

FTIR INTERFEROMETER/DETECTOR MODULE

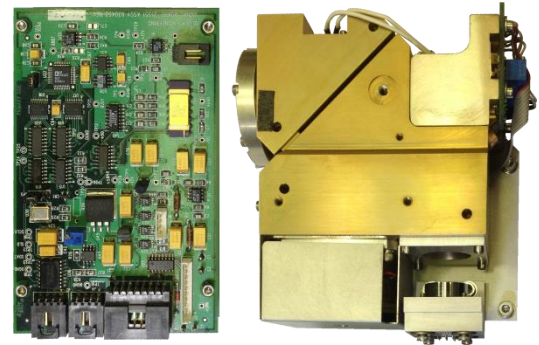
Key Features

- ▣ Available as a laboratory bench-top system and as an OEM module for integration
- ▣ Small, rugged, lightweight, highly sensitive, power-efficient Interferometer & detector engine
- ▣ 2.5 – 13 μm (770 – 4000 cm^{-1}) operating range
- ▣ Room temperature, TE, or Stirling cooled MCT detector options
- ▣ Small form factor makes the mini-FT ideal for OEM applications
- ▣ Modular configuration enables integration into industrial or process monitoring applications
- ▣ Custom spectroscopy and sampling solutions developed for OEM system applications

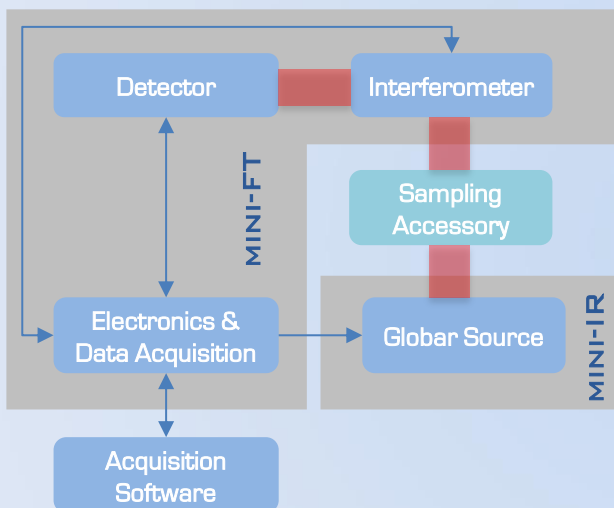
Bench-top System



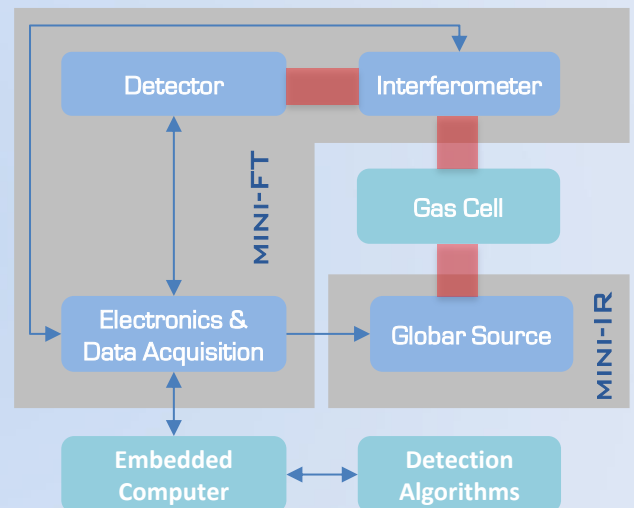
OEM Module



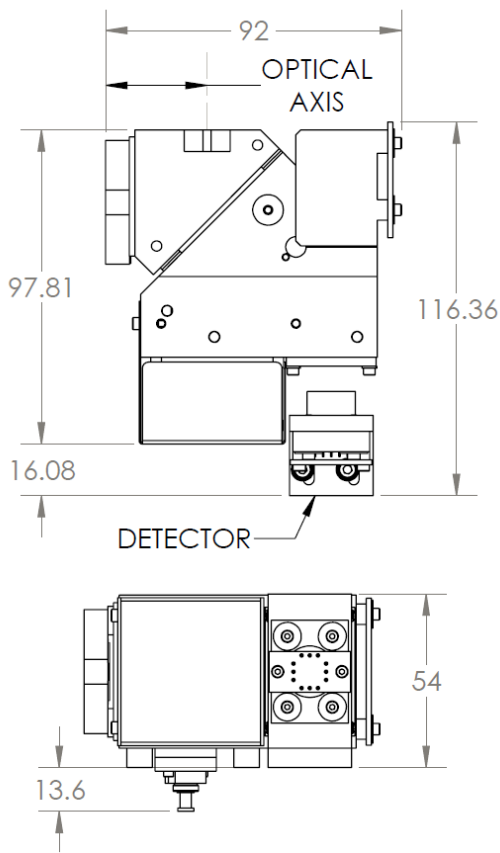
Typical System Block Diagram



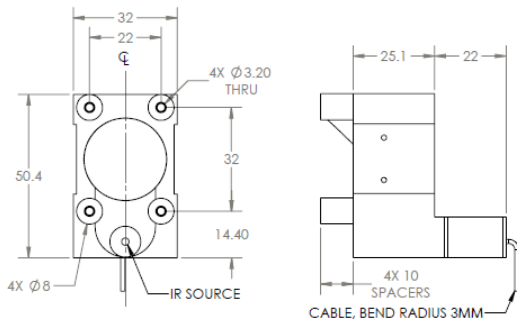
Example OEM Integration for Gas Analysis



FTIR Interferometer/Detector Module



FTIR Globar Source Module



[All dimensions in mm]

System Parameters Specification

System Parameters	Specification
Spectral Range	2.5-13 μm (770 - 4000 cm^{-1})
Resolution	3, 6, 12 cm^{-1}
Scan Format	Single-direction, single-sided
Scan Rate	Up to 30 spectra/sec
Input Aperture	12.7 mm diameter
Field of view	+/- 1.5° (3° total)
Laser Reference	Temperature stabilized VCSEL
Signal-to-Noise Ratio	6,000:1 (Globar Source, 6 cm^{-1} , 1 sec)
System power	15 W
System Input voltage	9 - 24 V
Dimensions (bench-top)	153 x 139 x 102 mm (6 x 5.5 x 4 in)
System Weight (bench-top)	2.25 kg (5 lbs)
Mounting Orientation	Any direction
Operating Temperature	-20 to +50 °C
Communication Interface	USB2 (RS-232 to adjust settings)

Detector Options Specification

Detector Options	Specification
Low Cost Detector (single pixel)	Temperature stabilized MCT $D^* = 4 \times 10^7 \text{ cm} \cdot \text{Hz}^{1/2} / \text{W}$ (2.5-11 μm)
Standard Detector (single pixel)	Optically immersed TE-cooled MCT $D^* = 4 \times 10^9 \text{ cm} \cdot \text{Hz}^{1/2} / \text{W}$ (2.5-11 μm)
High Sensitivity Detector (single pixel)	Optional Stirling-cooled MCT $D^* = 4 \times 10^{10} \text{ cm} \cdot \text{Hz}^{1/2} / \text{W}$ (2.5-13 μm)

System Options

Description

MINI-IR (Globar Source with parabolic reflector)	Maximum 1150 °C @ 18 W for ~5000+ hours
Data Acquisition Software	Igram to spectra conversion/display – Remote TCP/IP interface
Custom Gas Cell, Sensors, and system hardware	Call for options
Custom Embedded Computer & Interface	Call for options
Custom Detection Algorithms	Call for options

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