System 6® UTP

The Siemon System 6 UTP connectivity family offers exceptional value in an end-to-end solution. A high-performance system meeting all category 6 requirements, System 6 performance can be attained using the innovative Z-MAX® connector system in addition to the existing MAX® 6 UTP modules and HD® 6 UTP patch panels. Use of the Z-MAX® connector system also gives the added benefit of 48 ports in 1U of rack space in flat or angled configurations.

SECTION CONTENTS

Z-MAX 6 UTP Outlets

The category 6 UTP Z-MAX outlet offers best-in-class performance exceeding all category 6 performance requirements. Its innovative features not only accelerate and simplify termination, but remove installation variability for consistently high and repeatable performance - every termination, every time!

1. **Fastest Termination Time** – Zero-Cross™ termination module and 2-step Z-TOOL™ termination process combine for best-in-class termination time
2. **High-Visibility Icon System** – Printed icons allow designation for voice / data applications and also provide an additional colour coding option
3. **Compact** – Slim and side-stackable for high-density applications. Supports "pass-thru" feature to mount from the front or rear of a faceplate
4. **Guided Termination Features** – Lacing channels guide correct conductor placement while 2-sided colour-coding provide wiring verification before and after lacing
5. **Enclosed IDC Terminations** – IDC terminations are fully enclosed in the outlet housing for robust protection
6. **Robust Hinged Cable Retention** – Hinged clip provides strain relief for multiple cable diameters

Flexibility and Simplified Ordering

A single hybrid outlet supports both angled and flat mounting orientations

Ordering Information:

Z6-(X)(XX) . . . . .UTP Z-MAX 6 outlet, T568A/B

Mounting Style

(Blank) = Hybrid Flat/Angled
K = Keystone

Bezel Color

01 = Black	**06** = Blue
02 = White	**07** = Green
03 = Red	**09** = Orange
04 = Grey	**20** = Ivory
05 = Yellow	**80** = Light Ivory

Hybrid

Keystone

Add "D" to end of part number for spring door option.

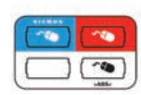
Ⓑ Add "B" to end of part number for bulk project pack of 100 modules (hybrid modules include icons).

Outlet terminates UTP cable constructions with 23 – 26 AWG (0.64 – 0.51mm) solid and 26 AWG (0.48mm) stranded conductors, with up to 0.60mm diameter conductors and up to 1.48mm diameter over insulation.

Each Z-MAX 6 UTP hybrid flat/angled outlet includes 1 printed icon set with the following colour/print options. Additional colour options available.

1 - Red Data	**1** - Red Voice
1 - Blue Data	**1** - Blue Voice
1 - Bezel Colour-matching Data	**1** - Bezel Colour-Matching Voice
1 - White Blank	**1** - Bezel Colour-matching Blank

Front



Rear

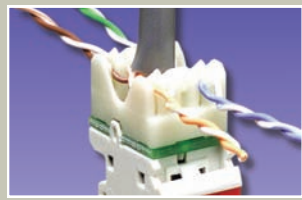
Note: Z-MAX outlets utilise the Z-TOOL termination tool.

MAX® 6 UTP Modules

Part of Siemon's category 6 UTP end-to-end Cabling Solution, the MAX 6 module exceeds category 6 connecting hardware performance specifications.

It's compact design is ideal for high density applications. Up to six modules can be utilised in a single gang faceplate and twelve modules in a double gang faceplate. Also, the angled MAX module provides a gravity feed, low-profile design for the work area — greatly improving cable management in installations where front or rear clearance is at a minimum.

1. **Flexible Installation** – Install from either front or rear of faceplate
2. **Easy Termination** – Punch down with standard 110 termination tools
3. **Quick Identification** – Coloured Icons provided for port identification
4. **Backward Compatible** – With category 5e/class D system components
5. **Universal Wiring** – T568A and T568B wiring compatible
6. **Protective Doors** – Minimise exposure to dust and other contaminants (doors not shown)



Quick Installation

Pyramid wire entry system on S310 blocks separates paired conductors when lacing cables to simplify and reduce installation time.

