

Connectivity & Power in Telco Closets

Versatility, Space Savings and Wall Mounting are Key Features for Equipment Deployed in These Unique and Dynamic Network Applications

The physical layout of telco closet applications presents many unique challenges to network engineers. To say space is limited is an understatement; in many cases, a piece of plywood is bolted to a wall, and communications network equipment shares space with brooms, mops and other items.

Yet the functions that occur in closet applications are critical to network performance. Demarcation of services, distribution of high-bandwidth cabling, and delivery of broadband to end users all take place in this "hub" of the building.

When it comes to layer one functionality such as connectivity, power distribution and circuit management, innovative platforms that make the most of limited space while providing advanced capabilities are the ideal solutions for telco closet applications.

Whether the user is creating a demarcation point, managing power, distributing services throughout the location, or all of these, there are several key features to emphasize when selecting equipment for a telco closet application.

Foremost is the ability to mount equipment on a wall – this is the most common practice in these environments, since there is seldom sufficient space for an equipment rack. Solutions that provide multiple capabilities in minimal space also create a significant advantage, since multiple functions can be addressed in a single piece of equipment.

Below are several examples of products and systems that incorporate these key advantages for telco closet applications.

Fiber Optic Demarcation

Many closet applications require the demarcation of service provider fiber optics (often a trunk cable, or 432-fiber stub) into individual patch outputs to other equipment or locations. A wall-mount patch panel is an ideal solution. Users can "land" the fiber in the building, then distrib-



24-port Telect wall-mount fiber optic patch panel.

ute it in a 24-port or 48-port panel.

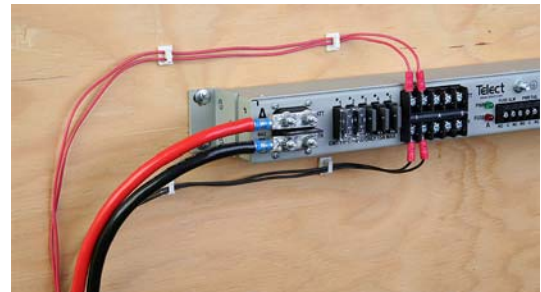
The compact size makes a wall-mount panel a good fit. Configurations with separate lockable compartments for provider fiber and end user fiber provide an additional layer of security.

Telect Fiber Optic Demarcation/Patching Products

24-port patch panel	055-8632-5000
48-port patch panel	055-8832-5000
6-port SC/UPC patch plate	055-0000-6010
6-port FC/UPC patch plate	055-0000-2010

Power Distribution

All network equipment requires power, and that power must be properly distributed and protected to ensure reliable performance. A fuse panel is typically sufficient for telco closet appli-



Telect wall-mount dual 5/5-position GMT fuse panel, fastened to a backboard.

Connectivity, Demarcation and Power Distribution in Telco Closets

cations, yet a full-sized panel is often too bulky to fit the space.

Wall-mount panels with minimal extension are the best solution. A Telect wall-mount/total front access panel protrudes just 2 inches from the wall when mounted to a backboard, providing ample power capacity without significantly impacting application space.

Telect Power Distribution Products

Dual 5/5 wall-mount GMT fuse panel	GMT05FA
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Multifunction Connectivity



Loaded 3-module multifunction chassis.

For layer one functionality, connectivity is the heart of the application. Managing fiber optics, DS1s, DS3s and Ethernet traffic is a critical component of the application. Obviously, there are a myriad of connectivity panels (DSXs, patch panels, etc.) available for each of these signal types. However, the volume of traffic in a typical telco closet does not usually justify the cost and space dedication of a full single-function panel.

Multifunctional solutions are available that address multiple signal types in a single panel.



Wall-mount multifunction chassis footprint.

Telect's multifunction panel also features a wall-mount chassis that's ideal for backboard applications. If users need to terminate a single DS3 in the closet, for example, they can use a wall-mount bracket with a single DSX-3 module, and the termination point is created in the absolute least amount of space possible.

Three-module chassis can be config-

ured to meet the specific capacity requirements of the application.

Telect Multifunctional Connectivity Products

1 RU/3-module chassis	ELF-0000-2400
1-module wall-mount chassis	ELF-0000-0600
1-module wall-mount fiber chassis	ELF-0000-0800
6-term. front acc. DSX-1 module	ELF-3006-1100
1-term. front acc. DSX-3 module	ELF-3206-1900
16-term. Cat 5e patch module	ELF-9716-1700
8-term. Cat 6 patch module	ELF-9716-2300
12-fiber SC/UPC patch module	ELF-PC12-SC00
12-fiber SC/UPC patch/splice module	ELF-SP12-SCPT

Additional modules available.



Multifunction panel single-module wall-mount chassis.

Ethernet Distribution

When utilized as a building distribution frame (BDF) location, a telco closet can essentially serve as the central distribution point for an entire floor, or even the rest of the building.

