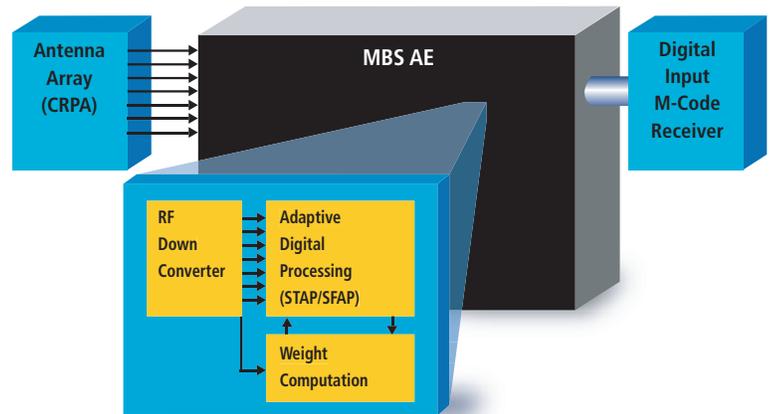




MULTI-BEAM STEERING ANTENNA ELECTRONICS

DESCRIPTION

The Multi-Beam Steering Antenna Electronics (MBS AE) will use advanced digital signal processing techniques such as Space Time Adaptive Processing (STAP) or Space Frequency Adaptive Processing (SFAP) to provide the Anti-Jam (AJ) performance required to meet current and future GPS jamming threats. It is projected that military operations will encounter jammer-to-signal (J/S) power levels of 120 dB or greater. The MBS AE will remove considerably more interference sources than current analog AJ antenna systems and also will provide increased gain to GPS satellites by steering beams in the direction of the desired satellites. The beam steering mode will improve both acquisition and tracking of GPS signals and prevent unintentional nulling of satellite signals. The MBS AE will be fully compatible with legacy and modernized GPS signals, and will also implement the GPS JPO standard all digital interface ICD for use with future digital GPS Modernization receivers.



FEATURES

- ▶ Up to 55 dB J/S anti-jam protection against broadband and narrowband interference (≥ 120 dB J/S with digital GPS receiver)
- ▶ 5 to 7 independently steered beams for GPS enhanced satellite acquisition and tracking
- ▶ Suitable for high dynamic aircraft environments (360 degree/second roll rates) and maintains performance in high multipath environments
- ▶ Compatible with existing and planned 5 to 7 element arrays (CRPA), as well as GAS-1 AE form and fit
- ▶ Operates with M-code and planned GPS III high power spot beam

- ▶ Conforms to GPS JPO standard digital interface operating over existing platform cabling with future digital M-code receivers

APPLICATIONS

Military land, sea, and airborne platforms requiring high levels of GPS anti-jam protection

FOR FURTHER INFORMATION CONTACT:

NAVSTAR, GPS Joint Program Office
DSN: 833-6507 or 310-363-6507

