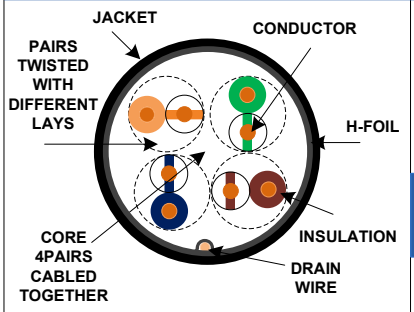
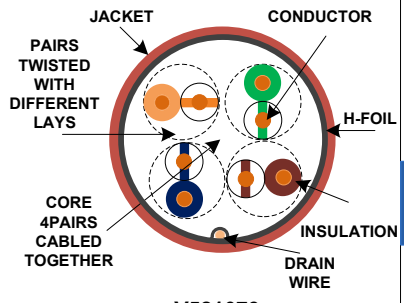
VELOCITY® TECHNOLOGY INDUSTRIES

Cable

Product construction :
Refer to individual product description

Applications :
- Horizontal network
- Digital video
- Broadband and Baseband analog video

Packing Details:
1640ft(500m)
3278ft(1000m)
Available on spools

Catalog Number	AWG SIZE NOM. DCR (Dia. in Inch)	INSULATION CORE		SHIELD COVERAGE NOM. DCR	SHEATH NOMINAL OD.		ELECTRICAL CHARACTERISTIC								Po.Delay (ns/100)
							Freq. (MHz)	Ins. Loss (dB/100) Max.	RL (dB) Min.	Pair to Pair NEXT (dB/100m) Min.	Pair to Pair ELFEXT (dB/100m) Min.	Pair to Pair ACR Min.	Power Sum NEXT (dB/100m) Min.	Power Sum ELFEXT (dB/100m) Min.	
		Inch	mm		Inch	mm									
 V521061 CAT.5e FTP	24 (Solid) 0.0201 Bare Copper	Solid Polyethylene		100% H-Foil Plus Over all Polyester tape and Tinned copper drain wire (0.495mm)	PVC		1	-----	20.00	-----	-----	-----	-----	-----	-----
		0.041	1.03		0.2358	5.99	4	4.10	23.00	56.30	52.00		53.30	55.00	552.00
							10	6.50	25.00	50.30	44.00		47.30	47.00	545.40
							16	8.30	25.00	47.20	39.90		44.20	42.90	543.00
							20	9.30	25.00	45.80	38.00		42.80	41.00	542.00
	Pair-to-ground Capacitance unbalance (pF/km)	DC Resistance (max) Ohms/100m (328ft) @ 20°C		Delay Skew (max) ns/100m 4 ≤ f ≤ 100 MHz	DC Resistance Unbalance (max) Individual Pair %		31.25	11.70	23.60	42.90	34.10		39.90	37.10	540.40
							62.50	17.00	21.50	38.40	28.10		35.40	31.10	538.60
							100	22.00	20.10	35.30	24.00		32.30	27.00	537.60
	1600	9.5		45	4										
 V521002 CAT.5e FTP	24 (Solid) 0.0201 Bare Copper	Solid Polyethylene		100% H-Foil Plus Over all Polyester tape and Tinned copper drain wire (0.495mm)	BLACK PE		1	-----	20.00	-----	-----		-----	-----	-----
		0.041	1.03		0.2358	5.99	4	4.10	23.00	56.30	52.00		53.30	55.00	552.00
							10	6.50	25.00	50.30	44.00		47.30	47.00	545.40
							16	8.30	25.00	47.20	39.90		44.20	42.90	543.00
							20	9.30	25.00	45.80	38.00		42.80	41.00	542.00
	Pair-to-ground Capacitance unbalance (pF/km)	DC Resistance (max) Ohms/100m (328ft) @ 20°C		Delay Skew (max) ns/100m 4 ≤ f ≤ 100 MHz	DC Resistance Unbalance (max) Individual Pair %		31.25	11.70	23.60	42.90	34.10		39.90	37.10	540.40
							62.50	17.00	21.50	38.40	28.10		35.40	31.10	538.60
							100	22.00	20.10	35.30	24.00		32.30	27.00	537.60
	1600	9.50		45	4										
 V521073 CAT.5e FTP	24 (Solid) 0.0201 Bare Copper	Solid Polyethylene		100% H-Foil Plus Over all Polyester tape and Tinned copper drain wire (0.495mm)	LSZH		1	-----	20.00	-----	-----		-----	-----	-----
		0.041	1.03		0.2358	5.99	4	4.10	23.00	56.30	52.00		53.30	55.00	552.00
							10	6.50	25.00	50.30	44.00		47.30	47.00	545.40
							16	8.30	25.00	47.20	39.90		44.20	42.90	543.00
							20	9.30	25.00	45.80	38.00		42.80	41.00	542.00
	Pair-to-ground Capacitance unbalance (pF/km)	DC Resistance (max) Ohms/100m (328ft) @ 20°C		Delay Skew (max) ns/100m 4 ≤ f ≤ 100 MHz	DC Resistance Unbalance (max) Individual Pair %		31.25	11.70	23.60	42.90	34.10		39.90	37.10	540.40
							62.50	17.00	21.50	38.40	28.10		35.40	31.10	538.60
							100	22.00	20.10	35.30	24.00		32.30	27.00	537.60
	1600	9.50		45	4										

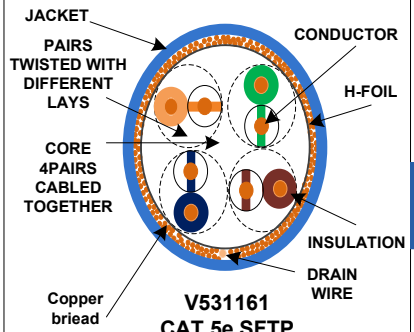
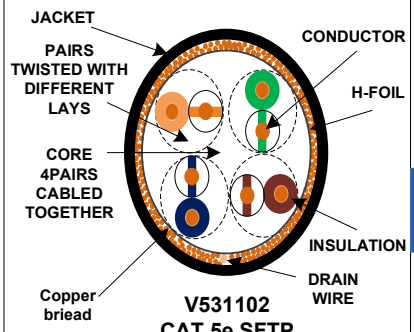
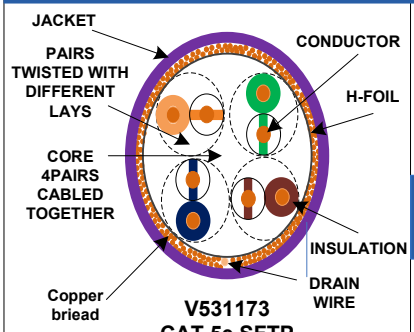
VELOCITY®
TECHNOLOGY INDUSTRIES

Cable

Product construction :
Refer to individual product description

Applications :
- Horizontal network
- Digital video
- Broadband and Baseband analog video

Packing Details:
1640ft(500m)
3278ft(1000m)
Available on spools

Catalog Number	AWG SIZE NOM. DCR (Dia. in Inch)	INSULATION CORE		SHIELD COVERAGE NOM. DCR	SHEATH NOMINAL OD.		ELECTRICAL CHARACTERISTIC								Po.Delay (ns/100)
							Freq. (MHz)	Ins. Loss (dB/100) Max.	RL (dB) Min.	Pair to Pair NEXT (dB/100m) Min.	Pair to Pair ELFEXT (dB/100m) Min.	Pair to Pair ACR Min.	Power Sum NEXT (dB/100m) Min.	Power Sum ELFEXT (dB/100m) Min.	
		Inch	mm		Inch	mm									
 V531161 CAT.5e SFTP	24 (Solid) 0.0201 Bare Copper	Solid Polyethylene		100% H-Foil Plus 40% Tinned Copper Braid and Tinned copper drain wire 0.495	PVC		1	-----	20.00	-----	-----		-----	-----	-----
							4	4.10	23.00	56.30	52.00		53.30	49.00	552.00
							10	6.50	25.00	50.30	44.00		47.30	41.00	545.40
		0.041	1.03		0.253	6.42	16	8.30	25.00	47.20	39.90		44.20	36.90	543.00
							20	9.30	25.00	45.80	38.00		42.80	35.00	542.00
	Pair-to-ground Capacitance unbalance (pF/km)	DC Resistance (max) Ohms/100m (328ft) @ 20°C		Delay Skew (max) ns/100m 4 ≤ f ≤ 100 MHz	DC Resistance Unbalance (max) Individual Pair %		31.25	11.70	23.60	42.90	34.10		39.90	31.10	540.40
							62.50	17.00	21.50	38.40	28.10		35.40	25.10	538.60
							100	22.00	20.10	35.30	24.00		32.30	21.00	537.60
	1600	9.5		45	4										
 V531102 CAT.5e SFTP	24 (Solid) 0.0201 Bare Copper	Solid Polyethylene		100% H-Foil Plus 40% Tinned Copper Braid and Tinned copper drain wire 0.495	BLACK PE		1	-----	20.00	-----	-----		-----	-----	-----
							4	4.10	23.00	56.30	52.00		53.30	49.00	552.00
							10	6.50	25.00	50.30	44.00		47.30	41.00	545.40
		0.041	1.03		0.253	6.42	16	8.30	25.00	47.20	39.90		44.20	36.90	543.00
							20	9.30	25.00	45.80	38.00		42.80	35.00	542.00
	Pair-to-ground Capacitance unbalance (pF/km)	DC Resistance (max) Ohms/100m (328ft) @ 20°C		Delay Skew (max) ns/100m 4 ≤ f ≤ 100 MHz	DC Resistance Unbalance (max) Individual Pair %		31.25	11.70	23.60	42.90	34.10		39.90	30.90	540.40
							62.50	17.00	21.50	38.40	28.10		35.40	25.10	538.60
							100	22.00	20.10	35.30	24.00		32.30	21.00	537.60
	1600	9.50		45	4										
 V531173 CAT.5e SFTP	24 (Solid) 0.0201 Bare Copper	Solid Polyethylene		100% H-Foil Plus 40% Tinned Copper Braid and Tinned copper drain wire 0.495	LSZH		1	-----	20.00	-----	-----		-----	-----	-----
							4	4.10	23.00	56.30	52.00		53.30	49.00	552.00
							10	6.50	25.00	50.30	44.00		47.30	41.00	545.40
		0.041	1.03		0.253	6.42	16	8.30	25.00	47.20	39.90		44.20	36.90	543.00
							20	9.30	25.00	45.80	38.00		42.80	35.00	542.00
	Pair-to-ground Capacitance unbalance (pF/km)	DC Resistance (max) Ohms/100m (328ft) @ 20°C		Delay Skew (max) ns/100m 4 ≤ f ≤ 100 MHz	DC Resistance Unbalance (max) Individual Pair %		31.25	11.70	23.60	42.90	34.10		39.90	30.90	540.40
							62.50	17.00	21.50	38.40	28.10		35.40	25.10	538.60
							100	22.00	20.10	35.30	24.00		32.30	21.00	537.60
	1600	9.50		45	4										