Termination

Siemon's Palm Guard with MAX insert (p/n: PG-MX6) assists in securing module during termination.

Superior Performance

For superior performance use MC® 6 modular cords to unlock the performance of MAX 6 modules.

MAX 6 UTP MODULES

MX6-(XX). . . . .
Category 6 Angled MAX module, T568A/B, rear strain relief cap and protective colour-matching rubber door*

MX6-F(XX) . . . .
Category 6 Flat MAX module, T568A/B, rear strain relief cap

MX6-K(XX) . . . .
Category 6 Keystone MAX module, T568A/B, rear strain relief cap

Use (XX) to specify colour: 01 = black, 02 = white, 03 = red, 04 = grey, 05 = yellow, 06 = blue, 07 = green, 09 = orange, 20 = ivory, 25 = bright white, 80 = light ivory

Angled modules include one colour-matching, one red, and one blue icon.
*Door colour is clear for red, yellow, blue and orange angled modules.

Flat modules include one colour-matching, one red, and one blue icon.

Keystone version is designed for integration with various international mounting products and is not compatible with MAX mounting hardware.

Ⓑ Add "B" to end of part number for bulk project pack of 100 modules (angled and flat modules include icons).

Z-MAX 6 UTP Patch Panels

Z-MAX patch panels provide outstanding performance and aesthetics in a high-density, modular UTP solution. The Z-MAX UTP panels provide rapid and reliable installation by accelerating module mounting, and cable tie-down operations.

In addition to traditional 24-port / 1U flat and angled versions, the Z-MAX UTP panels are also available in 48-port / 1U configurations for ultra high density installations.

1. **High Density** – Provides 24 or 48 ports in just 1U
2. **Installation Friendly** – Quick-Snap feature allows panel outlets to quickly be snapped into place
3. **Port Identification** – High visibility magnifying labeling system enables quick identification of outlets
4. **Durable** – Lightweight, high strength steel with black finish and scratch/fade resistant port marking
5. **Aesthetics** – The Z-MAX panel provides a clean front surface to improve the installation appearance

Kits

Panels available as complete kits including patch panel, Z-MAX panel outlets, Z-TOOL and all necessary accessories. Empty panels are also available for use with Z-MAX trunk assemblies

Ideal for Trunking Applications

Combine Z-MAX trunk assemblies (with panel outlets) and empty Z-MAX panels for rapid data centre deployment

Integrated Cable Management

Ensures proper cable management practices for all installations

Ordering Information:

Z6-PNL(X)-24(X)...............24 Port, Z-MAX 6 shielded patch panel, 1U, black

Mounting Style
- **(Blank)** - Flat
- **A** - Angled

Outlets
- **K** -Kit w/ 24 Z-MAX panel outlets
- **E** - Empty (no outlets) for use with trunks

Z6-PNL(X)-U48(X) ....48 Port, Z-MAX 6 shielded patch panel, 1U, black

Mounting Style
- (Blank) - Flat
- A - Angled

Outlets
- **K** - Kit w/ 48 Z-MAX panel outlets
- **E** - Empty (no outlets)

