

Category 7/7_A/Class F/F_A Products

Exceeding ISO/IEC Category 7/7_A/Class F/F_A specifications, Siemon’s fully shielded TERA® end-to-end cabling solution is the highest-performing, most secure twisted-pair copper cabling system available. TERA supports performance of 10Gb/s and passes stringent TEMPEST security testing.

Beyond industry best speed and best total cost of ownership, TERA’s unique cable-sharing ability in support of lower speed applications results in a more “Green” solution and can also provide up-front savings through the reduction of cable counts. By combining the use of one TERA outlet dedicated for high-speed applications of 10Gb/s and another for cable sharing of lower speed voice and video applications, end-users simultaneously benefit from the highest performing and most cost effective copper solution.

The only non-RJ connector approved as a Category 7/7_A/Class F/F_A interface, TERA fits within a standard RJ45 footprint and is easily connected to RJ45 equipped electronics via hybrid TERA to RJ patch cords.

Section Contents

TERA Outlets	1.1
TERA 4-Pair Outlet	1.2
TERA Cable Sharing	1.2
TERA-MAX® Patch Panels	1.3
TERA Patch Cords	1.4 – 1.5
TERA Video Baluns	1.5
TERA S/FTP Trunking Cable Assemblies	1.6
Category 7 600 MHz Cable (International)	1.7
Category 7 _A 1000 MHz Cable (International)	1.8
Category 7 _A 1200 MHz Cable (International)	1.9

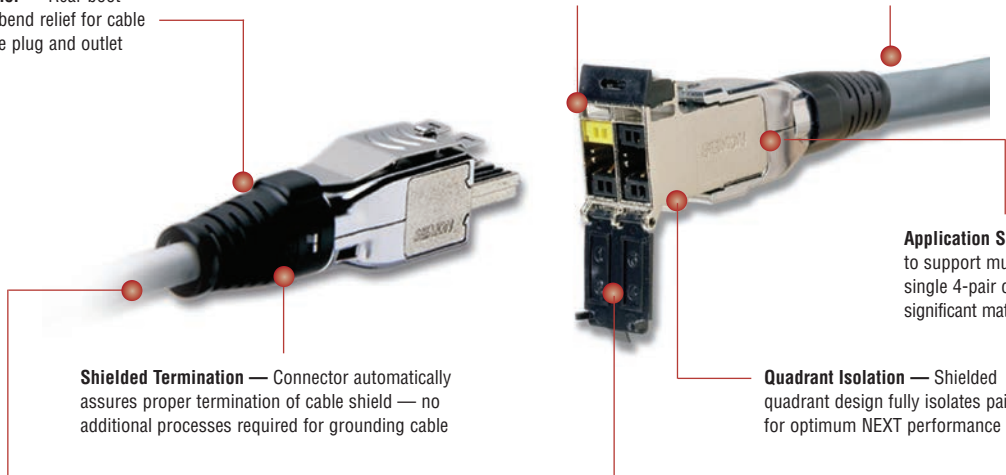
TERA® Outlet

Invented by Siemon in 1999 and subsequently chosen as an industry standard interface for Category 7/Class F and Category 7_A/Class F_A, the Siemon TERA outlet still is by far the highest performing twisted-pair copper connector in the world. When installed as part of a TERA solution, each pair delivers 1.2 GHz of bandwidth — exceeding Category 7_A/Class F_A specifications. This extra bandwidth supports demanding applications like 10GBASE-T and broadband video.

Bend Relief — Rear boot provides bend relief for cable exiting the plug and outlet

Compact Design — Slim, compact design allows outlets to be side-stacked and inserted from either the front or rear of faceplates and patch panels

Tempest Security Tested — The TERA system is the first and only copper system to pass TEMPEST emissions testing by an independent, NSA certified lab, Dayton T. Brown Inc.



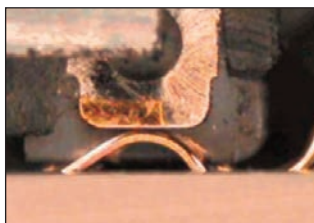
Shielded Termination — Connector automatically assures proper termination of cable shield — no additional processes required for grounding cable

Application Sharing — TERA's ability to support multiple applications over a single 4-pair cable and outlet can save significant material and installation costs

Quadrant Isolation — Shielded quadrant design fully isolates pairs for optimum NEXT performance

Fully Shielded — Terminates fully shielded (F/FTP and S/FTP) cable - virtually eliminates alien crosstalk

Hinged Door — Outlets include a hinged door to prevent exposure to dust and other contaminants



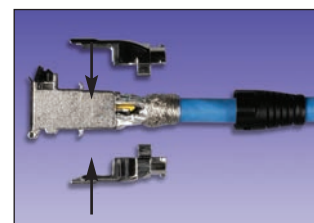
Contact Integrity

Featuring Siemon's patented crowned jack contact geometry that improves electrical and mechanical performance and ensures that any jack or plug contact damage due to arcing caused by unmating under PoE load occurs well away from the final mated contact position.