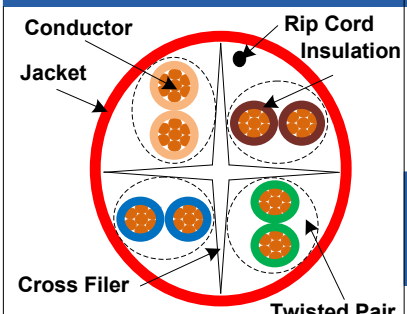
VELOCITY®
TECHNOLOGY INDUSTRIES

Patch Cord

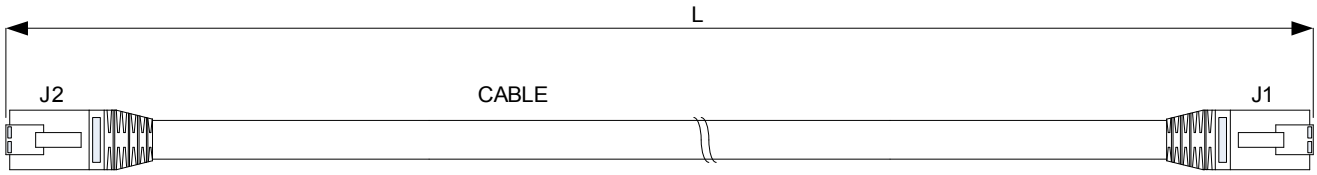
Product construction :
Refer to individual product description

Applications :
Voice
550MHz Broadband Video
155/622Mbps1.2/2.4Gbps ATM
Token Ring(IEEEX3T9,5)
Fast Ethernet(IEEE802.3)

Packing Details:
1 meter
2 meter
3 meter
5 meter
10 meter

Catalog Number	AWG SIZE NOM.DCR (Dia. In inch)	INSULSTION CORE		SHIELD COVERAGE NOM.DCR	SHETH NOMINAL OD.	
		Inch	mm		Inch	mm
 Cat.6 Patch Cable V650021	24 (7X32) Stranded bare copper 0.008	PE			PVC RED	
		0.0374	0.95		0.245	6.22
	Mutual Cap. Max. pf/m	Input Impedance Ω		Conductor Resistance (Ω/km @20°C)	DC Resistance Unbalance % Max	
	56	100±15% 1≤f≤250MHz		45	4	

ELECTRICAL CHARACTERISTIC								
Freq. (MHz)	Ins. Loss (dB/100m)	RL (dB)	Pair to Pair		Power Sum		Delay Skew	PO.Delay
			NEXT	ELEFXT	NEXT	ELEFXT		
			(dB/100m)		(dB/100m)		(ns)	(ns/100m)
1	2.1	19.0	102.4	94.0	80.0	78.0	78.0	75.0
4	4.0	19.0	93.4	82.0	80.0	76.3	76.3	75.0
8	5.7	19.0	87.4	74.0	80.0	74.1	74.1	71.0
10	6.3	19.0	84.3	69.9	80.0	72.6	72.6	66.9
16	8.0	18.0	82.9	68.0	80.0	71.7	71.7	65.0
20	9.0	17.5	80.0	64.1	77.0	69.6	66.6	61.1
25	10.1	17.0	75.5	58.1	72.5	60.6	57.6	55.1
31.25	29.0	16.5	72.4	54.0	69.4	53.4	50.4	51.0
62.5	16.5	14.0	67.9	48.0	64.9	40.4	37.4	45.0
100	21.3	12.0	66.4	46.0	63.4	35.5	32.5	43.0
200	31.5	9.0	66.4	66.4	66.4	66.4	66.4	66.4
250	33.1	8.0	66.4	66.4	66.4	66.4	66.4	66.4



Packing :

Size :

Part Numer	Description	Size (m)
V650021-1	Cat.6 UTP cable, RJ45-8P8C plug, over molded boots, RED	1
V650021-2	Cat.6 UTP cable, RJ45-8P8C plug, over molded boots, RED	2
V650021-3	Cat.6 UTP cable, RJ45-8P8C plug, over molded boots, RED	3
V650041-1	Cat.6 UTP cable, RJ45-8P8C plug, over molded boots, YELLOW	1
V650041-2	Cat.6 UTP cable, RJ45-8P8C plug, over molded boots, YELLOW	2
V650041-3	Cat.6 UTP cable, RJ45-8P8C plug, over molded boots, YELLOW	3
V650051-1	Cat.6 UTP cable, RJ45-8P8C plug, over molded boots, GREEN	1
V650051-2	Cat.6 UTP cable, RJ45-8P8C plug, over molded boots, GREEN	2
V650051-3	Cat.6 UTP cable, RJ45-8P8C plug, over molded boots, GREEN	3
V650061-1	Cat.6 UTP cable, RJ45-8P8C plug, over molded boots, BLUE	1
V650061-2	Cat.6 UTP cable, RJ45-8P8C plug, over molded boots, BLUE	2
V650061-3	Cat.6 UTP cable, RJ45-8P8C plug, over molded boots, BLUE	3
V650061-5	Cat.6 UTP cable, RJ45-8P8C plug, over molded boots, BLUE	5
V650061-10	Cat.6 UTP cable, RJ45-8P8C plug, over molded boots, BLUE	10
V650081-1	Cat.6 UTP cable, RJ45-8P8C plug, over molded boots, GRAY	1
V650081-2	Cat.6 UTP cable, RJ45-8P8C plug, over molded boots, GRAY	2
V650081-3	Cat.6 UTP cable, RJ45-8P8C plug, over molded boots, GRAY	3
V650081-5	Cat.6 UTP cable, RJ45-8P8C plug, over molded boots, GRAY	5
V650081-10	Cat.6 UTP cable, RJ45-8P8C plug, over molded boots, GRAY	10
V650091-1	Cat.6 UTP cable, RJ45-8P8C plug, over molded boots, WHITH	1
V650091-2	Cat.6 UTP cable, RJ45-8P8C plug, over molded boots, WHITH	2
V650091-3	Cat.6 UTP cable, RJ45-8P8C plug, over molded boots, WHITH	3

VELOCITY®
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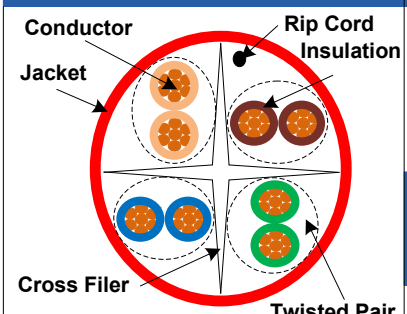
Patch Cord

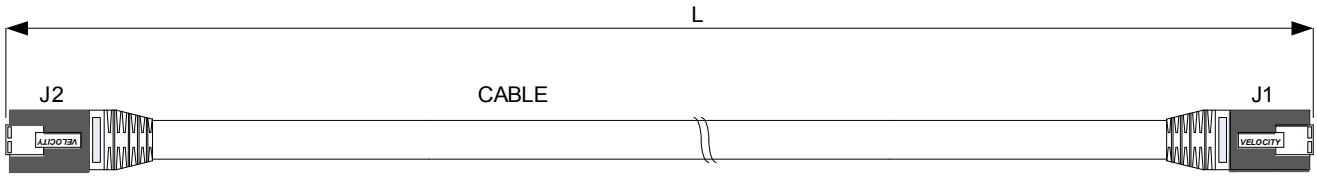
Product construction :
Refer to individual product description

Applications :
Voice
550MHz Broadband Video
155/622Mbps1.2/2.4Gbps ATM
Token Ring(IEEEX3T9,5)
Fast Ethernet(IEEE802.3)

Packing Details:
1 meter
2 meter
3 meter
5 meter
10 meter

Catalog Number	AWG SIZE NOM.DCR (Dia. In inch)	INSULSTION CORE		SHIELD COVERAGE NOM.DCR	SHETH NOMINAL OD.	
		Inch	mm		Inch	mm
 Cat.6 Patch Cable V660021	24 (7X32) Stranded bare copper 0.008	PE			PVC RED	
		0.0374	0.95		0.245	6.22
	Mutual Cap. Max. pf/m	Input Impedance Ω		Conductor Resistance (Ω/km @20°C)	DC Resistance Unbalance % Max	
	56	100±15% 1≤f≤250MHz		45	4	

ELECTRICAL CHARACTERISTIC								
Freq. (MHz)	Ins. Loss (dB/100m)	RL (dB)	Pair to Pair		Power Sum		Delay Skew	PO.Delay
			NEXT	ELEFXT	NEXT	ELEFXT		
			(dB/100m)		(dB/100m)		(ns)	(ns/100m)
1	2.1	19.0	102.4	94.0	80.0	78.0	78.0	75.0
4	4.0	19.0	93.4	82.0	80.0	76.3	76.3	75.0
8	5.7	19.0	87.4	74.0	80.0	74.1	74.1	71.0
10	6.3	19.0	84.3	69.9	80.0	72.6	72.6	66.9
16	8.0	18.0	82.9	68.0	80.0	71.7	71.7	65.0
20	9.0	17.5	80.0	64.1	77.0	69.6	66.6	61.1
25	10.1	17.0	75.5	58.1	72.5	60.6	57.6	55.1
31.25	29.0	16.5	72.4	54.0	69.4	53.4	50.4	51.0
62.5	16.5	14.0	67.9	48.0	64.9	40.4	37.4	45.0
100	21.3	12.0	66.4	46.0	63.4	35.5	32.5	43.0
200	31.5	9.0	66.4	66.4	66.4	66.4	66.4	66.4
250	33.1	8.0	66.4	66.4	66.4	66.4	66.4	66.4



Part Numer	Description	Size (m)
V660021-1	Cat.6A FTP cable, RJ45-8P8C plug, over molded boots, RED	1
V660021-2	Cat.6A FTP cable, RJ45-8P8C plug, over molded boots, RED	2
V660021-3	Cat.6A FTP cable, RJ45-8P8C plug, over molded boots, RED	3
V660041-1	Cat.6A FTP cable, RJ45-8P8C plug, over molded boots, YELLOW	1
V660041-2	Cat.6A FTP cable, RJ45-8P8C plug, over molded boots, YELLOW	2
V660041-3	Cat.6A FTP cable, RJ45-8P8C plug, over molded boots, YELLOW	3
V660051-1	Cat.6A FTP cable, RJ45-8P8C plug, over molded boots, GREEN	1
V660051-2	Cat.6A FTP cable, RJ45-8P8C plug, over molded boots, GREEN	2
V660051-3	Cat.6A FTP cable, RJ45-8P8C plug, over molded boots, GREEN	3
V660061-1	Cat.6A FTP cable, RJ45-8P8C plug, over molded boots, BLUE	1
V660061-2	Cat.6A FTP cable, RJ45-8P8C plug, over molded boots, BLUE	2
V660061-3	Cat.6A FTP cable, RJ45-8P8C plug, over molded boots, BLUE	3
V660061-5	Cat.6A FTP cable, RJ45-8P8C plug, over molded boots, BLUE	5
V660061-10	Cat.6A FTP cable, RJ45-8P8C plug, over molded boots, BLUE	10
V660081-1	Cat.6A FTP cable, RJ45-8P8C plug, over molded boots, GRAY	1
V660081-2	Cat.6A FTP cable, RJ45-8P8C plug, over molded boots, GRAY	2
V660081-3	Cat.6A FTP cable, RJ45-8P8C plug, over molded boots, GRAY	3
V660081-5	Cat.6A FTP cable, RJ45-8P8C plug, over molded boots, GRAY	5
V660081-10	Cat.6A FTP cable, RJ45-8P8C plug, over molded boots, GRAY	10
V660091-1	Cat.6A FTP cable, RJ45-8P8C plug, over molded boots, WHITH	1
V660091-2	Cat.6A FTP cable, RJ45-8P8C plug, over molded boots, WHITH	2
V660091-3	Cat.6A FTP cable, RJ45-8P8C plug, over molded boots, WHITH	3

Packing :

Size :

VELOCITY®
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Networking Accessories

Patch Panel

Velocity patch panel is an ideal solution for shared media requirement from educational to general office, etc….. this solution provides the cabling media flexibility needed in today's high tech environments.

