HYPERSPECTRAL SPECTRO-RADIOMETER SYSTEMS



## **HS-IR Family**



VERSATILE SPECTRO-RADIOMETER (VSR)

## **KEY FEATURES**



HIGH SPECTRAL RESOLUTION



HIGH TEMPORAL RESOLUTION

ULTRA-WIDE BANDWIDTH: WITH ITS UNIQUE 3 DETECTORS CONFIGURATION, THE VSR CAN COVER THE MWIR, LWIR AND SWIR RANGE (0.8 - 15 μm) The Versatile Spectroradiometer (VSR) is a compact high sensitivity spectroradiometer which uses Fourier Transform Infrared (FT-IR) technology. Its high speed, robust operation is ideal for multiscenario operation, from the laboratory to airborne applications even those with heavy vibrational constraints. The VSR can provide real-time high resolution spectral information on slow and fast occurring phenomena, as well as perform material and target signature analysis.

## **HS-IR Family**

## **APPLICATION FOCUS: SMOKE STACK EMISSION MONITORING**



The Ministry of Environment of South Korea utilizes VSR spectroradiometers to monitor smokestack emissions as part of a national initiative to standardize and measure fugitive emissions at major industrial sites. This technology enables the quantification of the three primary greenhouse gases:  $CO_2$ ,  $CH_4$ , and  $N_2O$  enhancing environmental monitoring and regulatory efforts.

SPECIFICATIONS	VSR SERIES
Detector Type	HgCdTe (MCT), InSb, InGaAS detector
Detector Format	Single-Pixel
Spectral Range	0.8 - 15 μm
Field of View (FOV)	90 mrad Telescope 0.5x magnification 45 mrad Instrument FOV without telescope 22 mrad Telescope 2x magnification 6.4 mrad Telescope 7x magnification
Max. Frame Rate	1 to 110 spectra/s
Typical NESR (At 16 cm <sup>-1</sup> spectral resolution and 1s observation time)	2.5 @ 1300 cm <sup>-1</sup> nW/sr/cm <sup>2</sup> /cm <sup>-1</sup> 0.25 @ 2000 cm <sup>-1</sup> nW/sr/cm <sup>2</sup> /cm <sup>-1</sup> 0.03 @ 6300 cm <sup>-1</sup> nW/sr/cm <sup>2</sup> /cm <sup>-1</sup>
Dimensions	46 x 65 x 32 cm (L x W x H)
Weight	< 28 kg (Without telescope)
Power Consumption	< 192 W (115 or 230 VAC)
Operational Temperature	-20 °C to +40 °C (Power consumption is increased when T < 20°C)

sales@telops.com



exosens.com



© Telops. The information furnished is believed to be accurate and reliable, but is not guaranteed and is subject to change without notice. No liability is assumed by Telops group of companies nor by any Exosens Group companies. Performance data represents typical characteristics as individual product performance may vary. Customers should verify that they have the most current product information from the Telops group of companies before placing orders. Texts and pictures may not be considered as contractually binding. This document may not be reproduced, in whole or in part, without the prior written consent of Telops.

in 🔠 f 🞯