

TABLE OF CONTENTS

Introduction to SYSTIMAX® Solutions
Introduction to the SYSTIMAX Solutions Catalog
WebTrak™ 10
Copper Solutions
Reference Material
Copper Conductor Sizes
Pair Colors
ISO Pin-Pair Assignment
T568 Outlet Specifications
Copper Cord Assembly Product Identifier14
GigaSPEED® X10D Solution (Exceeding Category 6A)
Channel Performance
Cables
Patch Panels
Outlets
Cords
GigaSPEED® XL Solution (Exceeding Category 6)
Channel Performance
Cables
Patch Panels
Outlets
Cords
PowerSUM Solution (Exceeding Category 5/5e)
Channel Performance
Cables
Patch Panels
Outlets
Cords
InstaPATCH® Cu (Pre-terminated Copper Solution)
VisiPatch® System
VisiPatch 360 System
VisiPatch System
Additional Copper Connectivity
Modular Panels
SFP (Small Form Factor Pluggable)
Ruggedized 9 Category 3 94
· ·
110 Hardware
Adapters
•
Protection Products
Coaxial Solutions 116 Cable Fire Ratings Matrix 117
ů .
Cable Construction
Video Cables
Security Cables
Fiber Solutions 130
Reference Material
Cable Sizing and Specification
Cable Sizing and Specification
Cable Capatriutions 13





































	//Inde
	Ssan
	5

LazrSPEED® Cables and Cords – 50 micron Laser Optimized Multimode	140
Performance	142
OptiSPEED® Cables and Cords – 62.5 micron Multimode	143
Performance	144
TeraSPEED® Cables and Cords – Zero Water Peak Single-mode	145
Performance	146
Cable	147
Distribution Cable	147
FastFiber Riser, Plenum and LSZH Distribution Products	148
Riser and LSZH Single Unit Distribution	150
Riser and LSZH Multi Unit Distribution	152
Plenum Single Unit Distribution	154
Plenum Multi Unit Distribution	
FiberGuard® Interlocking Armored Riser and LSZH Distribution Cables	
FiberGuard® Interlocking Armored Plenum Distribution Cables	158
Indoor/Outdoor Cable	
Triathlon® Indoor/Outdoor Riser and LSZH Single Unit Distribution	161
Triathlon® Indoor/Outdoor Riser and LSZH Multi Unit Distribution	
Indoor/Outdoor Single Unit Plenum Distribution	
Indoor/Outdoor Multi Unit Plenum Distribution	166
Indoor/Outdoor Gel-free Stranded Loose Tube Riser	
Heavy Duty Indoor/Outdoor Gel-free Stranded Loose Tube Riser	
Mini LSZH Indoor/Outdoor Armored Loose Tube Cable	
Mini LSZH Indoor/Outdoor Loose Tube Cable	
Mini LSZH Indoor/Outdoor HTS Stranded Loose Tube	
LSZH All-Dielectric Drop Indoor/Outdoor Cable	
Indoor/Outdoor Stranded Loose Tube Plenum	
Light Duty Riser Indoor/Outdoor Cable	
Outside Plant Cable	176
All Dry Outside Plant Stranded Loose Tube Non-Armored	
All Dielectric Gel-free Buffer Tube	
All Dry Outside Plant Stranded Loose Tube Armored Gel-free Buffer Tubes	
Outside Plant Arid-Core Stranded Loose Tube Non-Armored All Dielectric	
Outside Plant Arid-Core Stranded Loose Tube Armored	
Outside Plant Arid-Core Mini Stranded Loose Tube Non-Armored All Dielectric .	
Light Duty Outside Plant Cable.	
Mini All-Dielectric High Tensile Strength Outside Plant Stranded Loose Tube .	187
Outside Plant Specialty Designs Double	400
Jacket Single Armor Gel-Free Stranded Loose Tube	
Outside Plant Central Tube Non-Armored All Dielectric Outside Plant Central Tube Armored	
Outside Plant All-Dielectric Drop.	
Outside Plant Self-Supporting Figure 8 Stranded Loose Tube Armored Outside Plant All-Dielectric Self Supporting ADSS Cable	
InstaPATCH® 360 Fiber System	
Shelves and Panels	
Modules	
iPatch Fiber Shelves	
Adapter and Mounting Bracket	
Fanout Cables	
Pulling Grip Kit	
Array Cords	204



