

CSM and Interference Monitoring



Overview

As more and more satellites are launched, carrier monitoring is becoming an ever-growing requirement. Whether it is to enable satellite operators to offer a service to their customers to detect loss of carrier or for detection of malicious or accidental satellite interference, satellite operators around the world are investing in carrier monitoring to protect their services and customer base.

At Kratos we have wide-ranging experience of CSM and interference monitoring systems. Similar in RF system architecture to TVRO systems, we can leverage our experience in both areas to offer economic solutions for this important aspect of satellite and service operation.



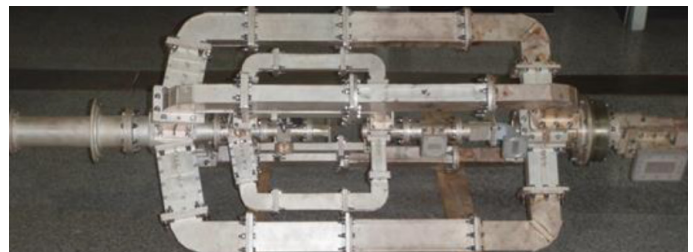
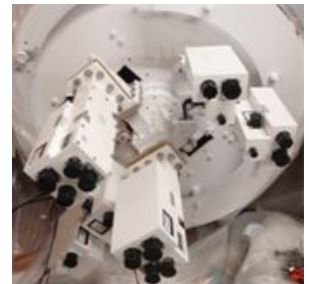
CSM, although simple in its concept, can become complex when it involves multiple satellite transponders from multiple antennas. Extensive cabling, LNB power supplies and controls, slope compensation and signal management is needed to ensure that the satellite signals reach the Signal Analyser sub-system with the right C/N and signal level to be useable for the application.

In this type of application, visibility of the satellite transponder noise floor is important to enable accurate interference location detection. Therefore antenna size and G/T analysis become just as critical as for a conventional telecommunication system or broadcast downlink.

Antennas

As an integrator, we have access to a wide range of antenna size, types and manufacturers so we can select the most economic solution for our customers:

- Antennas Sizes: Ranging From 2.4m through to >7m
- Multi-band Feed Options (L-S; C-X-Ku; Extended C-Ku; X-Ka, etc.)
- Frequency Band Capability: L-Band, S-Band, C-band, Superextended C-Band, X-band, Ku-band and Ka-band
- Circular/Linear Polarisation Switching
- Fixed or Motorised
- High wind speed options
- De-Ice



Carrier Monitoring Systems

Our in-house CMS is from sister company, SAT Corporation. Products include Monics, SAT-DSA, SatID and SigMon. Our early experience came from being involved in the deployment of the company's SATCOM NetOps global network, which offers Interference Detection and Geolocation services. Our staff are fully trained on the Monics and SAT-DSA products.

Installation Design

CSM systems quite often involve multi-dish installations in confined spaces with satellite visibility constraints or building roof tops with space and loading constraints.

We work within the constraints of the customer site to minimise the space required and maximise satellite visibility. We have well establish CAD and 3D modelling tools to enable this to be achieved efficiently and effectively providing maximum value for our customers.

