

# FLIR GRIFFIN™ G465

## Mobile GC/MS with Real-Time Vapor Survey Mode



The FLIR Griffin G465 is the most flexible transportable GC/MS (Gas Chromatograph/Mass Spectrometer) system available for mobile and forward-deployed labs, reconnaissance vehicles, and other portable platforms. Like the Griffin G460, the G465 features an integrated split/splitless injector and universal sampling port. The addition of a heated sampling line enables survey mode for near real-time vapor threat identification. Industry-leading chemical matching techniques provide high-confidence results in complex environments and eliminate data interpretation in the field. Intuitive user controls, on-screen guidance, and simple data presentation expedite decision making for field operators. The Griffin G465 provides the ease of use and intelligence needed to perform real-time countermeasures that protect public safety.

### **BEST-IN-CLASS CHEMICAL IDENTIFICATION AND BETTER INFORMED DECISION-MAKING**

*Guesswork is eliminated with high-confidence chemical matching in complex environments*

- Method selection tool guides user through operation
- Automated chemical matching eliminates data interpretation in the field
- Color-coded, go/no-go alarms expedite on-site decision-making

### **THE MOST FLEXIBLE GC/MS WITH REAL-TIME VAPOR SURVEY MODE**

*Always mission-ready with unmatched sampling options for vapor, liquid, and solid samples*

- Integrated heated sampling line for survey mode missions
- Integrated split/splitless injector accepts traditional syringe, SPME fiber, headspace, and PSI-Probe injections
- Integrated Universal Sampling Port provides continuous air monitoring capability and quick-connect fitting for portable plug-and-play samplers

### **RUGGED, VEHICLE-MOUNTABLE PLATFORM**

*GC/MS operates while in motion to expedite mission completion*

- MIL-STD 810G design resists shock and vibration
- Internal active vacuum pumping maximizes system uptime
- Integrated shock isolation system minimizes footprint on a vehicle



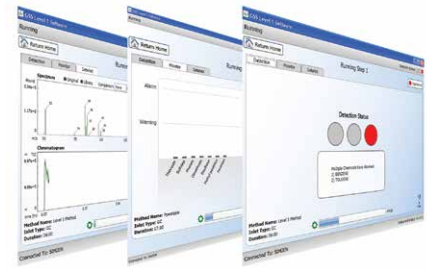
Vehicle mount with integrated real-time vapor sampling



Universal Sampling Port with quick-connect Griffin X-Sorber™ portable air sampler

## Specifications

Griffin G465	
<b>TECHNOLOGY</b>	
Technology	GC/MS; fully integrated low thermal mass gas chromatograph (LTM-GC) and MS/MS-capable ion trap mass analyzer
Mass Range / Scan Rate	35-425 m/z; up to 10,000 m/z per second @ 20 points per m/z
Ionization Type	Internal electron ionization (EI)
Detector	Conversion dynode electron multiplier
LTM-GC Column	Standard VB-5MS (15 m x .18 mm x .18 µm); others available; programmable 40 to 300°C
Calibrant	Onboard FC-43 (Perfluorotributylamine)
Carrier Gas	Connection for external gas source (choice of He or H <sub>2</sub> ); available from many vendors; H <sub>2</sub> generator available
<b>SAMPLING &amp; ANALYSIS</b>	
Sample Introduction	Split/splitless injector accepts: <ul style="list-style-type: none"> <li>- Direct syringe injection (1 syringe included)</li> <li>- SPME fiber (optional)</li> <li>- Manual headspace sampler (optional)</li> <li>- Autosampler (optional)</li> <li>- PSI-Probe™ thermal separation via TAG™ (optional)</li> <li>- PSI-Probe thermal separation via GERSTEL-Twister® (optional)</li> </ul> Universal Sampling Port with standard Tenax TA and Carboxen 1017 dual bed preconcentration tubes accepts: <ul style="list-style-type: none"> <li>- Direct air intake onto precon tubes (adaptor included)</li> <li>- Griffin Purge and Trap for water analysis (optional)</li> <li>- Griffin X-Sorber handheld vapor sampler (optional)</li> </ul> Membrane Introduction Mass Spectrometry (MIMS) Inlet: <ul style="list-style-type: none"> <li>- Direct air intake for near real-time air monitoring capability</li> </ul>
Sample Phase	Solid, liquid, and vapor
Threats	Detects and identifies explosives, narcotics, CWAs, TICs, environmental pollutants, and other chemicals
Sampling & Analysis	Full identification in 4-15 mins for most chemicals, near real-time in survey mode
<b>SYSTEM INTERFACE</b>	
Display & Alerts	Full automation by connection with computer
Communication	Ethernet connection TCP/IP; remote operation and diagnostics
Data Storage	Data automatically stored on supplied laptop (500 GB)
Simplified User Interface	Griffin System Software (GSS); GriffinLib, NIST and AMDIS mass spectral libraries included; capable of user-defined library
Training Requirements	1-2 days depending on level of training desired; Operator, Developer, and Full System certifications available
<b>POWER</b>	
Input Voltage	100-240 VAC; 24 VDC (+/- 5%, 25 A, 1000 W)
Cold Start Time	<30 mins (includes automatic tuning/calibration)
<b>ENVIRONMENTAL</b>	
Operating Temp / Humidity	41 to 104°F (5 to 40°C); <85% relative humidity
Storage Temp	-13 to 131°F (-25 to 55°C)
<b>PHYSICAL FEATURES</b>	
Dimensions (L x W x H)	19.2 x 19.2 x 21.1 in (48.8 x 48.8 x 53.6 cm)
Weight	99.5 lbs (45.0 kg)
Enclosure & Protection	Rugged, internal shock mounting system; integrated vacuum system contains mini turbomolecular pump & quad diaphragm; no external shock table or vacuum system required



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