



AMP Hi-D

Next Generation of Cable Organization and Routing



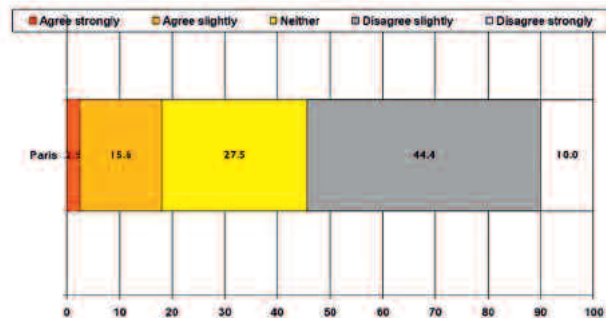
The Importance of the IT Infrastructure

Today, Information Technology is a critical service function that directly affects business processes and efficiency through the implementation of business critical telecommunications infrastructures. Developments in standards and user environments indicate constant growth and impact on all IT systems. Today performance is the critical criterion on which to base the decision to purchase a system. However with the increasing complexity of IT other criteria now need to be considered with equal importance.

This is particularly the case in Data Centers where many disparate systems work closely together. Many factors are important to guarantee reliable and error free operation. Even in the office environment users are increasingly paying attention to the impact of the infrastructure solution and considering important factors such as:

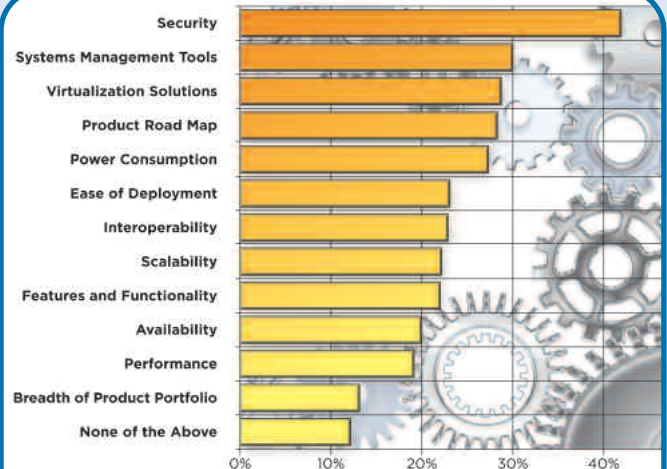
- Operational cost
- Maintenance
- Downtime
- Mechanical issues and space
- Documentation, Intelligent Infrastructure Systems

"I can predict exactly what will happen in my datacentre(s)"

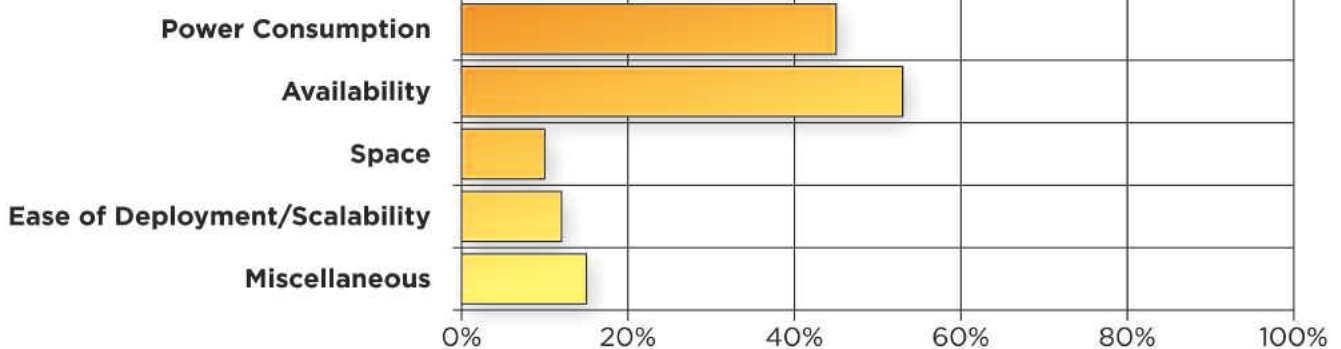


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Sources: IDC, BSRIA, DCD, DCS



Source: Tyco Electronics customer survey

Why Cable Organization and Management?