Feature

Individual jack allows for easy reconfiguration of parts.

High-density 19-inch Rack Mount Standard design.

Optional cable management bar can be attached to the back of the panel to provide both cable management and strain relief while maintaining proper bend radius.

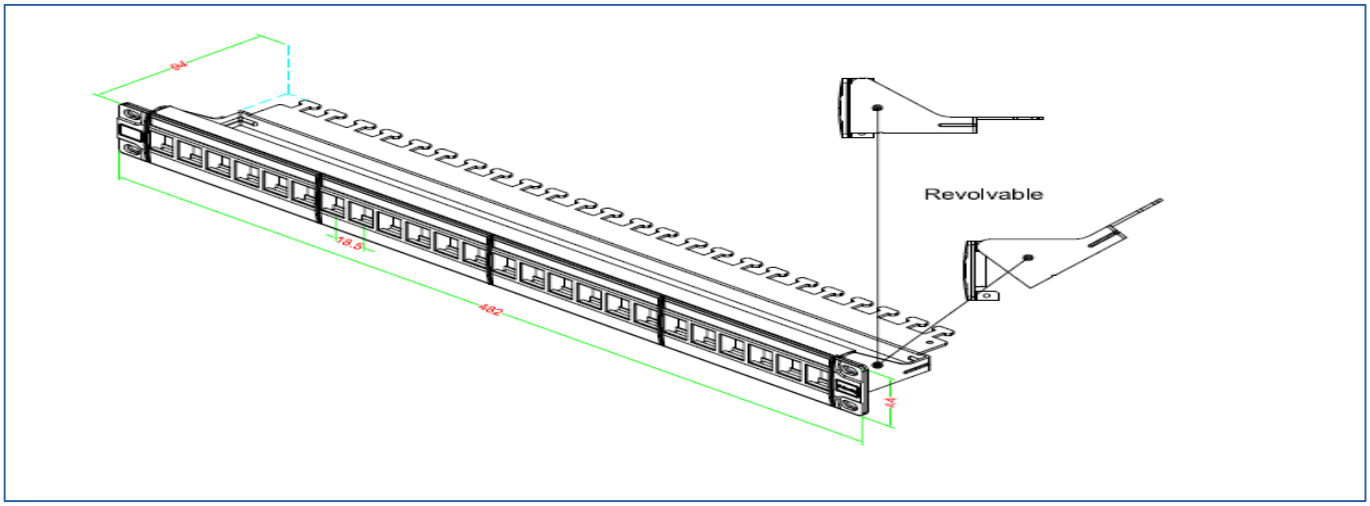
Material :

Front plate : Fire proof ABS UL-94V0
Panel : Metal (SPCC)
Cable Management : Metal (SPCC)

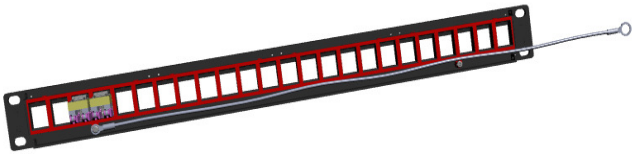
Performance:

Meets C6 EIA/TIA 568B Standard

Part number : V612410



Mechanical Specifications	
Panel	1.5mm thickness, black anodized steel
Jack	RJ45 8P8C, UL94V-0 PBT 8 Phosphor bronze Pins contact is 50 gold plated pins over Nickel
Current	1.5 Amps
Voltage	150VAC
Dielectric Withstanding Voltage	100 Volt Max.



Electrical specifications :

Insulation resistance : 500MΩ (min)
Contact resistance : 20mΩ (max)
Current Rating : 1.5A
DC resistance : 0.1 Ω
Withstanding voltage : 1000 VAC RMS @60Hz/min

Mechanical specifications:

Jack insertion cycle : over 2000 cycle
Operation temperature : - 40°C

Packaging:

Includes:

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Networking Accessories

Patch Panel

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Feature

Individual jack allows for easy reconfiguration of parts.

High-density 19-inch Rack Mount Standard design.

Optional cable management bar can be attached to the back of the panel to provide both cable management and strain relief while maintaining proper bend radius.

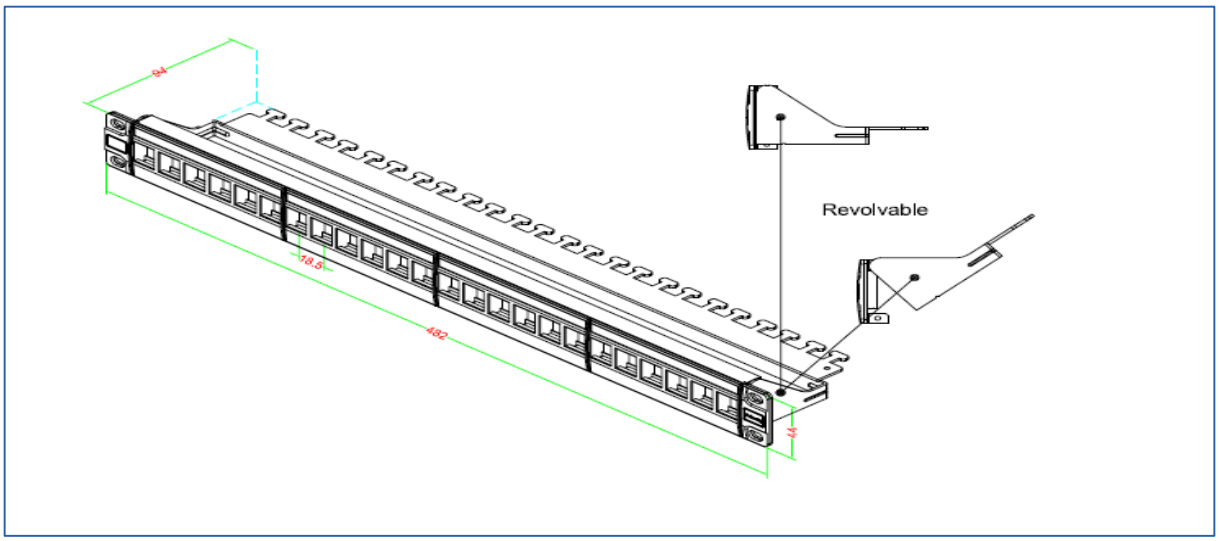
Material :

Front plate : Fire proof ABS UL-94V0
Panel : Metal (SPCC)
Cable Management : Metal (SPCC)

Performance:

Meets C6 EIA/TIA 568B Standard

Part number : V612410



Packaging:

Includes:

Mechanical Specifications	
Panel	1.5mm thickness, black anodized steel
Jack	RJ45 8P8C, UL94V-0 PBT 8 Phosphor bronze Pins contact is 50 gold plated pins over Nickel
Current	1.5 Amps
Voltage	150VAC
Dielectric Withstanding Voltage	100 Volt Max.

Electrical specifications :

Insulation resistance : 500MΩ (min)
Contact resistance : 20mΩ (max)
Current Rating : 1.5A
DC resistance : 0.1 Ω
Withstanding voltage : 1000 VAC RMS @60Hz/min

Mechanical specifications:

Jack insertion cycle : over 2000 cycle
Operation temperature : - 40ºC

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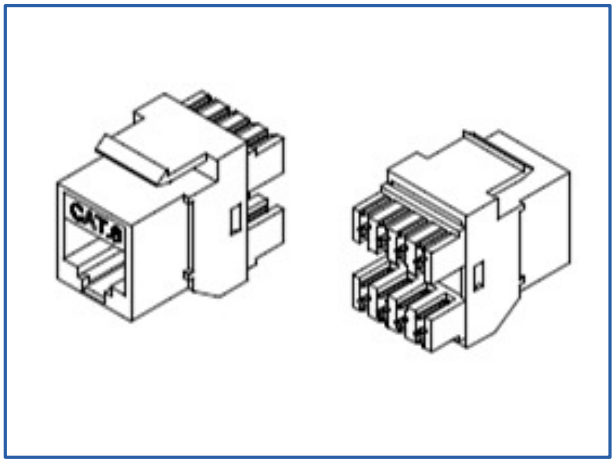
Networking Accessories

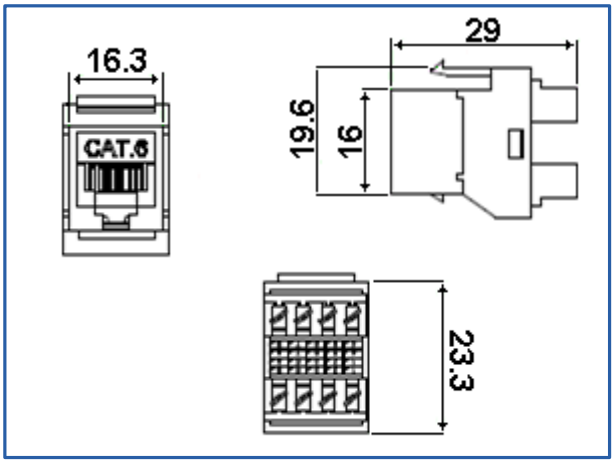
Keystone

Part Number	Description
V630090	Category 6, unshielded Keystone Jack, 180°
V630000	Category 6, unshielded Keystone Jack, 180°



Feature

The tool-less screened modular Keystone jack features a die-cast housing. Innovative mechanism optimizes the PSANEXT & PSAACR-F, which are the most critical criteria outlined by Class EA standard.
Supports interoperable 10G BASE-T application, backward compatible to any class E, class D solution.
Press-Fit technology is applied, no solder, no impact tools required. RoHS compliant.



