

# SVC

## HR-512i

### On Land or Under the Sea

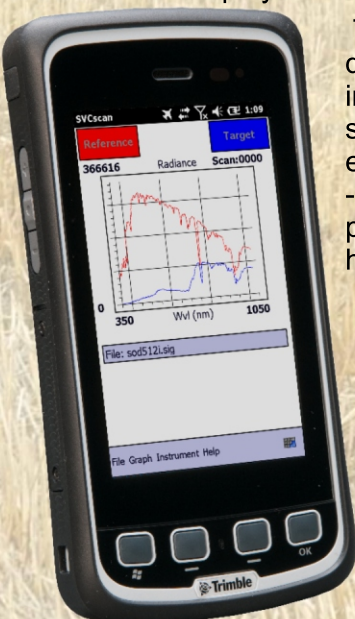
#### LIGHT WEIGHT - STAND ALONE

Field Portable Spectroradiometer with Graphic Data Display, Internal Camera, Onboard GPS and Bluetooth Wireless Communications.

Operating in the VNIR spectral range, the SVC HR-512i takes field measurements to an exciting new level. The SVC HR-512i excels in terrestrial and marine applications due to the superior data quality, leading edge optical and electronic design, robust construction, ease of use and integrated information functions.

Measurements are acquired in seconds as the internal CPU sets the appropriate integration based on current lighting conditions, while dark current is automatically measured and subtracted. The internal computer applies the selected radiometric calibration and the graphic data is promptly displayed on the sunlight readable LCD touch screen. No external computer is required to acquire, view and store high quality spectral measurements, accompanied with time and positional coordinates from the GPS, and digital images from the camera. The SVC HR-512i includes a second Bluetooth radio for communication with up to eight external sensors.

**The rugged PDA option** allows measurements to be remotely acquired up to 100 meters from the instrument wirelessly via the Bluetooth. Real time spectral data is viewed on the sunlight readable color touch screen display.



The PDA can withstand drops from 4 ft., accidental immersion, exposure to sand and dust, vibration and extreme temperatures from -30° C to 60° C. The battery provides power for up to 10 hours of operation.



**The Underwater Enclosure** for the SVC HR-512i allows the instrument to be taken to depths of 30 meters. The instrument is installed into the enclosure and the enclosure is taken to the area of interest, where a diver directs the scan. SVC instruments have been supporting scientific marine research in North America, Europe, Asia and South America for 20 years. Research associated with ocean color, coral reef assessment, sea grass and water column studies have most often been conducted using the underwater enclosures and instruments provided by SVC.

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# SVC *HR-512i* <sup>TM</sup>

<b>Spectral Range</b>	350-1050 nm
<b>Internal Memory Channels</b>	1000 scans 512
<b>Linear Array</b>	(1) 512 Si, 350-1050 nm
<b>Spectral Resolution (FWHM)</b>	3.2 nm, 700 nm
<b>Bandwidth (nominal)</b>	1.5 nm, 350-1050 nm
<b>Minimum Integration</b>	10 millisecond
<b>FOV</b>	4° standard, 8° or 14° optional 25° optional armored fiber optic
<b>Head Size</b>	8.75" x 6.5" x 3.0" 22 cm x 17 cm x 8 cm
<b>Instrument Weight</b>	5.2 lbs., 2.4 kg
<b>Battery Type</b>	7.4 V lithium ion
<b>Battery Life</b>	8 hours approx.
<b>Digitization</b>	16 bit
<b>Wavelength Repeatability</b>	0.1 nm
<b>Noise Equivalent Radiance (1.0 sec scan)</b>	$0.8 \times 10^{-9} \text{ W/cm}^2/\text{nm/sr} @ 700 \text{ nm}$
<b>Radiometric Calibration Accuracy (NIST Traceable)</b>	$\pm 5\% @ 400 \text{ nm}$ $\pm 4\% @ 700 \text{ nm}$
<b>Dark Current Correction</b>	automatic
<b>Spectrum Averaging</b>	automatic/selectable
<b>Operating Environment</b>	
<b>Humidity</b>	to 90% RH, non-condensing
<b>Temperature</b>	-10° to +40° C
<b>Sighting</b>	diode laser



**WATERTIGHT  
FIELD CASE**



**STAND-ALONE INSTRUMENT CONTROL PANEL**

## Features

- Small, light weight field spectroradiometer
- 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 8 channel (optional) sensor suite
- Provides good spectral resolution across the full spectral region
- Incorporates 100% linear array technology
- State of the art linear arrays provide low noise (improved data) across the 350 nm to 1050 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
- Optional 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
- Ocean Color Analysis
- Drill Core Analysis
- Ground Truthing
- Surface Color Measurements