It is critical, that IT driven tasks are able to change as quickly as required by the constantly evolving needs of the organization. In a dynamic business environment IT tasks are critical to people and processes. At the same time installation, cable routing and cable management have become more important. Work orders or reconfigurations can be difficult. If active equipment is installed, the airflow can be obstructed or not efficient or inefficient. With higher speed copper services such as 10 Gigabit applications even the bend radius is an issue as the cable diameter of patch cords has increased. Investigations have shown that many systems suffer performance degradation delete performance because of bend radius issues.



Daily tasks:

- Movement of people
- Repatching of cords
- Installation of a new cable
- Installation or replacement of LAN electronics
- Troubleshooting
- Maintenance of hardware



Market trends:

- High Density Electronics
- Growth of Data Center
- Limited floor space
- Power and Cooling requirements
- Importance of IT



Technical issues:

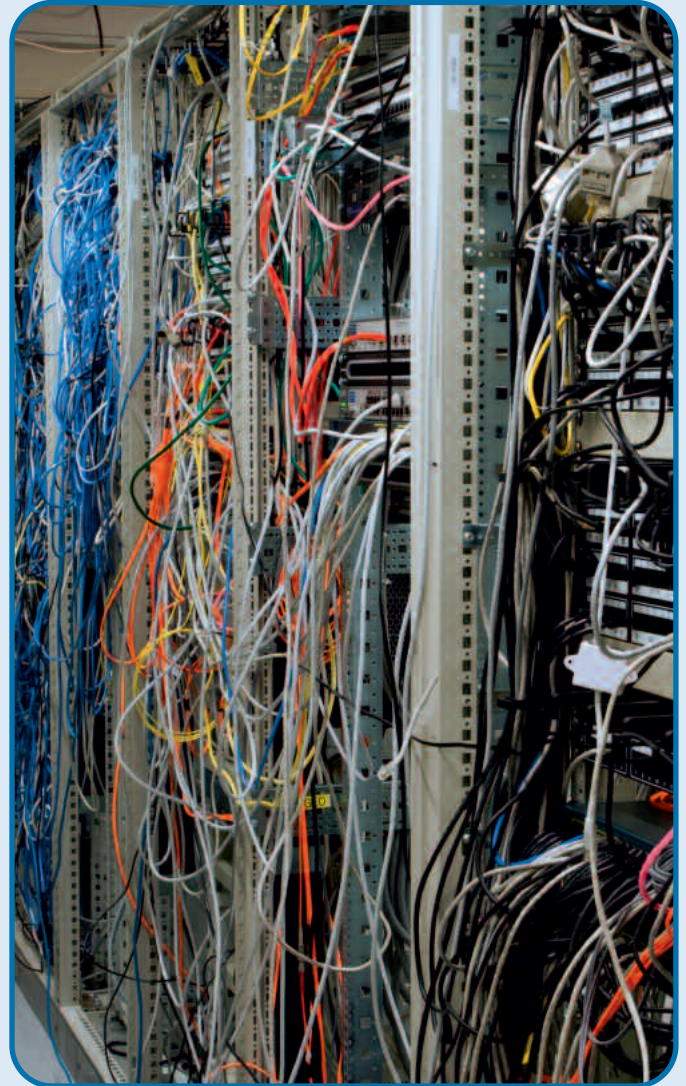
- Blocked airflow
- Insufficient Bend radii
- Cable routing and management
- Thicker cable because of 10 Gbit/s and more

Consequences:

- Standard products insufficient for supporting cable routing and organization
- Non-existent function for Intelligent Infrastructure Management
- Incompatible products in rack
- Time issues
- 30-40 % abandoned patch cords after 1 year of operation
- Dead ports in switches and cable runs 30-40 % unused capacity
- New LAN electronics required

Airflow and Cooling Issues

Today data centre owners face a new challenge in the form of airflow and cooling issues. Cable routing and design can have an influence and strongly affect airflow design efficiency. This applies to the individual rack as well as in pathways covering the overall data center design. A particular area of concern is racks that house active devices. In this scenario any movement of cables can have an impact on the operation of the active equipment. Depending on the equipment the cooling design can be disturbed and even result in equipment failure.



Airflow Dynamics

Airflow and cooling dynamics are a crucial requirement for active equipment and essential to ensure reliable operation. The AMP Hi-D system has been designed to provide an airflow friendly design to support the operation of active equipment. The current generation of switching equipment on the market has either a front to back or a side to side ventilation concept. The AMP Hi-D system supports both cooling methods and increases the reliability and airflow efficiency of the equipment by keeping the cables away from the ventilation pathways, unlike traditional compared to traditional cable management systems.