Application

Cat.6 Channel Performance
Die-Cast Housing, effective protection from EMI and Alien crosstalk
Press-Fit Module, Without Solder, RoHS Compliant

Standard

TIA/EIA-568-B.2-10
FCC part 68, Subpart F
Amendment 1 to ISO/IEC 11801, 2nd Ed.
UL 1863

Electrical Specifications

Insulation resistance	500MΩ
Dielectric withstanding voltage	1000V AC
DC current rating	1.5 Amps
DC resistance	0.1 Ω
Contact resistance	20mΩ

Physical Specifications

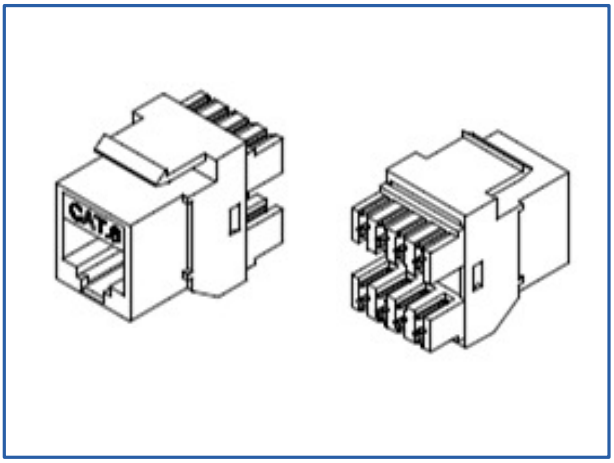
Die- Cast Housing	Zinc alloys Zamac3
Spring wire	Phosphor Bronze temper wire, φ=0.45mm, 50μ gold over 100μ Nickel undercoat
IDC Housing	Polycarbonate resin high-impact UL94V-0 thermoplastic
IDC contact	Phosphor Bronze t=0.4mm, 200μ Tin over 50μ Nickel undercoat
Mating	750 mating cycles with FCC compliant RJ-45 Plug
Wire accommodation	- 10 ~ 60°C
Operation humidity	10% ~ 90%RH
Operation Temperature	- 40°C to 60°C

VELOCITY®
TECHNOLOGY INDUSTRIES

Networking Accessories

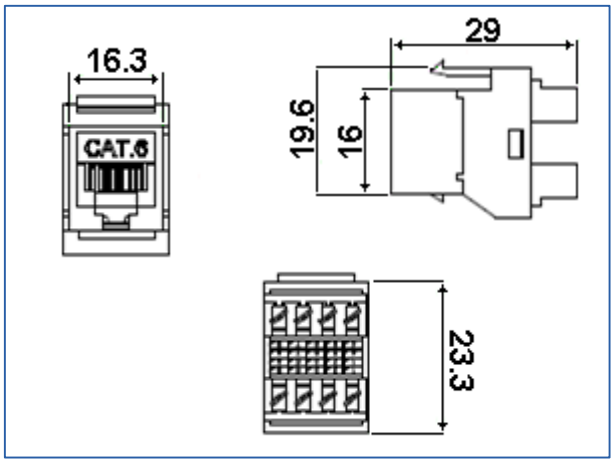
Keystone

Part Number	Description
V631891	Category 6, unshielded Keystone Jack, 180°



Feature

The tool-less screened modular Keystone jack features a die-cast housing. Innovative mechanism optimizes the PSANEXT & PSAACR-F, which are the most critical criteria outlined by Class EA standard.
Supports interoperable 10G BASE-T application, backward compatible to any class E, class D solution.
Press-Fit technology is applied, no solder, no impact tools required. RoHS compliant.



Application

Cat.6 Channel Performance
Die-Cast Housing, effective protection from EMI and Alien crosstalk
Press-Fit Module, Without Solder, RoHS Compliant

Standard

TIA/EIA-568-B.2-10
FCC part 68, Subpart F
Amendment 1 to ISO/IEC 11801, 2nd Ed.
UL 1863

Physical Specifications

Die- Cast Housing	Zinc alloys Zamac3
Spring wire	Phosphor Bronze temper wire, φ=0.45mm, 50μ gold over 100μ Nickel undercoat
IDC Housing	Polycarbonate resin high-impact UL94V-0 thermoplastic
IDC contact	Phosphor Bronze t=0.4mm, 200μ Tin over 50μ Nickel undercoat
Mating	750 mating cycles with FCC compliant RJ-45 Plug
Wire accommodation	- 10 ~ 60°C
Operation humidity	10% ~ 90%RH
Operation Temperature	- 40°C to 60°C

Electrical Specifications

Insulation resistance	500MΩ
Dielectric withstanding voltage	1000V AC
DC current rating	1.5 Amps
DC resistance	0.1 Ω
Contact resistance	20mΩ

VELOCITY®
TECHNOLOGY INDUSTRIES

Networking Accessories

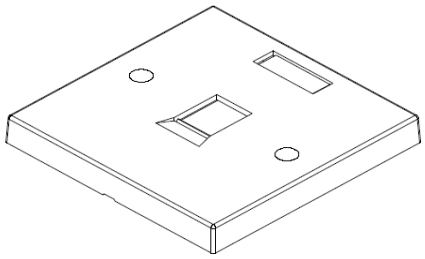
Module Face Plate

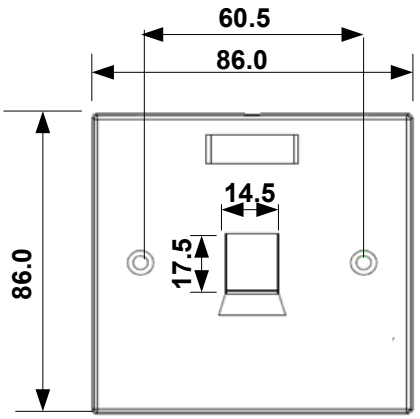
Part Number	Item Number
V700091	Face Plate, Single port
V700092	Face Plate, Dual port

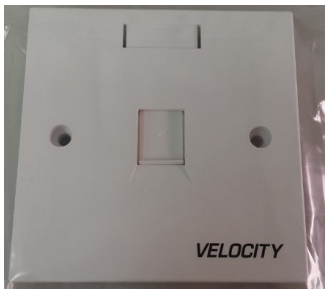
Velocity Face plate are easily configured, allowing for additions, deletions or changes to connections. This smooth finish, flush mount wall plate enables quick and easy installations.
Face plates come's in single and dual port.

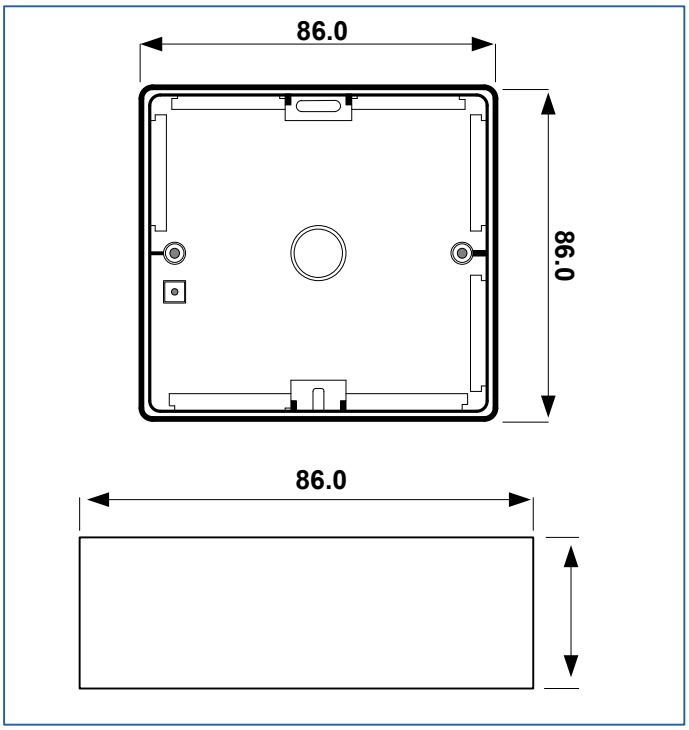
Features

Rear-loading, snap fit for security application
Flash keystone jack mounting
Offers spring-loaded shutter doors for added protection from dust and other contaminants









Universal Wall Box

Part Number	Item Number
V10009B	Back Box

Velocity wall box accept their corresponding faceplates. High profile wall boxes provide everything needed for your applications at the user.

Features

Provided with two mounting screw for easy installation.
Breakouts on base an sides provide additional cable access.
Improve cable management.

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Useful Infomation

History

Twisted Pair cables were inverted by Alexander Graham Bell in 1881. By 1900, the entire American telephone line network was either twisted pair or open wire with transportation to guard against interference. Today, most of the millions of kilometers of twisted pairs in the world are outdoor landlines, owned by telephone companies, used for voice service, only handled or even seen by telephone workers.

Two wires, strung on either side of cross bars on utility poles, shared the route with electrical power lines. Within a few years the growing use of electricity again bought and increase of interference, so engineers devised a method called wire transportation, to cancel out the interference. In wire transportation, the wires exchange position once every several poles. In this way, two wires would receive similar EMI from power lines. This represented an early implementation of twisting, with a rate of about four twist per kilometer, or six per mile. Such open-wire balanced lines with periodic transportation still survives today in some rural areas.

LAN Cable

A twisted pair cable includes at least one pair of insulated conductors twisted about each other to form a two-conductor group. When more than one twisted pair group is bunched or cabled together, it is referred to as a multi-cable. High performance twisted pair cables have become popular for variety of reasons. Such cables are comparatively easy to handle, install, terminate and use. UTP cables are found in many Ethernet networks and telephone systems. For indoor telephone applications, UTP is often grouped into set of 25 – pair color code originally developed by AT & T. A typical subset of these colors (white/blue, blue/white, white/orange, orange/white) shows up in most UTP cables.

For urban outdoor telephone cables containing hundreds or thousands of pairs, the cables is divided into smaller but identical bundles are in turn twisted together to make up the cables. UTP cable is also the most common cable used in computer networking. The most common date networking standard, utilizes UTP cables. Twisted pair cabling lower costs compared to optical fiber and LAN cable.

This made possible by the fact that UTP bandwidth has improved to match the baseband of television signals. While the video most likely still has unbalanced BNC connectors for standard LAN cable, a balun is used to convert form 100m ohm UTP to 75-ohm unbalanced.

Cable Shielding

Main article: Electromagnetic shielding

Twisted pair cables are often shielding in attempt to prove electromagnetic interference. This shielding can be applied to individual pairs, or to the collection of pairs. When shielding to the collection of pairs, this is referred to as screening.

Shielding twisted pair (STP or STP-A)

STP cabling includes metal shielding over each individual pair copper wires. This type of shielding protects cable from external EMI (electromagnetic interferences). E.g. the 150 ohm shielding twisted pair.

Screened unshielded twisted pair (S/UTP)

Also known as Foiled Twisted Pair (FTP), is a screened UTO cable (ScTP).

Screened shielded twisted pair (S/STP) or (S/FTP)

S/STP cabling, also known as Screened Fully shielding Twisted Pair (S/FTP), is both individual (like cabling) and also has an outer metal shielding covering the entire group of shielded copper.

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Useful Infomation

Solid core cable vs. stranded cable

Solid core cable is supposed to be used for permanently installed runs. Its is less flexible than stranded cable and is more prone to failure if repeatedly flexed. Stranded cable is used for fly leads at patch panel and for connections from wall-ports to end devices, as it resists cracking of the conductors.

