



# Gasmet Technologies, Inc. - Model DX4040 Portable FTIR Gas Analyzer

## GENERAL DESCRIPTION:

The Model DX4040 portable FTIR gas analyzer is a field rugged instrument that can identify “unknown” gases within minutes of arriving at an incident site by searching the NIST/EPA© reference library of over 5,000 gases. Measuring 25 gases simultaneously at sub-ppm levels, the DX4040 can be pre-programmed to measure TIC’s, TIM’s and CWA gases with updated readings each 60 seconds or less.



## TECHNICAL DESCRIPTION:

The Model DX4040 uses FTIR (Fourier Transform Infrared) measurement technology to allow the user to measure up to 25 toxic gases simultaneously. A unique part of the Model DX4040 is Gasmet Technologies GICCOR (an acronym for 'Genzel interferometer with a cube corner retroreflector') interferometer. The interferometer can be thought of as the engine of a FTIR. It is rugged and withstands the demanding environmental conditions of non-laboratory environments.

## CONTACT INFORMATION

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## COST

- \$65,000/system
- N/A/analysis

## Tier Selection

Final tier assignment is based on overall product score.

- Top Tier
- Second Tier
- Third Tier
- ◐ Fourth Tier
- Bottom Tier

### RANKINGS

	Biological	Chemical	Radiological
<b>FIELD USE System</b>	N/A	◐	N/A
<b>MOBILE Laboratory</b>	N/A	●	N/A
<b>DIAGNOSTIC Laboratory</b>	N/A	●	N/A
<b>ANALYTICAL Laboratory</b>	N/A	●	N/A

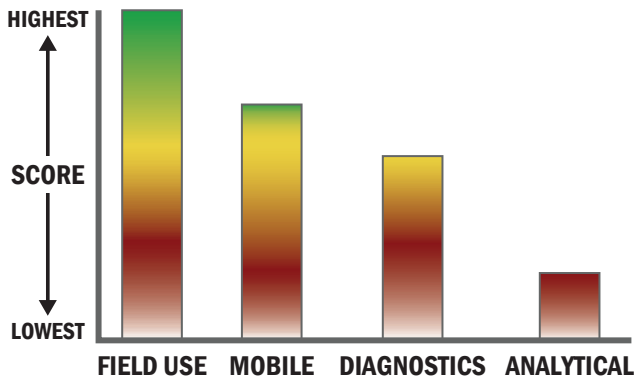
## Survey Source

Vendor Supplied Information



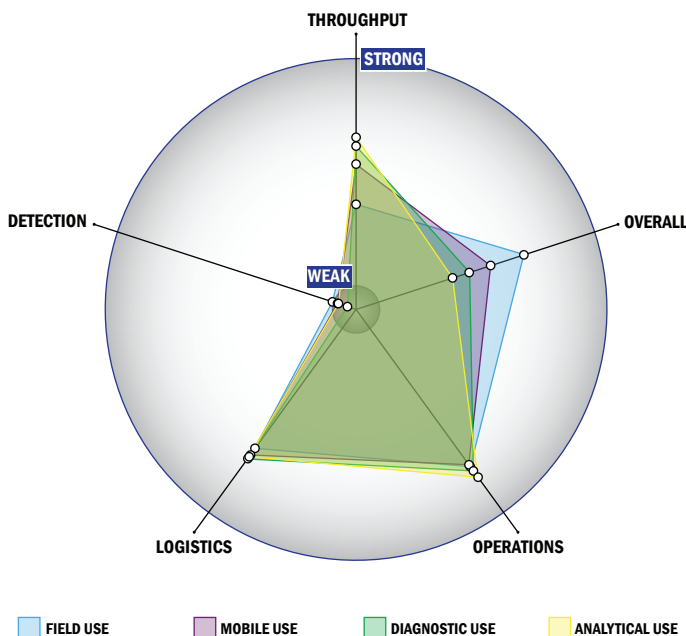
## Scoring Analysis

System scores are compared across the four scenarios and ranked from highest to lowest.



## Impact Chart

The Impact Chart is a spider graph representing specific categories and designed to give the reader a visual depiction of how a particular system is expected to operate across the four different scenarios. The score for each of the seven categories is presented as the percentage of the total possible score. Higher category scores extend the spokes of a graphic toward the outer edge of the chart. The area graphed for each of the four scenarios relates to how well the system performed in that scenario. Graphics for each of the four scenarios are super-imposed for ease of comparison.



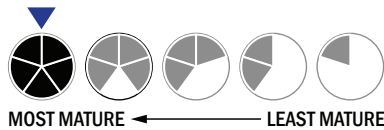
## Evaluation Criteria

### Throughput:

- Between 2 and 15 minutes for detection
- Continuous operation with no defined runs
- 349-96 samples every 2 hours
- The system or device is currently semi-automated
- Device or system is intended for multiple detection assays
- 5-10 minutes is required for set-up
- 1-2 steps are required for detection

### Logistics:

- A day of training and technical skills are required
- Approximately the size of a carry-on luggage suitcase
- Between 5 and 25 kg
- Wireless and wired connections are available
- System or device uses batteries
- 2-4 hours battery life



### Operations:

- Performance is not influenced by relative humidity
- Greater than 10 years expected life
- Results can be viewed in real-time
- The system could be adapted to a fully autonomous system with some effort
- The system software is closed and not available for modification
- The system hardware is open and available for modification

### Detection:

- Excellent specificity. System has occasional false alarms under certain conditions (<2%)