

SVC

HR-768i™

High Resolution Field Portable Spectroradiometer

Superior data quality provided by the SVC HR-768i, coupled with the ability to collect and review data without an external computer make the SVC HR-768i one of the best instruments available for field applications. The internal CPU coordinates the spectral data collection as well as functions provided by the internal GPS, onboard digital camera and a second Bluetooth radio for communication with external sensors. The SVC HR-768i is the basis of the multi-sensor data collection system.

The use of 100% linear array detectors ensures excellent wavelength stability, while the thermoelectrically cooled InGaAs and extended InGaAs detectors provide superior radiometric stability.

Fixed foreoptics and hard-mounted internal spectrometer elements combine to produce a robust and efficient optical path, ensuring reliable data under the most demanding field conditions. The internal CPU enables a full day's data to be acquired, displayed and recorded with no external computer. The SVC HR-768i firmware/software automatically record the longitude, latitude and time of day from the internal GPS receiver, and a digital photograph is stored as a separate linked file for each spectral measurement. This greatly eases record keeping in the field while providing positive, coded identification for subsequent data analysis.

The SVC HR-768i, weighing only 8.5 pounds, is the lightest and the most portable field spectroradiometer providing this full range of features.

The system is available with optional foreoptics and fiber optic bundles that are easily changed in the field. The spectroradiometer system is furnished in a durable, waterproof field case.



The Rugged Android Smartphone

Each SVC HR-768i is supplied with a rugged smartphone with Bluetooth radio, enabling wireless remote measurements at distances of up to 70 meters from the instrument. Real time data can be quickly reviewed on the sunlight readable touchscreen display, enabling the operator to make quick data assessments. The rugged smartphone will survive a 1.8-meter drop onto a hard surface and a 35-minute water immersion up to 1.5 meters, ensuring that a mishap in the field will not put this method of data collection on the sideline. Temperatures as low as -30°C or as high as 50°C do not hamper the rugged smartphone operation. This Bluetooth functionality greatly adds to the efficiency of field Collection and is another example of Spectra Vista's decades of experience in providing researchers the best equipment available.

SVC Spectra Vista Corporation

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SVC HR-768i™

Spectral Range	350-2500 nm
Internal Memory	1000 scans
Channels	768
Linear Array	(1) 512 Si, 350-1000 nm (1) 128 InGaAs, 1000-1890 nm (1) 128 Extended InGaAs, 1890-2500 nm
Spectral Resolution (FWHM)	3.5 nm, 700 nm 16 nm, 1500 nm 14 nm, 2100 nm
Bandwidth (nominal)	1.5 nm, 350-1000 nm 7.6 nm, 1000-1890 nm 5.0 nm, 1890-2500 nm
Minimum Integration	1 millisecond
FOV	4° standard, 8° or 14° optional 25° optional armored fiber optic
Head Size	8.75" x 11.5" x 3.0" 22 cm x 29 cm x 8 cm
Instrument Weight	8.5 lbs., 3.8 kg
Battery Type	7.4 V lithium ion
Battery Life	3 hours approx.
Digitization	16 bit
Wavelength Repeatability	0.1 nm
Noise Equivalent Radiance (1.0 sec scan)	0.8 x 10 ⁻⁹ W/cm ² /nm/sr @ 700 nm 1.2 x 10 ⁻⁹ W/cm ² /nm/sr @ 1500 nm 1.2 x 10 ⁻⁹ W/cm ² /nm/sr @ 2100 nm
Radiometric Calibration Accuracy (NIST Traceable)	± 5% @ 400 nm ± 4% @ 700 nm ± 7% @ 2200 nm
Dark Current Correction	automatic
Spectrum Averaging	automatic/selectable
Operating Environment	
Humidity	to 90% RH, non-condensing
Temperature	-10° to +40° C
Sighting	diode laser



**WATERTIGHT
FIELD CASE**



STAND-ALONE INSTRUMENT CONTROL PANEL

Features

- One half the size and weight of other field spectroradiometers
- Full spectral measurements can be acquired in 1 second
- Internal digital camera captures scene of target area
- Internal GPS provides time and location coordinates for each data file
- QVGA sunlight readable touch screen provides graphic data display
- Dedicated Bluetooth can receive data from 16 channel (optional) sensor suite
- Provides good spectral resolution across the full spectral region
- Incorporates 100% linear array technology and cooled InGaAs detectors for superior wavelength and radiometric stability
- State of the art linear arrays provide low noise (improved data) across the 350 nm to 2500 nm range
- Fixed foreoptics ensure a reliable optical path
- Critical optical components are hard mounted to the spectrometer platform
- Provides fast, full spectral measurements with no moving gratings
- Internal 32-bit CPU allows measurements to be acquired and viewed without an external computer
- Designed for minimal set-up & warm-up time
- Internal memory stores 1000 measurements
- Supplied with rugged PDA and Bluetooth for wireless operation
- Field-changeable fiber optic light guide options available
- Integral, removable Lithium Ion battery enhances mobility (no power cord)
- Optional Foreoptics, Fiber Optic Light Guides, Reflectance Probe, Cosine Receptors, Back Pack, Reflectance Panels, Spheres, and Computers are available

Applications

- Vegetative Stress Analysis
- Forestry Analysis
- Land and Crop Management
- Marine and Wetland Studies
- Environmental Monitoring
- Geological Studies
- Drill Core Analysis
- Ground Truthing
- Industrial QC and Process Control
- Surface Color Measurements

