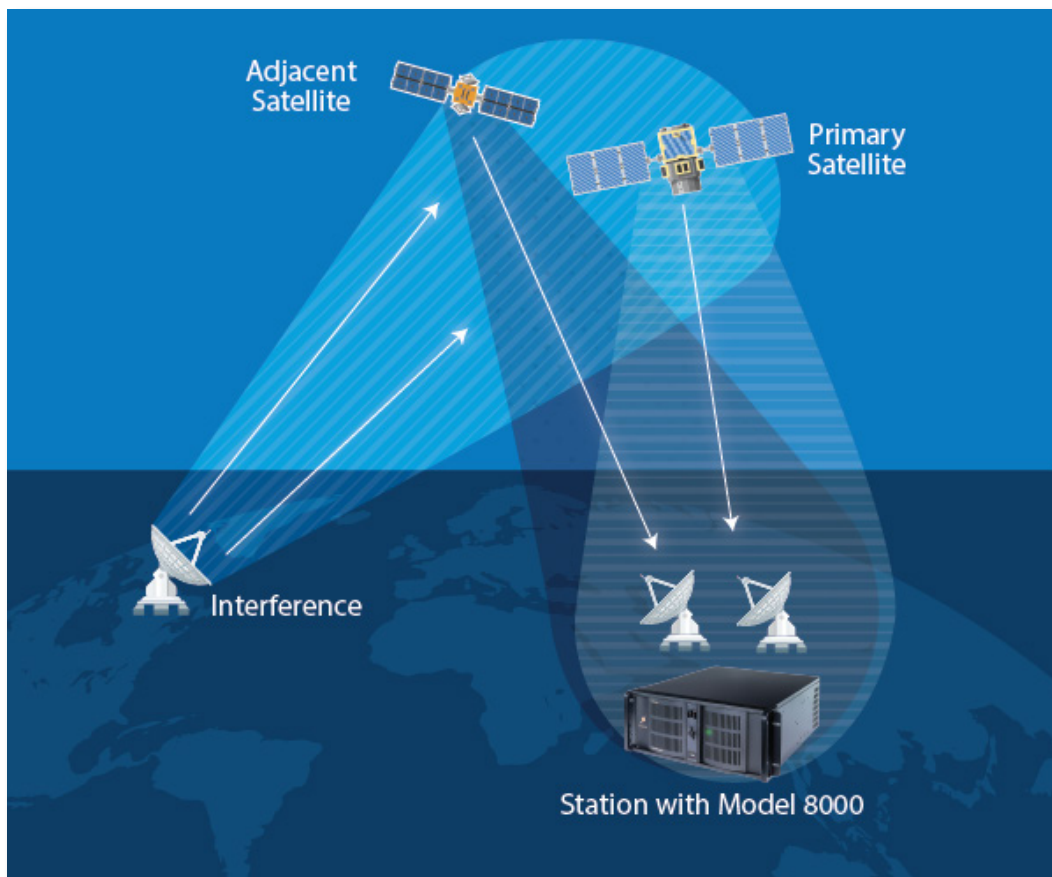# Geolocation

The iDirect Government Glowlink Model 8000 interference detection and geolocation system allows operators to view real-time spectra for the detection and characterization of interference. The Model 8000 seamlessly transitions from detecting the interference to geolocating the interference with the click of a button.

The Model 8000 geolocates transmit terminals quickly and accurately. It locates the interference by taking advantage of the weak replica of the signal that an adjacent satellite will receive. Downlinks for the primary and adjacent satellite are acquired and analyzed to extract precision time difference and/or frequency difference information used for locating the interference signal.

Key Features

- Built-in interference detection and spectrum monitoring in a single enclosure
- Geolocate interference in four guided steps
- Unparalleled geolocation accuracy with either a single or multiple references
- Centralized database for the storing of carrier monitoring and geolocation system parameters, measurement results and additional data for analysis
- Sig-Catcher™ for the acquisition and geolocation of fast-sweeping and frequency hopping signals
- Advanced Error Correction (AEC™) for errors in satellite ephemeris
- Automated adjacent satellite selection
- Effective across multiple satellite bands (L, C, X, Ku and Ka)

Adjacent Satellite
Primary Satellite
Interference
Station with Model 8000

Stay connected. Stay informed. The mission depends on it.

iDIRECT Government   503H8
0320

Glowlink Model 8000

Model 8000

Measurement Accuracy

Carrier Power	+/- 0.2 dB[1]
Center Frequency	+/- 0.75% of BW[2]
Carrier Frequency	+/- 0.05% of BW + 100 Hz[1]
Carrier Bandwidth	+/- 0.5%[1]
C/N, C/kT	+/- 0.25 dB[1]

Characterization/Detection Capabilities

Modulation Type	Identifies PSK, APSK, QAM and other modulations
Symbol Rate	Measured symbol rate of digital carrier
Carrier Frequency	Carrier frequency or digital carrier
Transmission Rate	Bit rate of digital carrier
Es/No	Measured from demodulated carrier
Eb/No	Referenced to demodulator
FEC	Convolutional (IESS-308, 309, 310, DVB-S), LDPC (DVB-S2) and others

RF Characteristics (Each Channel)

RF Interface	SMA, 950-2150 MHz, 0 dBm (max), Full Bandwidth Input Power -65 dBm/-5 dBM, 50Ω
Instantaneous Bandwidth	36 MHz
Resolution Bandwidth	97.66 kHz to 12 Hz
Dynamic range	115 dB nominal
Minimum Carrier Level	1 kHz carrier BW: -85 dBm, 10 kHz carrier BW: -75 dBm, 100 kHz carrier BW: -65 dBm, 1 MHz carrier BW: -55 dBm, 10 MHz carrier BW: -45 dBm

Data Interface

Network	Ethernet (RJ-45)
I/O	USB, Serial

Mechnical/Environmental

Size	W 19.00 in x D 21.00 in x H 7.00 in (W 48.26 cm x D 53.34 cm x H 17.78 cm)
Weight	39.00 lbs (17.69 kg)
Temperature	Operational 57.2° to 107.6°F (14° to 42°C)
Humidity	30 to 90%, at 95°F (35°C) non-condensing
Input Voltage	100–240 VAC, 50–60Hz

Geolocation Bundle Includes

Monitoring	Audible and Visual Alarm, Fine resolutions, 16APSK/32APSK Recognition and Characterization, DVB/DVB-S2 Analysis Package
Geolocation	G-Wiz™ Guided Geolocation, Advanced Error Correction (AEC™), SigCatcher™ Signal Acquisition, Automated Frequency Offset Measurement, TDOA/FDOA Contour Maps, Geolocation Performance Estimator, Ephemeris Propagator, Multiple Overlapping Signal Exclusion
System Functionality	Interfacility link Calibration, Signal Recorder, Web-Server™, Email Notification, User Account Manager
Hardware	Database Server, GL950 8-Port RF Switch, Removable System Drive, Hot Swappable Power Supply, Workstation with Geolocation Client

[1] *Accuracy measured with C/N = 10 dB*
[2] *Typical for C/N = 14 dB*

iDirect Government

503H8
0320