F	Patch Cords	205
F	Fiber Pigtails	206
A	Attachment Brackets	208
9	Shelf Accessories	209
Ultra	High Density Solutions	211
G2 Fi	iber Connectivity	213
3	360 G2 Modular Cartridges	213
3	360 G2 Modular Distribution Panels	214
(G2 Front Faceplates	215
Addit	tional Fiber Connectivity	216
E	Enclosures	216
٦	Troughs	220
	Grounding Clamp	
A	Adapter Kits	221
ŀ	Keyed LC Connectors	222
E	EZ Connectors	224
(Qwik II Connectors	227
	Adapters	
Tools	and Consumables	232
•	nfrastructure Solutions	
	ntelligent Infrastructure Solutions Overview	
	Patch Operations Software	
	Patch Control Systems	
	Patch Copper Panels	
	Patch Fiber Shelves	
	Patch Services	
	Patch BusinessPartner Program	
	n Platforms and Accessories	
	Faceplates	
	Surface Mount Boxes	
	Zone Boxes	
	Accessories	
	Multimedia Adapters and Couplers	
	nternational Faceplates	
	7-ded Ad	
	Racks and Accessories	
	Cable Runway and Accessories	
	Cable Management	
	Power Strips	
	Server Cabinets	
	Network Cabinets	
	Explanation of Cabinet Accessories	
	and Shipping Copper Cable Packaging and Shipping	
	Fiber Optic Cable Packaging and Shipping	
	Tiber Optic Cable Fackaging and Shipping	
Giossary		300



















SYSTIMAX® Solutions



















CommScope, through its SYSTIMAX, Uniprise and Andrew brands, enables customers around the world to create a connected enterprise, supporting current and future business and technology opportunities by providing the right network infrastructure solution for any and every need. Through its portfolio of fiber and copper cabling, intelligent systems for infrastructure management, security and building automation and distributed antenna systems, CommScope delivers the solutions that transform a building to a connected enterprise

Backed by CommScope Labs and a 20 year extended warranty, solutions are delivered through CommScope's global network of industry-leading Business Partners and distributors that ensure consistent, high level service and support worldwide.

The SYSTIMAX Product Line

SYSTIMAX delivers intelligent network infrastructure solutions that can make the difference between business success and failure. Our advanced technology and breadth of solutions enable C-level executives around the world to take advantage of business opportunities that affect the bottom-line by reliably powering mission-critical, high-bandwidth and emerging applications.

Environmental Stewardship

In addition to helping customers, CommScope is focused on environmental stewardship – one of the company's longtime fundamental values. CommScope's solutions can help customers to minimize energy consumption and long-term waste throughout the network as part of a larger concern for the impact of enterprise technology on the environment. Manufacturing products that last more than 20 years, offering integrated solutions that run on one network and providing unparalleled vision and control to more efficiently manage existing resources – are all ways that CommScope's solutions contribute to a positive impact on the environment.

CommScope and the RoHS Directive

RoHS, adopted in July 2006, is an international environmental initiative that restricts the levels of potentially harmful materials, such as lead, cadmium, mercury and hexavalent chromium, used in electrical and electronic equipment.

Since the inception of RoHS, CommScope has worked to ensure that our manufacturing processes are aligned with these voluntary but important requirements. These principals are, in fact, very consistent with the company's policy toward environmental stewardship. We are proud to continue working toward a cleaner future.

ISO 9001 Quality Management System Certification

CommScope is committed to manufacturing excellence in all aspects of its operations. Our policy is to design, manufacture and deliver products and services which conform to the industry and customer specifications in every way. And we do that through our Quality Management System. ISO 9001 is an internationally recognized standard for the management of a quality system. CommScope has been certified to the ISO 9001 standard since 1994. Our conformance to the standard provides our customers with the assurance that our business, product design and production processes are congruent with the principles and philosophy underlying the ISO 9001 Quality Management System family of standards. Specifically, that customer satisfaction and continuous improvement of our processes and products is a part of the core of what we do everyday.

SYSTIMAX® Solutions

CommScope® SYSTIMAX 360™

Engineering meets elegance. Speed meets intelligence. Copper meets fiber.

With SYSTIMAX 360™, CommScope® delivers the most capable infrastructure imaginable with a solution loaded with features that will make it a platform for change in the industry. SYSTIMAX 360 delivers next generation 10G U/UTP with uncompromised performance and high-density formats and improved ergonomics, exceeding industry standards from every angle. SYSTIMAX 360 is engineered with customers in mind; products deliver the design, speed and intelligence you need to take your business further. Sleek, intuitive design offers superb ergonomics and an elegant appearance. Scorching speed takes on any current or emerging application with superior, consistent performance. Intelligence options provide insight deep into your network, offering you the vision, knowledge and control of your network infrastructure.

