

Turnkey Earth Stations



Overview

Kratos has a long history of Turnkey Earth station deliveries, from Green Field site builds through to Turnkey system upgrades. We understand that logistics, project management and ancillary systems are just as important as the core satellite technology and hardware that is being installed. Kratos can manage as much or as a little of the overall project scope as the customer wishes. The value added by us doing this, can enable customers to focus on running their day to day core business without the major distraction of multiple supplier management, in large scale projects and the associated risks.

Our Turnkey projects have included full earth stations builds, including the Equipment/Data Centre through to RF equipment and Antenna for applications such as:

- Broadcast and Headends (DTH and contribution)
- Satellite Telemetry, Test and Control (TT&C) and In Orbit Test (IOT)
- Communications Gateways
- Carrier System Monitoring (CSM)
- Satellite TVRO
- VSAT systems

We have the experience, knowledge and capability to delivery Turnkey projects to demanding time scales and to a high standard of quality.

Turnkey Scope

The scope of a turnkey solution can include:

- *Green Field Site Development*
- *Civil engineer: Building and Antenna Foundations*
- *Building Design and Build*
- *Equipment shelters*
- *Air conditioning systems*
- *Fire Alarm/Suppression Systems*
- *Power Systems: Distribution, Generators, UPS*
- *Lighting Systems*
- *Cable Management and Internal site trench systems*
- *Site Diversity*
- *Multi-Site, Multi-Country*

Earth Station systems often also include:

- *Antenna De-Icing: Electric, HPA Hot Air, Gas*
- *Safety Inter-Lock systems*
- *Dehydrator Sub-Systems*
- *RF Fibre Links*
- *Microwave Links*
- *Antenna Aux Drive Systems*
- *Hub Air Conditioning*
- *Cable Gantries*
- *Radomes*

Broadcast (DTH and Headends)

Within broadcast DTH application, waveguide networks can be very large and complex. With our intelligent controllers and DTH system experience we can deliver highly innovative designs that maximise system available and optimise maintenance functionality of the system. We have delivered many broad cast systems to customers such as: BSkyB, Gloecast, AsiaSat and others.



TT&C and IOT Systems

TT&C Earth Stations require monopulse antenna tracking for accurate and stable satellite location capability. In addition, customers often want combined earth station functionality to allow for DTH, VAS and TT&C capability to be achieved through the same RF system assets. Our



extensive understanding of these critical earth stations, along with experience with the supply and integration of ranging baseband sub-systems including our new Kratos TT&C modem, along with Cortex CRT and Satellite Control Centres software

Communications Gateways

Communication Gateways for Global Communication Systems such as: Thuraya, Kacific, Inmarsat, Sky Perfect JSAT require resilient high technology earth stations with complex RF and baseband system integration designs. We have wide ranging experience in the delivery of different gateway systems for industry leading service providers including multiple sites across multiple countries.



CSM and TVRO

CSM and TVRO systems often require multiple antenna installations in confined areas, quite often in rooftop locations. Our experience site designers can analyse and model the antenna installation areas allowing us to maximise the use of the available foot print.