



## PERSON-PORTABLE GC-MS CHEMICAL IDENTIFIER

# FLIR GRIFFIN™ G510



The FLIR Griffin™ G510 Gas Chromatograph Mass Spectrometer (GC/MS) is a versatile, person-portable chemical identifier. It complements presumptive techniques used during emergency missions, by enabling responders to analyze all phases of matter (liquid, solid, vapor) and by performing rapid field-confirmation of chemical hazards. The integrated heated sample probe enables hot zone operators to identify vapor-phase chemical threats within seconds when operated in Survey Mode. The integrated split/splitless injector allows for environmental, forensic, and hazardous material sampling via syringe injection of organic liquids. The 9" on-board touchscreen delivers automated user controls and can be operated while wearing full personal protective equipment downrange. It is built with an IP65-rated enclosure for harsh environments and supports passive defense, interdiction, elimination, and consequence management missions. Long-lasting, on-board batteries ensure every mission is supported from beginning to end.

[www.flir.com/G510](http://www.flir.com/G510)



### MASS SPEC PERFORMANCE REDEFINED

Confidently identify unknowns and take action with guided controls and simple threat alarms

- Lab, gold-standard linear quadrupole mass analyzer
- Full NIST and SWGDRUG chemical library for field identification and analysis of unknown materials and mixtures
- Simple on-board touchscreen with automated user controls and Method Selector tool
- Visual and audible alarm confirmation with limited data interpretation
- On-board WiFi and GPS assist in maintaining result defensibility



### ULTIMATE CHEMICAL DETECTION TOOLBOX

Versatile in-field sampling options for vapor, liquid, and solid samples

- Vapor sampling probe with rapid-response survey mode
- Integrated split/splitless liquid injector accepts direct injection of organic liquids
- Available Prepress Sample Introduction (PSI) Probe with Touch-And-Go (TAG™) capability for direct analysis of solid samples
- Effortlessly links with SPME and headspace sample collection tools
- High-fidelity, low thermal mass (LTM) GC column for unsurpassed resolution in challenging environments



### BUILT FOR EVERYONE, BUILT FOR EVERYWHERE

Completely self-contained and mission-ready from the field to the lab

- IP65-rated, dust-tight and spray-resistant
- Built-in active pumping system eliminates need for an external service module
- Integrated carrier gas, batteries, and training reference videos
- Simple field maintenance activities for increased uptime
- Extensive training, service, and support options available
- Optional vehicle mount kit for variety of on-the-go missions

## SPECIFICATIONS

### Griffin G510

Technology	Gas Chromatography/Mass Spectrometry (GC/MS)
Dimensions (L x W x H)	13.25 x 13.25 x 15.75 in (33.7 x 33.7 x 40 cm) - includes batteries, carrier gas, and vacuum system
Weight	36 lbs (16.3 kg) - includes batteries, carrier gas, and vacuum system
Optional Vehicle Mount Kit (L x W x H)	- Road-Ready Version: 16.7 x 14 x 15.2 in (with G510 installed) - Off-Road Version: 16.7 x 17.5 x 16.2 in (with G510 installed)
Operating Temp / Humidity	32 to 104 °F (0 to 40 °C); <95% relative humidity
Storage Temp	-13 to 131 °F (-25 to 55 °C)
Decontamination	Sealed for Survey Mode operation in hot-zone; IP65-rated enclosure is dust-tight and spray-resistant
Power Supply	100-240V 50-60Hz (220 W max); 19V (DC); 2 x #2590 @ 15V Li Ion batteries (included)
Battery Life	4 hrs in Survey Mode, 2 hrs in Confirmation Mode; hot swappable
Start Up Time	15 minutes to full operation from cold
Calibrant	On-board FC-43 (Perfluorotributylamine)
Carrier Gas	On-board helium; external helium connector, automatic switching (Hydrogen capable)

### System Interface

Display	9" Multitouch Color Display (1280x720 WVGA; 1300 nits brightness)
Alerts	Audible and visual (touchscreen and handheld probe)
Software	GSS Level 1 Touch; multiple user levels
Communication	2 x USB 2.0, Bluetooth 4.0, WiFi 802.11n, Ethernet via USB, integrated GPS
Data Storage	Internal ≥128GB SSD
Training Requirements	2 hours basic operation; 8 hours Operator Certification

### Sampling & Identification

Sample Phase	Solid, liquid, and vapor
Sample Introduction	<b>Heated Sample Probe (included standard):</b> - Vapor survey mode via Membrane Introduction Mass Spectrometry (MIMS) Inlet - Vapor confirmation via Internal Dual-Bed Preconcentrator <b>Split/splitless injector (included standard) accepts:</b> - Direct liquid sampling (organic solution) via syringe - Liquid extraction via SPME fiber or PSI-Probe w/ Gerstel Twister™ * - Solid PSI-Probe™ thermal separation via TAG™ *
Threats	Detects and identifies explosives, narcotics, CWAs, TICs, environmental pollutants, and other chemicals
Standard Reference Database	NIST/EPA/NIH Mass Spectral Library, SWGDRUG Mass Spectral Library, and GriffinLib Mass Spectral Library included
Sampling & Analysis	Full identification in 4-15 minutes for most chemicals; identification within seconds (near real-time) when operating in Survey Mode

\*optional accessories

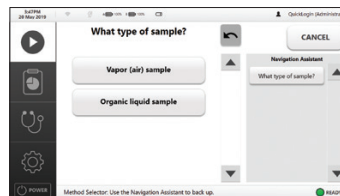
### Mass Spectrometer

Mass Analyzer Type	Linear quadrupole mass filter
Mass Range / Resolution	15-515 m/z; 0.7 amu @ FWHM
Ionization Type / Source	Electron Impact Ionization; non-radioactive ionization source
Detector	Electron Multiplier
Vacuum System	Self-contained miniature turbomolecular & diaphragm pumps
Dynamic Range	7 decades
Detection Limit	PPM (parts per million) – PPT (parts per trillion)

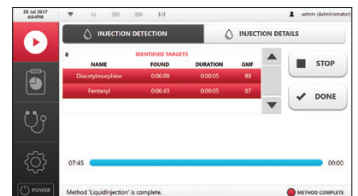
### Gas Chromatograph

LTM-GC Column	DB-5MS (15 m x .18 mm x 0.25 µm); others available
Temperature Range	Programmable 40 to 300 °C; ramping of 100 °C/min

Specifications are subject to change without notice. For the most up-to-date specs, go to [www.flir.com](http://www.flir.com)



Method Selector Tool



GSS Touch Chemical Identification Result

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19-1401-DET-DET-Update G510 Datasheet



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