

CLIFF PATCH PANELS

In modern data centres, patch panels play a critical role in maintaining structured, scalable, and manageable network infrastructure. Products from Cliff Electronic Components—including their RJ45 patch panels and feedthrough systems—are sometimes used in specialised areas of data centre environments, particularly where modularity and front-facing connectivity are important.

A data centre typically contains rows of racks housing servers, switches, and storage systems. Within this environment, patch panels act as a centralised termination and distribution point for network cabling. Instead of running permanent cables directly into switches, cables from different parts of the facility terminate at patch panels. Short patch leads are then used to connect these panels to active equipment. This approach reduces wear on expensive switch ports and makes it easier to reconfigure connections without disturbing the underlying cabling.

Cliff patch panels differ slightly from traditional enterprise-focused panels in that they often use feedthrough (coupler-based) RJ45 ports rather than punch-down IDC terminations. This means cables can be plugged into both the front and rear of the panel without needing specialised termination tools. In certain data centre scenarios—such as temporary deployments, testing environments, or modular data pods—this can significantly speed up installation and changes.

One of the main advantages of Cliff systems in a data centre context is their modular D-size connector format. This allows engineers to mix Ethernet with other connection types in the same panel. While this is more commonly seen in broadcast or AV racks, it can also be useful in hybrid data centre environments where networking, monitoring, and control signals coexist. For example, a single panel might include RJ45 for network access alongside fibre, serial, or control interfaces.

Cable management is another key consideration. In high-density data centres, maintaining airflow and accessibility is critical. Cliff patch panels, typically designed for 1U rack mounting, can be combined with horizontal and vertical cable managers to keep patch leads organised and prevent obstruction of cooling pathways. Good cable discipline not only improves aesthetics but also reduces the risk of accidental disconnections and simplifies troubleshooting.

Performance is also a factor. Many Cliff RJ45 panels support Cat6 or Cat6a standards, enabling high-speed data transmission up to 10 Gigabit Ethernet. Shielded variants help minimise electromagnetic interference, which can be important in racks filled with power supplies and high-frequency equipment.