Panels include: Cable Ties, Icon/Label Holders, Labels and Mounting Hardware

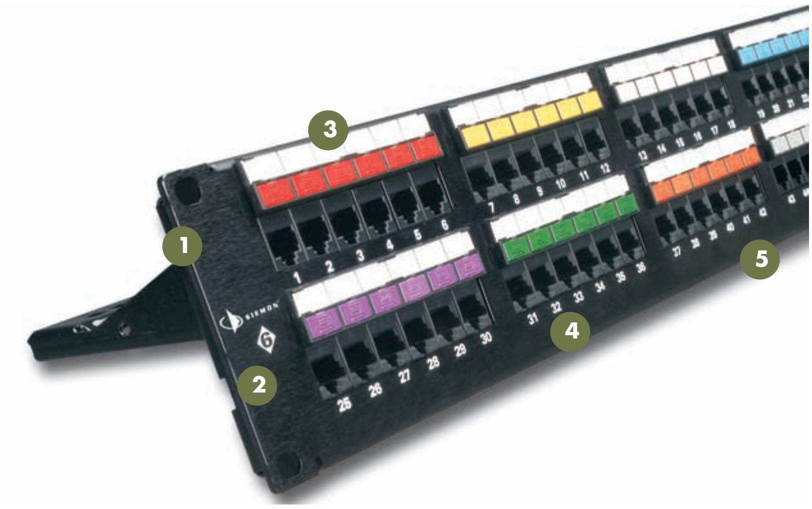
Panel Accessories

Z-PNL-PL24 ....Patch panel label sheet, numbered 1 to 24, bag of 100
Z-PNL-PL48 ....Patch panel label sheet, numbered 25 to 48, bag of 100
Z-PNL-PS ....Patch panel label holder, bag of 25
Z6-P ....Z-MAX 6 UTP panel outlet

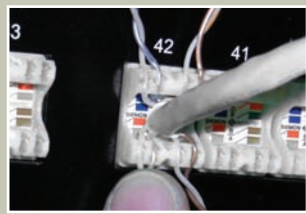
Note: Z-MAX UTP panels are designed for use with Z-MAX UTP panel outlets only

HD6 UTP Patch Panels

Siemon's HD 6 patch panel was the industry's first patch panel to exceed category 6 connecting hardware specifications for all pair combinations up to 250 MHz. Get superior performance and user-friendly termination, labeling, and cable management features with Siemon's popular category 6 patch panel.



1. **Universal Wiring** – HD 6 patch panels feature universal wiring for both T568A/B
2. **Aesthetics** – Front surface is uninterrupted by screw heads for a clean appearance
3. **Installer Friendly** – Icon label holders and designation labels included
4. **Port Identification** – Bold port numbering enables quick identification of outlets
5. **Standard Fit** – Panels can be mounted directly on standard 19 inch relay rack or cabinet



Pyramid™ Wire Entry System

Pyramid wire entry system on S310 blocks separates paired conductors when lacing cables to reduce installation time.

Circuit Protection

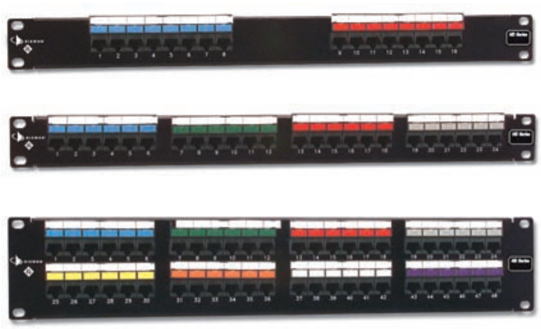
Rear metal enclosure protects printed circuitry.

Cable Management

Includes built-in cable manager to properly guide cables to point of termination.

Ordering Information:

Part #	Description
HD6-16	16-port category 6 UTP HD patch panel, 1U
HD6-24	24-port category 6 UTP HD patch panel, 1U
HD6-48	48-port category 6 UTP HD patch panel, 2U
HD6-96	96-port category 6 UTP HD patch panel, 4U



Panels include rear cable manager(s), icon label holders, designation labels, cable ties, and mounting hardware.

Ⓑ Add "B" for bulk project pack of 5 panels (rear cable managers [p/n: HD-RWM] not included but can be ordered separately).
Note: 1U = 44.5mm
S310 termination blocks are not compatible with S110® multi-pair termination tools.

HD PANEL ACCESSORIES

Part #	Description
HD-RWM	Rear cable management bracket for HD patch panels (not compatible with HD5-S-24)
HD5-ICON6	Adhesive-backed strips in a package of 8 for colour-coding and port designation for 24-, 48-, or 96-port panels (icons not included)
HD5-ICON6-LBL	10 sheets of labels for HD5-ICON6 for laser printing (16 labels per sheet)*
HD5-LBL-480	Adhesive strips for sequentially numbering panel ports 1 through 480 for 24-, 48-, or 96-port panels
HD5-LBL6-2	White removable designation strips in a package of eight for 24-, 48-, or 96-port panels

