



MRTA TEST TRANSMITTER



MITRE

DESCRIPTION

The Modernization Receiver Test Asset (MRTA) Test Transmitter unit ensures that a test capability is available to support signal verification at contractor factories, Cape Canaveral, and on orbit.

The Test Transmitter is a reconfigurable, stand-alone unit capable of generating legacy and modernized GPS signals at L1, L2, or L5. Up to 50 minutes of GPS data messages can be stored in its nonvolatile memory. The unit is controlled from a PC through the serial port. The maximum output power is -10 dBm and individual code powers can be controlled through the Java GUI.

The only requirements for operation are a 5 V power supply and a 10.23 MHz sine reference clock with a 7 dBm output power. The user also has the option to use an external LO ranging from 0.8 to 2.5 GHz.

FEATURES

- ▶ Generates legacy and modernized codes (no crypto)
- ▶ Selectable on-board synthesizer that generates L1, L2, or L5
- ▶ 2 MB nonvolatile memory
- ▶ Stores transmitter configuration
- ▶ Stores up to 50 minutes of GPS data messages
- ▶ Controlled by RS-232 from a PC through a Java GUI
- ▶ RF output up to -10 dBm
- ▶ 1 bit baseband outputs of I & Q
- ▶ 10.23 MHz sine reference clock input

- ▶ Trigger I/O
- ▶ 5 V power supply (10 A max current)
- ▶ Size: 12.75" x 10" x 2.75" (LxWxH)

APPLICATIONS

- ▶ GPS signals generation at L1, L2, or L5 carriers
- ▶ Generation of any arbitrary 50 MHz I/Q signals modulated to RF of 0.8 to 2.5 GHz

FOR FURTHER INFORMATION CONTACT:

NAVSTAR, GPS Joint Program Office