Easy Installation

CPT-T tool reduces preparation and termination time.



Quick-Ground™ Termination

No additional steps required for termination. Cable shield is automatically terminated within the outlet without additional steps or tools.

TERA[®] 4-Pair Outlet

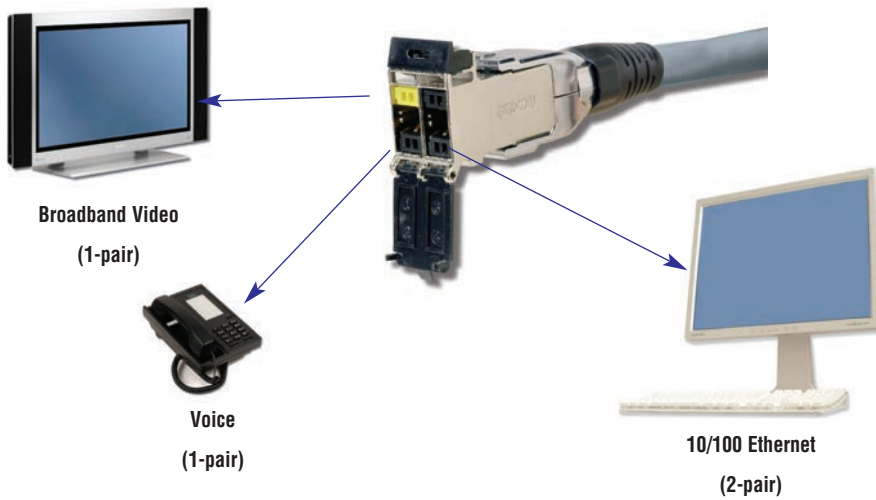
TERA outlets are the industry's highest performing network cabling connectors. Outlets accept 1-, 2- and 4-pair plugs and terminate fully shielded Category 7 and 7_A cables. TERA outlets can be used in both the work area and in the telecommunications room.



Part #	Description
T7F-01-1.....	TERA 4-pair outlet with black door, latch and boot. Compatible with 0.64-0.55mm (22-23 AWG) solid S/FTP and F/FTP cable

TERA Cable Sharing

Up to four simultaneous applications can be served from a single 4-pair, S/FTP cable and TERA outlet, saving significant materials, labour, pathway and rack space.



One TERA replaces four 1-pair analog voice outlets — perfect for call centres.



TERA[®]-MAX[®] Patch Panels

TERA-MAX 19 inch patch panels provide outstanding performance and reliability in a shielded, high-density modular solution. As outlets are snapped into place, resilient ground tabs assure that each outlet is properly grounded. No secondary outlet grounding operations are required, reducing overall installation time.

Angled TERA-MAX — Allows direct routing of cables to vertical managers, eliminating the need for horizontal cable managers



Standard Fit — Panels can be mounted directly on standard 19 inch relay rack or cabinet

Durable — High strength steel with black or metallic finish

Port Identification — Bold port numbering enables quick identification of outlets



Installation Friendly — Individual modules snap into place, providing integrated grounding without additional steps



Cable Management
Integral rear cable manager facilitates the orderly routing of horizontal cables as well as maintaining proper bend radius for optimum performance.



Slim Design
Use TERA outlets in TERA-MAX patch panel for telecommunications room applications.



Integrated Grounding
Panels feature integrated grounding via resilient ground tabs engaged during module insertion.