HD-RWM

HD5-ICON6

HD5-LBL-480

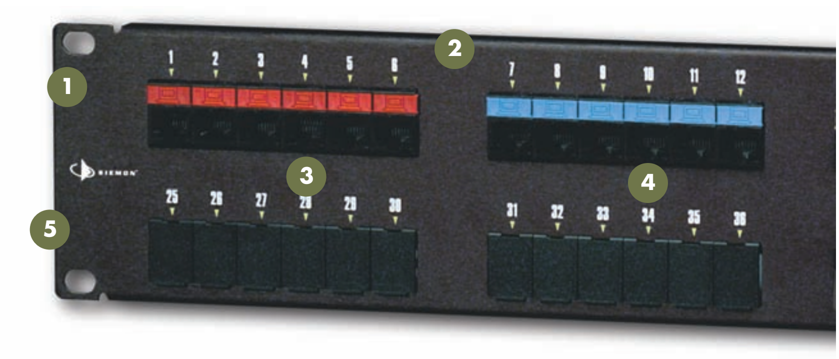
HD5-LBL6-2

*Visit our web site or contact our Technical Support Department for labeling software.

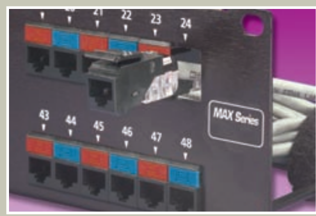
MAX® Patch Panels

MAX patch panels provide a flexible, high density termination solution for the telecommunications room. Using the full line of Z-MAX or MAX modules (available separately), the panel can be configured for a variety of multimedia applications. Blank modules can be used to reserve ports for future capacity.

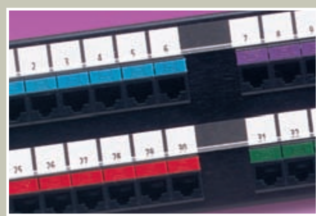
Siemon's MAX series angled patch panels route cables directly into the vertical cable managers eliminating the need for horizontal cable management between panels.



1. **High Density Design** – Accommodates up to 24 ports /1U
2. **Aesthetics** – Lightweight, high strength brushed aluminum with black protective finish
3. **Installer Friendly** – Icon label holders and designation labels included
4. **Port Identification** – Bold port numbering enables quick identification of outlets
5. **Standard Fit** – Panels can be mounted directly on standard 19 inch relay rack or cabinet
6. **Versatility** – Combines modular design with high density for ultimate flexibility



Installation Friendly
Individual modules snap into place from front or rear of panel for added installation flexibility.



Designation labels
Removable designation labels can be laser printed and enable proper circuit identification for each port.

Cable Management
Rear Cable management bar included for routing horizontal cables to terminations.

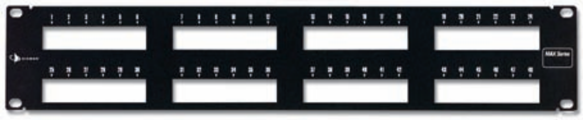
Eliminates Horizontal Cable Managers
Angled panels route patch cords directly into vertical cable managers saving valuable rack space.

MAX® PATCH PANELS

Part #	Description

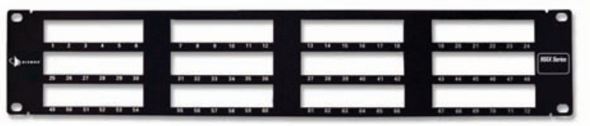
MX-PNL-16 . . . . 16-port MAX patch panel, 1U

Part #	Description



MX-PNL-48 . . . . 48-port MAX patch panel, 2U

MX-PNL-24 . . . . 24-port MAX patch panel, 1U



MX-PNL-72 . . . . 72-port MAX patch panel, 2U

Panels include rear cable manager, designation labels, cable ties, and mounting hardware.

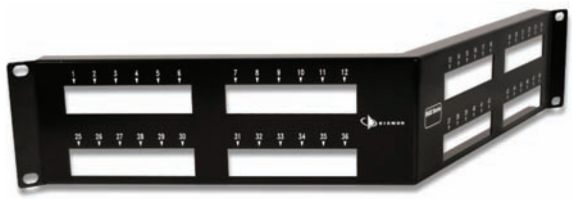
MAX Panels are not compatible with shielded MAX or Z-MAX modules. Use the TERA-MAX or Z-MAX panel.

