

Multilateration Installation



Manchester Airport is currently in the middle of a huge redevelopment program and atg airports are involved with many different aspects of this project. Electrical installation works associated with the transformation project include, rewiring of the runway and taxiway lighting systems, the relocation of a substation, re-routing of supply cables, and installation of pier services such as fix ground power units, and docking guidance systems.

Amongst other systems that airport is due to bring on line, is the use of a navigational tool utilising multilateration equipment. Multilateration is a technology that was originally developed for military purposes and has proven itself over many years. The method utilized is what is known as, Time Difference of Arrival (TDOA) and can be used for both air traffic surveillance, and also ground movement monitoring of the arrival, departing aircraft over an extended zone and also monitor vehicle movement around the airside operations areas.



Project Key Facts

Location

Manchester Airport

Client Name

TAG Aviation

Dates

June 2019



ATG airports, in house turnkey solutions team, were awarded the contract to complete the installation of the equipment associated with this system. It comprises of a multiple number of ground-based stations with sophisticated electronics and associated transmitter and receiver equipment strategically positioned within the airport boundaries. The equipment was installed where possible in existing buildings and the many antenna arrays that were deployed, positioned on buildings or newly installed frangible masts, ensuring the optimum coverage for the transceivers. Co-ordinating the daily installation program with the airport operations team, is critical when erecting masts within the movement areas. This type of activity has to consider all aspects involved with the program, and ensure that there would be no interference with aircraft movements, and that all works could be done quickly but safely. During the commissioning phase co-ordination of commissioning engineers, projects team and ATC was vital to ensuring a smooth implementation of this service.