# SVCHR-768si

## High Resolution Field Portable Spectroradiometer

The SVC HR-768si produces the same superior data quality and high spectral resolution as the SVC HR-1024i, while covering the spectral range from 350nm to 1900nm. The onboard LCD provides the scientist with an instantaneous graphic display of the measurement without need for a separate computer or smartphone. The internal digital camera captures the image of the target area for reference during data analysis, while the built-in GPS acquires the location of the instrument and writes the coordinates to memory. The durable SVC HR-768si incorporates two Bluetooth radios. The first is used to facilitate instrument control and data transfer to a notebook computer, tablet or smartphone. The second Bluetooth is provided to communicate with optional external sensors such as single wide-band or narrow multi-band downwelling detectors. The SVC HR-768si is engineered to be the central device integrating target images, GPS location, instrument direction, time, and external sensor inputs with high resolution spectral data.

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

Every design element of the SVC HR-768si reflects a complete understanding of the demands of field data collection. Fixed foreoptics and hard-mounted internal spectrometer elements provide a robust optical path. This ensures the SVC HR-768si will deliver reliable data under the most demanding field campaigns for years to come.





### The Rugged Android Smartphone

Each SVC HR-768si 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 quality 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 collections and is another example of Spectra Vista's decades of experience in providing researchers the best equipment available.

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Spectral Range Internal Memory Channels

Linear Array

**Spectral Resolution (FWHM)** 

Bandwidth (nominal)

Minimum Integration

FOV

Head Size

Instrument Weight Battery Type Battery Life Digitization Wavelength Repeatability

Noise Equivalent Radiance (1.0 sec scan)

Radiometric Calibration Accuracy (NIST Traceable)

Dark Current Correction Spectrum Averaging

Operating Environment Humidity Temperature Sighting 350-1900 nm 1000 scans 768

(1) 512 Si, 350-1000 nm (1) 256 InGaAs, 1000-1900 nm

3.3 nm, 700 nm 9.5 nm, 1500 nm

1.5 nm, 350-1000 nm 3.8 nm, 1000-1900 nm

1 millisecond

4° standard, 8° or 14° optional 25° Optional armored fiber optic

8.75" x 11.5" x 3.0" 22 cm x 29 cm x 8 cm 7.8 lbs., 3.5 kg 7.4 V lithium ion 3 hours approx. 16 bit 0.1 nm

0.8 x 10<sup>-9</sup> W/cm<sup>2</sup>nm/sr @ 700 nm 1.2 x 10<sup>-9</sup> W/cm<sup>2</sup>nm/sr @ 1500 nm

± 5% @ 400 nm ± 4% @ 700 nm ± 5% @ 1500 nm

Automatic Automatic / selectable

To 90% RH, non-condensing -10° to +40° C Diode laser





#### 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 4 channel (optional) sensor suite
- Provides exceptional spectral resolution across the full spectral region
- Incorporates 100% linear array technology and cooled InGaAs detector for superior wavelength and radiometric stability
- □ State of the art linear arrays provide low noise (improved data) across the 350 nm to 1900 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 smartphone 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
- □ Ocean Color Studies
- □ Ground Truthing
- □ Industrial QC and Process Control
- □ Surface Color Measurements