Note: 1U= 44.5mm

ANGLED MAX® PATCH PANELS

Siemon's MAX series angled patch panels route cables directly into the vertical cable managers, eliminating the need for horizontal cable management between panels.

Part #	Description
MX-PNLA-24	24-port angled MAX patch panel, 1U



Part #	Description
MX-PNLA-48	48-port angled MAX patch panel, 2U

Panels include mounting hardware. Rear cable manager not included.

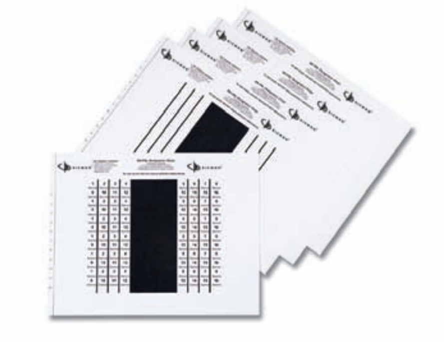
Angled MAX panels are not compatible with shielded Z-MAX or MAX modules. Use the TERA-MAX or Z-MAX panel.

Angled MAX panels are not recommended for use with RS3 rack series. RS series racks with VPC vertical patching channels are recommended.

Note: 1U = 44.5mm

MAX PANEL ACCESSORIES

MX-PNL-LBL4* . . . .
10 sheets of laser printable labels
for 16-port MAX panels

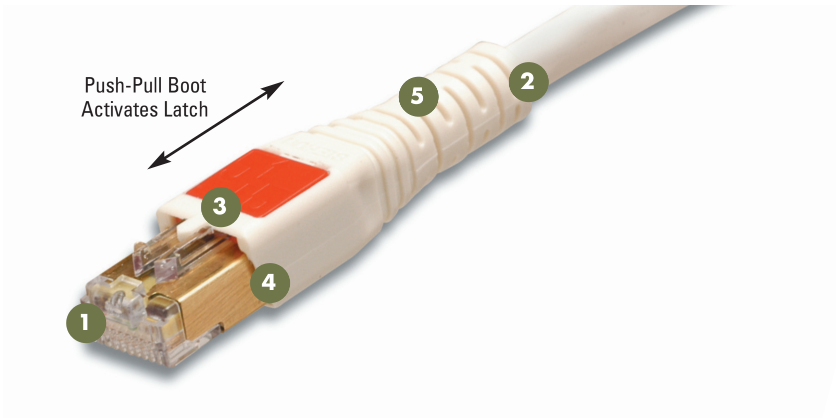


MX-PNL-LBL6* . . . .
10 sheets of laser printable labels
for 24- and 48-port MAX panels

**Visit our web site or contact our Technical Support Department for labeling software.*

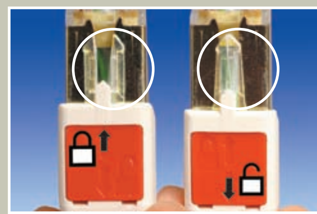
BladePatch® 6 UTP Modular Cords

Siemon's BladePatch 6 offers a unique category 6 solution for high-density patching environments. It features an innovative push-pull boot design to control the latch, enabling easy access and removal of the cord in tight-fitting areas. The BladePatch cord is ideal for patching blade servers, patch panels, or any equipment with high density RJ-45 outlets.



1. **Revolutionary Design** – Push-pull latch design eliminates need to defeat thumb latch used in standard modular plug designs
2. **Easy Access and Removal** – RJ-45 patch cord with patent-pending push-pull latch design enables easy access and removal in high density patching environments
3. **Snagless** – Push-pull design eliminates external thumb latch which can snag and break
4. **Low Profile Boot Design** – Optimises side-stackability of patch cords and allows use in even the most dense equipment
5. **High Density** – Ideal for high density data centre applications and today's high-density blade servers

Universal Compatibility
Fits within any standard RJ-45 opening.



Revolutionary Latch
Simply push the boot forward to latch into the outlet and pull back to release.

High Density
The push-pull design enables easy access and removal via the boot in tight-fitting areas.