TERA-MAX Patch Panels

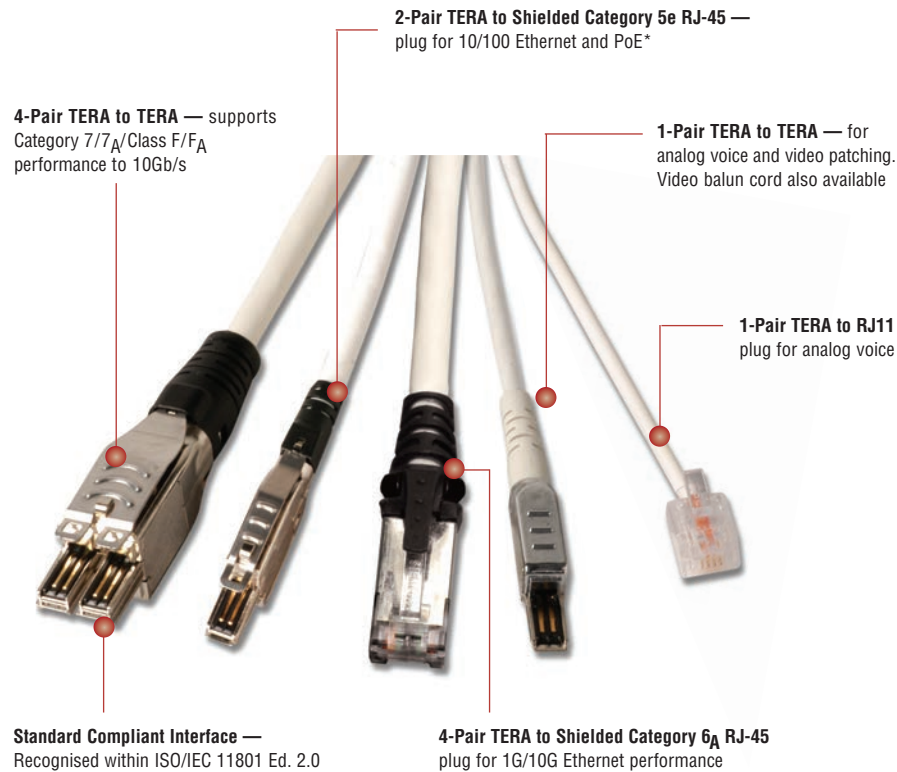
Part #	Description
TM-PNLZ-24-01	24-Port flat TERA-MAX panel, 1U, black
TM-PNLZ-24	24-Port flat TERA-MAX panel, 1U, metallic
TM-PNLZA-24-01	24-Port angled TERA-MAX panel, 1U, black
TM-PNLZA-24	24-Port angled TERA-MAX panel, 1U, metallic
PNLA-CVR-01	Angled panel cover, black

*Panels include designation labels, cable ties and mounting hardware.
Note: 1U = 44.5mm (1.75 in.)*



TERA[®] - Patch Cords

Part of the TERA cabling solution, TERA-to-TERA patch cords exceed bandwidth of Category 7_A/Class F_A specifications when combined with the TERA outlet. TERA delivers up to 1.2 GHz of bandwidth per pair, providing the extra bandwidth for demanding applications like 10GBASE-T and Broadband Video. Facilitated by 1- and 2-pair patch cords, TERA's extended performance also supports cable sharing – the simultaneous convergence of video, voice data and remote powering onto a single 4-pair cable and outlet.



Standard Footprint
ISO recognised interface allows TERA cords and outlets to fit within a standard RJ45 footprint.



Fully Compatible With Active Electronics
TERA to RJ45 patch cords allow the TERA system to be easily connected to RJ45 equipped active electronics.



Cable Sharing
Multiple applications can be run over one 4-pair cable and outlet, saving significant material and pathway space.

TERA Field-Terminated Plug

TERA 4-pair plugs can be used to terminate horizontal cable into exact lengths for consolidation point applications. Plugs terminate fully shielded Category 7 and 7_A solid cable.

Part #	Description
T7P4-B(XX)-1.....	4-Pair TERA plug with coloured boot. Compatible with 0.64 – 0.55mm (22 – 23 AWG) solid S/FTP and F/FTP cable
T7P4-B(01)-2.....	4-Pair TERA plug with black boot. Compatible with 0.48mm (26 AWG) stranded S/FTP and F/FTP cable

Use (XX) to specify boot colour: 01 = Black, 02 = White, 03 = Red, 05 = Yellow, 06 = Blue, 07 = Green

* One TERA Category 7_A/Class F_A channel can support two 10/100 BASE-T Ethernet data and two Type 1 or Type 2 PoE applications as long as power is delivered using IEEE Std 802.3™ -2015 PSE pinout Alternative A.



TERA® - Patch Cords

TERA Category 7_A Patch Cords

Category 7_A compatible, TERA to TERA, LS0H cable assembly, ivory jacket, coloured boot.

T(X)-(XX)M-B(XX)L	
Plug Type	Boot Colour
1 = 1-Pair	01 = Black
4 = 4-Pair	02 = White
	03 = Red
	05 = Yellow
	06 = Blue
	07 = Green
Cord Length	
01 = 1m (3.3 ft.)	
02 = 2m (6.6 ft.)	
03 = 3m (9.8 ft.)	
05 = 5m (16.4 ft.)	

TERA Category 5e Compatible Patch Cords

TERA to shielded RJ-45, or TERA to 6 position (voice) modular plug, LS0H cable assembly, ivory jacket, coloured boot.

T(XXX)-(XX)M-B(XX)L	
Plug Type	Boot Colour
2E2 = 2-Pair, RJ-45, 10/100BASE-T	01 = Black
2UT = 2-Pair, RJ-45, Token Ring	02 = White
1SU1 = 1-Pair, UTP, 6-position, Voice	03 = Red
	05 = Yellow
	06 = Blue
	07 = Green
Cord Length	
01 = 1m (3.3 ft.)	
02 = 2m (6.6 ft.)	
03 = 3m (9.8 ft.)	
05 = 5m (16.4 ft.)	