Use of a conductor with the wrong cable type is likely to lead unreliable cabling. Plugs designed for solid and stranded readily available, and some vendors even offer plugs designed for use with both types.

Manufacture

Copper Rod Breakdown

These coils are continuously drawn through diamond dies that drastically reduce the diameter of the copper to 10 or 13 gauges. Once completed, the copper is stacked in vertical coils called stem packs. During this stage, the copper is also charged with an electrical current.

Copper Insulation Process

The copper insulation process is continually monitored and controlled up to +/-. 0001". Once the copper is insulated, it runs through water cooling through, allowing the wire jacket to harden properly.

Copper Twisting

Twisting helps reduce crosstalk between the individual pairs of wire. Some Cat 6 premises cable include a center spline, or wire separator, to further reduce crosstalk performance. Wire faceplates Cable unit.

Jacketing

OSP cable typically uses a black polyethylene or UV rated polyvinyl chloride (PVC). For Cat 3, Cat 5e and Cat 6 premises cable, varying grades of PVC are used, depending on flame safety rating requirements. Shielding, armoring and water blocking compound may also applied at this step. Once completed, the cable passed through a long cooling both, then through a laser micrometer to verify the final diameter.

Typical Jacket and Insulation material

PVC, Sometimes referred to as vinyl or polyvinyl chloride..

PE, polyethylene (Solid and Foam),

Polypropylene

Printing

For OSP cable, a hot foil printing is used, leaves an indented print in the cable jacket. Some cable manufactures print distance marking from 1000-0ft, or from 305-0m making it easy to determine how much cable is left in the box.

Coiling

The coiling process requires very precise tension controls to ensure the cable wont tangle when being pulled out of its box.

Final Testing

Once the cable is printed and coiled, it goes through one last set of tests. A large set of mechanical and electrical.

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Useful Infomation

Advantages

- It is a thin, flexible cable that it is easy to string between walls.
- More line can run through the same wiring duets
- UTP cost less per meter/foot than any other type of LAN cable.

Disadvantages

- Twisted pair's susceptibility to electromagnetic interference greatly depends on the pair twisting schemes (usually patented by the manufactures) staying intact during the installation. Relative fragility of part of twisted pair cables makes the installation practices and important part of ensuring the cable's performance.
- The skew occurs because twisted pairs within the same cable often use a different number of twists per meter so as to prevent common-mode crosstalk between pairs identical numbers of twists. Compensated by varying the length of pairs in the termination box. So as to introduce delay lines that take up the slack between shorter and longer pairs.

Size

UTP can also come in many different sizes based upon the number of pairs. Cat 3 used for telephone often come in two pair, as that is all that is needed for a basic telephone system. Standard Cat 5 or 6 network cables are eight twisted pair.

Backbone cables that run from floor to floor in large buildings are often 25 pair calves, The 25 pair can be bundled to make cables with as many as 1,400 pair.

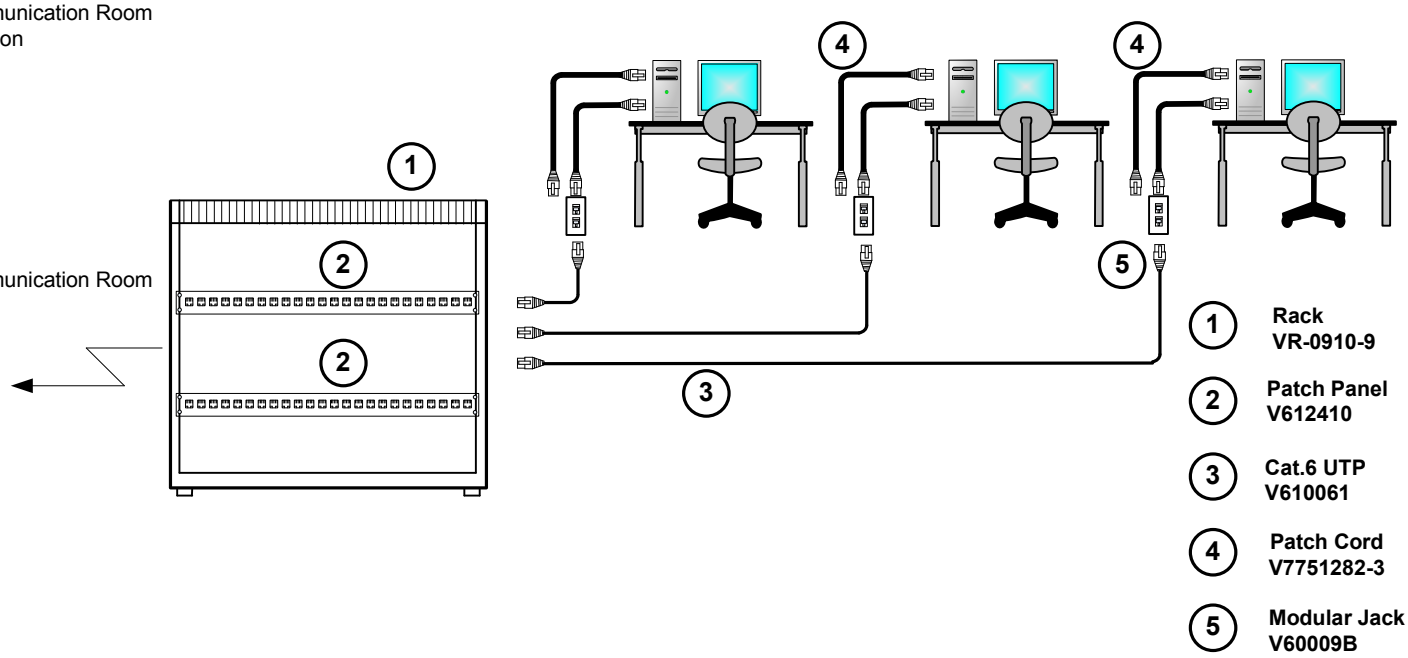
Useful Infomation

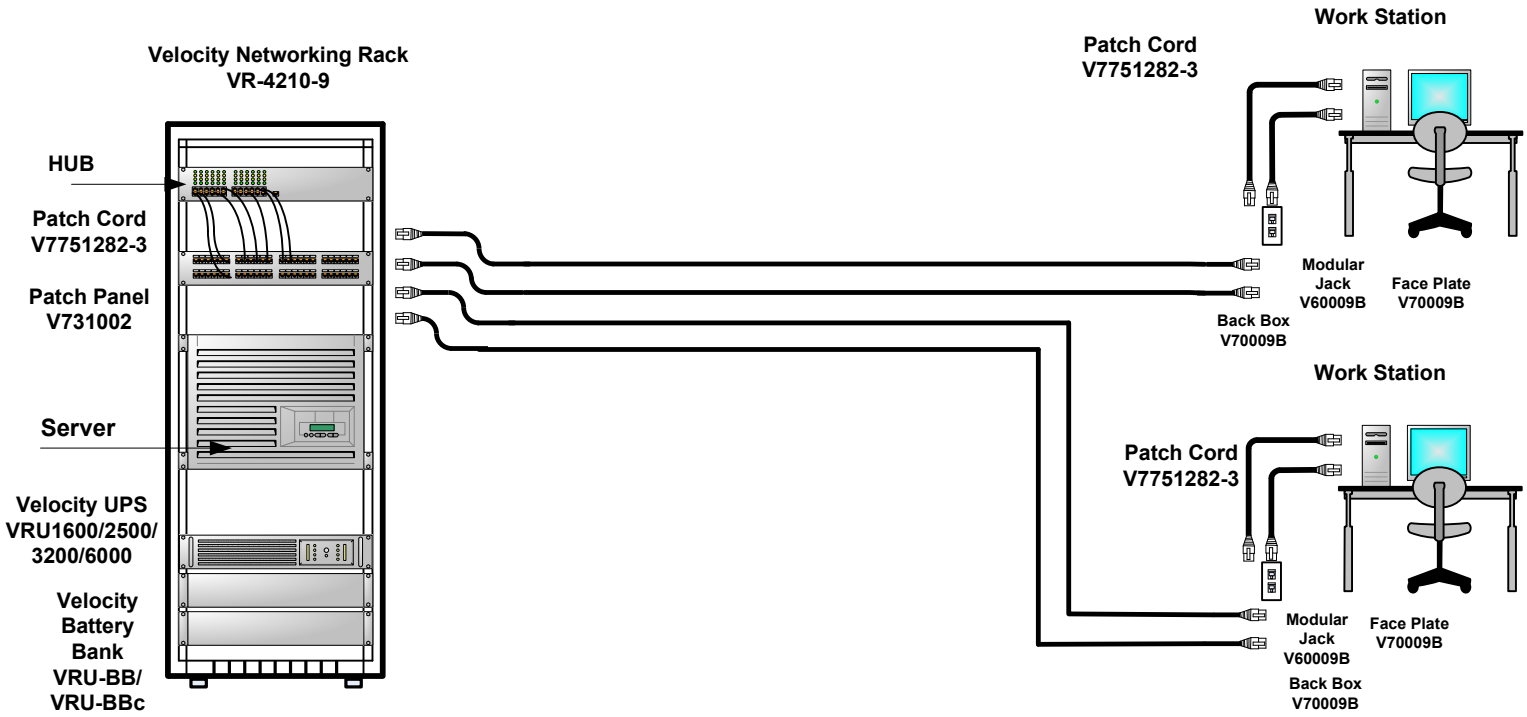
Networking Application

Velocity products are used in many applications in to days needs for Networking and even Security projects. We make sure the total installation will be in high Performance.