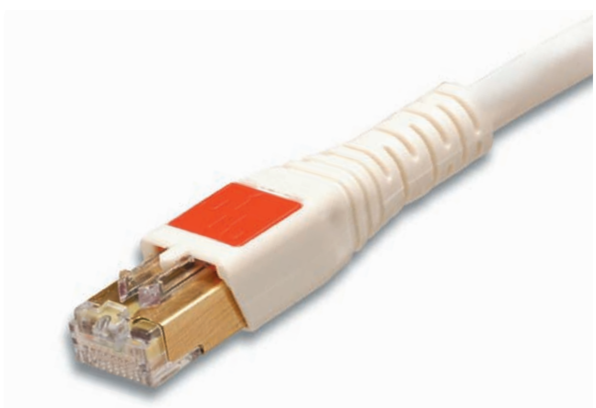
BLADEPATCH® 6 UTP

Category 6 UTP BladePatch, double-ended, RJ-45 modular patch cord with push-pull latching design, colour matching cord/boot, T568A/B.

BP6-(XX)M-(XX)

Cord Length:
- **01** = 1.0m
- **1.5** = 1.5m
- **02** = 2.0m
- **03** = 3.0m
- **05** = 5.0m
- **7.5** = 7.5m

Cord Colour:
- **01** = Black
- **02** = White
- **03** = Red
- **04** = Grey
- **05** = Yellow
- **06** = Blue
- **07** = Green

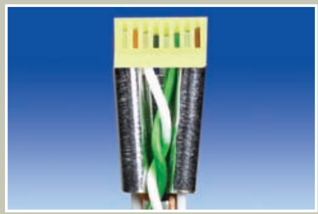


SIEMON

MC® 6 UTP Modular Cords

Siemon's MC 6 modular cords are the key to unlocking the performance of category 6 products. A variety of product enhancements contribute to the cord's performance — including 250 MHz rated stranded cordage, a patented cross-pair isolator and an innovative 360° crimp, which provides excellent plug-to-cable strain relief without causing pair deformation.

1. **Easy Identification** – Optional colour-coded icons available for port identification
2. **Superior Quality** – Internal stranded cordage isolator provides extended flex life and maintains ideal pair geometry
3. **Latch Guard** – Slide on boots feature a latch guard to protect plug from snagging when pulling through pathways or cable managers
4. **Durability** – High quality modular plugs provide long-term resistance to corrosion, humidity, extreme temperatures and airborne contaminants



Metallic Isolator
Patented metallic isolator shields pairs inside plug for optimum NEXT performance.

Excellent Bend Relief
37mm boot ensures excellent bend relief, critical for category 6 performance.

Exceeds Category 6
100% transmission testing ensures category 6 modular cord specifications and guarantees optimum field performance.

MC® 6 UTP MODULAR CORDS

Category 6 MC, double-ended, 4-pair UTP stranded modular patch cord, T568A/B, colour matching jacket/boot.

MC6-8-T-(XX)M-(XX)

Cord Length:
- **01** = 1.0m
- **1.5** = 1.5m
- **02** = 2.0m
- **03** = 3.0m
- **05** = 5.0m
- **7.5** = 7.5m

Cord Colour:
- **01** = Black
- **02** = White
- **03** = Red
- **04** = Grey
- **05** = Yellow
- **06** = Blue
- **07** = Green

IC 5e SOLID UTP SINGLE-ENDED MODULAR CORDS

Siemon's category 6 IC solid single-ended modular cords are designed for use in category 6 applications requiring a consolidation point (CP) or cross-connect (as an equipment cord). The cords are 100% factory transmission tested to 250 MHz and feature the same plug construction used in Siemon's stranded category 6 modular cords. These cords are supplied with an LS0H jacket and are single-ended for direct termination.