TERA Category 6A Patch Cords

Category 6A, TERA to shielded RJ-45 modular plug, LS0H cable assembly, ivory jacket, coloured boot

T4(X)-S(XX)M-B(XX)L	
Plug Type	Boot Colour
A = T568B	01 = Black
T = T568A	02 = White
	03 = Red
	05 = Yellow
	06 = Blue
	07 = Green
Cord Length	
01 = 1m (3.3 ft.)	
02 = 2m (6.6 ft.)	
03 = 3m (9.8 ft.)	
05 = 5m (16.4 ft.)	

CLIP-(XX)..... Colour coding clip, bag of 25

Clip Colour	
01 = Black	06 = Blue
02 = White	07 = Green
03 = Red	08 = Violet
04 = Grey	09 = Orange
05 = Yellow	



TERA Video Balun Cords

TERA CATV baluns provide the optimum solution for the transmission of TV or CATV signals over structured cabling systems that were historically limited to voice and data transmission. These products convert the unbalanced TV signals designed for coaxial cabling (75 Ω impedance) to balanced signals (100 Ω impedance) as required for transmission over twisted pair (balanced) cabling. The TERA CATV adapters are specified and usable to 862 MHz. The 1-pair TERA to PAL and TERA to "F" patch cords utilise an integrated balun. The 1-pair shielded TERA to shielded RJ45 patch cord allows connection to third-party RJ45 baluns.

Part #	Description
T1VC-(XX)M-B01L.....	1-Pair TERA to PAL connector, LS0H cable assembly, grey jacket
T1VF-(XX)M-B01L.....	1-Pair TERA to F connector, LS0H cable assembly, grey jacket
T1S4V-(XX)M-B01L.....	1-Pair shielded TERA to RJ45 patch cord



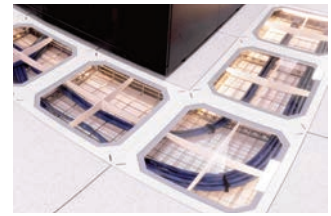
Use (XX) to specify length: 01 = 1m (3.3 ft.), 1.5 = 1.5m (4.9 ft.), 02 = 2m (6.6 ft.), 03 = 3m (9.8 ft.), 05 = 5m (16.4 ft.)

T1VF-(XX)M-B01L

T1S4V-(XX)M-B01L

TERA® - S/FTP Trunking Cable Assemblies

Simon's TERA copper trunking cable assemblies provide an efficient and cost effective alternative to individual field-terminated components. Combining factory terminated and tested TERA outlets and fully shielded Siemon Category 7_A cable, Siemon TERA trunking cable assemblies offer industry leading performance to 10Gb/s. Standard configurations also help maintain consistent cable layout, facilitate efficient moves, adds and changes and significantly reduce scrap versus typical field installation. Modular design, in conjunction with reduced scrap, makes trunks the most "Green" method for copper cabling installations.



Data Centres

Ideal for data centre, raised floor and ladder rack environments enabling up to 75% faster deployment time. Well organised cable bundles improve cable management and air flow.



Simple, Snap-In Installation

Straight Cut aligns TERA outlets for optimal snap in installation into TERA- MAX patch panels and allows left, right or centre exit.



Protective Packaging

Each assembly is packaged individually to protect factory terminations.

Identification — Each cable assembly is coded with a unique identification number for administrative purposes

Fully Shielded Cable — Utilises high quality Category 7_A S/FTP Siemon cable

Breakout Kit — Unique breakout kit creates optimal cable orientation and limits cable crossing

Factory Terminated and Tested — Utilises TERA outlets, factory terminated and tested for performance to 10Gb/s

TERA S/FTP Trunking Cable Assemblies

6 Leg Double-Ended Trunking Cable Assemblies

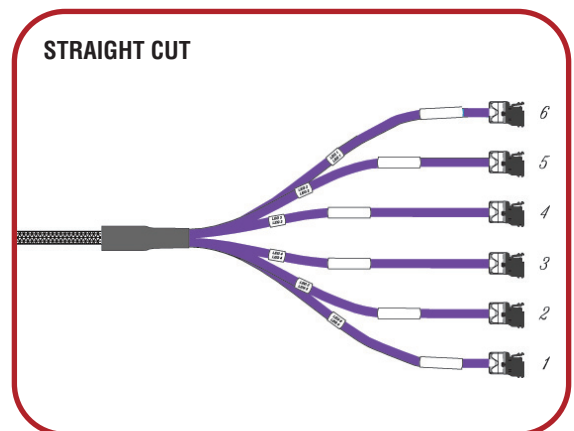
Part #	Description
TJLD8E-F1F1(XXX)M.	LSOH rated (IEC 60332-1), violet jacket, 1000MHz

Use (XXX) to specify length: 2.7 - 90m in (8.9 - 295 ft.) increments of 1 metre (3.3 ft.)

