

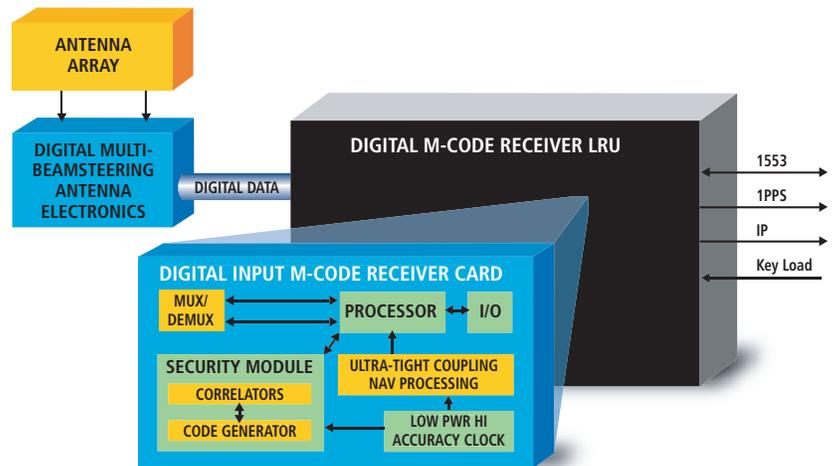


DIGITAL M-CODE RECEIVER CARD

DESCRIPTION

The Digital M-code Receiver Card (DMRC) will provide an all-in-view high performance GPS Modernization-compatible receiver module offering superior Anti-Jamming (AJ) immunity and high navigation accuracy. The DMRC will implement a high-speed, full digital interface with advanced digital multi-beam steering (MBS) antenna electronics (AE), and provide greater than 120 dB jammer-to-signal power (J/S) jamming suppression with MBS AE. Ultra-tight coupling navigation processing will extend the receiver’s inherent AJ capability by 10 to 15 dB while tracking GPS satellite signals. Using the planned M-code acquisition signals and advanced parallel correlators for Direct M-code acquisition, DMRC will offer fast initial acquisition in high J/S jamming environments.

To protect algorithms and cryptographic key security, the DMRC will incorporate a GPS JPO-approved Security Module. It will also support future over-the-air-rekeying to provide crypto keys. With scalable and flexible architecture, the DMRC will permit implementation in a variety of form factors to meet multiple application requirements.



FEATURES

- ▶ Dual frequency (L1/L2) all-in-view GPS tracking and navigation
- ▶ C/A compatible
- ▶ P(Y) compatible
- ▶ M-code compatible
- ▶ High AJ: up to 70 dB J/S without AE and greater than 120 dB J/S with MBS AE
- ▶ Supports beamsteering to 5 to 7 satellites
- ▶ Fast TTFF with J/S > 40 dB
- ▶ Conforms to GPS JPO non-proprietary high speed digital interface standard that permits reuse of existing platform cabling

- ▶ GRAM standardized form factors

APPLICATIONS

Military applications requiring high GPS navigation accuracy and high state-of-the-art jamming immunity

FOR FURTHER INFORMATION CONTACT:

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

