

## Masterpiece in the City of London

This impressive stainless steel block is writing architectural history. 5 Broadgate in the City of London sets new standards in terms of bold design, sustainability and functionality. The project partners – including the cabling experts from Redstone and R&M – created a unique building for the new London headquarters of the financial services company UBS.

The IT infrastructure required to accommodate 6000 workstations and a state-of-the-art building management system (BMS) is as impressive as the twelve-story building itself. Working together, R&M and installation partner Redstone Converged Solutions Ltd ensured that the design criteria specified by UBS were implemented to meet the current and future needs of the business.

The structured cabling system at 5 Broadgate includes more than 63000 Class EA links, 126000 shielded Cat. 6<sub>A</sub> EL connection modules and 3000 km of cable from R&M. R&M and Redstone worked closely together to ensure the specification required by UBS was not only 10Gb Ethernet compliant throughout but also met the growing demands of Power over Ethernet (PoE).

Speed of installation was paramount for a project of this size and R&M was well placed to develop and customize products to assist in this process. UBS had very specific requirements with respect to the longevity, aesthetics and functionality of the desired GOP. R&M, Redstone and UBS designed a GOP that is tool free, robust and allows color identification for the associated equipment room at outlet level. These purpose-designed Grid Outlet Points (GOPs) make it possible to pre-terminate and Redstone seized the

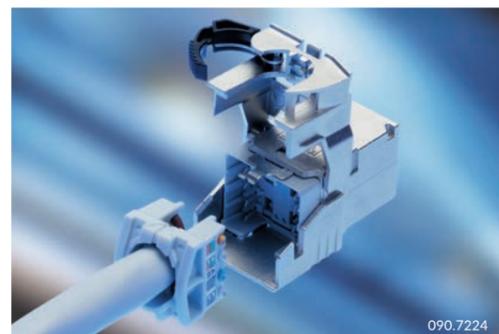
opportunity to construct over 11000 pre-terminated GOP boxes for both high and low level positions. Each GOP box was fitted with six or four RJ45 connections using an angled LJU6C shutter to eliminate any bend radius considerations. The removable mounting plate was pre-installed by the furniture supplier which ensured all GOPs were in the same position and allowed the pre-terminated GOP to snap into position. This method enables easy relocation for Moves, Adds & Changes (MACs).

**“The development of such an impressive new office signals the continuation of UBS’s long and successful relationship with the UK, the City of London and Broadgate.”**

**Ulrich Koerner, CEO UBS Group EMEA**



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### A logistical tour de force

One of the greatest challenges was seen in logistics. Space in the City of London is at a premium, with hardly any storage areas on site for building and installation materials. The construction work had to have no impact on the neighborhood and environment, while the companies at work had to minimize journeys and waste as far as possible. With pre-termination works commencing in April 2015 and practical completion scheduled for July

### Added value

5 Broadgate in the City of London demonstrates the following:

- R&M's expertise and ability to meet the demands of major projects
- R&M's ability in providing and coordinating multinational teams
- R&M's commitment to provide high-end technical support to the client
- R&M's customer-specific range of services

### The R&M solution for 5 Broadgate

Structured LAN cabling with 31 800 Class EA links, comprised of:

- 340 km shielded Cat. 6<sub>A</sub> loomed 6-fold cables
- 179 km shielded Cat. 6<sub>A</sub> loomed 4-fold cables
- 324 km shielded Cat. 6<sub>A</sub> cables
- More than 3000 km Cat 6<sub>A</sub> cables
- More than 125000 shielded Cat. 6<sub>A</sub> EL modules

2016 it was essential that the processes and close contact between R&M and Redstone were strong to guarantee the constant flow of materials to the project ran as precisely as a Swiss watch.

This logistical tour de force succeeded thanks to the outstanding, seamless cooperation between R&M and Redstone. Moreover, R&M put together a multinational team which dealt exclusively with the project at 5 Broadgate which included Global Key Account Management, R&M Market Organizations in Western Europe and the United Kingdom, Customer Project Management and Product Development at R&M headquarters.

The team at the Redstone facility in Beckton worked closely with their design team to pre-terminate the GOPs in the required lengths and to a pre-defined schedule to meet the demands of the project program. Supported by R&M local technical personnel as well as the technical support and training team from Switzerland, UBS was assured of the quality and performance of the pre-terminated assemblies.

### Solution for long distances

The enormous scale of the UBS headquarters posed further challenges for the design of the cabling system. Due to the building ensemble at Broadgate Circle, the architects at Make were not able to plan a skyscraper. Instead, the idea was to build a “groundscraper” limited to twelve floors and stretching out over a huge area. 5 Broadgate has a usable space of 65000 square meters (700000 square feet).



Photographer: John Madden, johnmaddenphoto.com

### A huge engine made from a single block

The £500 million building 5 Broadgate in the City of London is the work of star architect Ken Shuttleworth and his team from Make Architects in London. It is the largest office building of its kind in London and one of the world's largest buildings with stainless steel cladding.

The goal of the architects was to build a perfect “machine” for the financial sector. The idea was for the building to look like a high-precision steel engine made from a single piece of cast metal – with an aura of reliability and solidity. The result is an ambitious, highly functional, world-class office building. For Ken Shuttleworth, this project marks the beginning of a new era of sustainable architecture and work-

place design – and a quantum leap for the global financial hub of the City of London.

In 5 Broadgate, UBS is amalgamating all of its trading activities in London and other business areas for the first time. It shows a clear commitment to the City of London as a financial hub with a major future.

The intensive use of the building required an appropriate data network provided by a trusted manufacturer. The cabling had to meet the extremely high quality and security standards set by the financial services company. The LAN had to be both sustainable and future-proof, meaning it can be used for years to come with current and future transmission parameters. Due to these challenging requirements, R&M was chosen as project partner.

By its nature, the implementation of a groundscraper means that Redstone had to plan some overlength cables. Every effort was made to ensure cable lengths met standards. However, in the rare case that a cable was over length, R&M was happy to certify and cover under its system warranty. Support of overlength runs and the effects of temperature increases as

a result of Power over Ethernet were a key consideration during the tendering process and the ability for R&M to support both these requirements was one of the decision factors for UBS choosing R&M. Even so it was necessary to work closely with UBS and Redstone to form a well thought-out design of the cable runs to ensure ultimate performance.



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