Other lengths and configurations available upon request.

Trunk cable assembly constructed with EU CPR rated cable
- Cca (pending completion of System 1+ requirement)

Note: These products are made to order. Call for lead time and part number availability in your region.



Category 7 600 MHz Cable - International

COMPLIANCE

- ISO/IEC 11801: Ed 2.2 (Class F)
- IEC 61156-5 Ed 2.1 (Category 7)
- EN 50288 • EN 55022
- EN 50173 • EN 55024
- LSOH: IEC 60332-1, IEC 60754, and IEC 61034
- EN 50399 Class CcaS_{1a}d₁a₁*

CABLE CONSTRUCTION

- S/FTP
- Nominal jacket OD: 7.1mm (0.28 in.)
- 0.56mm (0.022 in.) solid (non-tinned) copper
- Reverse sequential measurement markings
- Pairs individually shielded
- Overall tinned-copper braid

Ordering Information:

Part #	Description
9T7L4-E6.....	LSOH (IEC 60332-1), violet jacket, Class E _{ca} , D _{ca} , C _{ca} *, 305m (1000 ft.)
9T7L4-E6-5CR.....	LSOH (IEC 60332-1), violet jacket, Class E _{ca} , D _{ca} , C _{ca} *, 500m (1640 ft.)
9T7L4-E6-1KR.....	LSOH (IEC 60332-1), violet jacket, Class E _{ca} , D _{ca} , C _{ca} *, 1000m (3281 ft.)

*Initial type test complete. System 1+ requirements pending



ELECTRICAL SPECIFICATIONS (Nominal)

DC Resistance	<7.32 Ω/100m
DC Resistance Unbalance	2%
Mutual Capacitance	5.6 nF/100m
Capacitance Unbalance	<160 pF/100m
Characteristic Impedance (ohms)	1-100 MHz: 100 ± 15% 100-600 MHz: 100 ± 22%
NVP	72%
TCL	40-10 x log(f)dB
Delay Skew	≤25ns/100m

PHYSICAL PROPERTIES

	LSOH
Pulling Tension (max)	80N (18 lbf)
Bend Radius (min)	50mm (2.0 in.)
Installation Temperature	0 to 75°C (+32 to 167°F)
Storage Temperature	-20 to 75°C (-4 to 167°F)
Operating Temperature	-20 to 75°C (-4 to 167°F)

TRANSMISSION PERFORMANCE



GUARANTEED WORST CASE



SIEMON TYPICAL

Frequency (MHz)	Insertion Loss (dB)		NEXT (dB)		PS NEXT (dB)		ACR (dB)		PSACR (dB)		ACR-F (dB)		PS ACR-F (dB)		Return Loss (dB)	
	Guaranteed	Typical	Guaranteed	Typical	Guaranteed	Typical	Guaranteed	Typical	Guaranteed	Typical	Guaranteed	Typical	Guaranteed	Typical	Guaranteed	Typical
1.0	2.1	1.8	78.0	103.7	75.0	110.0	75.9	101.9	72.9	108.2	78.0	94.8	75.0	102.3	20.0	32.7
4.0	3.7	3.4	78.0	106.8	75.0	117.2	74.3	103.4	71.3	113.8	78.0	90.5	75.0	91.8	23.0	27.4
10.0	5.8	5.3	78.0	111.6	75.0	121.1	72.2	106.3	69.2	115.8	78.0	109.0	75.0	116.2	25.0	35.9
16.0	7.3	6.8	78.0	113.9	75.0	121.9	70.7	107.0	67.7	115.1	78.0	107.0	75.0	114.5	25.0	36.6
20.0	8.2	7.6	78.0	110.2	75.0	117.4	69.8	102.5	66.8	109.7	78.0	115.7	75.0	117.7	25.0	36.4
31.25	10.3	9.7	78.0	112.4	75.0	119.5	67.7	102.7	64.7	109.8	75.4	106.8	72.4	109.8	23.6	39.2
62.5	14.6	13.9	78.0	114.0	75.0	121.6	63.4	100.1	60.4	107.7	69.4	102.4	66.4	109.8	21.5	33.6
100.0	18.5	17.7	78.0	108.3	75.0	117.5	59.5	90.6	56.5	99.8	65.3	100.8	62.3	103.0	20.1	37.8
200.0	26.5	25.2	73.9	112.5	70.9	118.7	47.4	87.3	44.4	93.6	59.3	85.9	56.3	90.9	18.0	38.9
250.0	29.7	28.3	72.4	108.6	69.4	115.0	42.7	80.3	39.7	86.8	57.3	88.2	54.3	89.5	17.3	35.2
300.0	32.7	31.1	71.2	106.2	68.2	112.2	38.6	75.1	35.6	81.1	55.8	84.7	52.8	90.1	17.3	36.9
400.0	38.0	36.1	69.4	108.0	66.4	116.9	31.4	71.9	28.4	80.8	53.3	71.9	50.3	76.8	17.3	36.2
500.0	42.8	40.4	67.9	96.1	64.9	103.4	25.2	55.7	22.2	62.9	51.3	79.6	48.3	83.6	17.3	32.8
600.0	47.1	44.4	66.7	97.0	63.7	101.8	19.6	52.5	16.6	57.4	49.7	69.9	46.7	71.7	17.3	34.8
700.0*	-	48.2	-	98.8	-	106.0	-	50.6	-	57.8	-	59.9	-	61.0	-	33.5
800.0*	-	51.8	-	94.6	-	103.7	-	42.8	-	51.9	-	60.9	-	62.9	-	29.9
850.0*	-	53.9	-	82.2	-	94.7	-	28.4	-	40.8	-	48.1	-	55.2	-	31.0