In these cases, basic access switching capabilities are required, along with a patching platform for Ethernet cables. Telect's SDP1000 access switch is the ideal solution — it's surface-mountable for backboard applications, and pro-

Telect Ethernet Distribution Products

Surface-mount access switch, 4GE (1SFP), 24FE (8POE)	MG-SDP1000-A
Surface-mount patch chassis	MG-SURFACEMT-A
Hinged module carrier	MG-CARRIER-4A
Cable management ring panel	MG-RGPNL-A
8-port Cat 5e patch module	MG-8CT5E-A

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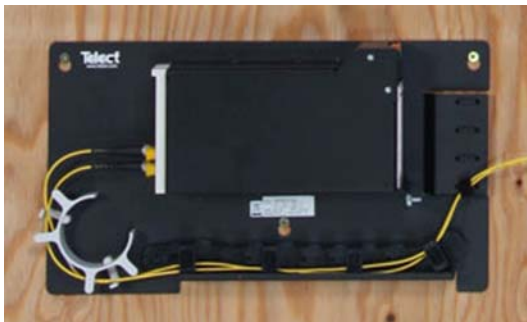
Telect surface-mount Ethernet switch and patching solution.

vides Gigabit Ethernet switching in an ultra compact footprint.

The surface-mount design and outward port orientation minimizes impact on overall space in the closet application. Wall-mount Ethernet distribution solutions — in a modular format to enable simple, scalable growth — provide the patching capabilities to manage traffic. A fiber optic patch and splice module (detailed in the “Multifunctional Connectivity” section above) can be utilized to terminate incoming fiber and feed fiber to the access switch’s input port.

Media Converter/Optical Extension

When a telco closet serves as a BDF, or the



Telect wall-mount media converter module.

hub of the communications network for the entire building, bandwidth must be delivered to different rooms or floors from a single location.

The limitations of copper cabling force the use of fiber optics between floors. Telect’s line of media converter solutions takes DS3 or Ethernet signals (electrical), converts them to fiber optics, then delivers the signals greater distances over fiber, without signal degradation.

Wall-mount systems provide the ideal back-board solution, with a send module in the BDF and a receive module at the end user location, which is typically another closet on a different floor.

Telect Media Converter Products

Ethernet wall-mount system, single mode SC 710-1001-2302-E

DS3 wall-mount system, single mode SC 710-1001-2002-U

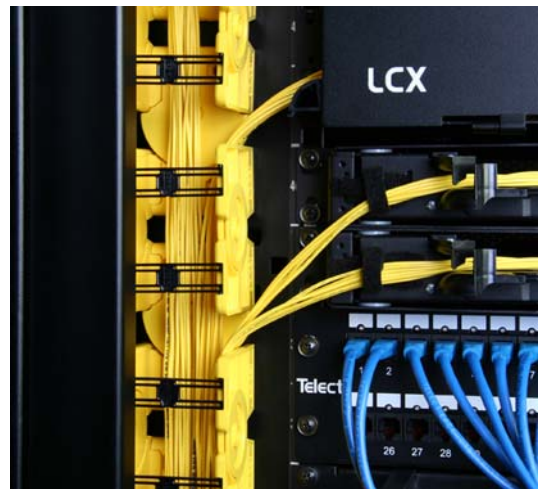
Protected DS3 wall-mount system, single mode SC 710-1001-2222-U

Additional configurations available.

Cable Management

Although closets are most often lower capacity applications, they still generate a significant amount of cabling. Telect’s CableLinks® flexible link system is an excellent choice for these applications.

Individual links snap together and flex horizon-



Vertical cable management with Telect’s CableLinks.

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tally and vertically to navigate around obstacles. Links can be easily mounted to backboards, helping to securely route and protect cables, and maintain critical bend radius for fiber.

Telect Cable Management Products

2" CableLinks, yellow, single	027-0000-4200
2" CableLinks, yellow, pallet	027-0000-42PLT
2" CableLinks, black	WT2E-CBLX-BLK

Battery/Power Rack Solutions

In cases where there is sufficient room for an equipment rack, many telco closet applications include transport equipment to deliver advanced services throughout the facility. These systems can be coupled with batteries (a backup power



Equipment such as power distribution, connectivity (top photo) and batteries (bottom photo) can be part of a rack-mount application in a telco closet.

source), connectivity, power distribution, or whatever else is required in the application. As a layer one solutions provider, Telect provides all of the physical layer components for this type of installation, including equipment racks, mounting hardware, and more.

Telect Battery/Power Rack Products

Global seismic frame, 19"	0GS146
Global seismic frame, 23"	0GS246
Battery tray, 19"	1SBTM-213W
Battery tray, 23"	0SBTM-213W
1 RU Multifunctional connectivity panel	See above for parts
24-port fiber optic patch tray, SC/UPC	NSRX-P024-ASC-000
100A Dual 10/10 GMT fuse panel	HPGMT10
6" support triangle	01241-01
9" support triangle	01241-02

Conclusion

Today more than ever, network engineers are faced with minimizing capital investment while maintaining high levels of service. In telco closet applications, equipment must address all required functionality, yet ideally must place a minimal impact on budgets and, more practically, must fit in the limited available space.

Telect telco closet solutions address all of these factors, providing users with efficient and effective systems for connectivity, power management, and more.

See more Telect products, systems and solutions engineered for telco closet/backboard applications on Telect.com.