Some of the common application are as follow:

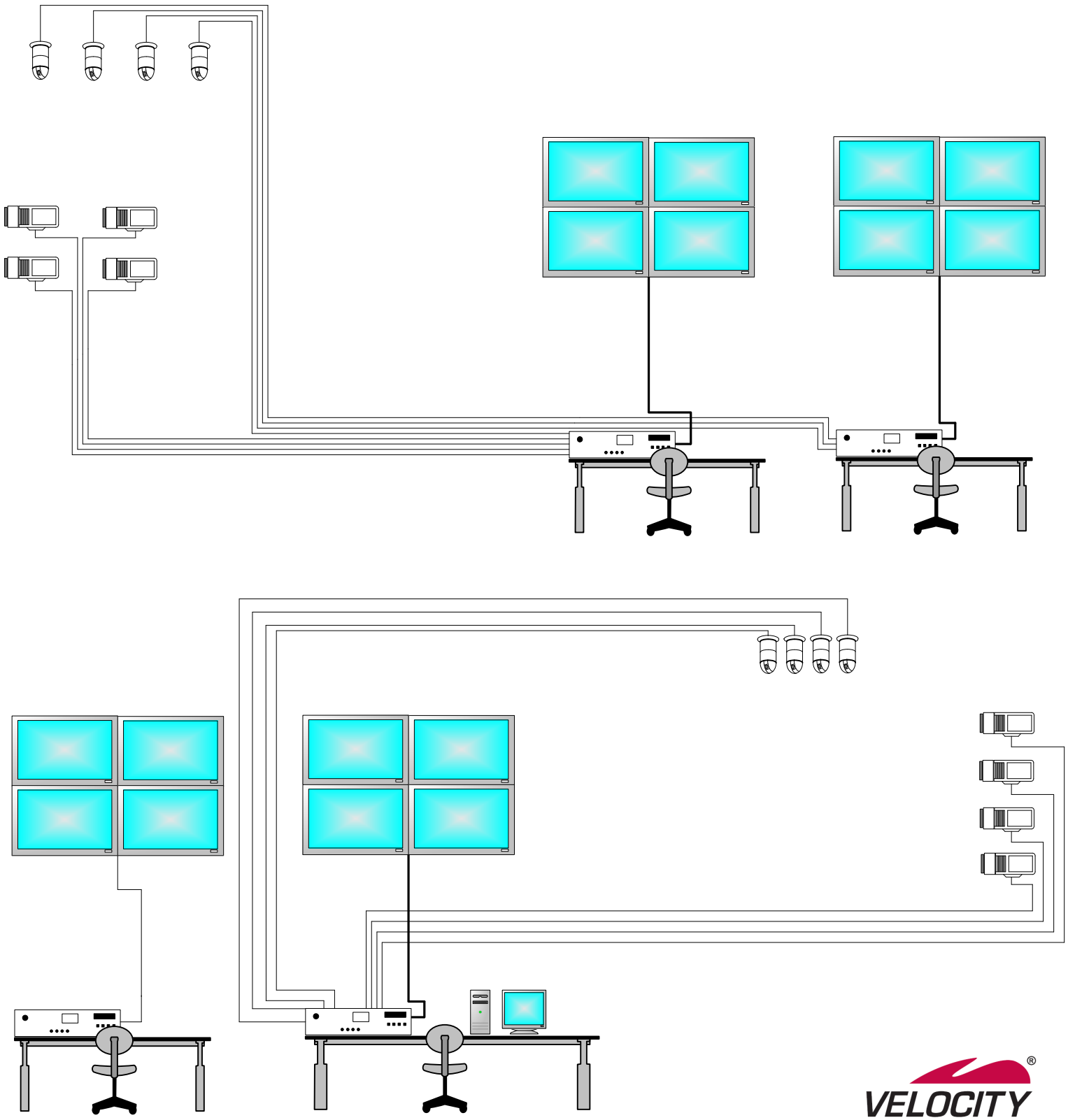
Telecommunication Room
Work station
School
Office





Useful Infomation

Security Application



Solid Bare Copper Wire AWG

AWG Gauge	Diameter Inches	Diameter mm	Ohms per 1000 ft@ 68º F	Ohms per 1000 ft@ 68º F	Weight Pounds per 1000 ft
10	0.1019	2.58826	0.9989	3.276392	31.43
11	0.0907	2.30378	1.2600	4.13280	24.92
12	0.0808	2.05232	1.5880	5.20864	19.77
13	O.0720	1.82880	2.0030	6.56984	15.68
14	0.0641	1.62814	2.5250	8.28200	12.43
15	0.0571	1.45034	3.1840	10.44352	9.858
16	0.0508	1.29032	4.0160	13.17248	7.818
17	0.0453	1.15062	5.0640	16.60992	6.200
18	0.0403	1.02362	6.3850	20.94280	4.917
19	0.0359	0.91186	8.0510	26.40728	3.899
20	0.0320	0.81280	10.1500	33.29200	3.092
21	0.0285	0.72390	12.8000	41.98400	2.452
22	0.0254	0.64516	16.1400	52.93920	1.945
23	0.0226	0.57404	20.3600	66.78080	1.542
24	0.0201	0.51054	25.7600	84.19760	1.223
25	0.179	0.45466	32.3700	106.17360	0.9699
26	0.0159	0.40386	40.8100	133.85680	0.7692
27	0.0142	0.36068	51.4700	168.82160	0.6100
28	0.0126	0.32004	64.9000	212.87200	0.4837
29	0.0113	0.28702	81.8300	268.40240	0.3836
30	0.0100	0.25400	103.2000	338.49600	0.3042
31	0.0089	0.22606	130.1000	426.72800	0.2413
32	0.0080	0.20320	164.1000	538.24800	0.1913
33	0.0071	0.18034	206.9000	678.63200	0.1517
34	0.0063	0.16002	260.9000	855.75200	0.1203
35	0.0056	0.14224	329.0000	1079.12000	0.09542
36	0.0050	0.12700	414.8000	1360.00000	0.07568
37	0.0045	0.11430	523.1000	1715.00000	0.06130
38	0.0040	0.10160	659.6000	2168.00000	0.04759
39	0.0035	0.08890	831.8000	2728.00000	0.03774
40	0.0031	0.07874	1049.0000	3440.00000	0.02993

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Stranded Copper Wire AWG

AWG Gauge	Stranding	Nominal O.D Strand	Approx. O.D		Circular Mil Area	Wight per 1000'	Ohms Per 1000'
			Inches	mm			
36	7/44	0.0019	0.0060	0.152	25.00	0.076	414.800
34	7/42	0.0024	0.0075	0.191	39.70	0.121	260.900
32	7/40	0.0300	0.0093	0.236	64.00	0.195	164.100
32	19/44	0.0018	0.0100	0.254	64.00	0.195	164.100
30	7/38	0.0038	0.120	0.305	100.00	0.304	112.000
30	19/42	0.0023	0.0120	0.305	100.00	0.304	112.000
28	7/36	0.0048	0.0150	0.381	159.00	0.484	70.700
28	19/40	0.0029	0.0160	0.406	159.00	0.484	70.700
27	7/35	0.0054	0.0170	0.432	202.00	0.614	55.600
26	7/34	0.0060	0.0190	0.483	253.00	0.770	44.400
26	10/36	0.0050	0.0210	0.553	253.00	0.770	44.400
26	19/38	0.0036	0.0200	0.508	253.00	0.770	44.400
24	7/32	0.0076	0.0240	0.610	404.00	1.229	27.700
24	10/34	0.0064	0.0240	0.610	404.00	1.229	27.700
24	19/36	0.0046	0.0240	0.610	404.00	1.229	27.700
24	42/40	0.0031	0.0230	0.584	404.00	1.229	27.700
22	7/30	0.0096	0.0300	0.762	640.00	1.947	17.500
22	19/34	0.0058	0.0310	0.787	640.00	1.947	17.500
22	26/36	0.0050	0.0300	0.762	640.00	1.947	17.500
20	7/28	0.0126	0.0380	0.965	1020.00	3.103	10.900
20	10/30	0.0101	0.0370	0.940	1020.00	3.103	10.900
20	19/32	0.0073	0.0370	0.940	1020.00	3.103	10.900
20	26/34	0.0063	0.0360	0.914	1020.00	3.103	10.900
18	7/26	0.0152	0.0480	1.220	1620.00	4.930	6.920
18	16/30	0.0101	0.0470	0.190	1620.00	4.930	6.920

AWG Gauge	Stranding	Nominal O.D Strand	Approx. O.D		Circular Mil Area	Wight per 1000'	Ohms Per 1000'
			Inches	mm			
18	19/30	0.0092	0.0490	1.240	1,620.00	4.930	6.920
18	42/34	0.0062	0.0470	1.190	1,620.00	4.930	6.920
18	65/36	0.0050	0.0470	1.190	1,620.00	4.930	6.920
16	7/24	0.0192	0.0600	1.520	2,580.00	7.850	4.350
16	19/29	0.0117	0.0580	1.470	2,580.00	7.850	4.350
16	26/30	0.0100	0.0590	1.500	2,580.00	7.850	4.350
16	65/34	0.0063	0.0590	1.500	2,580.00	7.850	4.350
16	105/36	0.0050	0.0590	1.500	2,580.00	7.850	4.350
14	7/22	0.0242	0.0760	1.930	4,110.00	12.500	2.730
14	19/26	0.0147	0.0710	1.800	4,110.00	12.500	2.730
14	42/30	0.0099	0.0750	1.910	4,110.00	12.500	2.730
14	105/34	0.0063	0.0750	1.910	4,110.00	12.500	2.730
12	7/20	0.0305	0.0960	2.440	6,530.00	19.860	1.710
12	19/25	0.0185	0.0930	2.360	6,530.00	19.860	1.710
12	65/30	0.0100	0.0950	2.410	6530.00	19.860	1.710
12	165/34	0.0063	0.0950	2.410	6530.00	19.860	1.710
10	37/26	0.0167	0.1150	2.920	10380.00	31.580	1.080
10	65/28	0.0126	0.1200	3.050	10380.00	31.580	1.080
10	105/30	0.0099	0.1180	3.000	10,380.00	31.580	1.080
8	49/25	0.0179	0.1400	2.950	15,699.00	47.530	0.670
8	133/29	0.0113	0.1470	3.730	16,984.00	51.420	0.610
8	655/36	0.0050	0.1470	3.730	16,625.00	49.580	0.620
6	133/27	0.0142	0.1840	4.670	26,812.80	81.140	0.470
6	259/30	0.0100	0.1840	4.670	25,900.00	78.350	0.400
6	1050/36	0.0050	0.1840	4.670	26,250.00	79.470	0.386

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Glossary

A – Ampere.

Abrasion Resistance - Ability to resist surface wear.

AC – Alternating current.

ACR – The different between attenuation and crosstalk, measured in dB, at a given frequency (acronym for Attenuation Crosstalk Ratio). Important characteristic in networking transmission to assure that signal sent down a twisted pair is stronger at the receiving end of the cable than are any interference signals imposed on that same pair by crosstalk from other pair.

Accelerated Aging – A test that simulates long time environmental conditions in a relatively short time.

AF – Audio frequency.

AM – Amplitude modulation.

Ambient – The atmospheric conditions surrounding a given item. Normally in terms of factors which influence or modify, such as temperature, humidity, etc.

Ampere – A standard unit of current. Defined as the amount of current that flows when one volt of emf is applied across one ohm of resistance. An ampere of current is produced by one coulomb of charge passing a point in one second.

Amplitude – the magnitude of variation in a changing quantity from its zero value. The world requires modification – as with adjectives such as peak, maximum, rms, etc, - to designate the specific amplitude in question.

Attenuation – Loss of signal strength as a function of distance. In optical fiber, it is the "dimming" of light as it travels through the fiber expressed in decibels per unit
(db/km).

AWG – American Wire Gauge. A standard for determining wire size. The gauge varies inversely with the actual wire diameter.

Backbone – The part of the network that carries the heaviest traffic. It is the main truck cable from which all connections to the network are made.

Balun (Balanced/Unbalanced) – An impedance matching device to connect balanced twisted pair cabling with unbalanced coaxial cable.

Bandwidth – The date-carrying capacity of a transmission medium, usually measured in hertz (HZ) which equals cycles per second.

Bend Loss – A form of increased attenuation caused by(a) having an optical fiber curved around a restrictive radius of curvature or (b) micro bends caused by minute distortions in the fiber imposed by externally induced perturbations.