*Values above 600 MHz are for information only.

All performance based on 100 metres (328 ft.)

Category 7_A 1000 MHz Cable - International

COMPLIANCE

- ISO/IEC 11801: Ed 2.2 (Class F_A)
- IEC 61156-5 Ed 2.1 (Category 7_A)
- EN 50288 • EN 55022
- EN 50173 • EN 55024
- LSOH: IEC 60332-1, IEC 60754, and IEC 61034
- EN50399 Class C_{ca}S_{1a}d_{1a1}*

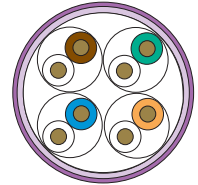
CABLE CONSTRUCTION

- S/FTP
- Nominal jacket OD: 7.7mm (0.30 in.)
- 0.57mm (0.022 in.) solid (non-tinned) copper
- Sequential measurement markings on jacket
- Pairs individually shielded with aluminium-polyester foil
- Overall tinned-copper braid

Ordering Information:

Part #	Description
9T7L4-E10.....	LSOH (IEC 60332-1), violet jacket, Class E _{ca} , D _{ca} , C _{ca} *, 305m (1000 ft.)
9T7L4-E10-5CR.....	LSOH (IEC 60332-1), violet jacket, Class E _{ca} , D _{ca} , C _{ca} *, 500m (1640 ft.)
9T7L4-E10-1KR.....	LSOH (IEC 60332-1), violet jacket, Class E _{ca} , D _{ca} , C _{ca} *, 1000m (3281 ft.)

*Initial type test complete. System 1+ requirements pending



ELECTRICAL SPECIFICATIONS

DC Resistance	<7.32 Ω/100m
DC Resistance Unbalance	≤ 2%
Mutual Capacitance	5.6 nF/100m
Capacitance Unbalance	≤160 pF/100m
Characteristic Impedance (ohms)	1-100 MHz: 100 ± 15% 100-250 MHz: 100 ± 22% 250-1000 MHz: 100 ± 25%
NVP	70%
TCL	40-10 x log(f)dB
Delay Skew	25ns/100m

PHYSICAL PROPERTIES

	LSOH
Pulling Tension (max)	110N (25 lbf)
Bend Radius (min)	50mm (2.0 in.)
Installation Temperature	0 to 75°C (+32 to 167°F)
Storage Temperature	-20 to 75°C (-4 to 167°F)
Operating Temperature	-20 to 75°C (-4 to 167°F)