Through the innovations of SYSTIMAX 360, CommScope empowers you with unprecedented performance, usability and intelligence. We make it possible for enterprise executives and IT management across the globe to seize future opportunities and enhance profitability by powering your network for mission-critical, high bandwidth and emerging applications. All delivered in a green packaging format for CommScope that continues our commitment to environmental stewardship.

Global Support and Delivery

CommScope's solid global footprint and extensive network of BusinessPartners ensure its customers receive a consistent level of services and support worldwide – providing access to CommScope's extensive product portfolio virtually anywhere at anytime. Another critical aspect of performance is installation and implementation. CommScope's BusinessPartners are among the industry's best network infrastructure implementation solution providers that adhere to the same high standards of expertise, performance, quality and reliability for which CommScope's solutions are known.

CommScope, Inc., through the Andrew Wireless Solutions brand, is a global leader in radio frequency subsystem solutions for wireless networks. CommScope is also the premier manufacturer of coaxial cable for broadband cable television networks and one of the leading North American providers of environmentally secure cabinets for DSL and FTTN applications.

For more information please visit www.commscope.com.









Intelligent Infrastructure









Introduction to the SYSTIMAX Solutions Catalog

Table of Contents

















A premises connectivity system, or distribution system, allows telephones, personal computers (PCs), control systems and other devices such as video surveillance cameras to communicate with each other. It does this by connecting them together through a combination of cables, adapters, connectors and other equipment, such as wireless LAN access points.

A structured connectivity solution is a cohesive way of organizing a connectivity system. The basic rules governing a structured connectivity solution are:

- It uses standardized media and layout for both backbone and horizontal cabling.
- It uses standard connection interfaces for the physical connection of equipment.
- It supports equipment and applications of many vendors – not just a single vendor. The cabling system is independent of the vendor's equipment, and thus, is more flexible. This is known as "Open Architecture."
- It has a consistent and uniform design. It follows a system plan and basic design principles.
- It is designed and installed as a total system.

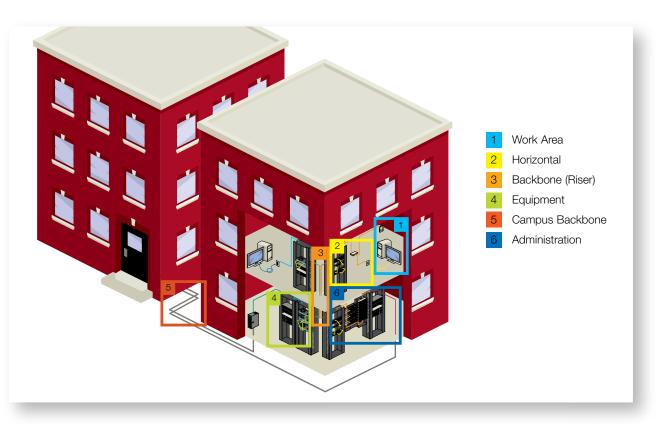
 Cabling is not just installed on an as-needed basis.

SYSTIMAX Subsystems

The complete structured connectivity solution can be divided into six discrete subsystems. Each subsystem provides modularity and flexibility; changes and rearrangements usually take place in just two of the subsystems. Configurations for different types of connectivity, for new applications or for new standards may also involve just a few subsystems.

The following six subsystems, when linked together, provide a complete, integrated connectivity system:

- Work Area Subsystem
- Horizontal Subsystem
- Backbone (Riser) Subsystem
- Equipment Subsystem
- Campus Backbone Subsystem
- Administration Subsystem



Work Area Subsystem

The connection between the Information Outlet (IO) and the station equipment (such as PCs, telephones, printers and video monitors) in the work area is the Work Area Subsystem. It consists of cords, adapters and other transmission electronics, such as wireless LAN access points, that permit the station equipment to connect to the horizontal media via the IO.

In SYSTIMAX Intelligent Building Infrastructure Solutions (IBIS), this subsystem is called the Coverage Area Subsystem, and equipment typically includes smoke-, fire- and temperature-sensing devices, video surveillance cameras, and access control devices (such as ID card readers).

Horizontal Subsystem

The Horizontal Subsystem covers the distance from the Work Area to the Telecom Closet (TC). It includes the IO and the transmission media used to extend the outlet to the TC. Each floor of a building is served by its own Horizontal Subsystem.

SYSTIMAX supports the use of twisted pair copper cable and/or multimode optical fiber and 8.3 micron single-mode optical fiber in the Horizontal Subsystem. The horizontal wiring is terminated on an IO in the Work Area and on cross-connect or interconnect hardware in the TC. The horizontal wiring shall be a star topology with each Work Area IO connected to a TC.

When twisted pair copper is used, SYSTIMAX requires that individual 4-pair cables be run and terminated at each IO placed in the Work Area. The maximum length of the horizontal cable run is 295 feet (90 meters).