Bit – A contraction of the words binary digit. A bit is the smallest unit of information, representing either a mark or a space (one or zero). In data transmission, the common unit of speed is bits per second (bps).

Bps – Bit per second. Often preceded by K (Kilo/Thousands) or M (Mega/ Million).

Braid – A weave of metal fibers used as a shield covering of an insulated conductor or group of insulated conductors. When flattened it may used as a grouping strap.

Buffer – The material that surrounds the fiber cladding.

Bus – A collection of wires in a cable (or copper traces on a circuit board) used to transmit data, status and control signals. ISA, ELSA, VL-Bus and PCI are examples of PC buses. Also a local area network topology in which all workstations are connected to a single cable. On bus network all workstations hear all transmissions on the cable. Each workstation then select those transmissions addressed to it based upon address information contained in the transmission.

C – Symbol designation for capacitance, and Celsius.

Cable – Either a standard conductor with or without insulation and other coverings, or a combination of conductors insulated from each other.

Capacitance – the property of a electrical conductor (dielectric in a capacitor) that permits the storage of energy as a result of electrical displacement. The basic unit of capacitance is the farad, however measurement is more commonly in microfarads or picofarads.

Capacitance, Unbalance to Ground – An inequality of capacitance between the ground capacitance of the conductors of a pair which result in a pickup of external source energy usually is from power transmission lines.

CDDI – Copper Distributed Data Interface. Another name for ANSI X3T9.5 Committee's proposed 100 Mbps over UTP standard, TP-PMD (Twisted Pair Physical Media Dependent). CDDI is a trademark of Crescendo Communications/CISCO.

Characteristic Impedance – The ratio of voltage to current at any point along a transmission line on which there are no standing waves.

Circular Mil Area (CMA) – A unit of area equal to the area of a circle whose diameter is 1 Mil (0.01 Inch). Used chiefly in specifying cross-sectional areas of conductors.

Current Carrying Capacity – The maximum current an insulated conductor can safely carry without exceeding its insulation and jacket temperature limitations.

Current Rating – The maximum continuous electrical flow of current recommended for a given situation. It is expressed in amperes.

Cut-Through Resistance – The ability of a material to withstand mechanical pressure is usually a sharp edge or small radius which without separation.

Cladding – The transparent material usually glass that surrounds the core of the optical fiber. Cladding glass has a lower refractive index than core glass.

Cladding (Metal) – A method of applying a layer of metal over another metal whereby the junction of the two metals is continuously welded.

Coaxial Cable – A transmission line consisting of two conductors concentric with and insulated from each other. In its flexible form it consists of either a solid or stranded center conductor surrounded by dielectric. A braid is then woven over the dielectric to form an outer conductor. A weatherproof plastic covering, usually vinyl is placed on top of a braid.

Cold Flow – Permanent deformation of the insulation due to mechanical force or pressure (not due to heat softening).

Compound – An insulating or jacketing material made by mixing two or more ingredients.

Conductance – The ability of a conductor to carry an electric change. The ratio of the current flow to the potential difference causing the flow. The reciprocal of resistance.

Connector – A coupling device employed to connect conductors to one circuit with those of another circuit. Used to provide rapid connect/ disconnect mating with PC boards, posts or another connector.

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Glossary

Conductivity Percentage – Conductivity of a material expressed as a percentage of the copper.

Copolymer – A compound resulting from the polymerization of two different monomers.

Copper Clad – Steel with a coating copper welded to it as distinguished from copper plated.

Cord – A small, flexible insulated cable.

Cord, Tinsel – The type of flexible electrical cored used for switchboard and other telephone cords. The conductors consist of thin narrow copper tapes wrapped spirally around textile cords.

Core – The center of an optical fiber. The core of communications grade fiber is made of glass that has a higher refractive index than the surrounding cladding glass.

Corona – a discharge of electricity appearing as a bluish-purple glow on the surface of and adjacent to a conductor when the voltage gradient exceeds a certain critical value. It is caused by the ionization of surroundings air by high voltage.

Corona Resistance – The time that the insulation will withstand a specific level of field-intensified ionization that does not result in the immediate complete break-down of the insulation.

Cross Connect – the physical connection between patch panels or punch down blocks that facilities connection from the workstation to the host or network.

Cross-Linked – Inter-molecular bonds between long chain thermoplastic polymers by chemical or electron bombardment means. The properties of the resulting thermosetting material are usually improved.

Crosstalk – The unwanted introduction of signals from one channel to another.

Crosstalk , Far-End – Crosstalk measured by applying the disturbing signal on one pair at the near end and measuring the pick up on the disturbed pair at the far-end.

Crosstalk, Near-End – Crosstalk measured by applying and measured the disturbing signal on two pairs at the same end.

C.S.A – Abbreviation for Canadian Standards Association, a non-profit, independent organization which operates a listing service for electrical and electronic materials and equipment. The Canadian counterpart of the Underwriters Laboratories.

Current Loop – A two wire transmit/receive interface.

Cycle – One complete sequence of values of an alternating quantity including a rise to maximum in one direction and return to zero and a rise to maximum in the opposite direction and return to zero. The number of cycles occurring in one second is called the frequency.

Data Transfer Rate – Generally associated with high speed serial data transfer systems and measured in gigabits per second (G Bite / Sec).

dB – Decibel.

DC – Direct current..

Decibel – A unit expressing the ratio of two voltages current or power Generally associated with high speed serial data transfer systems and measured in gigabits per second (G Bite / Sec).
It is equal to 20 times the common logarithm of the ratio of two voltages across two current through equal loads or 10 times the common logarithm of the two power. Once decibel is approximately the smallest change in audible power that can be recognized by the human ear.

Delay Line – A transmission line or equivalent device designed to delay a wave or signal for a specific length of time.

Dielectric – A material that serves as an insulator. The amount of resistance to voltage in a given insulation.

Dielectric Constant (K) – The ratio of the capacitance using the material in question as the dielectric to the capacitance resulting when the material is replaced by air. A low electric constant material result in low cable capacitance for a given size.

Dielectric Withstanding Voltage – The maximum potential gradient that a dielectric material can withstand without failure.

Differential – A SCSI bus configuration in which each signal is derived by taking the difference in voltage between the two wires, effectively eliminating unwanted noise in the wire.

Discontinuity – Rated interconnection; a broken connection (open circuit) of the loss of a specified connection characteristics. Transient Phenomena: Short term (temporary) interruption or unacceptable variation in current or voltage.

Distortion – Any undesired change in a wave form or signal.

Dissipation – Unusable or lost energy such as production of unused heat in a circuit.

E – Voltage(Electromotive force)

EIA 568 A – Electronic Industries Association. A commercial building wiring standard voice and data communications developed in 1989 by EIA.

Drain wire – An uninsulated wire in contac with a shield throughout it length. Used for terminating the shield.Any undesired change in a wave form or signal.

Electromagnetic Compatibility (EMC) – The ability of an electronic device to operate in its intended environment without its performance being affected by EMI and without generating EMI that will affect other equipment.

Electromotive Force (EMF) – See voltage.

EMI – Energy generated by outside sources such as lighting systems and electric motors which is received by copper data/voice cable and interferes with transmission.

Equalization – A process of compensating for increases in attenuation (signal loss) with frequency. Different frequencies are attenuated differently over a given distance.

Farad – Unit of capacitance whereby a charge of one coulomb produces a one volt potential difference.

FDDI – Fiber Distributed Data Interface. A standard for a 100 megabit per second local area network.

Fibre – An optical fibre in which the refractive index the core materials varies across the core diameter usually in a parabolic fashion which is the highest value at the core center.

Fibre Channel – A scalable, high speed and serial data transfer interface standard (ANSI X3T11).

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Glossary

Flame Resistance – The ability of a material not to propagate flame once the heat source is removed.

Flex Life – The measurement of the ability of a conductor or cable to withstand repeated bending.

Flexibility – The ability of a cable to bend in a short radius. (also see limpness).

Floating – Referring to a circuit which has no connection to ground.

Frequency Modulation (FM) – A scheme for modulating a carrier frequency in which the amplitude remains constant but the carrier frequency is displaced in frequency proportionally to be the amplitude of the modulating signal. An FM broadcast is practically immune to atmospheric and man-made interference.

GHz – See Gigahertz.

Giga – A prefix meaning a billion (10°).

Gigabit Ethernet – High speed network data transfer protocol standard (IEEE 802.3z).

Gigahertz (GHz) – One billion cycles per second (10° cps).

Graded-Index Fibre – An optical fibre in which the refractive index the core materials varies across the core diameter usually in a parabolic fashion which is the highest value at the core center.

Ground – A connection, intentional or accidental between an electrical circuit and the earth or some conducting body (E.g.: chassis) serving in place of earth.

Heat-Shrinkable – A type of plastic material that has been cross – linked. A term describing tubes, sleeves, caps, boots, films or other form of plastic which shrink to encapsulate, protect or insulate connections, splices terminations and other configurations.

Henry – Unit of inductance such that the induced voltage in volts is numerically equal to the rate of change in current amperes per seconds.

Hertz (Hz) – International standard term for cycle per second. Name after the German Heinrich R. Hertz (E.g.: 60 cycles per second is equal to 60 Hertz or 60Hz).

Hi-Post – A test designed to determine the highest voltage that can be applied to a conductor without breaking through the insulation.

IDC – Insulation Displacement Contact. A type of wire terminating connection in which the insulating jacket is cut by the connector when the wire is inserted.

IEEE – Institute of Electrical and Electronic Engineers. An international professional society that issues its own standard and is a member of ANSI and ISO.

IEEE 802.3 – Is a physical layer standard for Token Ring.

Impedance (Z) – A measure of material resistance to the transfer of electricity.

Impedance Match – A condition in which the impedance of a component or circuit is equal to the internal impedance of the source of the surge impedance of a transmission line. This gives maximum transfer of energy from the source to load, as well as minimun reflection and distortion.

Inductance – A cause of reactance. An electromagnetic phenomenon in which the expanding and collapsing of a magnetic field surroundings a conductor or device tends to impede changes in current. The effects of inductance became greater as frequencies increase. The basic unit for inductance is the Henry.

Inductive Coupling – Crosstalk resulting from the action of the electromagnetic field of one conductor on the other.

Input Impedance – The impedance that exits between the inputs terminals of an amplifier or transmission line when the source is disconnected. The circuit, signal level and frequency must be specified.

Insertion Loss – The loss in load power due to the insertion of a component, connector or device at some point in a transmission system. Generally expressed in decibels as the ratio of the power received at the load before insertion of the apparatus to the power received at the load after insertion.

Insulation Resistance – The electrical resistance between two conductors separated by insulating material.

Interference – An electrical or electromagnetic disturbance that causes undesirable response in electronic equipment.

ISDN – Integrated Service Digital Network. A CCIT defined standard for a public-switch service that allow the digital transmission of voice, data and video over one network. Being touted as “the next big thing” in voice, data and video integration.

Irradiation – In insulations the exposure of the material to high energy emissions for the purpose of favorably altering the molecular structure by cross linking.