SYSTEM 6 IC MODULAR CORDS

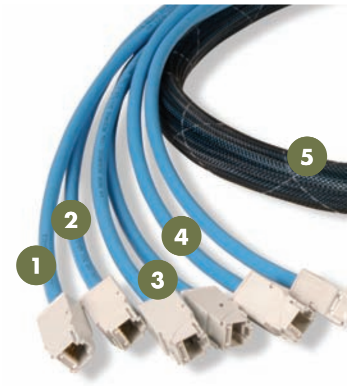
Part #	Description
IC6-8A-(XX)M-B(XX)L . . .	IC6, single-ended, LS0H, 4-pair UTP solid modular cord, violet jacket with coloured boot, T568B
IC6-8T-(XX)M-B(XX)L . . .	IC6, single-ended, LS0H, 4-pair UTP solid modular cord, T568A violet jacket with coloured boot, T568A

Use 1st (XX) to specify cord length: 03 = 3m, 05 = 5m, 10 = 10m, 15 = 15m, 20 = 20m

Use 2nd (XX) to specify colour of boot: 01 = black, 02 = white, 03 = red, 04 = grey, 05 = yellow, 06 = blue, 07 = green

Category 6 UTP Trunking Cable Assemblies

Siemon's category 6 UTP copper trunking cable assemblies provide an efficient and cost effective alternative to individual field-terminated components. Combining factory terminated and tested UTP Z-MAX or MAX® modules with Siemon System 6 cable, Siemon copper trunking cable assemblies were designed with data centre applications in mind. In addition to providing simple and aesthetically pleasing cable management, standard configurations also help maintain consistent cable layout and facilitate efficient moves, adds and changes. The modular design and reduced scrap of trunk assemblies make them the most "Green" method for category 6 cabling.



1. **Proper Orientation** – Each leg is labeled for proper module orientation
2. **Siemon Cable** – Utilises high quality Siemon cable
3. **Factory Terminated and Tested** – Utilises Z-MAX panel outlets or flat UTP MAX modules, factory terminated and tested for high performance
4. **Identification** – Each cable assembly is coded with a unique identification number for administrative purposes
5. **Breakout Kit** – Unique breakout kit creates optimal cable orientation and limits cable crossing

MAX SYSTEM 6 DOUBLE-ENDED TRUNKING CABLE ASSEMBLIES

Part #	Description
TCMD4E-A1A1(XXX)M	6 Leg Solid Cable Trunking Assembly, Grey Jacket, PVC
TCLD8E-A1A1(XXX)M	6 Leg Solid Cable Trunking Assembly, Violet Jacket, LS0H

Z-MAX™ SYSTEM 6 DOUBLE-ENDED TRUNKING CABLE ASSEMBLIES W/PANEL OUTLETS

Part #	Description
TCMD4E-P0P0(XXX)M	6 Leg Solid Cable Trunking Assembly, Grey Jacket, PVC
TCLD8E-P0P0(XXX)M	6 Leg Solid Cable Trunking Assembly, Violet Jacket, LS0H

Use (XXX) to specify length:
003-090 m in increments of 1 metre

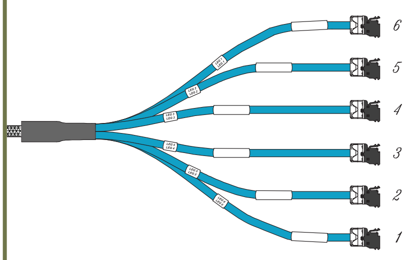
Standard wiring is T568B. Other lengths and configurations available upon request.

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

Straight Cut
Typical installation utilising Straight Cut ensures each cable is terminated at the proper length and allows left, right or centre exit.

Protective Packaging
Each assembly is packaged individually to protect factory terminations.

STRAIGHT CUT



System 6 UTP 4-Pair Cable (EMEA)

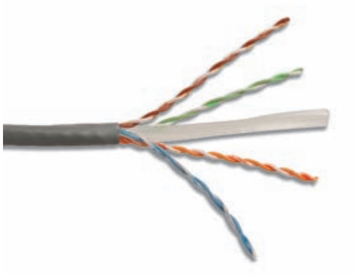
COMPLIANCE

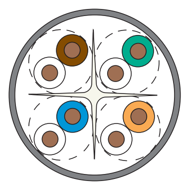
- ISO/IEC 11801:2002 (Category 6)
- TIA-568-C.2 (Category 6)
- IEC 61156-5:2002 (Category 6)
- UL CMX
- UL CM
- LS0H:IEC 60332-1, IEC 60754, and IEC 61034

