

# PORTHOS™

**PORTable Hazard Observation System  
for Stand-Off Chemical Sensing**

## PORTHOS-500



## PORTHOS-1500



- **Compact, lightweight, rugged design**
- **Low power, battery operation**
- **Rapid identification of Chemical Warfare Agents (CWAs), Toxic Industrial Chemicals (TICs) and other gases**
- **Real-time, built-in video and spectral analysis**

PORTHOS™ is a small, rugged, lightweight, highly sensitive multiple chemical agent detector and identification system, based on Block's proven and validated passive Fourier Transform Infrared (FT-IR) technology. It works in the long wave infrared spectral band, functions day or night and is capable of either short or long term military or Homeland Security ground or air operations. Within seconds it detects and presents to the user the name of a dangerous chemical vapor at distances of 0.1 to 5 km. Stored data includes raw interferograms, alarm type and time. The unit has both automated self-calibration and status monitoring of all critical points.

PORTHOS™ detects and identifies all the Military C-Agents (Nerve, Blood, and Blister) required of the JSLSCAD system and has been tested against the full list of military interferents. The following lists of TICs have been programmed and tested in a chamber: Ammonia, Boron Trichloride, Phosgene, Nitric Acid, Sulfur Dioxide, Arsine, Boron Trifluoride, Carbon Disulfide, and Hydrogen Cyanide. Additional chemicals can be programmed as needed.

PARAMETER	PORTHOS-1500	PORTHOS-500
Wavelength (µm)	7.5-13	7.5-13
Field of View (FOV) (degrees)	1.5	<b>0.5</b>
Acquisition Rate (@8cm <sup>-1</sup> & 5cm/sec) (spectra/sec)	20 spectra/sec	20 spectra/sec
Noise Equivalent Spectral Radiance (NESR) (W/(cm <sup>2</sup> -sr-cm <sup>-1</sup> )) @ 1000cm <sup>-1</sup>	4.3 x 10 <sup>-9</sup>	4.3 x 10 <sup>-9</sup>
Weight (lbs)	20	<b>27</b>
Sensor Dimensions (inches – WxLxH)	12 x 15.5 x 7.5	<b>13 x 19 x 8</b>
Sensor Volume (ft <sup>3</sup> )	0.8	<b>1.1</b>
Power (W)	50	<b>150</b>
Operating Temperature ( C)	0-50	0-50
Altitude (ft)	0-10,000	0-10,000
Relative Humidity (%)	0-100 non-condensing	0-100 non-condensing