Jacket – The outside covering of a cable.

Ohm – The unit of measurement for electrical resistance. A circuit is said to have a resistance of one Ohm when applied EMF of one volt causes a current of one ampere to flow.

Oxygen Index – Percentage of oxygen necessary to support combustion of a specified material.

P-Cable – A 68 wire cable used for 16-Bits SCSI-3 buses.

Patch Cord – The connecting cord between the terminal device and the drop.

Permeability (Chemical) – The passage or diffusion (or rate of passage) of a gas, vapor, liquid or solid through a barrier without physically or chemical affecting it.

Permeability (magnetic) – The measurement of how much better a material is than air as a path of magnetic lines of force. Air is assumed to have a permeability of 1.

Propagation Delay – Time required for an electronic digital device, or transmission network to transfer information from its input to its output.

LAN – Local Area Network. A data communications network spanning a limited area. It provides communications between three or more computers and peripherals in most cases using a high speed media as its backbone.

Line Impedance – Impedance as measured across the terminals of a transmission line; frequency the characteristic impedance of the line.

LVDS – Low Voltage Differential Signals which reduce on-chip power consumption.

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Matched Impedance – The coupling of two circuits in such a way that the impedance of one circuit equals the impedance of the other.

Mbps – Megabits per second.

Mega (M) – A prefix meaning one million (10°).

Microwave – That portion of the electromagnetic spectrum lying between the far infrared and conventional radio frequency range. The microwave frequency range extends from 1GHz to 300GHz. Microwaves are usually use in point-to-point communications because they are easily concentrated into a beam.

Military Specification – Military requirements. The demand imposed upon a system meet a military operational need.

Mismatch – The condition in which the impedance of a source does not match or equal the impedance of the connection load. The reduces power transfer by causing reflection.

Moisture Absorption – The amount of moisture in percentage that a material will absorb under specified conditions.

Multimode – A device that emits or a fiber that carried multiple modes of light.

Permeability (magnetic) – The measurement of how much better a material is than air as a path of magnetic lines of force. Air is assumed to have a permeability of 1.

Propagation Delay – Time required for an electronic digital device, or transmission network to transfer information from its input to its output.

Propagation, Velocity of – The speed with which a signal wave travels through a particular transmission medium. It varies as follows:

Medium	Speed, miles per second
Light through space	186,284
Radio through air	142,000
Coaxial Cable	133,000

Propagation Delay Time – The time between the application of a digital input waveform and the corresponding change in input waveform. It is measured between reference points on the waveforms. The time is generally different for positive-going and negative-going waveforms.

Prototype – A model suitable for use in the complete evaluation of form, design and performance.

Pulse – A change in the level, over a relatively short period of time, of a signal whose value is normally constant.

Pulse Width – The length of time that the pulse voltage is at the transient level Electronic pulse widths are usually in the milliseconds (10°), microsecond (10°) or nanosecond (10°) range.

PVC – Polyvinyl Chloride. The material most commonly used for the insulation and jacketing of cable.

Q-cable – A 68-wire cable used in conjunction with a P-cable for 32 bit SCSI-3 buses.

Reflection Loss – The part of a signal which is lost due to reflection of power at a line of discontinuity.

Resonance – A frequency at which captive reactance and inductive reactance are equal and therefore cancel one another's effects.

RF – Abbreviation for radio frequency.

RG/U – Symbol used to designate coaxial cables that are made to Government Specification (e.g., RF-58U; in this designation the "R" means radio frequency , the "G" means Government, the "58" is the number assigned to the government approval, and the "U" means it is a universal specification).

Ribbon Cable – A flat cable of individually insulated conductors lying parallel and held together by means of adhesive or woven textile yarn.

Ring – A local Area Network topology in which data is sent from workstation via a loop or ring. One conductor of a pair (vs. tip)

Rise Time – The time required for a component or logic circuit to change from the quiescent to the transient state when an input is aplied. (i.e. elapsed time between application of input and attainment of full output level).

RMS – Abbreviation for root means square.

Root means Square – The effective value of an alternating current, corresponding to the direct current value that will produce the same heating effect.

SCI – Scalable Coherent Interface is a point-to-point, unidirectional link for handing large amounts of data in scalable, massively parallel processors.

SCSI – Small computer system Interface. An intelligent bus for transmitting data and commands between a variety of devised. There are many implementations of SCSI, including Fast SCSI, Wise SCSI, Fast Wide SCSI, Fast – 20, and fast – 40.

SCSI-2 – The second generation for SCSI; includes many improvements to SCSI-1, including Fast SCSI, Wide SCSI, mandatory parity checking.

SCSI-3 – The third generation of SCSI; introduces Fast – 20 and Fat – 40 as improvements to the parallel bus. The standard also includes a number of specifications for high-speed serial bus architectures such as SSA, Fiber Channel, and IEEE1394.

SE – Single-Ended is a method of defining and/or measuring impedance.

Semi-Rigid – A cable containing a flexible inner core and relatively inflexible sheathing.

Sheath – The outer covering of a jacket over the insulated conductors to provide mechanical protections for the conductors. Also known as the external conduction surface of a shielded transmission line.

Shield/Shielding (cable) – A conducting envelope, composed of metal strands, which enclose a wire, group of wire or cable so constructed that substantially every point on the surface of the underlying insulation is at ground potential or at some predetermined potential with respect to the ground.

Simplex – A transmission facility in which the transmission is restricted to only one direction at a time.

Shield/Shielding (Circuit) – The metal sleeving surrounding one or more of the conductors in a wire circuit to prevent interference, interaction or current leakage. Shielding protects a circuit against crosstalk.

Shock (Mechanical) – (1) An abrupt impact applied to a stationary objects. (2) An abrupt or non-periodic change in position, characterized by suddenness, and by the development of substantial internal forces.

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Sine Wave – A wave which can be expresses as the sine of linear function of time, space or both. A waveform, often viewed on a oscilloscope, of a pure alternating current or voltage.

Skew – A measurement of the different in the electrical length of two conductors of pairs of conductors and generally measured in picoseconds.

Skin Effect – The tendency of alternating currents to flow near the surface of the conductors, thus being restricted to a small part of the total cross-sectional area. This effect increases the resistance and becomes more marked as the frequency rises.

SSA – Serial storage Architecture is a serial data transfer standard (ANSI X3710.1)

Standing-Wave – Distribution of current and voltage on a transmission line, resulting from two sets of waves travelling in opposite directions.

Standing Wave Ratio – The ratio between maximum and minimum current or voltage along a line. It is measure of the mismatch between the load and the line. It is equal to 1 when the line impedance is perfectly matched to the load. (In which case the maximum and minimum are the same, as current and voltage do not vary alone the line). The perfect match would be a 1 to 1 ratio.

Super High Frequency (SHF) – The federal Communications Commissions designation for the band from 3,000 to 30,000 MHZ in the ratio spectrum.

Sweep Test – A method to determine the frequency response of a cable by generating and RF voltage whose frequency is varied at a rapid constant rate over a given range.

Temperature Rating – The maximum and minimum temperature at which an insulating material may be used in continuous operating without loss of its basic properties.

Tensile Strength – The greatest longitudinal stress that a substance or union can bear without tearing or pulling apart. In crimping terminations, it is the greatest longitudinal stress that a terminal can bear without the wire separating from the terminal.

10 Base-T – 10 Mbps 802.3/Ethernet over standard unshielded twisted pair cable specification. 10 Base-T support network configurations using the CSMA/CD access method over at twisted pair transmission system up to 100 meters in length without the use of a repeater.
“curing”.

Thermal Shock – The effect of heat or cold applied at such a rate that non-uniform thermal expansion or contractions occurs within a given materials or combination materials. The effect can cause inserts and other insulation materials to pull away from metal parts.

Thermoplastic – A material which softens when heated or reheated and becomes firm on cooling.

Thermoset – A material which harden or sets when heat is applied, and which once set, cannot be resoftenened by heating. The application of heat is called “curing”.

Time-Delay – A Circuit that delays the transmission of an impulse for a definite and desired period of time.

Topology – The architecture of a network, or the way circuits are connected to link to the network nodes together.

Transceiver – A device used in contention networks for sending data over the network and receiving data from the network.

Trunk Cable – Trunk cable typically refers to a copper twisted pair backbone or vertical riser cable consisting of multiple groups of 25 pairs.

Twisted pair – Two wires twisted together to reduce susceptibility of RF Noise.

Twisted pair – Two wires twisted together to reduce susceptibility of RF Noise.

Ultra-High Frequency (UHF) – A federal Communications Commissions designation for the band from 300 to 3000 MHZ on the radio spectrum. In television channels 14 to 83 or 470 to 890 MHZ.

UTP – Unshielded Twisted Pair. Twisted pair cable without either individual or overall shielding.

Velocity of Propagation – The speed with which a signal wave travels through a particular transmission medium. It varies as follows:

Medium	**Speed, miles per second**
Light through space	186,284
Radio through air	142,000
Coaxial Cable	133,000

Very High Frequency (VHF) – A federal Communications Commissions designation for the band from 30 to 300 MHZ on the radio spectrum.

VHDCI – Very High Density Cable Interconnect (0.8mm connector) for next generation Ultra-SCSI applications.

Voice Frequency (VF) – Any frequency within that part of the radio frequency range essential to speech transmission of a commercial quality (i.e., 300-3400 Hz). Also referred to as telephone frequency.

Volt (V) – The unit of measurement for electromotive force (emf). It is equivalent to the force required to produce 1 ampere through a resistance of 1 ohm.

Voltage (E) – The term most often used to designate electrical pressure that exists between two point and is capable of producing a flow of current when a closed circuit is connected between the two points. Voltage is measured in volts, milivolts, microvolts and kilovolts. The terms electromotive force (emf), potential, potential difference and voltage drop are often referred to as voltage.

Voltage Rating – The highest voltage that may be continuously applied to a wire in conformance with standards or specifications.

VSWR – Abbreviation for voltage standing wave ratio. Also see: standing wave ratio.

Wavelengths – The distance an electromagnetic wave travels during the time it takes to oscillate through one complete cycle. The wavelengths of light used in fiber communications are usually measured in nanometers (nm). The common wavelengths or “windows” are 850nm, 1300nm, and 1550nm.

Z – Letter symbol used to represent impedance in ohms.

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Note

Networking Solution

Worldwide Office:
USA
Velocity Technology Industries LLC
710 E. McGlincy Lane
Unit 106B, Campbell, CA 95008 USA
Tel : 408-540-7072
Fax : 408-540-7139
E-mail : sales@velocityti.com
Www.velocityti.com

Asia Pacific
Velocity Technology Industries Pte Ltd
35 Tannery Road,
#09-03, Ruby Industrial complex
Tannery Block,
Singapore 347740
Tel : 6741 7229
Fax : 6741 1986
E-mail : velocity.sg@velocityti.com
Www.velocityti.com

For drawing, technical data or sample,contact our Velocity sales engineer. Specification subject to change. Consult Velocity Technology ind. For latest specification.