



## 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 displays guided user prompts and can be operated while wearing full personal protective equipment (PPE) 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 prompts and simple threat alarms

- Laboratory level, gold-standard linear quadrupole mass analyzer
- Full NIST and SWGDRUG on-board libraries provide confirmatory identification and analysis of trace compounds, unknown chemicals, and mixtures
- Simple on-board touchscreen with navigation assistant and Method Selector tool
- Visual and audible alarm confirmation with limited data interpretation
- On-board WiFi and GPS assist in maintaining result defensibility
- Remote monitoring and control with WiFi hotspot



### 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, Sample Prep Kit (SPK), and 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 reachback options available
- Optional vehicle mount kit for shock and vibration protection during off-road or harsh transport

## 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	<p><b>Heated Sample Probe (included standard):</b></p> <ul style="list-style-type: none"> <li>- Vapor survey mode via Membrane Introduction Mass Spectrometry (MIMS) Inlet</li> <li>- Vapor confirmation via Internal Dual-Bed Preconcentrator</li> </ul> <p><b>Split/splitless injector (included standard) accepts:</b></p> <ul style="list-style-type: none"> <li>- Direct liquid sampling (organic solution) via syringe</li> <li>- Liquid extraction via SPME fiber or PSI-Probe w/ Gerstel Twister™ *</li> <li>- Solid PSI-Probe™ thermal separation via TAG™ *</li> </ul> <p><b>Sample Prep Kit (SPK)</b></p> <ul style="list-style-type: none"> <li>- Simplified analysis of solids and liquids</li> </ul>
Threats	Detects and identifies trace-level explosives, narcotics like Fentanyl and its analogues, A-series and Novichok 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, with instant updates available
Sampling & Analysis	Full identification in 4-15 minutes for most chemicals; identification within seconds (near real-time) when operating in Survey Mode

\*optional accessories

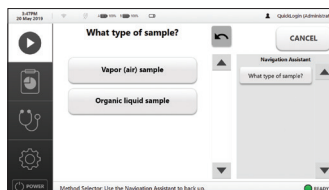
### Mass Spectrometer

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) - PPB (parts per billion). Note: PPT (parts per trillion) for vapor analysis with extended sampling time.

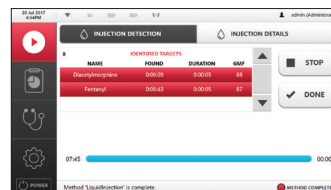
### Gas Chromatograph

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

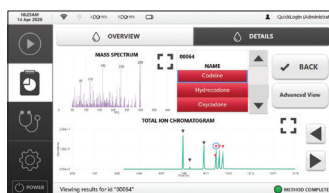
Specifications are subject to change without notice. For the most up-to-date specs, go to [www.flir.com](http://www.flir.com)



Method Selector Tool



GSS Touch Chemical Identification Result



Trace-level detection of narcotics like Fentanyl and its analogues

**HEADQUARTERS**  
FLIR Systems, Inc.  
1201 S. Joyce Street  
Suite C006  
Arlington, VA 22202  
USA  
PH: +1-877-692-2120

**DETECTION SALES, APAC**  
FLIR Detection, Inc.  
10 Kallang Avenue #09-10  
Aperia Tower 2  
Singapore 335910  
PH: +65-6822-1596

**DETECTION SALES, EMEA**  
FLIR Detection, Inc.  
Luxemburgstraat 2  
2321 Meer  
Belgium  
PH: +32 (0) 3665 5106

[detection@flir.com](mailto:detection@flir.com)

[www.flir.com](http://www.flir.com)  
NASDAQ: FLIR

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