Protect Your Active Equipment

AMP Hi-D - The Platform of Your Infrastructure

In order to meet these design objectives, Tyco Electronics has used its longterm experience in the telecom business in developing a new generation of cable organization and routing products. The AMP Hi-D system is a complete next generation of infrastructure hardware products, which has been developed to improve cabling performance, maintenance and daily operational functions. Electrical and mechanical requirements as well as operational and maintenance are all crucial factors in the modern infrastructure design. AMP Hi-D provides the overall solution to all of these concerns.

What is AMP Hi-D?

AMP Hi-D is a cabling system platform consisting of different product sets for data transmission and cable management which complement each other.

The AMP Hi-D product range contains:

- Angled panels
- Horizontal and vertical cable management
- Patented side management using AMP corner brackets
- Fiber Optic tray system
- Automatic bonding control



AMP Hi-D is a platform for excellent cable access and protection. In the case of moves, adds and changes work orders for connections can be handled effectively and reliably. This is essential for reducing downtime and completing successful work orders.

Cabling Protection

Fibers and also new generation copper systems are sensitive to maintaining minimum bend radii. The patented side management bracket is a reusable corner bracket, which automatically applies the correct bend radius. The brackets are designed for both copper and fiber.



Zero U Cable Management

Our Zero U cable management for copper or fibre enables customers to achieve space saving. This allows the combination of high density electronics and patch panels even in environments where space is limited.

ONE - Overall Network Efficiency

The AMP Hi-D connect system provides many features that provide a positive influence on the operational cost of the system during its usable lifetime. These features result in an improved ROI. A key element is the strong focus on achieving operational tasks to minimize the time taken for moves, adds and changes, troubleshooting

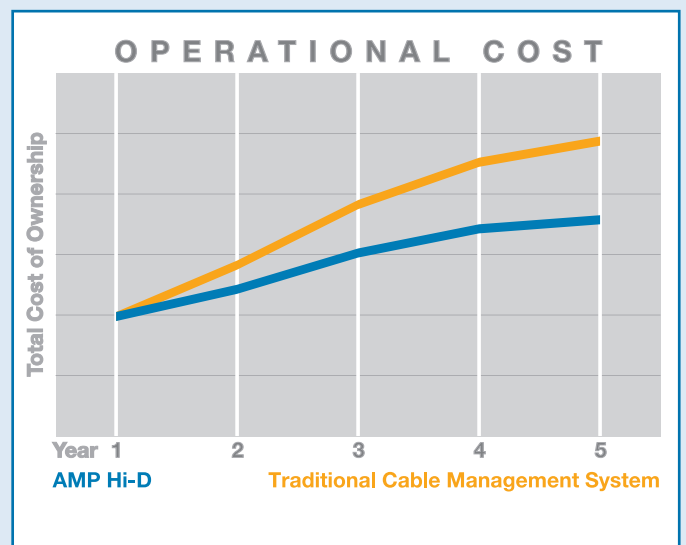
- Space savings
- Operational savings
- Improved Airflow support
- One system for copper and fiber
- For Data Centers and Office buildings



Operational Savings Improve Return on Investment

The operational costs of a system are not clearly apparent when considering product selection. The operational environment is increasingly difficult to envisage in today's ever changing infrastructure. This is particularly true in the network environment where many devices exist with different levels of functionality. When considering the impact and operational cost benefits of a system a holistic approach to the infrastructure is required.

- Product cost
- Return On Investment



Features and Benefits

Key System Benefits

The AMP Hi-D platform is the next generation hardware management system for enterprise networks and Data Centers.

In those environments the platform realizes the following benefits:

- Rack density increased by up to 35%
- Professional cable routing
- Reliable and safe maintenance
- Lower operational cost
- Bend radius control for copper and fiber
- Reusable parts
- Improves airflow and cooling concepts
- Automatic bonding system

AMP Hi-D Applications



- Zero U cable management for open frames and cabinets
- CareClip cable management
- Panels with integrated cable management

The Right Combination for Your Network

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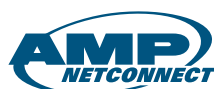
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