The Viasat Radio Frequency Generator 1000 (VRG-1000) is the only AIMS certified, true-to-life environment generator for testing Identification, Friend or Foe (IFF) systems in high-density signal environments. With 50 independent interactive IFF interrogator or 25 independent interactive transponder platforms, this test set brings realistic signal testing on-location to your installed or in-development IFF system, so you can replicate crowded airspace and reduce flight test time by evaluating your system in a lab.

**ONLY AIMS CERTIFIED IFF ENVIRONMENT GENERATION TEST SET**

This portable RF environment generator includes an intuitive graphical interface that works with a standard web-based browser, no additional software needed. The operator can create and control a test scenario that includes moving platforms, each with an IFF interrogator or transponder. Each IFF interrogator and transponder can be associated with an antenna pattern to create a dense, robust, and realistic IFF environment. The System Under Test (SUT) is presented with interactive IFF replies that have the correct relative time delay and amplitude, so they can be received and analyzed as they would in dynamic operation. For advanced antenna testing, a sum and difference channel configuration (VRG-1000SD) is available upon request.

With an established library of IFF signals, independent control of all transponders and interrogators, and a convenient compact design, Viasat’s VRG-1000 delivers easy and accurate IFF signal testing to your system.
SPECIFICATIONS

INTERROGATION GENERATION
Modes Supported 1, 2, 3/A, C, 4, S, 5, and All-Call
Frequency 1030 MHz
Amplitude -90 to +6 dBm
PGRI 10 to 2.5 ms

INTERROGATION RECEPTION
Modes Supported 1, 2, 3/A, C, 4, S, 5, and All-Call
Frequency 1030 MHz
Amplitude
- VRG-1000 -50 to 0 dBm
- VRG-1000SD +15 to +65 dBm

SCENARIO FEATURES
- Up to 50 moving IFF platforms
- 6 degrees of freedom (latitude, longitude, altitude, heading, pitch, roll)
- Transmit/receive antenna patterns
- Realistic RF environment accounting for path loss and pointing angles
- DIS (platform motion) interface
- Reception of external antenna pointing angle
- Data extraction for detailed post processing

TRANCEPONDER GENERATION
Modes Supported 1, 2, 3/A, C, 4, S, M5L1, M5L2 and ADS-B
Frequency 1090 MHz
Amplitude -90 to +6 dBm
Sum/Difference Channels VRG-1000SD version

TRANSPONDER RECEPTION
Modes Supported 1, 2, 3/A, C, 4, S, M5L1, M5L2 and ADS-B
Frequency 1090 MHz
Amplitude
- VRG-1000 -50 to 0 dBm
- VRG-1000SD +15 to +65 dBm

GENERAL
Optional External Reference 10 MHz, +10 dBm
Control Interface Ethernet
RF Interface Connectors N-Type / TNC
Operating Temperature -10° to +40° C
Power 110 to 240 VAC, 5A, 50/60 Hz
Dimensions (W x H x D) 19 x 7 x 27 in.
Weight 40 lb

PART NUMBERS
VRG-1000 (w/ Transponders) 1199118
VRG-1000SD (w/ Transponders) 1170355

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