



## Global Tech HQ

### One of the world's largest wireless mesh lighting control

Delmatic's IOT wireless mesh network manages and monitors normal and emergency lighting throughout the smart headquarters building providing flexible granular control, intelligent analytics and Cloud MQTT data sharing.

Delmatic have supplied one of the world's largest IOT wireless mesh DALI lighting management solutions for the BREEAM Outstanding "first of its kind digital smart building".

The system is deployed throughout the headquarters complex and individually addresses, monitors and maps 5,500 DALI luminaires plus 800 DALI emergency luminaires and battery monitoring devices. The wireless lighting management network provides full IP to the Edge DALI operation and comprises 1700 luminaire nodes and 1700 multisensors which communicate across the wireless mesh to wireless hubs and on to the Cloud for detailed insights and intelligent analytics.



Multisensors throughout workspace areas optimise energy efficiency, and continuously adapt and regulate lighting based upon presence, absence and the contribution of daylight. To enhance efficiency, the lighting management sensors share real-time, granular occupancy and daylight intelligence with the building ecosystem so that HVAC speed, temperature band and other energy-consuming services also adjust according to occupancy and density of occupation within each space.

The project uses Delmatic's latest IP DALI Wireless hubs – cutting-edge Ethernet to the Edge DALI devices which combine latest DALI-2 functionality with full BACnet and MQTT integration for unrivalled management, monitoring and smart data sharing. The IP Wireless Hubs communicate with Wireless Nodes and Multisensors throughout workspace areas and with DALI EnOcean Gateways for wireless scene-setting within meeting and conference spaces. The system incorporates DALI-2 technology for full management and monitoring of DALI-2 drivers, DALI-2 emergency devices and integration of DALI-2 local control devices such as sensors, switches and scene-set switches.

Delmatic's graphical interface software and applications continuously monitor the complete wireless ecosystem providing real-time data and intelligent analytics on building usage and performance including occupancy heat maps, lux level mapping, occupancy tracking, energy usage mapping, hardware and network tracking, fault detection diagnosis, individual lamp and driver diagnostics, and individual emergency battery testing and monitoring.

MQTT is the global protocol of choice for today's Internet of Things and Delmatic are market-leaders in the application of MQTT for cloud-centric IOT integration. The IP DALI hubs – the first to be globally qualified as Smart Ready – are powerful MQTT Edge Gateway devices representing every lighting point and sensor device in a network as a configurable and individual MQTT payload. The IP DALI hubs provide full IOT functionality through the DALI network as well as full DALI-2 features across the IOT network.

Lighting in fixed circulation and core areas is controlled by wired DALI domains as a seamless part of a mixed-mode wireless/wired network: Delmatic's unique mixed-mode solutions optimise the application of technology to a project taking into account the type of fittings, architectural details, and installation methodology within each area, recognising that one approach rarely fits all.

Delmatic's team of engineers worked closely with the tech client and their master system integrator on all aspects of the project including visioning, profiling, ontology and application end-goals to deliver an integrated solution which shares key data with the Building Information System via BACnet and MQTT within the headquarters building as well as across the client's extended international property portfolio.