TRANSMISSION PERFORMANCE

■ GUARANTEED WORST CASE □ SIEMON TYPICAL

Frequency (MHz)	Insertion Loss (dB)		NEXT (dB)		PS NEXT (dB)		ACR (dB)		PSACR (dB)		ACR-F (dB)		PS ACR-F (dB)		Return Loss (dB)		Propagation Delay (ns)	
	Guaranteed	Typical	Guaranteed	Typical	Guaranteed	Typical	Guaranteed	Typical	Guaranteed	Typical	Guaranteed	Typical	Guaranteed	Typical	Guaranteed	Typical	Guaranteed	Typical
1.0*	1.9	1.6	78.0	105.0	75.0	102.0	76.1	103.0	73.1	100.0	77.0	96.0	75.0	94.0	20.0	31.0	536	512
4.0	3.5	3.0	78.0	105.0	75.0	102.0	74.6	102.0	71.6	99.0	77.0	96.0	75.0	94.0	23.0	34.0	518	494
10.0	5.4	4.9	78.0	105.0	75.0	102.0	72.6	100.0	69.6	97.0	74.0	96.0	71.0	94.0	25.0	35.0	511	487
16.0	6.8	6.3	78.0	105.0	75.0	102.0	71.2	99.0	68.2	96.0	70.0	96.0	67.0	94.0	25.0	35.0	509	485
20.0	7.5	7.0	78.0	105.0	75.0	102.0	70.3	98.0	67.4	95.0	68.0	96.0	65.0	94.0	25.0	35.0	508	484
31.25	9.6	8.9	78.0	105.0	75.0	102.0	68.5	96.0	65.5	93.0	64.0	93.0	61.0	91.0	23.6	34.0	506	482
62.5	13.7	12.8	78.0	105.0	75.0	102.0	64.3	92.0	61.3	89.0	58.0	88.0	55.0	86.0	21.5	32.0	505	481
100.0	17.5	16.5	76.0	105.0	73.0	102.0	58.5	89.0	55.5	86.0	54.0	82.0	51.0	80.0	20.1	31.0	504	480
200.0	25.3	23.5	71.0	102.0	68.0	100.0	46.2	79.0	43.2	77.0	48.0	78.0	45.0	75.0	18.0	29.0	503	479
250.0	28.5	28.2	70.0	102.0	67.0	100.0	41.5	74.0	38.5	72.0	46.0	75.0	43.0	70.0	17.3	28.0	502	502
300.0	31.5	28.9	69.0	102.0	66.0	97.0	37.3	73.0	34.3	68.0	44.0	70.0	41.0	68.0	17.3	28.0	502	478
350.0	34.3	31.5	68.0	100.0	65.0	97.0	33.6	69.0	30.6	66.0	43.0	70.0	40.0	63.0	17.3	28.0	502	478
400.0	36.9	33.1	67.0	95.0	64.0	93.0	30.1	62.0	27.1	60.0	42.0	66.0	39.0	59.0	17.3	28.0	502	478
550.0	44.1	40.2	65.0	95.0	62.0	93.0	20.8	55.0	17.8	53.0	39.0	60.0	36.0	56.0	17.3	28.0	502	478
600.0	46.3	41.7	64.0	95.0	61.0	93.0	18.0	53.0	15.0	51.0	38.0	55.0	35.0	53.0	17.3	28.0	502	478
800.0	54.5	47.6	62.0	90.0	59.0	87.0	7.9	42.0	4.9	39.0	36.0	47.0	33.0	44.0	16.1	28.0	501	477
1000.0	62.0	54.5	61.0	85.0	58.0	83.0	-1.0	31.0	-4.0	29.0	34.0	40.0	31.0	38.0	15.5	27.0	501	477
1200.0*		59.8		80.0		77.0		20.0		17.0		35.0		33.0		27.0		477

*Values below 4 MHz are for information only.

**Values for IEC 61156-5 above 1000 MHz are for information only.

All performance based on 100 metres (328 ft.)

Category 7_A 1200 MHz Cable - International

COMPLIANCE

- ISO/IEC 11801: Ed. 2.2 (Class F_A)
- ISO/IEC 15018 BCT Channel Application
- IEC 61156-7 Ed 1.1
- IEC 61156-5 Ed 2.1 (Category 7_A)
- EN 50288 • EN 55022
- EN 50173 • EN 55024
- LSOH: IEC 60332-1, IEC 60754, and IEC 61034
- EN50399 Class C_{ca}S_{1a}d_{1a}*

CABLE CONSTRUCTION

- S/FTP
- Nominal jacket OD: 8mm (0.31 in.)
- 0.64mm (0.025 in.) solid (non-tinned) copper
- Sequential measurement markings on jacket
- Pairs individually shielded with aluminium-polyester foil
- Overall tinned-copper braid

Ordering Information:

Part #	Description
9T7L4-E12.....	LSOH (IEC 60332.1), violet jacket, Class E _{ca} , D _{ca} , C _{ca} *, 305m (1000 ft.)
9T7L4-E12-5CR.....	LSOH (IEC 60332.1), violet jacket, Class E _{ca} , D _{ca} , C _{ca} *, 500m (1640 ft.)
9T7L4-E12-1KR.....	LSOH (IEC 60332.1), violet jacket, Class E _{ca} , D _{ca} , C _{ca} *, 1000m (3281 ft.)