Backbone (Riser) Subsystem

The Backbone (Riser) Subsystem is the portion of the SYSTIMAX Solution that provides the main (or feeder) cable routes in a building. It usually supplies the multiple circuit facilities between two locations, especially where common system equipment is located at a central point. The Backbone (Riser) Subsystem consists of larger pair count copper cables and optical fiber cabling along with the associated hardware used to bring this cable to other locations. For communications within a building, the Backbone (Riser) Subsystem connects TCs to equipment areas. These areas may be a single main equipment room or multiple equipment locations within the building.

Equipment Subsystem

The Equipment Subsystem consists of shared, common communications equipment and the transmission media required to terminate this equipment on connecting hardware.

The Equipment Subsystem is made up of the cable, connectors and associated support hardware in an equipment room. These are used to extend the common equipment circuits to the main cross-connect wall field for connection to the SYSTIMAX network infrastructure solution.

Campus Backbone Subsystem

The Campus Backbone Subsystem extends the cabling in one building to communication devices and equipment in other buildings on the premises. It is the portion of the distribution system that includes the transmission media and support hardware required to provide an inter-building communication facility. It consists of copper cable, optical fiber cable and electrical protection devices that are used to prevent surges on the cable from entering buildings.

Fiber optic cable is often used as the Campus Backbone medium because it is immune to Electromagnetic Interference and Radio Frequency Interference (EMI and RFI) and can extend the distance over which signals can travel between buildings. Typically, the Campus Backbone Subsystem connects buildings in the equipment rooms.

Administration Subsystem

The Administration Subsystem consists of the cross-connects and interconnects that are made to join two subsystems together or to assign common equipment circuits to subsystems that exist in the TC and equipment areas. Cross-connects and interconnects allow easy administration of common equipment circuits for routing and rerouting to various parts of a building or a campus.

Cross-connects are made with hook-up wire or patch cords. A hook-up wire is a short length of single wire, whereas a patch cord contains several wires and has connectors at both ends. Patch cords provide an easy way to rearrange circuits without the need for the special tools required to install jumper wires. Interconnects accomplish the same purpose as cross-connects, but use plug ended wires, jacks and adapters instead of jumper wires or patch cords.

It is recommended that the Administration System use the color coding for circuit labels and the circuit identification parameters outlined in TIA/EIA 606.

This catalog contains all the components to fulfill the requirements of each of the subsystems.









Intelligent











Certification of Quality and Performance

Proof of Performance Comes with Every Reel

Certified Test Reports



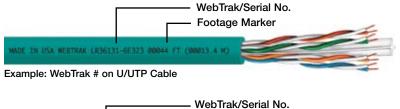
Quality is just a word until it is proven. This is why CommScope backs its claims for the performance of it's twisted pair and fiber optic cables by testing each master reel.

WebTrak is a service that gives you online access to performance testing for our copper and fiber optic cable products. Should there be a performance issue in the field, WebTrak offers the peace of mind you need to ensure the product meets or exceeds performance requirements, allowing you to focus on other causes.

WebTrak test reports are available for all SYSTIMAX Category 6A, 6 and 5e Cables. (Not available on outdoor cables or multi-leg and pair counts higher than 4.) These cables undergo frequency sweep tests for insertion loss, crosstalk and return loss. These values are recorded and logged to our WebTrak system. Each report shows the TIA spec, CommScope spec, average and worst case data for the NEXT, PSNEXT, Return Loss, Insertion Loss (attenuation) and ACR.

Test reports are available for all CommScope Premises, Indoor/Outdoor, and Outside Plant Fiber Optic Cables. WebTrak reports for Fiber Optic Cables provide dated, detailed results on attenuation for each fiber, conducted at two wavelengths as well as cable construction information, sales order number and part number. To access WebTrak reports for your fiber optic cable use the 11-digit serial number and the length marker located on the cable jacket.

This report is your assurance that the cable you've paid for will perform as promised. WebTrak: Your access to online data for the cable you install. www.commscopewebtrak.com





Example: WebTrak # on Fiber Optic Cable

1,000' - 0' Footage Markers

To reduce scrap and simplify traceability and termination, CommScope prints 1000 to 0 footage markings on the outer jacket of all twisted pair and fiber optic cables. This is just another feature that CommScope offers to simplify the installation process. (Not available on outdoor cables or multi-leg and pair counts higher than 4.)



ISO 9001

ISO certification is another proof of CommScope's commitment to manufacturing excellence in all aspects of our operations. Our promise is to design, manufacture and deliver products and services which conform to specifications and satisfy your requirements and expectations in every way.



















