

DATA CENTRES

A cabling environment in their own right.

Most cabling companies are installing standard enterprise/ office cabling products into data centres - leading to congested cabinets, cableways, impeded airflows and excessive use of expensive floor space for patching frames.

Is it time for a total rethink and specialist datacentre cabling products specifically designed for the space and cooling constraints of datacentres? Ken Hodge, technical manager at Brand-Rex says a decided yes and describes a completely new approach.

Structured cabling systems emerged to interconnect all the IT equipment in a building, principally devices at users' desks, such as PCs and telephones. The Data Centre that acted as the core was a special area where many different connector technologies and machines, each with their own interfaces, were interconnected. To an extent this is still the case.

Data Centres have seen huge growth in the last few years but this growth has been more a case of rapid evolution rather than carefully planned expansion. This has led to people equipping Data Centres with standard office cabling products that may be far from ideally suited to the Data Centre environment.

Structured cabling makes it easy to manage an office environment. Typically, a building will be flood wired, and then as MACs occur, points are available anywhere. Importantly, the basic user requirements do not alter a great deal.

However, in a Data Centre, when a server is changed, it can suddenly go from needing two ports to eight, or more. So the density of cabling provided to the server point is far higher than to a desk point, and is likely to grow more rapidly. Also, there is typically far less space available than in an office environment. The result is: far more cabling and higher levels of connectivity going into a smaller space.

To solve this problem is the aim of a series of products developed recently by Brand-Rex, some already in the market, others about to be introduced. For example, a new Data Centre Patch Cabinet is specifically designed to increase the density of cabling it can handle. It achieves this by incorporating special V12 snap-in-jack panels that pair the patch cords away to the side, giving full access to patch cords, eliminating the need for horizontal cable managers. As well as saving space, the panels also ease bending stresses on the cord.

Also, the cabinet is half-depth, so two can be installed back to back in the space of a single standard cabinet. The result is, the new cabinet provides up to 1728 ports in a 900 x 1000mm footprint.

Such space saving can pay for itself extremely quickly. For example, a single cabinet can generate a revenue of £100,000 a year through leasing the space for servers to outside companies.

A further development concerns cable itself, with the imminent launch of new products designed to minimise space. One is the AC6 (Augmented Cat6) Zone Cable, designed for running the latest 10GBASE-T standard.

The AC6 Zone Cable is as thin as Cat5e cable, measuring about 5.4mm in diameter, compared with AC6 UTP cable, which is about 8.5mm, or a standard AC6 screened cable at about 7.2mm. The AC6 Zone cable brings several benefits: a 30 per cent reduction in weight, less air blocking under the floor, and it enables 120 links to be fitted into a cable tray that can take just 50 standard Cat6A links. The cable can be terminated with an RJ45 plug at one end and a socket at the other, so it can be used as an equipment cable or all the way back to the cross connect.

An important difference between Data Centre cabling and floor wiring is that in the latter you may often need links up to 100m, in the former you will not. The new cable exploits this and still meets all required standards – and thereby giving customers the features they really need: less space used and less weight.

Another new cable is a lightweight micro distribution optical fibre cable, measuring only 3.8mm, which reduces space and weight in racks and pathways. Combined with the Brand-Rex MPO connectivity set, it makes it possible to put up to 72 fibre connectors in a 1U space, rather than the normal 48.

The MPO is a high performance, pre-terminated fibre cabling system based on MT ferrule connector technology, ideally suited for use in Data Centre backbone and zone cabling situations.

The philosophy embodied in these products is simple: the cabling environment of a Data Centre simply is not the same as an open office. Ignore that at your peril!

For more information visit
www.brand-rex.com or call 01592 772124