*Initial type test complete. System 1+ requirements pending



ELECTRICAL SPECIFICATIONS

DC Resistance	<17.0 Ω/100m
DC Resistance Unbalance	2%
Mutual Capacitance	5.6 nF/100m
Capacitance Unbalance	<330 pF/100m
Characteristic Impedance (ohms)	1-100 MHz: 100 ± 15% 100-250 MHz: 100 ± 22% 250-1000 MHz: 100 ± 25%
NVP	80%
TCL	40-10 x log(f)dB
Delay Skew	≤25ns

PHYSICAL PROPERTIES

	LSOH
Pulling Tension (max)	110N (25 lbf)
Bend Radius (min)	50mm (2.0 in.)
Installation Temperature	0 to 75°C (+32 to 167°F)
Storage Temperature	-20 to 75°C (-4 to 167°F)
Operating Temperature	-20 to 75°C (-4 to 167°F)

TRANSMISSION PERFORMANCE

■ GUARANTEED WORST CASE

□ SIEMON TYPICAL

Frequency (MHz)	Insertion Loss (dB)		NEXT (dB)		PS NEXT (dB)		ACR (dB)		PSACR (dB)		ACR-F (dB)		PS ACR-F (dB)		Return Loss (dB)		Propagation Delay (ns)	
	Guaranteed	Typical	Guaranteed	Typical	Guaranteed	Typical	Guaranteed	Typical	Guaranteed	Typical	Guaranteed	Typical	Guaranteed	Typical				
1.0*	1.9	1.7	78.0	105.2	75.0	99.5	76.1	103.5	73.1	97.7	78.0	99.6	75.0	96.6	20.0	30.0	536.0	455
4.0	3.5	3.2	78.0	107.8	75.0	102.8	74.5	104.6	71.5	99.7	78.0	107.5	75.0	102.6	23.0	27.8	518.0	452
10.0	5.4	4.8	78.0	105.2	75.0	99.4	72.6	100.4	69.6	94.6	74.0	103.1	71.0	97.4	25.0	34.1	511.4	449
16.0	6.8	6.1	78.0	109.1	75.0	101.7	71.2	103.0	68.2	95.6	69.9	104.2	66.9	99.9	25.0	33.1	509.0	447
20.0	7.6	6.9	78.0	107.2	75.0	101.3	70.4	100.3	67.4	94.4	68.0	105.0	65.0	97.4	25.0	34.4	508.0	446
31.25	9.6	8.8	78.0	106.8	75.0	100.0	68.4	98.0	65.4	91.2	64.1	102.3	61.1	96.7	23.6	35.9	506.4	445
62.5	13.7	12.7	78.0	108.3	75.0	102.7	64.3	95.7	61.3	90.0	58.1	104.6	55.1	98.4	21.5	41.1	504.6	444
100.0	17.5	16.2	76.0	105.5	73.0	97.8	58.5	89.3	55.5	81.6	54.0	104.1	51.0	97.7	20.1	36.0	503.6	444
200.0	25.3	23.1	71.5	107.7	68.5	101.9	46.2	84.6	43.2	78.8	48.0	101.6	45.0	95.6	18.0	30.4	502.5	444
250.0	28.5	25.8	70.0	110.4	67.0	101.4	41.5	84.6	38.5	75.5	46.0	107.0	43.0	99.1	17.3	33.5	502.3	443
300.0	31.5	28.3	68.8	105.5	65.8	100.0	37.3	77.2	34.3	71.6	44.5	100.8	41.5	95.3	17.3	34.9	502.1	443
350.0	34.3	30.8	67.8	108.4	64.8	101.0	33.6	77.2	30.6	70.3	43.1	107.5	40.1	97.8	17.3	39.0	501.9	443
400.0	36.9	33.0	67.0	111.2	64.0	103.3	30.1	78.2	27.1	70.2	42.0	107.2	39.0	99.5	17.3	35.5	501.8	443
550.0	44.1	39.0	64.9	105.0	61.9	99.1	20.8	66.0	17.8	60.0	39.2	102.0	36.2	94.9	17.3	33.8	501.5	443
600.0	46.3	40.8	64.3	108.3	61.3	99.3	18.0	67.5	15.0	58.5	38.4	105.2	35.4	96.6	17.3	35.9	501.5	443
800.0	54.5	47.5	62.5	98.7	59.5	93.8	7.9	51.2	4.9	46.2	35.9	93.1	32.9	90.1	16.1	34.0	501.3	443
1000.0	62.0	53.7	61.0	100.2	58.0	93.9	-1.0	46.5	-4.0	40.2	34.0	83.3	31.0	77.1	15.1	25.3	501.1	443
1100.0	65.6	56.6	60.4	106.2	57.4	98.0	-5.2	49.6	-8.2	41.4	33.2	80.9	30.2	74.6	14.7	30.0	501.1	443
1200.0	65.6	61.8	59.8	100.1	56.8	92.6	-9.2	38.3	-12.2	30.8	32.4	78.1	29.4	67.4	14.3	24.8	501.1	441
1300.0*	-	62.2	-	95.2	-	87.6	-	33.0	-	25.4	-	66.1	-	59.6	-	19.7	-	445
1500.0*	-	68.4	-	101.3	-	90.4	-	32.9	-	22.0	-	37.5	-	57.5	-	19.0	=	441

*Values below 4 MHz and above 1200 MHz are for information only.

All performance based on 100 metres (328 ft.)