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 interrogators, 25 independent interactive transponders, or 400 squittered 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.

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.
**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
- Antenna Diversity: VRG-1000SD version

**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**
- 50 interrogators, 25 interactive transponders, or 400 squittered transponders
- Up to 400 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 angles
- Data extraction for detailed post processing

**TRANSPONDER GENERATION**
- Modes Supported: 1, 2, 3/A, C, 4, S, M5L1, M5L2, M5L2-B, ADS-B, ELS, and EHS
- 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, M5L2-B, 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: -10º to +40º 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

**CONTACT**
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