CABLE CONSTRUCTION

- UTP
- 0.57mm (23 AWG) solid bare copper
- 6.35mm (max) jacket diameter
- Central isolation member

Part #	Description
9C6M4-E3	PVC (CM, IEC 60332-1), Grey Jacket, 305m, Reel-in-Box
9C6L4-E3	LS0H (IEC 60332-1), Violet Jacket, 305m, Reel-in-Box





ELECTRICAL SPECIFICATIONS

DC Resistance	<9.38 Ω/100m
DC Resistance Unbalance	5%
Mutual Capacitance	5.6 nF/100m
Capacitance Unbalance	<330 pF/100m
Characteristic Impedance (ohms)	1-100 MHz: 100 ± 15% 100-550 MHz: 100 ± 22%
NVP	68%
TCL	30-10 log(f/100) dB
Delay Skew	≤35ns

PHYSICAL PROPERTIES

	LS0H	CM/CMR
Pulling Tension (max)	110N	110N
Bend Radius (min)	25mm	25mm
Installation Temperature	0 to 60°C	0 to 60°C
Storage Temperature	-20 to 75°C	-20 to 75°C
Operating Temperature	-20 to 60°C	-20 to 60°C

TRANSMISSION PERFORMANCE

TIA & ISO/IEC — 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)	
1.0	2.1	1.8	74.3	87.3	72.3	82.3	72.2	85.5	70.2	80.5	67.8	84.8	64.8	79.8	20.0	29.0	570	545
4.0	3.8	3.5	65.3	78.3	63.3	73.3	61.4	74.8	59.4	69.8	55.8	72.8	52.8	67.8	23.0	32.0	552	527
10.0	6.0	5.6	59.3	72.3	57.3	67.3	53.3	66.7	51.3	61.7	47.8	64.8	44.8	59.8	25.0	38.0	545	520
16.0	7.6	7.1	56.2	69.2	54.2	64.2	48.6	62.1	46.6	57.1	43.7	60.7	40.7	55.7	25.0	34.0	543	518
20.0	8.5	7.9	54.8	67.8	52.8	62.8	46.2	59.9	44.2	54.9	41.8	58.8	38.8	53.8	25.0	34.0	542	517
31.25	10.8	10.0	51.9	64.9	49.9	59.9	41.1	54.9	39.1	49.9	37.9	54.9	34.9	49.9	23.6	32.0	540	515
62.5	15.5	14.4	47.4	60.4	45.4	55.4	31.9	46.0	29.9	41.0	31.9	48.9	28.9	43.9	21.5	32.0	539	514
100.0	19.9	18.6	44.3	57.3	42.3	52.3	24.4	38.7	22.4	33.7	27.8	44.8	24.8	39.8	20.1	32.0	538	513
160.0	25.8	24.1	41.2	54.2	39.2	49.2	15.5	30.1	13.5	25.1	23.7	40.7	20.7	35.7	18.7	31.0	537	512
200.0	29.0	26.8	39.8	52.8	37.8	47.8	10.6	26.0	8.6	21.0	21.8	38.8	18.8	33.8	18.0	29.0	537	512
250.0	33.0	30.5	38.3	51.3	36.3	46.3	5.3	20.8	3.3	15.8	19.8	37.0	16.8	31.8	17.3	29.0	536	511
300.0*	36.6	33.7	37.1	50.0	35.1	45.0	0.5	16.3	-1.5	11.3	18.3	36.0	15.3	30.0	16.8	27.0	536	511
400.0*	43.0	40.3	35.3	48.0	33.3	43.0	-7.9	7.7	-9.9	2.7	15.8	32.0	12.8	27.0	15.9	26.0	536	511
500.0*	48.9	39.9	33.8	48.0	31.8	42.0	-15.4	8.1	-17.4	2.1	13.8	31.0	10.8	26.0	15.2	25.0	536	511
550.0*	51.8	39.7	33.2	46.0	31.2	42.0	-18.8	6.3	-20.8	2.3	13.0	30.0	10.0	26.0	14.9	24.0	536	510

**Values for frequencies above industry requirements are for information only*

All performance based on 100 meters .

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